# EIR APPENDIX B

**Initial Study – Potrero Yard Modernization Project**
**(including Water Supply Assessment)**
**June 30, 2021**

# Initial Study

| | |
|---|---|
| *Record No.:* | Planning Department Case No. 2019-021884ENV; State Clearinghouse No. 2020089022, Potrero Yard Modernization Project (2500 Mariposa Street) |
| *Zoning:* | Public (P) Zoning District<br>65-X Height and Bulk District |
| *Plan Area:* | Eastern Neighborhoods Area Plan, Mission Area Plan |
| *Block/Lot:* | 3971/001 |
| *Lot Size:* | 192,000 Square feet |
| *Project Sponsor:* | Licinia Iberri, San Francisco Municipal Transportation Agency, 415-646-2715 |
| *Staff Contact:* | Jennifer McKellar, CPC.PotreroYardEIR@sfgov.org, 628-652-7563 |

## A. Project Description

The Potrero Yard Modernization Project (proposed project) is described in Chapter 2, Project Description, of the environmental impact report (EIR), to which this initial study is attached. EIR Chapter 2 describes four variants to the proposed project that consider modifications to limited features or aspects of the project (pp. 2.56-2.58).

## B. Project Setting

The existing setting and land use characteristics are described in EIR Chapter 2, Project Description (pp. 2.3-2.14). The cumulative setting is provided in EIR Chapter 3, Environmental Setting and Impacts, Section 3.A (pp. 3.A.6-3.A.9).

## C. Compatibility with Existing Zoning and Plans

| | *Applicable* | *Not Applicable* |
|---|---|---|
| Discuss any variances, special authorizations, or changes proposed to the planning code or zoning map, if applicable. | ☒ | ☐ |
| Discuss any conflicts with any adopted plans and goals of the City or region, if applicable. | ☒ | ☐ |
| Discuss any approvals and/or permits from city departments other than the planning department or the Department of Building Inspection, or from regional, state, or federal agencies. | ☒ | ☐ |

### Required Project Approvals

Required variances, special authorizations, and changes to the San Francisco Planning Code (planning code) or zoning map; approvals from City agencies; and approvals from regional, state, or federal agencies (if applicable) for approval of the proposed project are discussed in EIR Chapter 2, Project Description, pp. 2.58-2.61.

## Conflicts with Adopted Plans and Policies

In accordance with California Environmental Quality Act (CEQA) Guidelines section 15125(d), this subsection discusses potentially obvious inconsistencies or conflicts of the proposed project or project variants with applicable local and regional plans and policies, as applicable. Inconsistencies or conflicts with existing local and regional plans and policies do not, in and of themselves, indicate a significant physical environmental effect under CEQA. To the extent that adverse physical environmental impacts may result from such inconsistencies or conflicts, these impacts are analyzed in this initial study and EIR under the specific environmental topic sections in Section E, Evaluation of Environmental Effects, and in EIR Chapter 3, Environmental Setting and Impacts, respectively.

### Local Plans and Policies

*San Francisco General Plan*

The San Francisco General Plan (general plan), adopted by the San Francisco Planning Commission (planning commission) and the San Francisco Board of Supervisors (board of supervisors), is both a strategic and long-term document, broad in scope and specific in nature. The general plan is the embodiment of the City's vision for the future of San Francisco. It provides general policies and objectives to guide land use decisions and contains some policies that relate to physical environmental issues. The general plan contains ten elements, each of which pertains to a particular topic that applies citywide: Air Quality, Arts, Commerce and Industry, Community Facilities, Community Safety, Environmental Protection, Housing, Recreation and Open Space, Transportation, and Urban Design.

The general plan also includes area plans that focus on particular areas of the City. Among these is the Mission Area Plan, which is one of the area plans adopted through the Eastern Neighborhoods Planning effort. The project site is in the northeastern portion of the Mission Area Plan, which is discussed in more detail below. In an area plan, "the more general policies in the General Plan elements are made more precise as they relate to specific parts of the city."[1] The area plans contain specific policies and objectives that address land use and planning issues in the local context. As described in EIR Chapter 2, Project Description, the San Francisco Municipal Transportation Agency (SFMTA) as the property owner will act as the project sponsor in coordination with a private project co-sponsor (developer). The SFMTA and private project co-sponsor would seek amendments to the general plan to allow for approval of the proposed project or project variants and would also develop project-specific urban design guidelines. Together the SFMTA and the private project co-sponsor are referred to as the project sponsor team.

Potential conflicts with general policies are discussed below. A potential conflict does not, in itself, indicate a significant effect on the environment within the context of CEQA. Any physical environmental impacts that could result from a conflict with general plan policies are analyzed in this initial study and EIR. In general, potential conflicts with the general plan would be considered by City decision makers (in the case of a general plan amendment, the planning commission and board of supervisors) independently of the environmental review process. Thus, in addition to considering inconsistencies that affect environmental issues, the decision makers

[1] San Francisco Planning Department, San Francisco General Plan, Introduction, October 2012.

consider other potential inconsistencies with the general plan as part of the decision to approve, modify, or disapprove the proposed project or project variants. Any potential conflict not identified in this environmental document would be considered in that context and would not alter the physical environmental effects of the project, which are analyzed in this initial study and EIR.

This subsection is not intended to provide a comprehensive analysis of general plan consistency; in particular, it does not identify policies that the proposed project or project variants would support. Staff report(s) and approval motions prepared for planning commission and board of supervisors' action(s) on the proposed project or project variants as part of the entitlements approval process will contain an analysis of general plan consistency.

The proposed new building would exceed the existing 65-foot height limit as set forth in the planning code and height maps (see discussion under "San Francisco Planning Code," below). The San Francisco General Plan Urban Design Guidelines Map 4, "Urban Design Guidelines for Height of Buildings," illustrates the geographic distribution of the urban design guidelines for heights of buildings, with taller buildings generally concentrated downtown and at high-activity centers and low and small-scaled buildings generally concentrated in residential areas away from commercial activity centers. San Francisco General Plan Urban Design Guidelines Policy 3.5 provides general guidance on heights of buildings and their relationship with the urban form but does not set limits on heights. Additionally, Mission Area Plan objectives and policies (discussed below under "Mission Area Plan") address height, architectural design, and the role of new development. With respect to height, the area plan's emphasis related to greater height allowances is at specific locations, e.g., along Mission Street (to the west) and the Potrero Center (to the north), while additional height for new development along alleyways is discouraged.

In its current conceptual design without any legislative changes, the proposed building's height (up to 150 feet) would not conform with Map 4, Policy 3.5, and the Mission Area Plan as it pertains to the height of new buildings. The proposed project or project variants would amend Map 4 and the existing 65-X Height and Bulk District to allow for the proposed replacement transit facility and joint development to rise to a height of 150 feet at the project site location. Planning code provisions through a new special use district are required and would address the proposed building's height as it relates to the neighboring structures. While the scale of the proposed project or project variants would be noticeably taller and larger than the surrounding neighborhood, the proposed project or project variants would incorporate new urban design guidelines into the proposed special use district (see further discussion below under "San Francisco Planning Code") that would address the need to include design interventions to relate the design of the project to the smaller scale surrounding buildings through upper-story setbacks, horizontal and vertical building articulation, and other architectural interventions.

As noted in initial study Section E.2, Aesthetics, p. 18, the proposed project and project variants meet each of the criteria provided by Public Resources Code (CEQA) section 21099(d); thus, the determination of significance of project impacts under CEQA does not consider aesthetics. However, the City may consider Urban Design Element policies during the subsequent design review process, separate from environmental review.

*Mission Area Plan*

The project site is located within the Mission Area Plan, one of four area plans analyzed in the Eastern Neighborhoods Rezoning and Area Plans EIR that was adopted in December 2008.[2] The Mission Area Plan envisions the preservation and enhancement of the community's diverse neighborhood and economic infrastructure, varied housing stock, architecturally and culturally rich character, and accessible and reliable transportation infrastructure. To achieve this vision, the Mission Area Plan includes objectives and policies arrayed into the following eight categories: land use, housing, built form, transportation, streets and open space, economic development, community facilities, and historic preservation.

One of the principal goals of the Mission Area Plan is to boost the supply of affordable housing and minimize population displacement. The area plan's housing section identifies policies intended to address six objectives that aim for new affordable housing that is constructed in an economically efficient manner to meet diverse population needs and lower production costs (Objectives 2.1, 2.3, 2.4, and 2.6), to preserve and enhance the existing housing supply (Objective 2.2), and to promote the health and well-being of residents through desirable residential design and location (Objective 2.5).

The Mission Area Plan also emphasizes the preservation of historic properties, built form, and land use patterns. The area plan's historic properties and built form sections aim to preserve historic resources and ensure historic resource considerations are integrated into the planning processes, while striving to reinforce the neighborhood's distinctive urban fabric and character. Refer to EIR Section 3.B, Cultural Resources, for a discussion of the proposed project's or project variants' impacts on historic architectural resources.

The Mission Area Plan's land use section aims to strengthen the mixed-use character while maintaining production, distribution, and repair (PDR) business activities. The area plan's land use map, Map 2, "Mission Generalized Zoning Districts," identifies the project site and immediate area as the Northeast Mission, which aims to maintain the area's mixed-use character and PDR business activities. The Northeast Mission Industrial Zone encompasses the proposed project site and includes a range of PDR uses, including, but not limited to, auto repair establishments, food processing, catering, graphic design, printing, photographic services, and communications. The zone also contains a number of cultural, institutional, educational uses, and a few large-format retail establishments. A defining characteristic of the zone is the high concentration of PDR uses near the area's surrounding residential uses, with enclaves of small-lot Victorian and Edwardian-era homes.

The proposed project or project variants would not be obviously inconsistent with the Mission Area Plan objectives and policies regarding housing, land use, and transportation. The proposed project or project variants would provide mixed-income and affordable residential units, bicycle parking, and retail space.

[2] San Francisco Planning Department, Eastern Neighborhoods Rezoning and Area Plans Final Environmental Impact Report, Case No. 2004.0160E, certified August 7, 2008, *https://sfplanning.org/eastern-neighborhoods-plans*, accessed March 23, 2021.

**San Francisco Planning Code**

The San Francisco Planning Code, which incorporates by reference the City's zoning maps, governs permitted uses, densities, and the configuration of buildings within San Francisco. Permits to construct new buildings (or to alter or demolish existing ones) may not be issued unless a project complies with the planning code or an exception is available under the code.

*Priority Policies*

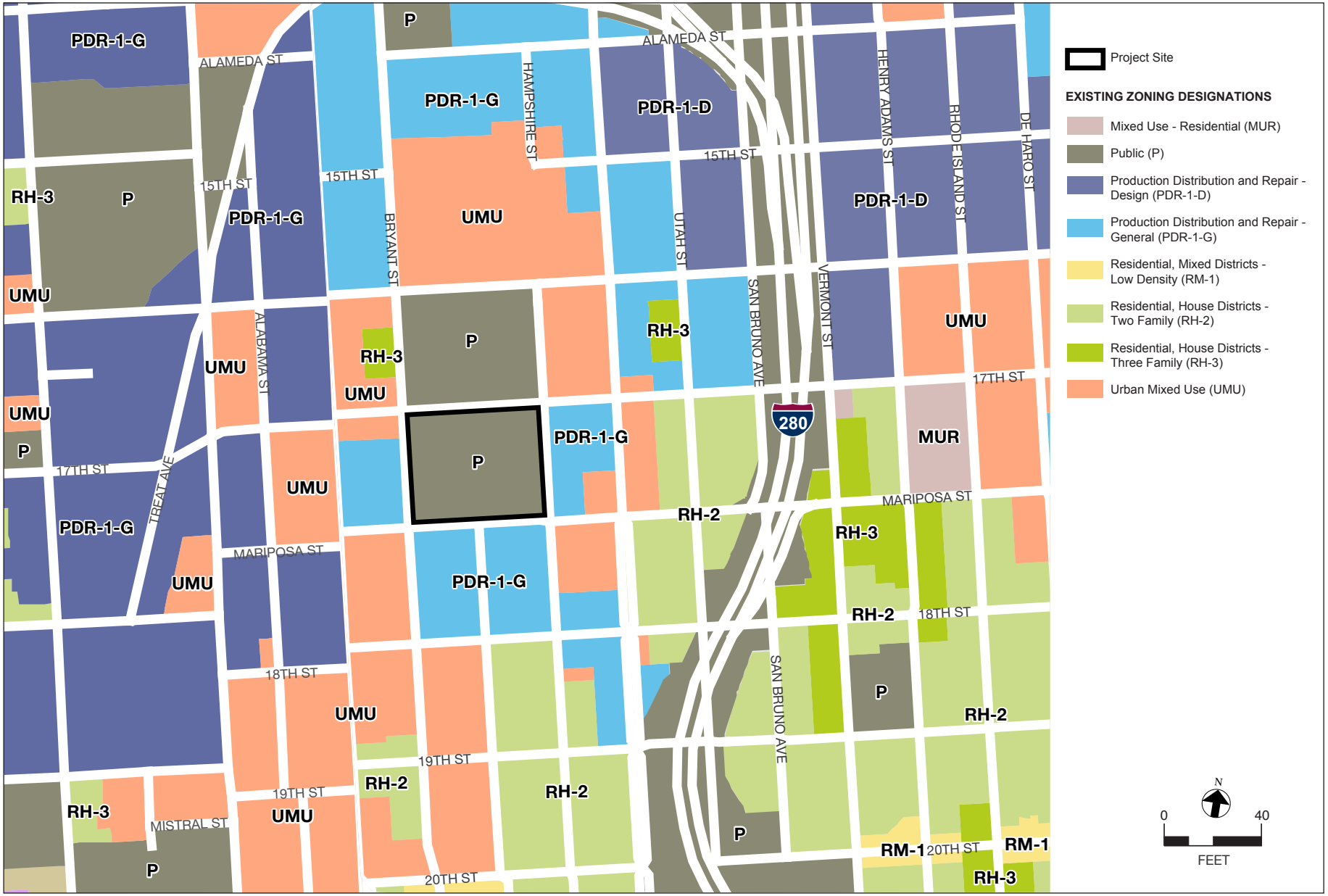
Planning Code section 101.1 establishes priority policies, which are also included in the preamble to the general plan, and this section is generally applicable to the proposed project and project variants. It requires that the City find that the proposed project or project variants is on balance and is consistent with eight priority policies. These policies are further discussed under "The Accountable Planning Initiative," below.

*Zoning*

The project site is located entirely within a Public Use (P) Zoning District (see Figure 1: Existing Zoning Districts). As described in planning code section 211 et seq., the P Zoning District applies to land owned by a governmental agency and in some form of public use and may consist of principal or conditional uses. Principal uses include structures and uses of governmental agencies, public structures and uses of the City and County of San Francisco, accessory nonpublic uses that meet specific conditions, and certain land uses and facilities, including City plazas, neighborhood agriculture, telecommunication facilities, 100 percent affordable housing projects, and Educator Housing Projects. Conditional uses require conditional authorizations and include, but are not limited to, social service and philanthropic facilities, religious institutions, community facilities, schools, and religious institutions.

The proposed project or project variants would include residential and neighborhood-commercial uses that would not conform to the allowable uses associated with the P Zoning District. The proposed project or project variants would amend the zoning map and the planning code, adding a new special use district. If approved by the planning commission and board of supervisors, the special use district would establish land use zoning controls and incorporate design standards and guidelines for the site. The San Francisco Zoning Map would be amended to reflect the special use district and may include conditional use authorization for a planned unit development. While the residential and commercial uses proposed under the proposed project or project variants are not permitted under existing zoning, if the rezoning is approved, project uses would be permitted on the site.

The project site is located within a 65-X Height and Bulk District, which limits the maximum allowable height on the site to 65 feet (see Figure 2: Existing Height and Bulk Districts). An "X" bulk designation sets no maximum length or diagonal dimensions for structures. The maximum bulk of structures in an "X" bulk district is limited by other controls such as required setbacks and yards, height limits, and other planning code requirements. Building heights under the proposed project or project variants are inconsistent with the existing height limits on the project site.




Source: City & County of San Francisco Planning Department, 2019 and 2020

POTRERO YARD MODERNIZATION PROJECT

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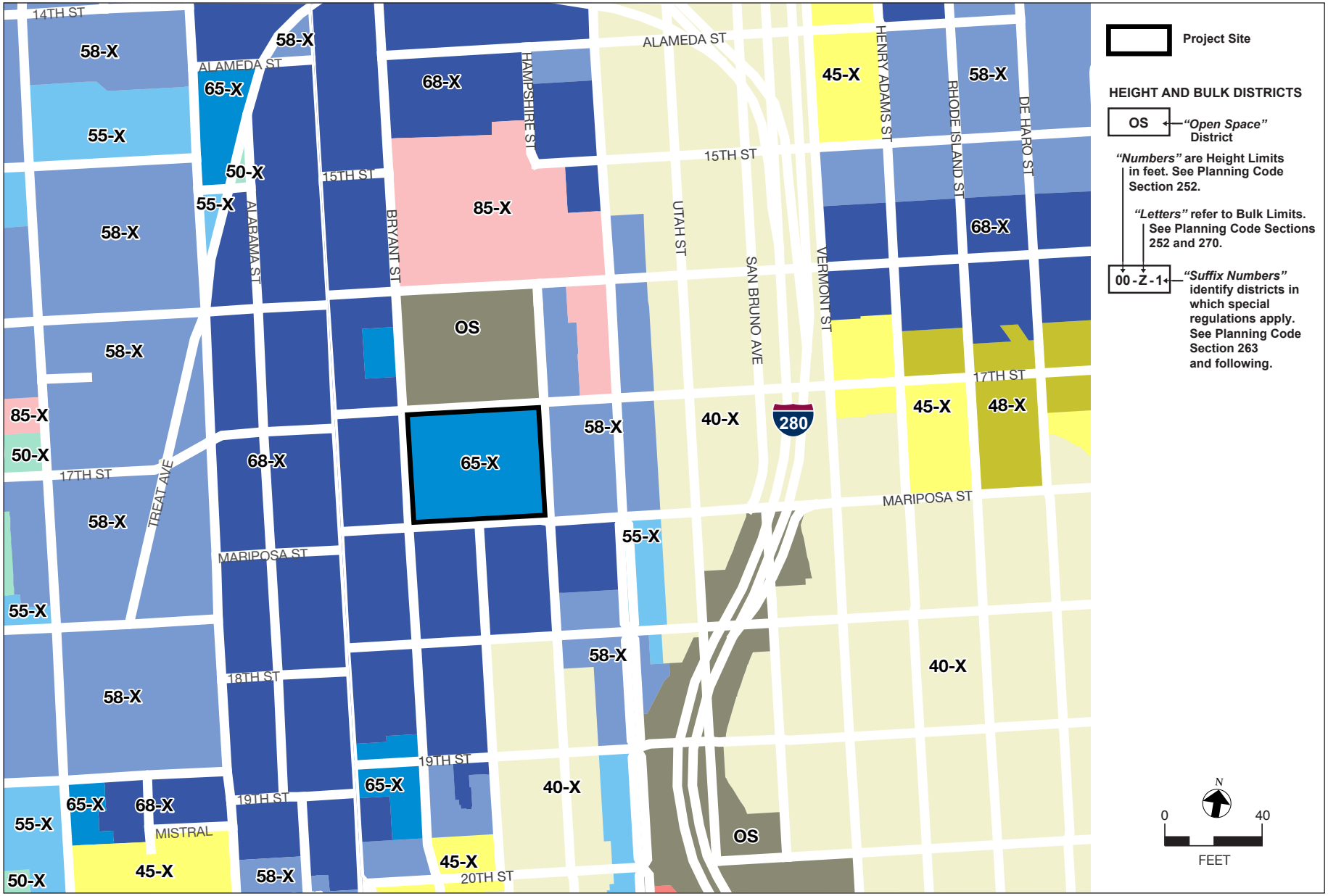
**FIGURE 1: EXISTING ZONING DISTRICTS**




Source: City & County of San Francisco Planning Department, 2017 and 2019

POTRERO YARD MODERNIZATION PROJECT

2019-021884ENV

**FIGURE 2: EXISTING HEIGHT AND BULK DISTRICTS**

The proposed project or project variants would amend the existing 65-X Height and Bulk District in the zoning map to a height limit of 150 feet to allow for the proposed project or project variants that would rise to heights ranging from 75 to 150 feet. If the rezoning is approved with respect to height limits, building heights under the proposed project or project variants would be consistent with the revised height and bulk requirements applicable to the project site. Thus, the project sponsor proposes the establishment of a new special use district further discussed below.

*Special Use District*

As mentioned above and noted in EIR Chapter 2, Project Description, on p. 2.58 under "Anticipated Project Approvals," the project sponsor proposes the establishment of a new special use district with respect to the project site and allowable land uses, height, and bulk. The special use district would require a recommendation by the planning commission and approval by the board of supervisors, including approval of zoning map amendments to establish boundaries of the special use district, to establish the zoning controls for the project site to accommodate the proposed residential and neighborhood-commercial uses, and to modify the allowable height at the site from 65 feet to 150 feet. The City's zoning map would be amended to retain the underlying current zoning district (P zoning) and show the change from the height and bulk district (65-X Height and Bulk District) to the proposed designations through the establishment of the boundaries of the new special use district. With adoption of the proposed special use district and the ordinance amending the zoning map, height map, and special use district map, the proposed project or project variants would be consistent with the planning code and applicable maps.

*Affordable Housing*

The proposed project or project variants would meet the requirements of the City's Residential Inclusionary Affordable Housing Program (planning code sections 415 et seq.), which requires projects of 10 or more residential units to contribute to the creation of affordable housing. The project sponsor is coordinating with City staff to ensure that the residential uses under the proposed project or project variants (up to 575 housing units) would include a minimum of 50 percent of the total as affordable housing units.

**The Accountable Planning Initiative**

In November 1986, the voters of San Francisco approved Proposition M, the Accountable Planning Initiative, which added section 101.1 to the planning code and established eight Priority Policies. These policies are (1) preservation and enhancement of neighborhood-serving retail uses and future opportunities for resident employment in and ownership of such businesses; (2) conservation and protection of existing housing and neighborhood character to preserve the cultural and economic diversity of neighborhoods (discussed in initial study Section E.3, Population and Housing); (3) preservation and enhancement of affordable housing (discussed in initial study Section E.3, Population and Housing); (4) discouragement of commuter automobiles that impede Muni transit service or that overburden streets or neighborhood parking (discussed in EIR Section 3.C, Transportation and Circulation); (5) protection of industrial and service land uses from commercial office development and enhancement of resident employment and business ownership (discussed in initial study sections E.1, Land Use and Planning and

E.3, Population and Housing); (6) maximization of earthquake preparedness (discussed in initial study Section E.16, Geology and Soils); (7) preservation of landmarks and historic buildings (discussed in EIR Section 3.B, Cultural Resources); and (8) protection of parks and open space and their access to sunlight and vistas (discussed in EIR Section 3.G, Shadow, and initial study Section E.12, Recreation).

Prior to issuing a permit approving any demolition, conversion, or change of use, and any action that requires a finding of consistency with the general plan, the City must find that the proposed project or project variants would be consistent with the priority policies, on balance. The staff reports and approval motions prepared for the decision makers will include a comprehensive project analysis and findings regarding the consistency of the proposed project or project variants with the Priority Policies.

**Other Local Plans and Policies**

In addition to the general plan and the planning code, other local plans and policies that are relevant to the proposed project are as follows:

- The Climate Action Strategy for San Francisco is a local action plan that examines the causes of global climate change and the human activities that contribute to global warming. It provides projections of climate change impacts on California and San Francisco based on recent scientific reports, presents estimates of San Francisco's baseline greenhouse gas emissions inventory and reduction targets, and describes recommended actions for reducing the City's greenhouse gas emissions.
- The Transit-First Policy (City Charter, section 8A.115) is a set of principles that underscore the City's commitment to give priority to traveling by transit, bicycle, and on foot over traveling by private automobile. These principles are embodied in the objectives and policies of the Transportation Element of the general plan. All City boards, commissions, and departments are required by law to implement Transit First principles in conducting the City's affairs.
- The San Francisco Bicycle Plan is a citywide bicycle transportation plan that identifies short-term, long-term, and other minor improvements to San Francisco's bicycle route network. The overall goal of the San Francisco Bicycle Plan is to make bicycling an integral part of daily life in San Francisco.
- The San Francisco Better Streets Plan consists of illustrative typologies, standards, and guidelines for the design of San Francisco's pedestrian environment, with the central focus of enhancing the livability of the City's streets.
- Vision Zero is a policy to eliminate all traffic deaths in San Francisco by the year 2024. The goal of Vision Zero is also to reduce severe injury inequities across neighborhoods, transportation modes, and populations. Vision Zero has been adopted by both the San Francisco Board of Supervisors and the SFMTA. Some actions the SFMTA has taken and will take to improve pedestrian safety include implementing safer signal timing at intersections, adding "continental" crosswalks (crosswalks with zebra striping), changing signals to "leading" pedestrian signals that allow pedestrians to get a head start at signalized intersections, adding red zones at intersections to improve visibility, and adding pedestrian bulbs to shorten pedestrian crossing distances.

The proposed project and its variants have been reviewed against these local plans and policies and would not obviously conflict with them due to the size, location, and infill nature of the proposed development.

**Regional Plans and Policies**

In addition to local plans and policies, there are several regional planning agencies whose environmental, land use, and transportation plans and policies consider the growth and development of the nine-county San Francisco Bay Area. Some of these plans and policies are advisory, and some include specific goals and provisions that must be adhered to when evaluating a project under CEQA. The regional plans and policies that are relevant to the proposed project or project variants are as follows:

- Plan Bay Area was prepared by the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) and includes the Regional Transportation Plan and Sustainable Communities Strategy for the San Francisco Bay Area. Plan Bay Area is a long-range integrated land use and transportation plan for the nine-county Bay Area that covers the period from 2010 to 2040. Plan Bay Area calls for concentrating housing and job growth around transit corridors, particularly within areas identified by local jurisdictions as Priority Development Areas. Assumptions for land use development are from local and regional planning documents. Plan Bay Area 2040 was adopted on July 26, 2017, and will be updated every four years. It is a limited and focused update of the region's previous integrated transportation and land use plan adopted in July 2013. The project site is located within the Eastern Neighborhoods Priority Development Area, which includes East South of Market (SoMa), Western SoMa, Central SoMa, the Mission District, Showplace Square and Potrero Hill, and the Central Waterfront.
- In addition, Plan Bay Area specifies strategies and investments for maintaining, managing, and improving the region's multi-modal transportation network and proposes transportation projects and programs to be implemented with reasonably anticipated revenue, as identified by local jurisdictions. Plan Bay Area also provides a list of transportation projects for highway, transit, rail, and related uses through 2040 for the nine Bay Area counties. The SFMTA's Transit Fleet Management Plan, intended to accommodate growth in public transit through 2040, is part of Plan Bay Area 2040.
- In spring 2018, ABAG and MTC initiated the planning process for the update to the 2017 plan: Plan Bay Area 2050.[3] It includes 35 strategic transportation, housing, economic, and environmental policy initiatives and/or investment strategies to sustainably guide the region to 2050. The impacts of the plan's proposed regional pattern of household and employment growth, transportation investments, and resilience investments will be assessed as part of a program-level environmental review.[4] The Notice of Preparation for the Draft EIR for Plan Bay Area 2050 (Regional Transportation Plan/Sustainable Communities Strategy for the Nine-County San Francisco Bay Area) was published on September 28, 2020, initiating a 30-day review period that ended on October 28, 2020. A public scoping meeting was held on October 15, 2020. The Draft EIR is anticipated to be released in spring 2021 with certification of the Final EIR in fall 2021.
- ABAG' Projections 2013 is an advisory policy document that includes population and employment forecasts to assist in the development of local and regional plans and policy documents. It received minor updates as part of Plan Bay Area 2040. The strategic framework for growth and investment through 2050 in Plan Bay Area 2050 is premised on the recently adopted 2020 Regional Growth Forecast. It identifies how much the Bay Area might grow between Plan Bay Area 2050's baseline year (2015) and its horizon year (2050), including population, jobs, households and associated housing units.

[3] Association of Bay Area Governments and Metropolitan Transportation Commission, Plan Bay Area 2050, *https://www.planbayarea.org/plan-bay-area-2050-1*, accessed December 3, 2020.

[4] Association of Bay Area Governments and Metropolitan Transportation Commission, Plan Bay Area 2050, Environmental Review Information, *https://www.planbayarea.org/2050-plan/eir-environmental-impact-report*, accessed December 3, 2020.

- The Bay Area Air Quality Management District's Bay Area 2017 Clean Air Plan updated the 2010 Clean Air Plan. In accordance with the requirements of the California Clean Air Act the clean air plan includes all feasible measures to reduce ozone and provides a control strategy to reduce ozone, particulate matter, air toxics, and greenhouse gas emissions throughout the region. The clean air plan also describes the status of local air quality and identifies emission control measures to be implemented.
- The Regional Water Quality Control Board's Water Quality Control Plan for the San Francisco Bay Basin is a master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the state, including surface waters and groundwater, and includes implementation programs to achieve water quality objectives.

The proposed project and project variants have been reviewed against these regional plans and policies. Due to the size, location, and infill nature of the proposed project or project variants, no obvious conflicts with any of the above plans or policies would occur.

# D. Summary of Environmental Effects

The proposed project or project variants could potentially affect the environmental topic(s) checked below. The following pages present a more detailed checklist and discussion of each environmental topic.

| | | |
|---|---|---|
| ☐ Land Use and Planning | ☐ Greenhouse Gas Emissions | ☒ Geology and Soils |
| ☐ Population and Housing | ☒ Wind | ☐ Hydrology and Water Quality |
| ☒ Cultural Resources | ☒ Shadow | ☐ Hazards and Hazardous Materials |
| ☒ Tribal Cultural Resources | ☐ Recreation | ☐ Mineral Resources |
| ☒ Transportation and Circulation | ☐ Utilities and Service Systems | ☐ Energy Resources |
| ☒ Noise | ☐ Public Services | ☐ Agriculture and Forestry Resources |
| ☒ Air Quality | ☐ Biological Resources | ☐ Wildfire |

### Approach to Analysis

This initial study examines the proposed project and project variants to identify potential effects on the environment. As stated in EIR Chapter 2, Project Description, pp. 2.49-2.54, the proposed project or project variants would be subject to the San Francisco Public Works' (public works') Standard Construction Measures (SCMs) because public works would have a role in oversight of the project construction contracts. The SCMs that would be incorporated into the proposed project or project variants are related to the following: seismic and geotechnical considerations, air quality, water quality, traffic, noise, hazardous materials, biological resources (bird protection, tree conservation, environmentally sensitive areas), visual and aesthetic considerations (project site), and cultural resources (archeological and historic architectural resources) (see EIR Chapter 2, Table 2.3: San Francisco Public Works Standard Construction Measures). EIR Appendix C, Standard Construction Measures for Public Works Projects and Draft Construction Contract Procedures, contains a copy of the SCMs and their attachments.

The following approach to analysis is used in this initial study to determine which topics require no additional environmental analysis beyond what is presented in this initial study and which topics require more detailed analysis in this EIR.

The conclusions regarding potential significant environmental effects are based upon field observations, staff and consultant experience and expertise on similar projects, and/or standard reference materials available at the San Francisco Planning Department (planning department), such as the Transportation Impact Analysis Guidelines for Environmental Review, the California Natural Diversity Database and maps published by the California Department of Fish and Wildlife, the California Division of Mines and Geology Mineral Resource Zone map and designations, and the California Department of Conservation's Farmland Mapping and Monitoring Program.

For each topic on the Initial Study Checklist, the evaluation has considered the impacts of the proposed project or project variants both individually and cumulatively. All topics on the Initial Study Checklist that have been checked "Less than Significant Impact with Mitigation Incorporated," "Less than Significant Impact," "No Impact," or "Not Applicable" indicate that, upon evaluation, staff has determined that the proposed project or project variants could not have a significant adverse environmental effect relating to that issue. A discussion is included for those issues checked "Less than Significant Impact with Mitigation Incorporated" and "Less than Significant Impact" and for most topics checked with "No Impact" or "Not Applicable."

All identified mitigation measures listed in Section G, Mitigation Measures, will be incorporated into the proposed project or project variants as conditions of approval.

Whenever an impact is identified as "Potentially Significant," that potential impact will be analyzed in the EIR. The "Potentially Significant" designation is used solely to identify topics that will be addressed in detail in the EIR for the proposed project and project variants and does not reflect a determination that the proposed project or project variants will result in a significant impact on these resources. These topics are being included in the EIR because additional analysis is needed to determine the potential effect with respect to those issues.

Significance criteria that do not apply to the proposed project, if any, are first identified, and neither this initial study nor this EIR provide further discussion of those criteria; for example, since the project site is not located within an airport land use plan, none of those criteria apply to this project.

**Cumulative Impact Analysis**

Two approaches to a cumulative impact analysis are provided in CEQA Guidelines section 15130(b)(1): (a) the analysis can be based on a list of cumulative projects producing closely related impacts that could combine with those of a proposed project; or (b) a summary of projections contained in a general plan or related planning document can be used to determine cumulative impacts. The analyses in this initial study employ a combination of the list-based approach and projections from the general plan or other related planning documents, as appropriate.

Cumulative projects that could potentially contribute to cumulative impacts on various resource topics are listed in EIR Table 3.A.1, Cumulative Projects, and shown on EIR Figure 3.A.1, Cumulative Projects, pp. 3.A.7-3.A.9. See EIR Chapter 3, Environmental Setting and Impacts, Section 3.A.

**Effects Found to Be Potentially Significant**

Based on this initial study, the topics for which there is the potential for project-specific effects to be significant or for which the analysis requires additional detail are analyzed in this focused EIR and are as follows:

- Cultural Resources (historic architectural resources only)
- Transportation and Circulation (all topics)
- Noise (all topics except aviation-related ones)
- Air Quality (all topics)
- Wind
- Shadow

**Effects Found Not to Be Significant**

The initial study determined that the potential individual and cumulative environmental effects on the following resource topics are not applicable, no impact, less than significant, or would be reduced to a less-than-significant level through recommended mitigation measures included in this initial study:

- Land Use and Planning (all topics)
- Population and Housing (all topics)
- Cultural Resources (archeological resources and human remains)
- Tribal Cultural Resources (all topics)
- Noise (aviation-related topics)
- Greenhouse Gas Emissions (all topics)
- Recreation (all topics)
- Utilities and Service Systems (all topics)
- Public Services (all topics)
- Biological Resources (all topics)
- Geology and Soils (all topics)
- Hydrology and Water Quality (all topics)
- Hazards and Hazardous Materials (all topics)
- Mineral Resources (all topics)
- Energy (all topics)
- Agriculture and Forestry Resources (all topics)
- Wildfire (all topics)

These topics are discussed with mitigation measures, where appropriate, in Section E of this initial study, and require no further environmental analysis in this EIR. As noted above, all identified mitigation measures listed in Section G of this initial study will be imposed on the proposed project or project variants as conditions of approval.

# E. Evaluation of Environmental Effects

# E.1 Land Use and Planning

| Topics: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact | Not Applicable |
|---|---|---|---|---|---|
| **1. LAND USE AND PLANNING. Would the project:** | | | | | |
| a) Physically divide an established community? | ☐ | ☐ | ☒ | ☐ | ☐ |
| b) Cause a significant physical environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? | ☐ | ☐ | ☒ | ☐ | ☐ |

## Summary of Land Use and Planning Comments Received in Response to the Notice of Preparation of an Environmental Impact Report and Notice of Public Scoping Meeting

Issues identified in public comments on the Notice of Preparation (NOP) of an Environmental Impact Report (EIR) and Notice of Public Scoping Meeting related to the proposed project's or project variants' physical environmental impacts were considered in preparing this analysis. Comments on the NOP received during the NOP scoping period and related to land use expressed concern with impacts on the existing character of the industrial and artist businesses in the Mission District and how these impacts will be alleviated (see EIR Chapter 1, Introduction, pp. 1.3-1.5).

Effects on existing neighborhood character are no longer considered in determining the significance of a land use and planning impact under CEQA. As described below in initial study Section E.2, Aesthetics, City decisionmakers can consider the proposed project's or project variants' architectural and urban design during their deliberations on the merits of the proposed project or its variants and as part of their actions to approve, modify, or disapprove the proposed project or project variants.

## Project-Specific Impacts

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

The existing 4.4-acre project site occupies the equivalent of roughly two typical city blocks within the generally rectangular street grid of the surrounding Mission neighborhood. It is bounded on three sides by sloping western, northern, and eastern edges that surround a sunken and fenced trolley bus storage yard on its western portion and a predominantly single-story maintenance and operations building on its eastern portion. Direct vehicular access to the site is provided along 17th Street (north side) via a gated entry west of Hampshire Street and along Mariposa Street (south side) via gated entries between Bryant and York streets. No direct pedestrian or vehicular access to the project site is available from the east or west. Potrero Yard has perimeter fencing and controlled entry to the bus parking lots and the maintenance and operations building, and pedestrians cannot walk through the site.

Implementation of the proposed project or project variants would result in the construction of a replacement transit facility with integrated residential and neighborhood-commercial uses within the established lot boundaries that would range in height from approximately 75 to 150 feet, as measured on the Mariposa Street elevation (excluding rooftop mechanical equipment enclosures and other rooftop appurtenances). The proposed project or project variants would increase the intensity of public land uses on the project site, as well as introduce a new mix of residential and neighborhood-commercial uses. However, the proposed project or project variants would not result in the construction of a physical barrier to neighborhood access or the removal of an existing means of access through alteration of the established street grid or permanent closure of any streets or sidewalks. Although the sidewalks and portions of streets adjacent to the project site (e.g., Hampshire and Mariposa streets) could be closed for periods of time during project construction, these closures would be temporary and occur only during construction.

For these reasons, the proposed project or project variants would have a less-than-significant effect with respect to physically dividing the surrounding community, and mitigation measures are not required. This topic will not be discussed in the EIR.

Impact LU-2: The proposed project or project variants would not conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, such that a significant environmental impact would result. (*Less than Significant*)

Applicable plans, policies, or regulations that govern development on the project site include the San Francisco General Plan (general plan), the Mission Area Plan (an area plan of the general plan), the planning code, the Better Streets Plan, and the Accountable Planning Initiative. Applicable regional plans include the Plan Bay Area 2040.[5] Initial study Section C, Compatibility with Existing Zoning and Plans, generally describes the proposed project's or project variants' potential inconsistencies with these plans, policies, or regulations.

The proposed project or project variants would not obviously be inconsistent with the general plan and the area plan objectives and policies and would not obviously or substantially conflict with any adopted environmental plan or policy. Refer to EIR Section 3.B, Cultural Resources, for a discussion of the project's impacts on historic architectural resources.

As proposed, the project would not conform to the existing P (Public Use) Zoning and 65-X Height and Bulk Districts. Although the expansion of transit uses on the project site would conform with the allowed uses under the existing P Zoning District, the introduction of new market-rate residential land uses would not. Principally permitted uses in the P Zoning District include residential land uses that are 100 percent affordable housing projects or educator housing projects; however, market-rate residential uses are not allowed as a principal or conditional use. The ground-floor neighborhood-commercial use could be principally permitted in the existing P Zoning District, which allows an accessory use that is not formula retail and that conforms to the principally permitted use of the nearest adjacent non-residential zoning district. The adjacent non-residential zoning districts are PDR-1-G, which allows

[5] Other regional plans, such as the 2017 Clean Air Plan and the Basin Plan concerning San Francisco Bay, address specific environmental resources and are discussed in initial study Section C, Compatibility with Existing Zoning and Plans.

many commercial uses as principally permitted. However, a neighborhood-commercial use (that is not below a publicly accessible parking garage) is not allowed as the principal use in a P Zoning District. Therefore, amendments to the general plan, the area plan, and the planning code and zoning map (adding a new special use district) would be required as part of the proposed project or project variants.

If the proposed project or one of the project variants is approved by the planning commission and board of supervisors, the special use district would establish the new allowable land uses, zoning, height and bulk controls, and incorporate design standards and guidelines for the project site. San Francisco Zoning Map sheets would subsequently be amended to show the current zoning designation (P [Public Use]) with amendments to the height and bulk controls and the new special use district. While the residential and neighborhood-commercial uses and heights over 65 feet proposed under the project are not permitted under existing zoning and height limits, if the rezoning and height limit reclassification are approved, the proposed uses and building heights (ranging from 75 feet to up to 150 feet) would be permitted on the site.

Conflicts with existing plans, policies, and regulations do not necessarily indicate a significant environmental land use impact under CEQA, unless the project substantially conflicts with a land use plan/policy that was adopted for the purpose of avoiding or mitigating environmental effects, such that a substantial adverse physical change in the environment related to land use would result. To the extent that such substantial physical environmental impacts may result from such conflicts, this initial study and EIR disclose and analyze these physical impacts under the relevant environmental topic sections.

Potential conflicts with applicable general plan objectives and policies, including those in the area plan, will continue to be analyzed and considered as planning department case reports and draft motions are prepared as part of the review of entitlement applications required for the proposed project, which are independent of environmental review under CEQA. The case reports, draft motions, and CEQA documents also will be considered by the decision makers during their deliberations on the merits of the proposed project or project variants and as part of their actions to approve, modify, or disapprove the proposed project or project variants. Therefore, the proposed project or project variants would have a less-than-significant impact with regard to conflicts with land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. Mitigation measures are not required. This topic will not be discussed in the EIR.

## Cumulative Impacts

### Impact C-LU-1: The proposed project or project variants, in combination with cumulative projects in the vicinity and larger planning area, would not result in significant cumulative land use impacts. (*Less than Significant*)

The cumulative context for land use effects is typically localized, within the immediate vicinity of the project site, or at the neighborhood level. Cumulative projects within an approximately 0.25-mile radius of the project site are listed in EIR Table 3.A.1 and shown on EIR Figure 3.A.1, pp. 3.A.7-3.A.9. From the larger planning area perspective, several area plans have identified the southeastern part of San Francisco as the location for substantial future housing and employment growth. These include the five Eastern Neighborhoods area plans (East SoMa, Western SoMa,

Showplace Square/Potrero Hill, Central Waterfront, and Mission, where the project site is located), the Mission Bay Redevelopment Plan, the Bayview Hunters Point Area Plan, and plans for the former Hunters Point Shipyard, Candlestick Point, Visitacion Valley, and Executive Park. The proposed project or project variants would add to future growth in housing and employment in the southeastern part of the City (see initial study Section E.3 Population and Housing, for further discussion).

The cumulative projects within the vicinity include development of new residential units, PDR space, institutional space, and commercial and retail space. The list of cumulative projects also identifies a transportation infrastructure project and a parking management plan that do not call for changes to existing land uses. Like the proposed project or project variants, the cumulative projects consist of the redevelopment of infill sites. When the closest cumulative projects at 1850 Bryant Street and at 2601 Mariposa Street are operating, this would result in the intensification of institutional, commercial, and PDR uses in the immediate project vicinity. Nearby cumulative projects such as 321 Florida Street, 2435-2455 16th Street, 681 Florida Street, and 2750 19th Street are mixed-use projects that would increase the supply of housing units and the amount of commercial and PDR space in the neighborhood.

As discussed above under Impact LU-1, and in EIR Chapter 2, Project Description, the proposed project or project variants would improve the immediate environment in accordance with the Better Streets Plan and Mission District Streetscape Plan including the network of bicycle lanes, sidewalks, curb ramps, and intersection crosswalks, all of which would enhance pedestrian and bicycle circulation. None of these changes would introduce physical divisions that would limit public access to the site or surrounding areas. Cumulative projects in the immediate vicinity and in the larger planning areas that cover much of the eastern part of the City would likewise enhance the circulation network in accordance with the Better Streets Plan. Therefore, none of these projects would divide an established community, nor would they combine to do so in a cumulative manner. Accordingly, cumulative effects related to physical division of established communities would be less than significant, and mitigation measures are not required. This topic will not be discussed in the EIR.

The proposed project or project variants would combine with cumulative projects in the immediate vicinity and with growth in the area plans listed above to continue the transformation of much of eastern San Francisco from a substantially industrial area to a mixed-use residential-commercial area. This transformation would be largely consistent with both adopted local and regional plans, including the plans noted above and Plan Bay Area 2040.

The conflicts of the proposed project or project variants with existing land use plans and policies adopted for the purpose of avoiding or mitigating an environmental effect, discussed above under Impact LU-2, would be less than significant. To the extent that substantial physical environmental impacts may result from such conflicts, the cumulative physical impacts are addressed and analyzed in this initial study and in EIR Chapter 3, Environmental Setting and Impacts.

Given the above, the proposed project or project variants, in combination with cumulative projects in the vicinity and larger planning area, would have less-than-significant cumulative land use and planning impacts. Mitigation measures are not required. This topic will not be discussed in the EIR.

# E.2 Aesthetics

| *Topics:* | *Potentially Significant Impact* | *Less Than Significant with Mitigation Incorporated* | *Less Than Significant Impact* | *No Impact* | *Not Applicable* |
|---|---|---|---|---|---|
| **2. AESTHETICS. Except as provided in Public Resources Code section 21099, would the project:** | | | | | |
| a) Have a substantial adverse effect on a scenic vista? | ☐ | ☐ | ☐ | ☐ | ☒ |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | ☐ | ☐ | ☐ | ☐ | ☒ |
| c) In non-urbanized 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 publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality? | ☐ | ☐ | ☐ | ☐ | ☒ |
| d) Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area? | ☐ | ☐ | ☐ | ☐ | ☒ |

## CEQA Section 21099

CEQA section 21099(d) – Modernization of Transportation Analysis for Transit Oriented Infill Projects, effective January 1, 2014, provides that "aesthetics and parking impacts of a residential, mixed-use residential, or employment center project on an infill site located within a transit priority area shall not be considered significant impacts on the environment." Accordingly, aesthetics and parking are not considered in determining if a project has the potential to result in significant environmental effects, provided the project meets the following three criteria:

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

The proposed project or project variants meet each of the above three criteria, and thus this initial study does not consider aesthetics and the adequacy of parking in determining the significance of project impacts under CEQA.[6]

[6] San Francisco Planning Department, Eligibility Checklist: CEQA Section 21099 – Modernization of Transportation Analysis, 2500 Mariposa St - SFMTA Potrero Yard Modernization Project, Case No. 2019-021884ENV, April 9, 2021.

CEQA section 21099(e) states that a Lead Agency maintains the authority to consider aesthetic impacts pursuant to local design review ordinances or other discretionary powers and that aesthetics impacts do not include impacts on historical or cultural resources. As such, there will be no change in the planning department's methodology related to design and historic review.

The planning department recognizes that the public and decision makers nonetheless may be interested in information pertaining to the aesthetic effects of a proposed project and may desire that such information be provided as part of the environmental review process. Therefore, some of the information that would have otherwise been provided in an aesthetics section of an initial study or EIR (such as "before" and "after" visual simulations) has been included in the EIR Chapter 2, Project Description (see pp. 2.29-2.32). However, this information is provided solely for informational purposes and is not used to determine the significance of the environmental impacts of the project, pursuant to CEQA.

In addition, CEQA section 21099(d)(2) states that a Lead Agency maintains the authority to consider aesthetic impacts pursuant to local design review ordinances or other discretionary powers and that aesthetics impacts do not include impacts on historical or cultural resources.

# E.3 Population and Housing

| *Topics:* | *Potentially Significant Impact* | *Less Than Significant with Mitigation Incorporated* | *Less Than Significant Impact* | *No Impact* | *Not Applicable* |
|---|---|---|---|---|---|
| **3. POPULATION AND HOUSING. Would the project:** | | | | | |
| a) 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) Displace substantial numbers of existing people or housing units necessitating the construction of replacement housing? | ☐ | ☐ | ☒ | ☐ | ☐ |

## Summary of Population and Housing Comments Received in Response to the Notice of Preparation of an EIR and Notice of Public Scoping Meeting

Issues identified in public comments on the NOP related to the proposed project's or project variants' physical environmental impacts were considered in preparing this analysis. Comments on the NOP received during the NOP scoping period and related to population and housing expressed concern with gentrification, housing costs, effects on the Muni workforce, and the jobs-housing balance (see EIR Chapter 1, Introduction, pp. 1.3-1.5).

## Project-Specific Impacts

Impact PH-1: The proposed project or project variants would not directly or indirectly induce substantial unplanned population growth in an area. (*Less than Significant*)

### Population Growth

The Association of Bay Area Governments (ABAG) prepares projections of employment and housing growth for the Bay Area. Plan Bay Area (approved in 2013) included ABAG's Projections 2013, which includes population, employment, and household growth by county for the nine-county Bay Area through 2040.[7] Plan Bay Area projects that much of the new housing growth will consist of infill development centered around business districts and transit corridors. To facilitate that, Plan Bay Area focuses growth and development in nearly 200 Priority Development Areas (PDAs). These existing neighborhoods are served by public transit and have been identified as appropriate for additional, compact development.[8] The project site is located within the Eastern Neighborhoods PDA in San Francisco.[9] The latest projections were prepared as part of Plan Bay Area 2040, adopted in 2017 by the Metropolitan Transportation Commission (MTC) and ABAG. In spring 2018, the MTC and ABAG initiated the planning process for the update to the 2017 plan: Plan Bay Area 2050. This update outlines the strategic framework for growth and investment through 2050 using the 2020 Regional Growth Forecast.[10] The impacts of the plan's proposed regional pattern of household and employment growth, transportation investments, and resilience investments will be assessed as part of a program-level environmental review.[11] The Draft EIR is anticipated to be released in spring 2021 with certification of the Final EIR in fall 2021.

According to the U.S. Census Bureau's 2019 American Community Survey,[12] the City and County of San Francisco had an estimated population of about 881,549 residents and 406,413 housing units. The growth projections prepared by ABAG for Plan Bay Area 2040 and updated in May 2019 for San Francisco County anticipate 483,695 households in 2040 (an increase of 137,885 households between 2010 and 2040), which is consistent with the housing element and other adopted plans. San Francisco's total population is anticipated to be

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7 Growth projections for Eastern Neighborhoods PDA included with ABAG Projections 2013. MTC and ABAG, Plan Bay Area Final Forecast of Jobs, Population and Housing, Appendix B: Housing Growth by Jurisdiction and PDA, July 2013, p. 58, *http://files.mtc.ca.gov/library/pub/28450.pdf*, accessed March 26, 2021.

8 Metropolitan Transportation Commission and Association of Bay Area Government (MTC and ABAG), Plan Bay Area 2040 - Final, July 26, 2017, p. 43, *http://files.mtc.ca.gov/library/pub/30060.pdf*, accessed May 18, 2021.

9 MTC and ABAG, Priority Development Areas (Plan Bay Area 2050), *https://opendata.mtc.ca.gov/datasets/MTC::priority-development-areas-plan-bay-area-2050/explore?location=37.765533%2C-122.433524%2C12.34*, accessed May 26, 2021.

10 The 2020 regional growth forecast identifies how much the Bay Area might grow between Plan Bay Area 2050's baseline year (2015) and its horizon year (2050), including population, jobs, households and associated housing units. The methodology for the 2020 Regional Growth Forecast was adopted in 2019 and Plan Bay Area 2050 is expected to be adopted in Summer 2021.

11 Association of Bay Area Governments and Metropolitan Transportation Commission, Plan Bay Area 2050, Environmental Review Information, *https://www.planbayarea.org/2050-plan/draft-environmental-impact-report*, accessed May 26, 2021.

12 U.S. Census Bureau, San Francisco County, California, Population and Housing Unit Estimates - QuickFacts San Francisco County, California, 2010-2019, *https://www.census.gov/quickfacts/sanfranciscocountycalifornia*, accessed May 7, 2021.

1,169,485 people in 2040 (an increase of 360,340 people between 2010 and 2040).[13] Plan Bay Area 2040 also projects 872,510 jobs in 2040 (an increase of 295,660 jobs between 2010 and 2040) in San Francisco. Compared to Plan Bay Area 2040, Plan Bay Area (2013) includes a more granular projection of population growth (i.e., at the neighborhood scale for purposes of designating PDAs). Plan Bay Area (2013) anticipated population and jobs growth in the Eastern Neighborhoods PDA, which is where the project site is located. Population growth projections for the Eastern Neighborhoods PDA anticipates 104,880 persons in 2040 (an increase of 31,060 persons over 2010),[14] 43,820 households in 2040 (an increase of 12,170 households over 2010), and 70,890 jobs in 2040 (an increase of 9,820 jobs over 2010).[15] As such, the proposed project or project variants would be implemented in an area where new population and jobs growth is both anticipated and encouraged.

Based on the average household size in the City and County of San Francisco of 2.36 people per household,[16] the addition of 575 new residential units would add approximately 1,357 residents to the citywide population (see Table 1: Existing and Proposed Population and Employment Estimates). This would represent a residential population increase of approximately 0.15 percent citywide over 2019. Additionally, this would represent between approximately 0.38 and 0.42 percent of the population and household growth expected in the City between 2010 and 2040 (360,340 persons and 137,855 households). The 575 additional housing units would also represent between approximately 4.3 and 4.7 percent of the projected population and household growth in the Eastern Neighborhoods PDA between 2010 and 2040 (31,060 persons and 12,170 households). Overall, the proposed project's or project variants' 575 residential units would represent a small fraction of the expected increase in population and households in the Eastern Neighborhoods PDA and citywide, as projected in Plan Bay Area (2013) and Plan Bay 2040. Therefore, the proposed project or project variants would not induce unplanned population growth; rather, it would provide housing units to accommodate the need for housing within the City.

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[13] MTC and ABAG, Projections 2040 by Jurisdiction (Curated), updated May 2019, *http://projections.planbayarea.org/*, accessed March 21, 2021. ABAG and MTC provide this dataset as part of *Projections 2040: A Companion to Play Bay Area 2040* (November 2018), *http://mtcmedia.s3.amazonaws.com/files/Projections_2040-ABAG-MTC-web.pdf*, accessed March 21, 2021.

[14] At the time Projections 2013 were developed the persons per household factor in San Francisco was 2.32.

[15] MTC and ABAG, Plan Bay Area Final Forecast of Jobs, Population and Housing, Appendix B: Housing Growth by Jurisdiction and PDA, July 2013, p. 58, *http://files.mtc.ca.gov/library/pub/28450.pdf*, accessed April 13, 2020.

[16] U.S. Census Bureau. San Francisco County, California, Families and Living Arrangements, Persons per households, 2015-2019, *https://www.census.gov/quickfacts/sanfranciscocountycalifornia*, accessed May 18, 2021.

**Table 1: Existing and Proposed Population and Employment Estimates**

| | Existing | Generation Rate Factors | Proposed Project Estimates |
|---|---|---|---|
| **Population** | | | |
| ***Total Residential Population*** | 0 | 2.36 persons/household | 1,357 residents |
| **Employment** | | | |
| Transit Facility | 400 | NA | 829 employees |
| Commercial | 0 | 350 gsf/employee | 95 employees |
| Residential | 0 | 1 employee/25 units | 23 employees |
| Open Space | 0 | 0.26 employees/acre | 1 employee |
| ***Total Employment*** | ***400*** | | ***948 Employees*** |

Notes:

U.S. Census Bureau, San Francisco County, California, Families and Living Arrangements, Persons per households, 2015-2019, *https://www.census.gov/quickfacts/sanfranciscocountycalifornia,* accessed May 18, 2021 (575 residential units × 2.36 persons/household = 1,357 residents).

San Francisco Planning Department, Transportation Impact Analysis Guidelines for Environmental Review, 2002, Appendix C, Table C-1. The estimated number of employees for commercial use assumes an average of 1 employee per 350 gross square feet of retail (33,000 square feet of retail ÷ 350 = 95 employees).

Employment numbers for residential and open space uses were determined using Table III.C-7, p. III.C-12, from the San Francisco Planning Department's Candlestick Point-Hunters Point Shipyard Phase II Development Plan EIR, November 2009.

For purposes of analysis, the increase in transit facility employees (from 400 to 829) is considered an increase in new employees. Therefore 429 transit facility employees (829 – 400 = 429) are considered new transit facility employees.

The increase in local population from the proposed project or project variants would not be considered substantial unplanned growth unless the physical changes that would be needed to accommodate project-related population growth would have adverse impacts on the physical environment. As evaluated under other environmental topics in this initial study, such as sections E.12 Recreation, E.13 Utilities and Service Systems, and E.14 Public Services, the proposed project or project variants would not require the expansion of roads, or other public infrastructure related to energy, water supply or wastewater/stormwater collection and conveyance system expansions. Additionally, the proposed project or project variants would not require an increase in public services that would cause additional offsite physical changes to the environment. Furthermore, the project is located in the Eastern Neighborhoods PDA and would conform with allowable densities under the planning code through the special use district development process. Infrastructure upgrades necessary to support the proposed project or project variants would be sized to meet only project needs and would not enable additional development. Since the project site is located on an infill site in an established urban neighborhood with available access to necessary infrastructure and services (transportation, utilities, schools, parks, hospitals, etc.), it would not indirectly induce substantial unplanned population growth in the project area.

The transit components of the proposed project or project variants would not directly induce population growth. As part of the SFMTA's Building Progress Program, the replacement transit facility is one of the outcomes from the agency's comprehensive outreach to SFMTA staff and stakeholders (see EIR Chapter 2, Project Description, pp. 2.14-2.17). The SFMTA's planning process is part of an integrated approach premised on transit fleet plan projections developed in coordination with ABAG's regional economic, land use, and population projections for 2040 and the San Francisco County Transportation Authority's travel demand model for the City.[17]

[17] SFMTA, 2014 SFMTA Transit Fleet Management Plan, March 2014, pp. 3-4.

Therefore, the proposed project's or project variants' estimated population growth and the replacement of the transit facility, which would accommodate a portion of Muni's planned transit fleet expansion, would not constitute substantial unplanned growth and no direct or indirect impacts related to population growth would occur.

**Employee-Generated Growth**

Employment growth, due to the regional distribution of commercial centers, is most appropriately viewed at the citywide scale. In December 2019, there were an estimated 777,100 jobs in San Francisco.[18] In the following analysis, the existing citywide employment is compared to projected employment growth between 2010 and 2040 planned for under ABAG and MTC's Plan Bay Area 2040 and Plan Bay Area (2013) and estimated in Projections 2040: A Companion to Plan Bay Area 2040.

***Construction***

Project construction is anticipated to occur over a period of three to four years, beginning in 2023. On any given day, there would be an average of 450 construction workers on the site.[19] It is anticipated that construction workers would commute from their residences, and workers who live outside of San Francisco would be expected to commute rather than permanently relocate from more distant locations, which is typical of the construction trades. Once the construction phase is complete, construction workers would typically seek employment at other job sites in the region. Thus, construction of the proposed project or project variants would not result in substantial unplanned employment-generated growth in the City or region.

***Operation***

Under existing conditions, there are approximately 400 employees associated with the transit facility (approximately 105 onsite employees and 295 trolley bus operators), with up to 158 trolley buses stored and maintained on the trolley bus storage yard. Up to 56 non-revenue vehicles are stored and maintained at Potrero Yard. The number of employees on the site varies throughout the day and night, because each subgroup has its own work hours and shift characteristics.

The proposed project or project variants would include expanded transit facility employment, new commercial employment, and new employment related to the residential and open space land uses, resulting in an estimated onsite employment increase of 548 new employees (from approximately 400 existing employees to 948 total employees) with 829 SFMTA employees and trolley bus operators and 119 employees associated with new commercial and residential uses in the joint development. The expanded transit use would accommodate 213 new buses, with three new bus wash areas, and result in an increase of approximately 429 transit employees on site (from approximately 400 existing employees to 829 total employees) (see Table 1, p. 22).

[18] Employment Development Department, State of California, Current Industry Employment Statistics (Industry Employment) Data, *https://www.labormarketinfo.edd.ca.gov/geography/sanfrancisco-county.html*, accessed May 14, 2021.

[19] Project specific construction information (including estimated number of construction workers) is provided in EIR Appendix G: Air Quality Calculation Details and Supporting Information.

The increase in SFMTA onsite employment of 429 employees would result from the consolidation of employees from other SFMTA offices and new hires. The number of future onsite SFMTA staff is projected to peak at about 180 from noon to 3 p.m. because the greatest number of bus operators are at the site between morning and evening rush hours. During the maximum work shift (9 a.m. – 5 p.m.), there would be approximately 130 to 180 staff on site. Additionally, based on the size of the proposed commercial space, open space, and the number of new residential dwelling units, new employment related to the joint development would be approximately 119 onsite employees. The 548 total new onsite employees represents a 137 percent increase in onsite employment and an increase of less than 0.01 percent over the total number of jobs in San Francisco in 2019.[20] Additionally, the 548 new jobs would represent 0.2 percent of the employment growth projected in Plan Bay Area between 2010 and 2040 for San Francisco, and 5.6 percent of the employment growth projected for the Eastern Neighborhoods PDA over the same period.[21]The proposed project would result in an increase in employees in the Eastern Neighborhoods PDA and citywide.

All the project variants would have the same net increase in employees as the proposed project except for the Employee and Family Support Variant. Under this variant, the proposed 33,000-gross-square-foot ground-floor commercial use would be reduced by 9,000 gross square feet to accommodate a childcare facility, which would include 25 employees. The reduced commercial space (at 24,000 gross square feet) would have 69 employees, 26 fewer commercial employees than the proposed project or other variants.[22] When combined with the 25 employees associated with the childcare use, the 829 employees associated with the transit uses, and the 24 employees associated with the residential use and open space (see Table 1, p. 22), this variant would yield a total employment of 947 employees (an increase of 547 over existing). Therefore, as this variant would support one less employee than the proposed project or other project variants, the analysis and conclusions for the proposed project or other variants would also be applicable to this project variant.

Employee-generated housing demand attributable to the proposed project or project variants would represent 3.4 percent in the Eastern Neighborhoods PDA and 0.3 percent citywide[23] of projected household growth between 2010 and 2040. Such a small increase in demand would not necessitate the construction of new housing and would not constitute substantial unplanned growth. In addition, new onsite employees are likely to be existing residents of the City or the region, and some of the employee-generated housing demand could potentially be

[20] With 548 new onsite employees and 777,100 total jobs in San Francisco in 2019, the new jobs attributable to the proposed project or project variants would be less than 0.01 percent of the total jobs (548 ÷ 777,100 = 0.007 percent).

[21] With 548 new onsite employees and a projected increase of 295,650 jobs in San Francisco between 2010 and 2040, the new jobs are 0.18 percent of the projected growth (548 ÷ 295,650 = 0.18 percent). With 548 new onsite employees and a projected increase of 9,820 jobs in the PDA between 2010 and 2040, the new jobs are 5.58 percent of the projected growth (548 ÷ 9,820 = 5.58 percent).

[22] San Francisco Planning Department, Transportation Impact Analysis Guidelines for Environmental Review, 2002, Appendix C, Table C-1. The estimated number of employees for commercial use assumes an average of 1 employee per 350 gross square feet of retail (24,000 square feet of retail ÷ 350 = 69 employees).

[23] With 548 new onsite employees and 1.32 workers per household (following ABAG's estimate of workers per household in *Projections 2013,* pp. 74 and 75), there would be an increase of approximately 416 households (548 ÷ 1.32), compared to the Plan Bay Area projected increase of 12,120 and 137,885 households in the PDA and San Francisco, respectively, between 2010 and 2040. Therefore, the 416 households would represent 3.4 percent of 12,170 and 0.3 percent of 137,885.

accommodated by housing developed under the proposed project or project variants. Therefore, the proposed project or project variant's employment-generated housing demand, from both new transit facility employees as well as the anticipated new commercial and residential employees (and childcare), would not constitute substantial unplanned employment growth or concentration of employment.

Given the above, the proposed project or project variant's estimated population and employment growth would not constitute substantial unplanned growth and no direct or indirect impacts related to such growth would occur. Mitigation measures are not required. This topic will not be discussed in the EIR.

Impact PH-2: The proposed project or project variants would not displace substantial numbers of existing people or housing units, necessitating the construction of replacement housing. (*Less than Significant*)

The project site is currently developed with the Potrero Yard transit facility, and there are no existing housing units on the project site. As such, no housing units would be displaced by the proposed project or project variants. During construction, the approximately 400 existing employees at the transit facility would continue to be employed by SFMTA and would be relocated to the Muni Metro East Facility, located approximately 1.5 miles southeast of the project site at 601 25th Street near the intersection of 3rd and Cesar Chavez streets, or other SFMTA facilities such as the 1399 Marin Street Facility or the Kirkland, Presidio and Woods bus yards. Therefore, implementation of the proposed project or project variants would have a less-than-significant impact related to the displacement of residents or employees requiring the construction of replacement housing. Thus, no physical environmental effects associated with the construction of replacement housing would occur as a result of implementation of the proposed project or project variants. Therefore, this impact would be less than significant, and mitigation measures are not required. This topic will not be discussed in the EIR.

## Cumulative Impacts

Impact C-PH-1: The proposed project or project variants, in combination with cumulative projects in the vicinity and larger geographic areas, would not result in significant cumulative population and housing impacts. (*Less than Significant*)

As discussed above, Plan Bay Area includes housing and employment projections anticipated to occur in San Francisco through 2040 and calls for focused growth and development within PDAs. Plan Bay Area projections provide the cumulative context for the population and housing analysis and are more recent than the population or employment growth projections included in the Eastern Neighborhoods Rezoning and Area Plans Final EIR,[24] which cover an area larger than the geographic extent of the Eastern Neighborhood PDA and do not project into 2040. ABAG's growth projections for San Francisco anticipate 483,695 households in 2040 (an increase of 137,885 households between 2010 and 2040) and 872,510 jobs in 2040 (an increase of 295,660 jobs between 2010 and 2040).[25] Projections for the Eastern Neighborhoods PDA also anticipate population and job growth through

[24] San Francisco Planning Department, Eastern Neighborhoods Rezoning and Area Plans Final EIR, August 7, 2008, pp. 33-34 and p. C&R-19, *https://sfplanning.org/eastern-neighborhoods-plans*, accessed March 26, 2021.

[25] MTC and ABAG, Projections 2040 by Jurisdiction (Curated), updated May 2019, *http://projections.planbayarea.org/*, accessed March 26, 2021.

2040 with 43,820 households in 2040 (an increase of 12,170 households over 2010) and 70,890 jobs in 2040 (an increase of 9,820 jobs over 2010).[26]

In 2019, San Francisco had an estimated population of 881,549 residents, an estimated 406,413 housing units, and approximately 777,100 jobs. The proposed project and cumulative projects would add an additional 992 housing units and 1,741 new jobs.[27,28] As discussed, cumulative household and employment growth is below the Plan Bay Area projections for planned growth in San Francisco and in the Eastern Neighborhoods PDA. Therefore, the proposed project or project variants, in combination with local and citywide development would not result in significant cumulative environmental effects associated with inducing unplanned population growth or displacing substantial numbers of people or housing, necessitating the construction of replacement housing elsewhere. For this reason, cumulative population and housing impacts would be less than significant.

Based on the above, the proposed project or project variants would contribute a small portion of the growth anticipated in the Eastern Neighborhoods PDA as well as for San Francisco as a whole under Plan Bay Area. The proposed project's or project variants' incremental contribution to this anticipated growth would not result in a significant individual or cumulative impact related to population and housing. Mitigation measures are not required. This topic will not be discussed in the EIR.

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[26] MTC and ABAG, Plan Bay Area Final Forecast of Jobs, Population and Housing, Appendix A: Employment Growth by Jurisdiction and PDA, and Appendix B: Housing Growth by Jurisdiction and PDA, July 2013, p. 50, *http://files.mtc.ca.gov/library/pub/28450.pdf*, accessed March 26, 2021.

[27] Employment numbers for residential uses were determined using Table III.C-7, p. III.C-12, from the San Francisco Planning Department, Candlestick Point-Hunters Point Shipyard Phase II Development Plan EIR, November 2009. With 1 employee per 25 units, and 417 net new units listed in EIR Table 3.A.1, on p. 3.7, 417 ÷ 25 = 17 new employees.

[28] Calculation of the number of new jobs follows San Francisco Planning Department, Transportation Impact Analysis Guidelines for Environmental Review, 2002, Appendix C, Table C-1. The estimated number of new non-residential employees, for the cumulative projects listed in EIR Table 3.A.1 assumes an average of 1 employee per 276 square feet of office use, 1 employee per 567 square feet of manufacturing/industrial, and 1 employee per 350 gross square feet of retail. Calculations are as follows: 210,240 square feet of office ÷ 276 = 762 employees; 221,615 square feet of PDR ÷ 567 = 391; and 7,500 square feet of retail ÷ 350 = 22 employees. Added together (762 + 391 + 22 + 17 [residential]), the total for cumulative projects jobs is 1,193. Proposed project jobs (548) + cumulative projects jobs (1,193) = 1,741 new jobs.

# E.4 Cultural Resources

| Topics: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact | Not Applicable |
|---|---|---|---|---|---|
| **4. CULTURAL RESOURCES. Would the project:** | | | | | |
| a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5, including those resources listed in article 10 or article 11 of the San Francisco *Planning Code*? | ☒ | ☐ | ☐ | ☐ | ☐ |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? | ☐ | ☐ | ☒ | ☐ | ☐ |
| c) Disturb any human remains, including those interred outside of formal cemeteries? | ☐ | ☐ | ☒ | ☐ | ☐ |

## Summary of Cultural Resources Comments Received in Response to the Notice of Preparation of an EIR and Notice of Public Scoping Meeting

Issues identified in public comments on the NOP related to the proposed project's or project variants' physical environmental impacts were considered in preparing this analysis. Comments on the NOP received during the NOP scoping period and related to cultural resources expressed concern with the impacts on the existing architectural character of the Muni facility and how retention and rehabilitation of the facility was considered in the project's design (see EIR Chapter 1, Introduction, pp. 1.3-1.5).

## Project-Specific Impacts

### Cultural Resources

#### *Historic Architectural Resources*

See EIR Section 3.B, Historic Architectural Resources, for the project-specific and cumulative analysis related to historic architectural resources.

#### *Archeological Resources and Human Remains*

As stated in Section D, Summary of Environmental Effects, p. 11, and EIR Chapter 2, Project Description, pp. 2.49-2.54, the proposed project or project variants would be subject to public works' SCMs. SCM #9, Cultural Resources, for archeological and historic (built environment) resources establishes procedures for public works projects with related ground disturbance that exceeds any previous depth of ground disturbance or proposed ground disturbance within previously undisturbed areas, in which cases additional screening will be carried out (see EIR Appendix C). SCM #9 includes an archeological assessment process for archeological resources that requires public works to coordinate with a planning department archeologist to complete the preliminary archeological assessment (see Attachment D in EIR Appendix C).

Based on the results of this assessment, the archeologist recommends whether and which of the following measures should be implemented during construction to avoid potential impacts to archeological resources:

- Public Works Archeological Measure I (Archeological Discovery);
- Public Works Archeological Measure II (Archeological Monitoring); and
- Public Works Archeological Measure III (Archeological Testing/Data Recovery).

Through implementation of applicable measures, significant impacts to identified and as-yet unidentified archeological resources and human remains would be avoided (see EIR Appendix C, Attachments F through H).

Impact CR-1: Construction excavation for the proposed project or project variants would not cause a substantial adverse change in the significance of an archeological resource because the requirements of San Francisco Public Works Standard Construction Measures are part of the project. (*Less than Significant*)

This section discusses archeological resources, both as historical resources according to CEQA Guidelines section 15064.5, as well as unique archeological resources as defined in CEQA section 21083.2(g). Determining the potential for encountering prehistoric or historical archeological resources includes relevant factors such as the location, depth, and amount of excavation proposed as well as any recorded information on known resources in the area.

To determine the potential for the proposed project or project variants to affect prehistoric or historical archeological resources, the planning department conducted a Preliminary Archeological Review (PAR) of the project site as required under public works' SCM #9 (see Archeological Assessment Process).[29] The following information is based on the PAR prepared by the planning department, which included review of the geotechnical report prepared by ARUP/RYCG.[30]

Construction of the proposed project or project variants would require excavation to a depth of up to 35 feet below present surface grade within the parcel across the whole site to accommodate one full basement level, foundation work, elevator pits, and lower-level work areas for SFMTA maintenance staff. In addition, pile driving would be required up to approximately 85 feet below grade to support the foundation on the western half of the site. Approximately 248,900 cubic yards of soil would be removed from the project site.

There are no prehistoric archeological sites recorded within the project area or within a 0.25-mile radius surrounding the project site. In San Francisco, the majority of recorded prehistoric archeological sites are within approximately 2,500 feet (less than 0.5 mile) of the historic bay margin. The project site is located approximately 1.2 miles from the San Francisco shoreline. Sensitivity for prehistoric archeological sites generally diminishes significantly in areas further than 0.5 mile from the shore but is increased along creeks and around water bodies more distant from the

[29] San Francisco Planning Department, Environmental Review Preliminary Archeological Review for Potrero Yard at 2500 Mariposa Street, Case File No. 2019-021884ENV, April 2, 2020 (includes confidential archaeological data, and thus is not subject to FOIA or Sunshine Ordinance).

[30] Arup/RYCG Joint Venture, Geotechnical Engineering Report, San Francisco Public Works, SFMTA Potrero Facility Rebuild, November 2019 (hereinafter referred to as "Geotechnical Report").

shore. GIS-based prehistoric sensitivity modeling[31], which takes into account proximity to other water sources and topography, as well as distance from the bay, ranks the western half of the project site as having high sensitivity for near-surface prehistoric resources, while the eastern half of the site is ranked as having moderate sensitivity.

Soils and bedrock underlying the project site would be disturbed by project grading and excavation. Based on geotechnical borehole data,[32] the soil profile varies significantly across the project site. The upper surface of the Colma Formation, which was formed too early in time to have the potential to include prehistoric resources except very near its surface, is present at depths of 5 to 14 feet below present parcel grade. The Colma Formation (and, variably, bedrock) at the site are overlain by clayey sand, and by an uppermost layer of fill or disturbed native soil that ranges from 1 to 6 feet thick, as observed on geotechnical cores. Weathered bedrock is present near the ground surface in the northeast corner of the site and dips steeply towards the southwest corner of the site (Mariposa and Bryant streets) where it is approximately 69 feet below ground surface. Based on this geomorphology, prehistoric archeological sensitivity varies in different parts of the site but extends generally from near the surface to no more than about 15 feet below the surface.

With respect to historic-period archeological resources, the PAR reports that the general project area was initially developed in the late 19th Century, with some residential development on the north and western portions of the site from the 1880s into the second decade of the 20th Century. The parcels remained in a semi-rural condition until construction of the original Potrero Trolley Coach Division maintenance/operations facility in 1915 on the eastern parcel. Expansions and/or modifications of this facility occurred in 1924-1925, 1940-1941, and again in 1948-1949. The 1940-1941 expansions/modifications included the purchase and occupation of the northern portion of the western parcel along 17th Street west of York Street by the San Francisco Municipal Railway (Muni) in anticipation of the shift away from street cars to trolley coaches and the need for additional space for trolley coach storage.[33] The 1948-1949 expansions/modifications resulted in structural changes to the maintenance/operations facility as part of the conversion from a streetcar facility to trolley coach facility, and the development of the bus storage yard on the western half of the site, which entailed the demolition of the existing structures near 17th Street and the Muni corporation yard on Mariposa Street.

Most significant with respect to the potential for the survival of historic-period archeological resources is that the natural topography of the site (a generally northeast-to-southwest trending slope) was altered substantially by the construction of the original transit facility in 1915. At that time, a bench approximately 20 feet deep was blasted out of the bedrock on the northeast portion of site to create a predominantly level site. This blasting/excavation undoubtedly destroyed any 19th-Century features and prehistoric deposits that may have been present on that

[31] Far Western Anthropological Research Group Citywide Archeological Sensitivity Model June 2019. Confidential document on file with the planning department's environmental planning division.

[32] Arup/RYCG Joint Venture, Geotechnical Engineering Report, San Francisco Public Works, SFMTA Potrero Facility Rebuild, November 2019.

[33] This property contained a large Victorian farmhouse and several rural outbuildings (see PAR, p. 7, and EIR Appendix D-1, HRE, p. 47).

portion of the project site. The potential for 19th-Century features and prehistoric deposits to survive is limited primarily to the western half of the site.

Although there are no recorded prehistoric sites in the project vicinity, prehistoric and late 19th-Century historic archeological deposits or features could be present and could be adversely affected by project excavation activities. Ground-disturbing construction activity within the western half and possibly southeastern portions of the project site could destroy or adversely affect the significance of prehistoric or historical archeological resources, should any such resources be present.

Accordingly, department staff archeologists have evaluated the project and have concluded that it is subject to each of the Public Works Archeological Measures. The Public Works Archeological Measures would be incorporated into the proposed project or project variants to avoid potentially significant impacts to significant prehistoric or historical archeological resources. Certain elements of SCM #9 have been completed such as the preliminary archeological review required under Public Works Archeological Measure III.A, listed below.

Public Works Archeological Measure I (Archeological Discovery)

The following requirements are applicable to:

- All projects that will include soil disturbance,
- Any discovery of a potential historical resource or of human remains, with or without an archeological monitor present.

Prior to ground disturbing activities:

A. Alert Sheet. Public Works shall, prior to any soils disturbing activities, distribute the Planning Department archeological resource "ALERT" sheet to each project contractor or vendor involved in project-related soils disturbing activities; ensure that each contractor circulates it to all field personnel; and provide the Environmental Review Officer (ERO) with a signed affidavit from each contractor confirming distribution to all field personnel.

Upon making a discovery:

B. Work Suspension. Should a potential archeological resource be encountered during project soils disturbing activity, with or without an archeological monitor present, the project Head Foreman shall immediately suspend soils-disturbing activities within 50 feet (15 meters) of the discovery in order to protect the find from further disturbance, and notify the Public Works Project Manager (PM) and/or environmental planning staff, who shall immediately notify the ERO for further consultation.

C. Qualified Archeologist. All archeological work conducted under this measure shall be performed by an archeologist who meets the Secretary of the Interior's Professional Qualifications Standards (36 CFR 61); consultants will be selected in consultation with the ERO and meeting the criteria or specialization required for the resource type as identified by the ERO in a manner consistent with Public Works on-call contracting requirements.

D. Assessment and Additional Measures. If the ERO determines that the discovery is a potential archeological/historical resource, the archeologist, in consultation with the ERO, shall document the find, evaluate based on available information whether it qualifies as a significant historical resource under the CEQA criteria, and provide recommendations for additional treatment as warranted. The ERO will consult with Public Works and the qualified archeologist on these recommendations and may require implementation of

additional measures as set forth below in Archeological Measures II and III, such as preparation and implementation of an Archeological Monitoring Plan, an Archeological Testing Plan, and/or an Archeological Data Recovery Plan, and including associated research designs, descendant group consultation, other reporting, curation, and public interpretation of results.

E. Report Reviews. All plans and reports prepared by an archeological consultant, as specified herein, shall be submitted first and directly to the ERO for review and comment with a copy to the Public Works and shall be considered draft reports subject to revision until final approval by the ERO.

F. Draft and Final Archeological Resources Reports. For projects in which a significant archeological resource is encountered and treated during project implementation (see Archeological Measures II and III), the archeological consultant shall submit a draft Final Archeological Resources Report (FARR) to the ERO that evaluates the historical significance of any discovered archeological resource and describes the archeological and historical research methods employed in the archeological testing/monitoring/data recovery program(s) undertaken, research questions addressed, and research results. Information that may put at risk any archeological resource shall be provided in a separate, removable insert within the draft final report.

Once approved by the ERO, copies of the FARR shall be distributed as follows: two copies to the applicable California Historic Information System Information Center (CHRIS), one copy to each descendant group involved in the project, and documentation to the San Francisco Planning Department of transmittal of the above copies. In addition, the Planning Department shall be provided one bound, one unbound and one unlocked, searchable PDF copy on CD of the FARR, which shall include copies of any formal site recordation forms (CA DPR 523 series) and/or National Register of Historic Places/California Register of Historical Resources nominations.

G. Other Reports. In instances of high public interest or interpretive value, the ERO may require different or additional final report content, format, and distribution than that presented above.

H. Human Remains, Associated or Unassociated Funerary Objects. Public Works shall ensure that human remains and associated or unassociated funerary objects discovered during any soils disturbing activity are treated in compliance with applicable State and federal laws. In the event of the discovery of potential human remains, the construction contractor shall ensure that construction activity within 50 feet of the find is halted and the Public Works PM, ERO, and the County Coroner are notified immediately. If the Coroner determines that the remains are of Native American origin, he/she will notify the California State Native American Heritage Commission. Subsequent consultation on and treatment of the remains shall be conducted consistent with Public Resources Code Section 5097.98 and CEQA Guidelines Section 15064.S(d), in consultation with the ERO.

I. Consultation with Descendant Communities. Consistent with AB 52 requirements, if requested, Public Works shall provide opportunities for Native American descendant groups to provide input during project planning for projects that may affect potential Tribal Cultural Resources. In addition, on discovery during construction of an archeological site associated with descendant Native Americans, the Overseas Chinese, or other descendant group, an appropriate representative of the descendant group shall be contacted by Public Works at the direction of the ERO. Public Works will offer this representative the opportunity to monitor archeological field investigations of the site and to consult with the ERO regarding the appropriate treatment and, if applicable, interpretation of the site and the recovered materials.

J. Construction Delays. Archeological monitoring and/or data recovery programs required by this measure may suspend construction of the project for up to a maximum of four weeks. At the direction of the ERO, the suspension of construction can be extended beyond four weeks only if this is the only feasible means to reduce potential effects on a significant archeological find to a less-than-significant level.

### Public Works Archeological Measure II (Archeological Monitoring)

A. Archeological Monitoring Plan (AMP). Where an archeological field investigation to identify expected buried or submerged resources cannot reasonably be carried out during project planning/ environmental review (for example, where definitive determination would require extensive street opening prior to construction), prior to any project-related soils--disturbing activities the qualified archeologist identified under Archeological Measure I.C. shall consult with Public Works and the ERO to develop an Archeological Monitoring Plan (AMP). The AMP which will be implemented in conjunction with soil-disturbing activities during construction. Preparation and implementation of an AMP also may be required based on the results of pre-construction archeological testing or upon a discovery during construction.

The AMP shall include the following elements, at minimum:

- Historical context and research design for assessment of resource types likely to be encountered;
- Project activities to be archeologically monitored and intensity of monitoring of each type and location of project construction activity; and
- Procedures for the documentation, significance and integrity assessment, treatment, interpretation and reporting of the types of resources likely to be encountered.

B. Reporting. Whether or not significant archeological resources are encountered, the archeological consultant shall submit a written report of the findings of the monitoring program to the ERO at the end of construction (See Archeological Measure I.E [Report Reviews] and I.F. [Draft and Final Archeological Research Report].)

C. Monitoring Authorities

- The archeological monitor will have the authority to halt construction activity at the location of a suspected resource for inspection, documentation, and assessment of the need for further measures as set forth in Archeological Measure III.
- The Archeological Monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis.
- The Archeological Monitor(s) shall be present on the project site according to a schedule identified in the AMP, subject to modification upon ERO concurrence, based on findings.

D. Testing/Data Recovery. In the event of a discovery during construction, if the ERO and archeological consultant determine that the discovery is a significant resource (that is, a resource that meets the eligibility criteria of the California Register of Historic Resources or qualifies as a unique archeological resource) that will be adversely affected (that is, where the project would result in loss of data potential) or that additional investigation is required to make this determination, all applicable elements of Archeological Measure III (Archeological Testing/Data Recovery) also shall be implemented.

### Public Works Archeological Measure III (Testing/Data Recovery)

The following provisions apply prior to or during construction when a significant archeological resource (as defined in Measure II.D) or an archeological resource of undetermined significance is expected to be present in the work area and the ERO, in consultation with the qualified archeologist, determines that an archeological field investigation is needed to determine: a) the presence of an archeological resource, b) whether it retains depositional integrity, and c) whether it qualifies as a legally significant resource under CEQA criteria. All archeological work under this Measure will be carried out by a qualified archeologist as identified in Archeological Measure I.C. Per Archeological Measure I.J, implementation of this measure shall not exceed four

weeks except at the direction of the ERO and only if this is the only feasible means to reduce potential effects on a significant archeological find to a less-than-significant level.

A. Archeological Testing Program. If an archeological investigation is required in order to verify resource location and/or assess the significance of the resource, the archeological consultant shall consult with the ERO to prepare and implement an Archeological Testing Plan (ATP) that identifies:

   - Key research questions and associated data needs,
   - Testing/ sampling methods, and
   - Testing locations.

   Results of testing shall be presented to the ERO in a written report following Measure I.E. If, based on the archeological testing program, the archeological consultant finds and the ERO concurs that significant archeological resources may be present, Measures III.B and/or III.C below will be implemented.

B. Treatment. If the project could adversely affect a significant (CRHR-eligible) archeological resource, preservation in place is the preferred manner of mitigating impacts, as detailed in CEQA Guidelines 15126.6(b) (3)(a) and (b).

   If preservation in place is determined to be infeasible, the Public Works at its discretion shall either:

   - Re-design the proposed project so as to reduce the adverse effect to a less-than-significant level through preservation in place or other feasible measures; and/or
   - For a resource important for its association with an important event or person, or which is of demonstrable public interest for both its scientific and historical values (e.g., a submerged ship), and where feasible, preserve the resource in place with appropriate documentation; or, if not feasible to preserve in place, systematically document and/or recover for interpretive use, at the discretion of the ERO; and/or
   - For an archeological resource significant primarily for its data potential, design and implement an archeological data recovery program, as detailed under Measure III.D.

C. Archeological Data Recovery Plan (ADRP). For resources for which the elected treatment is archeological data recovery, the archeological consultant, in consultation with the ERO, shall prepare and implement an ADRP. It will identify how the significant information the archeological resource is expected to contain will be recovered and preserved. Data recovery results will be reported in the Final Archeological Resources Report (FARR), as detailed in Measure I.F. The ADRP shall include the following elements:

   - Historic context and research design
   - Field methods and procedures, including sampling strategy
   - Archeological monitoring recommendations for ongoing construction
   - Cataloguing and laboratory analysis
   - Discard, deaccession, and curation policy
   - Interpretive program
   - Security measures

With the incorporation of the Public Works Archeological Measures in the proposed project or project variants, any archeological resource that may be present on the project site would be promptly discovered through archeological discovery provisions implemented during construction, as needed. If a significant resource is discovered that cannot

be preserved in place, archeological data recovery and the other elements of the Public Works Archeological Measures (archeological monitoring and archeological testing) would be implemented to preserve and realize the information potential of archeological resources. With the incorporation in the project of all the Public Works Archeological Measures, the proposed project or project variants would not cause a substantial adverse change to the significance of an archeological resource, because resources that may be present would be promptly discovered with minimal disturbance, and archeological monitoring and data recovery would be implemented to ensure that the significant information they represent is preserved. Therefore, this impact would be less than significant.

Impact CR-2: Construction excavation for the proposed project or project variants could disturb human remains, if such remains are present within the project site. (*Less than Significant*)

There is the potential for Native American or other human remains to be present at the project site, either in the context of an archeological site or in isolation. Excavations for the proposed project or project variants may disturb human remains, if such resources are present within the project site, which is a potentially significant impact.

Because the proposed project or project variants would include soil disturbance, Public Works Archeological Measure I (Archeological Discovery) would be implemented prior to ground disturbance, requiring the distribution of "ALERT" sheets to all construction contractors involved in soils-disturbing activities, return of signed affidavits by construction contractors, and work suspension when a potential archaeological resource is encountered. Pre-construction archeological testing under Public Works Archeological Measure III.A would seek to identify archeological sites, including those that might include human remains. Public Works Archeological Measure II and Public Works Archeological Measure I.H also include provisions for archeological monitoring during construction and for identifying and addressing human remains that might be encountered, respectively. In addition, applicable state and federal laws and the protocols regarding the treatment of human remains, including California Health and Safety Code Section 7050.5, require that if human remains are encountered, ground-disturbing work in the immediate area of the find must be halted, and arrangements made to protect the remains in place until they have been inspected by the County Coroner (in San Francisco, the Medical Examiner). If the Medical Examiner determines the remains to be Native American, the Medical Examiner will notify the Native American Heritage Commission, who will appoint an Ohlone Most Likely Descendant to inspect the remains and provide recommendation for subsequent treatment. If the remains cannot be permanently protected in place, treatment may include archeological recovery and analysis followed by respectful reburial, as set forth in Public Works Archeological Measure III.

Public Works Archeological Measure III, which would be incorporated in the proposed project or project variants, would ensure that human remains, if present within the project site, would be promptly identified and appropriately treated. Therefore, the potential impact on human remains would be less than significant.

## Cumulative Impacts

Impact C-CR-1: The proposed project or project variants, in combination with cumulative projects in the vicinity, would not result in significant cumulative impacts on as-yet unknown archeological resources or human remains. (*Less than Significant*)

Ground-disturbing activities for construction of the proposed project or project variants have the potential to disturb as-yet unknown archeological resources and human remains. However, impacts to archeological resources and human remains are site-specific; that is, an archeological resource or associated or unassociated human remains would be affected by cumulative projects only if they extend onto more than one project site or would be affected by more than one episode of development. Although cumulative projects could require various levels of excavation and grading, which may affect archeological resources or human remains, there are no adjacent projects that could combine with the proposed project or project variants. There are no known archeological resources or human remains on the project site that have been affected or would be affected by the cumulative projects. On this basis, the potential for significant cumulative impacts on archeological resources and/or human remains would be less than significant. Further, the proposed project or project variants would incorporate all Public Works Archeological Measures including Public Works Archeological Measure III, which would ensure that the proposed project or project variants would not contribute to any potentially significant cumulative impacts on archeological resources and/or human remains. As such, this topic will not be discussed in the EIR.

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# E.5 Tribal Cultural Resources

| *Topics:* | *Potentially Significant Impact* | *Less Than Significant with Mitigation Incorporated* | *Less Than Significant Impact* | *No Impact* | *Not Applicable* |
|---|---|---|---|---|---|
| **5. TRIBAL CULTURAL RESOURCES. Would the project:** | | | | | |
| a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: | | | | | |
| i. 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 | ☐ | ☒ | ☐ | ☐ | ☐ |
| ii. A resource determined by the lead agency in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in this subdivision, the lead agency shall consider the significance of the resource to a California Native American tribe. | ☐ | ☒ | ☐ | ☐ | ☐ |

## Summary of Tribal Cultural Resources Comments Received in Response to the Notice of Preparation of an EIR and Notice of Public Scoping Meeting

Issues identified in public comments on the NOP related to the proposed project's or project variants' physical environmental impacts were considered in preparing this analysis. Comments on the NOP received during the NOP scoping period and related to tribal cultural resources requested that all procedures required for evaluating the potential for discovering and then preserving potential resources be followed (see EIR Chapter 1, Introduction, pp. 1.3-1.5).

## Project-Specific Impacts

### Impact TCR-1: Construction of the proposed project or project variants could cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code section 21074. (*Less than Significant with Mitigation*)

CEQA section 21074.2 requires the CEQA lead agency to consider the effects of a project on tribal cultural resources. As defined in CEQA section 21074, tribal cultural resources include sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe and that are listed, or determined to be eligible for listing, on a national, state, or local register of historical resources. Pursuant to CEQA section 21080.3.1, on February 1, 2021, the planning department contacted Native American individuals and organizations identified

by the Native American Heritage Commission for the San Francisco area, providing a description of the project and requesting comments on the identification, presence, and significance of tribal cultural resources in the project vicinity. During the 30-day comment period, Native American tribes contacted in the planning department outreach process did not request consultation. On this basis there are no known tribal cultural resources on the project site.

However, as discussed above under Impact CR-1 in initial study Section E.4, Cultural Resources, preliminary archeological review by a planning staff archeologist determined that the project site is highly to moderately sensitive for prehistoric archeological resources and that unknown prehistoric archeological deposits could be present on the western portion of the site and could be encountered during project excavations.[34] In 2015, the planning department, after consultation with Ohlone Native American tribes, concluded that all Native American archeological sites in San Francisco should be considered to be potential tribal cultural resources. Preliminary archeological review determined that significant prehistoric archeological resources could be encountered during construction. Therefore, the proposed project or project variants also have the potential to encounter tribal cultural resources during excavation and other soil-disturbing construction activities. Any damage to tribal cultural resources would be considered a significant impact. Based on prior planning department Native American consultation under Assembly Bill 52, local Ohlones indicated that their preferred treatment of tribal cultural resources is preservation in place. If preservation in place is not feasible, then archeological data recovery should be carried out, and public interpretation of the find should be planned and implemented in consultation with the local tribes.

As discussed above, the proposed project or project variants would incorporate Public Works Archeological Measure III, which provides for both pre-construction archeological testing and archeological data recovery. The implementation of this measure would ensure that if a tribal cultural resource is present and cannot be preserved in place, appropriate archeological data recovery would be implemented. In addition, Mitigation Measure M-TCR-1: Tribal Cultural Resources Preservation and/or Interpretive Program would be implemented to reduce impacts to tribal cultural resources that could be encountered during construction activities to less-than-significant levels. This would be achieved by preserving the resource in place, if feasible (the Native American preference and the preferred treatment under CEQA) or, if not feasible, by implementing archeological data recovery and developing and implementing a public interpretive program in consultation with local Native American representatives, as detailed below.

Mitigation Measure M-TCR-1: Tribal Cultural Resources Preservation and/or Interpretive Program

During ground-disturbing activities that encounter archeological resources, if the Environmental Review Officer (ERO) determines that a significant archeological resource is present, and if in consultation with the affiliated Native American tribal representatives, the ERO determines that the resource constitutes a tribal cultural resource (TCR) and that the resource could be adversely affected by the proposed project, the proposed project shall be redesigned so as to avoid any adverse effect on the significant tribal cultural resource, if feasible.

If the ERO, in consultation with the project sponsor, determines that preservation-in-place of the TCR would be both feasible and effective, then the archeological consultant shall prepare an archeological resource

[34] San Francisco Planning Department, Environmental Review Preliminary Archeological Review for Potrero Yard at 2500 Mariposa Street, Case File No. 2019-021884ENV, April 2, 2020.

preservation plan (ARPP). Implementation of the approved ARPP by the archeological consultant shall be required when feasible.

If the ERO, in consultation with the affiliated Native American tribal representatives and the project sponsor, determines that preservation-in-place of the TCR is not a sufficient or feasible option, then the project sponsor shall implement an interpretive program of the TCR in consultation with affiliated Native American tribal representatives. An interpretive plan produced in consultation with affiliated Native American tribal representatives, at a minimum, and approved by the ERO, would be required to guide the interpretive program. The plan shall identify proposed locations for installations or displays, the proposed content and materials of those displays or installation, the producers or artists of the displays or installation, and a long-term maintenance program. The interpretive program may include artist installations, preferably by local Native American artists, oral histories with local Native Americans, artifacts displays and interpretation, and educational panels or other informational displays.

The inclusion of Public Works Archeological Measure III in the proposed project or project variants and implementation of Mitigation Measure M-TCR-1 would mitigate the potential for tribal cultural resources impacts of the proposed project or project variants to a less-than-significant level by preserving the resource or, if preservation in place proves infeasible, by preserving the significant information and values represented by the resource and, with Native American collaboration, interpreting it to the public. This topic will not be discussed in the EIR.

## Cumulative Impacts

### Impact C-TCR-1: The proposed project or project variants, in combination with cumulative projects in the vicinity, would not result in significant cumulative tribal cultural resources impacts. (*Less than Significant with Mitigation*)

As discussed above under Impact C-CR-1, p. 35, cumulative projects could require various levels of excavation and grading, which may affect prehistoric archeological resources, which are also considered potential tribal cultural resources. Project-related impacts on tribal cultural resources are site-specific and generally limited to a project's construction area. As noted, there are no adjacent cumulative projects with impacts that could combine with the impacts of the proposed project. There are no known tribal cultural resources on the project site and the proposed project or project variants would not affect any known resources that have been or would be affected by the cumulative projects. On this basis, the potential for significant cumulative impacts on tribal cultural resources would be less than significant. Further, inclusion of Public Works Archeological Measure III in the proposed project or project variants and implementation of Mitigation Measure M-TCR-1 would ensure that the proposed project or project variants would not contribute to any potentially significant cumulative impacts. Tribal cultural resources will not be discussed in the EIR.

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# E.6 Transportation and Circulation

| *Topics:* | *Potentially Significant Impact* | *Less Than Significant with Mitigation Incorporated* | *Less Than Significant Impact* | *No Impact* | *Not Applicable* |
|---|---|---|---|---|---|
| **6. TRANSPORTATION AND CIRCULATION. Would the project:** | | | | | |
| a) Involve construction that would require a substantially extended duration or intensive activity, the effects of which would create potentially hazardous conditions for people walking, bicycling, or driving, or public transit operations; or interfere with emergency access or accessibility for people walking or bicycling; or substantially delay public transit? | ☒ | ☐ | ☐ | ☐ | ☐ |
| b) Create potentially hazardous conditions for people walking, bicycling, or driving or public transit operations? | ☒ | ☐ | ☐ | ☐ | ☐ |
| c) Interfere with accessibility of people walking or bicycling to and from the project site, and adjoining areas, or result in inadequate emergency access? | ☒ | ☐ | ☐ | ☐ | ☐ |
| d) Substantially delay public transit? | ☒ | ☐ | ☐ | ☐ | ☐ |
| e) Cause substantial additional vehicle miles travelled or substantially induce additional automobile travel by increasing physical roadway capacity in congested areas (i.e., by adding new mixed-flow travel lanes) or by adding new roadways to the network? | ☒ | ☐ | ☐ | ☐ | ☐ |
| f) Result in a loading deficit, the secondary effects of which would create potentially hazardous conditions for people walking, bicycling, or driving; or substantially delay public transit? | ☒ | ☐ | ☐ | ☐ | ☐ |
| g) Result in a substantial vehicular parking deficit, the secondary effects of which would create potentially hazardous conditions for people walking, bicycling, or driving; or interfere with accessibility for people walking or bicycling or inadequate access for emergency vehicles; or substantially delay public transit? | ☒ | ☐ | ☐ | ☐ | ☐ |

EIR Section 3.C, Transportation and Circulation, provides a detailed analysis of construction and operational transportation and circulation impacts associated with the proposed project or project variants, including an explanation of initial study checklist topics E.6(a) through E.6(g) indicated above. The EIR includes a complete description of the existing transportation and circulation setting and regulatory framework, the approach to the analysis, an impact evaluation of the proposed project and its variants, cumulative impacts, and, if appropriate, identification of mitigation measures. The significance of the proposed project's or project variants' transportation and circulation effects is based on detailed travel demand estimates, intersection counts, and site observations.

On September 27, 2013, Governor Brown signed Senate Bill 743, which became effective on January 1, 2014, and amended CEQA by adding section 21099 regarding analysis of aesthetics and parking impacts for urban infill projects. Key provisions of CEQA section 21099(d) include changing the analysis of aesthetics and parking impacts for urban infill projects pursuant to CEQA. The proposed project or project variants would include an expanded transit use and a new mixed-use component (residential and commercial) that meets the definition of an employment center and is located on an infill site in a transit priority area, as discussed above under Section E.2, Aesthetics. Accordingly, parking impacts can no longer be considered in determining the significance of the proposed project's or project variants' physical environmental effects under CEQA. However, this EIR has also considered any secondary physical impacts associated with constrained parking supply (e.g., queuing by drivers waiting for scarce onsite parking spaces that may affect the public right-of-way) as applicable in the analyses.

# E.7 Noise

| *Topics:* | *Potentially Significant Impact* | *Less Than Significant with Mitigation Incorporated* | *Less Than Significant Impact* | *No Impact* | *Not Applicable* |
|---|---|---|---|---|---|
| **7. NOISE. Would the project:** | | | | | |
| a) 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? | ☒ | ☐ | ☐ | ☐ | ☐ |
| b) Generate excessive groundborne vibration or groundborne noise levels? | ☒ | ☐ | ☐ | ☐ | ☐ |
| c) For a project located within the vicinity of a private airstrip or an airport land use plan area, or, where such a plan has not been adopted, in an area within two miles of a public airport or public use airport, would the project expose people residing or working in the area to excessive noise levels? | ☐ | ☐ | ☐ | ☐ | ☒ |

EIR Section 3.D, Noise, provides a detailed analysis of construction and operation noise and vibration impacts associated with the proposed project or project variants, including explanation of initial study checklist topics E.7(a) and E.7(b) indicated above. The EIR includes a complete description of the existing noise setting and regulatory framework, the approach to the analysis, an impact evaluation of the proposed project and its variants, and cumulative impacts, and, if appropriate, identification of mitigation measures. The project site is not located within an area covered by an airport land use plan, within 2 miles of a public airport or a public use airport, or in the vicinity of a private airstrip. Therefore, initial study checklist topic E.7(c) is not applicable to the proposed project or project variants and is not addressed further. The significance of the proposed project's or project variants' noise effects is based on detailed noise measurements, modeling, and calculations.

# E.8 Air Quality

| Topics: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact | Not Applicable |
|---|---|---|---|---|---|
| **8. AIR QUALITY. Would the project:** | | | | | |
| a) Conflict with or obstruct implementation of the applicable air quality plan? | ☒ | ☐ | ☐ | ☐ | ☐ |
| b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal, state, or regional ambient air quality standard? | ☒ | ☐ | ☐ | ☐ | ☐ |
| c) Expose sensitive receptors to substantial pollutant concentrations? | ☒ | ☐ | ☐ | ☐ | ☐ |
| d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? | ☒ | ☐ | ☐ | ☐ | ☐ |

EIR Section 3.E, Air Quality, provides a detailed analysis of construction and operation air quality impacts associated with the proposed project or project variants, including explanation of initial study checklist topics E.8(a) through E.8(d) indicated above. The EIR includes a complete description of the existing air quality setting and regulatory framework, the approach to the analysis, an impact evaluation of the proposed project and its variants and cumulative impacts, and, if appropriate, identification of mitigation measures. The significance of the proposed project's or project variants' local and regional air quality effects is based on detailed air quality study modeling and a health risk assessment.

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# E.9 Greenhouse Gas Emissions

| Topics: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact | Not Applicable |
|---|---|---|---|---|---|
| **9. GREENHOUSE GAS EMISSIONS. Would the project:** | | | | | |
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | ☐ | ☐ | ☒ | ☐ | ☐ |
| b) Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases? | ☐ | ☐ | ☒ | ☐ | ☐ |

## Summary of Greenhouse Gas Emissions Comments Received in Response to the Notice of Preparation of an EIR and Notice of Public Scoping Meeting

Issues identified in public comments on the NOP related to the proposed project's or project variants' physical environmental impacts were considered in preparing this analysis. There were no comments on the NOP related to greenhouse gas emissions (see EIR Chapter 1, Introduction, pp. 1.3-1.5).

## Cumulative Impacts

Greenhouse gas (GHG) emissions and global climate change represent cumulative impacts. GHG emissions cumulatively contribute to the significant adverse environmental impacts of global climate change. No single project could generate enough GHG emissions to noticeably change the global average temperature; instead, the combination of GHG emissions from past, present, and future projects has contributed and will continue to contribute to global climate change and its associated environmental impacts.

The Bay Area Air Quality Management District (air district) has prepared guidelines and methodologies for analyzing GHGs. These guidelines are consistent with CEQA Guidelines sections 15064.4 and 15183.5, which address the analysis and determination of significant impacts from a proposed project's GHG emissions. CEQA Guidelines section 15064.4 allows lead agencies to rely on a qualitative analysis to describe GHG emissions resulting from a project. CEQA Guidelines section 15183.5 allows for public agencies to analyze and mitigate GHG emissions as part of a larger plan for the reduction of GHGs and describes the required contents of such a plan. Accordingly, San Francisco has prepared Strategies to Address Greenhouse Gas Emissions,[35] which presents a comprehensive assessment of policies, programs, and ordinances that collectively represent San Francisco's qualified GHG reduction strategy in compliance with the CEQA Guidelines. These GHG reduction actions have resulted in a 35 percent reduction in GHG emissions in 2018 compared to 1990 levels[36], exceeding the year 2020 reduction goals

[35] San Francisco Planning Department, 2017 Greenhouse Gas Reduction Strategy Update, July 2017, *https://sfplanning.org/project/greenhouse-gas-reduction-strategies#info*, accessed March 26, 2021.

[36] San Francisco Department of the Environment, San Francisco's Carbon Footprint, 2019, *https://sfenvironment.org/carbon-footprint*, accessed March 26, 2021.

outlined in the air district's Bay Area 2017 Clean Air Plan (2017 Clean Air Plan), Executive Order (EO) S-3-05, and Assembly Bill (AB) 32 (also known as the Global Warming Solutions Act).[37]

Given that the City has met the state and region's 2020 GHG reduction targets and San Francisco's GHG reduction goals are consistent with, or more aggressive than, the long-term goals established under EO S-3-05,[38] EO B-30-15,[39,40] and Senate Bill (SB) 32,[41,42] the City's GHG reduction goals are consistent with EO S-3-05, EO B-30-15, AB 32, SB 32, and the 2017 Clean Air Plan. Therefore, projects that would be consistent with the City's GHG reduction strategy would also be consistent with the GHG reduction goals, would not conflict with these plans or result in significant GHG emissions, and would therefore not exceed San Francisco's applicable GHG threshold of significance.

The following analysis of the proposed project's impact on climate change focuses on the proposed project's contribution to cumulatively significant GHG emissions. Because no individual project could emit GHGs at a level that could result in a significant impact on the global climate, this analysis is in a cumulative context, and this section does not include an individual project-specific impact statement.

The proposed project or project variants would include public transit (municipal) and private residential and commercial components. Because the project would be developed as a single integrated structure, as proposed, and the site would remain City-owned property through the SFMTA, the project would be a public project. Therefore, the project was reviewed against the San Francisco Planning Department's Compliance Checklist Table for

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37 Executive Order S-3-05, Assembly Bill 32, and the Bay Area 2017 Clean Air Plan (continuing the trajectory set in the 2010 Clean Air Plan) set a target of reducing GHG emissions to below 1990 levels by year 2020.

38 Office of the Governor, Executive Order S-3-05, June 1, 2005, *http://static1.squarespace.com/static/549885d4e4b0ba0bff5dc695/t/54d7f1e0e4b0f0798cee3010/1423438304744/California+Executive+Order+S-3-05+(June+2005).pdf*, accessed March 26, 2021. Executive Order S-3-05 sets forth a series of target dates by which statewide emissions of GHGs need to be progressively reduced, as follows: by 2010, reduce GHG emissions to 2000 levels (approximately 457 million metric tons of carbon dioxide equivalents [$MTCO_2E$]); by 2020, reduce emissions to 1990 levels (approximately 427 million $MTCO_2E$); and by 2050 reduce emissions to 80 percent below 1990 levels (approximately 85 million $MTCO_2E$). Because of the differential heat absorption potential of various GHGs, GHG emissions are frequently measured in "carbon dioxide-equivalents," which present a weighted average based on each gas's heat absorption (or "global warming") potential.

39 Office of the Governor, Executive Order B-30-15, April 29, 2015, *https://www.ca.gov/archive/gov39/2015/04/29/news18938/index.html*, accessed May 26, 2021. Executive Order B-30-15, issued on April 29, 2015, sets forth a target of reducing GHG emissions to 40 percent below 1990 levels by 2030 (estimated at 2.9 million $MTCO_2E$).

40 San Francisco's GHG reduction goals are codified in section 902 of the environment code and include: (i) by 2008, determine City GHG emissions for year 1990; (ii) by 2017, reduce GHG emissions by 25 percent below 1990 levels; (iii) by 2025, reduce GHG emissions by 40 percent below 1990 levels; and (iv) by 2050, reduce GHG emissions by 80 percent below 1990 levels.

41 Senate Bill 32 amends California Health and Safety Code Division 25.5 (also known as the California Global Warming Solutions Act of 2006) by adding section 38566, which directs that statewide greenhouse gas emissions to be reduced by 40 percent below 1990 levels by 2030.

42 Senate Bill 32 was paired with Assembly Bill 197, which would modify the structure of the State Air Resources Board; institute requirements for the disclosure of greenhouse gas emissions criteria pollutants, and toxic air contaminants; and establish requirements for the review and adoption of rules, regulations, and measures for the reduction of greenhouse gas emissions.

Greenhouse Gas Analysis (Table 2: Municipal Projects.)[43] The SFMTA and the private project co-sponsor (or lead developer) would be required to incorporate all regulations applicable to the proposed project or project variants.

Impact C-GG-1: The proposed project or project variants would generate greenhouse gas emissions, but not at levels that would result in a significant impact on the environment or conflict with any policy, plan, or regulation adopted for the purpose of reducing greenhouse gas emissions. (*Less than Significant*)

Individual projects contribute to the cumulative effects of climate change by directly or indirectly emitting GHGs during construction and operational phases. Direct operational emissions include GHG emissions from new vehicle trips and area sources. Indirect emissions include emissions from electricity providers; energy required to pump, treat, and convey water; and emissions associated with waste removal, disposal, and landfill operations.

The proposed project or project variants would increase the intensity of use at the site by replacing the existing transit facility (the maintenance and operations building and associated bus storage yard) with a new and expanded transit facility and integrated residential and commercial uses as part of a larger joint development. Therefore, operation of the proposed project or project variants would contribute to annual long-term increases in GHGs as a result of increased vehicle trips (mobile sources), energy use, water use, wastewater treatment, and solid waste disposal. Construction activities would also result in temporary increases in GHG emissions.

The proposed project or project variants would be subject to regulations adopted to reduce GHG emissions as identified in the City's GHG reduction strategy. As discussed below, compliance with the applicable regulations would reduce the proposed project's or project variants' GHG emissions related to construction activities, transportation, energy use, water use, waste disposal, and wood burning.

Compliance with the City's Commuter Benefits Ordinance, Healthy Air and Clean Transportation Ordinance, transportation management programs, bicycle parking requirements, the transportation sustainability fee, and car-sharing requirements would reduce the proposed project's or project variants' transportation-related emissions. These regulations reduce GHG emissions from single-occupancy vehicles by promoting the use of alternative transportation modes with zero or lower GHG emissions on a per capita basis. In addition to no parking for the residential uses, the proposed project or project variants would provide up to 12 car-share spaces. Furthermore, both the SFMTA and the private project co-sponsor would incorporate multiple transportation demand management (TDM) measures into their operations to reduce vehicle trips and encourage sustainable modes of transportation. TDM measures that would be incorporated into the design of the proposed project or project variants include affordable housing units (which exhibit fewer auto trips than market-rate housing), bicycle parking spaces, commuter shower and locker facilities for employees, and sidewalks and streetscapes that prioritize safety for pedestrians and bicyclists. Additional TDM measures could include delivery supportive amenities (such as

[43] San Francisco Planning Department, Compliance Checklist Greenhouse Gas Analysis and Greenhouse Gas Analysis for Municipal Development, Compliance Checklist Table for Greenhouse Gas Analysis: Table 2. Municipal Projects, Potrero Yard Modernization Project, 2500 Mariposa Street, May 24, 2021.

temporary storage for package delivery, which may reduce auto trips),[44] bicycle sharing stations, and other approaches to discourage the use of single-occupant private vehicles. These design features of the proposed project or project variants would contribute to reducing project-related GHG emissions and would further efforts to meet the City's targeted GHG reduction goals for 2025 and 2050.

The proposed project or project variants would be required to comply with the energy efficiency requirements of the City's Green Building Code, Stormwater Management Ordinance, and Commercial Water Conservation Ordinance, which would promote energy and water use efficiency, thereby reducing the proposed project's or project variants' energy-related GHG emissions.[45]

Additionally, the proposed project or project variants would be required to meet the renewable energy criteria of Title 24 of the California Code of Regulations and the San Francisco Green Building Code (green building code), including renewable energy generation or green roof installation. The proposed project or project variants would also address the SFMTA's Sustainability and Climate Action Program, which aims to reduce the transportation sector's contribution to GHG emissions, reduce transportation-related resource consumption and waste, and develop and improve San Francisco's multi-modal transportation system and broader transportation network.[46] To support these goals, Muni buses will transition to 100 percent electric by 2035.[47] Currently, Muni buses run on two renewable fuels, electricity from the Hetch Hetchy Dam and renewable diesel. Additionally, upgrades and modernization of the SFMTA's portfolio of buildings, including Potrero Yard, are part of a citywide effort to reduce water and energy consumption.[48] The proposed project or project variants would be consistent with the objectives in the SFMTA Sustainability and Climate Action Program, further reducing the proposed project's or project variants' energy-related GHG emissions.

As discussed in EIR Chapter 2, Project Description (p. 2.48), the proposed project or project variants would obtain Leadership in Energy and Environmental Design (LEED) Gold certification. LEED is a green building certification program that recognizes best-in-class building strategies and practices. To receive LEED certification, building projects must satisfy prerequisites and earn points to achieve different levels of certification. Examples of design requirements for LEED Gold certification are meeting insulation, roofing, and plumbing performance goals; restricting the use of toxic substances such as volatile organic compounds (VOCs) that are components in certain sealants and construction materials; and restricting the use of hydrochlorofluorocarbon refrigerants in heating,

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44 San Francisco Planning Department, Standards for the Transportation Demand Management Program: Appendix A TDM Measures, updated June 7, 2018, p. 35, *https://sfplanning.org/transportation-demand-management-program*, accessed May 28, 2021.

45 Compliance with water conservation measures reduce the energy (and GHG emissions) required to convey, pump, and treat water required for the project.

46 San Francisco Municipal Transportation Agency (SFMTA), Sustainability and Climate Action, *https://www.sfmta.com/sustainability-and-climate-action*, accessed March 26, 2021.

47 SFMTA, San Francisco Transportation Sector Climate Action Strategy, *https://www.sfmta.com/sites/default/files/reports-and-documents/2017/12/cap_draft_full_document-final1.pdf#page=28*, accessed March 26, 2021.

48 San Francisco Department of the Environment, San Francisco Climate Action Strategy – 2013 Update, October 2013, *https://sfenvironment.org/sites/default/files/fliers/files/sfe_cc_climateactionstrategyupdate2013.pdf*, pp. 12-22, accessed March 26, 2021.

ventilation, and air conditioning (HVAC) systems.[49] Other LEED Gold certification design strategies for the proposed project or project variants would include using water-efficient fixtures for indoor potable water-use reduction, meeting energy efficiency standards, and providing onsite renewable energy production or renewable energy credits.[50]

The proposed project or project variants would also incorporate non-potable rainwater and graywater storage and re-use systems; would develop the rooftop of the proposed new building with a mix of green roofs and/or solar photovoltaic systems; and would incorporate 12 car-share vehicle parking spaces (the project would not provide onsite residential or commercial parking spaces). The public transit component of the proposed project or project variants would include bus wash bays with dedicated water reclamation equipment to reduce potable water demand. The public transit component of the proposed project or project variants would serve an all-electric bus fleet (a mixture of trolley and battery-electric buses) when operations at Potrero Yard restart in 2026. Any existing non-revenue service vehicles that are gasoline- or diesel-powered would transition to all electric before or soon after project completion in 2026. Additionally, Muni's full revenue and non-revenue vehicle fleet would transition to all-electric by the year 2035, contributing to citywide GHG reductions.

For the private commercial and residential components of the proposed project or project variants, high-efficiency fixtures and appliances would be installed in the residential and commercial portions of the project to reduce potable water demand. These components of the proposed project or project variants would meet applicable City codes and regulations such as the water efficient irrigation, residential water conservation, and residential energy conservation ordinance, including Title 24 of the California Code of Regulations. Convenient recycling, composting, and trash areas would be provided for both the public transit and private commercial and residential development components of the proposed project or project variants. These design features would also contribute to reducing project-related GHG emissions and would further efforts to meet the City's targeted GHG reduction goals for 2025 and 2050.

The proposed project's or project variants' waste-related emissions would be reduced through compliance with the City's Recycling and Composting Ordinance, Construction and Demolition Debris Recovery Ordinance, Construction and Demolition Debris Recycling Requirements, Clean Construction Ordinance, and green building code requirements, including Title 24 of the California Code of Regulations. These regulations reduce the amount of materials sent to a landfill, reducing GHGs emitted by landfill operations. These regulations also promote reuse of materials, conserving their embodied energy[51] and reducing the energy required to produce new materials. The proposed project or project variants would use as much cut soil as fill soil in other areas of the site, minimizing or eliminating the need for either soil import or export. Cut and excavated material would be recycled and re-used

[49] HATCH, HDR, Sitelab, VerPlanck, and CHS, Potrero Yard: 3-Level Bus Facility Design Criteria Document, Version 2, June 2019, (hereinafter referred to as "Design Criteria Document, Version 2"), pp. 36, 46, 84, 88, and 104.

[50] San Francisco Planning Department, Compliance Checklist Greenhouse Gas Analysis and Greenhouse Gas Analysis for Municipal Development, Compliance Checklist Table for Greenhouse Gas Analysis: Table 2. Municipal Projects, Potrero Yard Modernization Project, 2500 Mariposa Street, May 24, 2021.

[51] Embodied energy is the total energy required for the extraction, processing, manufacture, and delivery of building materials to the building site.

onsite to the extent possible, which would further reduce the amount of materials sent to a landfill and associated hauling trips.

Compliance with the City's street tree planting requirements would serve to increase carbon sequestration,[52] as the proposed project or project variants would retain or replace existing street trees along Bryant, Hampshire, and 17th streets, and add street trees along Mariposa Street where there are currently no street trees adjacent to the project site. As discussed in EIR Chapter 2, Project Description (p. 2.47), the SFMTA and private project co-sponsor would develop the site with a landscaped open area along 17th Street and common open space on top of the 75-foot-tall transit facility component of the project. Each of these spaces would be planted with drought-tolerant species.

Other regulations such as the air district's wood-burning regulations would reduce emissions of black carbon. Regulations requiring low-emitting finishes would reduce VOCs.[53] Thus, the proposed project or project variants was determined to be consistent with San Francisco's GHG reduction strategy.[54]

The SFMTA and private project co-sponsor would be required to comply with these regulations, which have proven effective, as San Francisco's GHG emissions have measurably decreased compared to 1990 emissions levels, demonstrating that the City has met and exceeded EO S-3-05, AB 32, and the 2017 Clean Air Plan GHG reduction goals for the year 2020. Furthermore, the City has met its 2017 GHG reduction goal of reducing GHG emissions to 25 percent below 1990 levels by 2017. Other existing regulations, such as those implemented through AB 32, will continue to reduce a proposed project's contribution to climate change. In addition, San Francisco's local GHG reduction targets are consistent with the long-term GHG reduction goals of EO S-3-05, EO B-30-15, AB 32, SB 32, and the 2017 Clean Air Plan. As described in EIR Section 3.E, Air Quality, pp. 3.E.59-3.E.62, the proposed project or project variants would also comply with supporting measures at the regional level such as those in the 2017 Clean Air Plan related to transportation, buildings, energy, natural and working lands, waste, and water control measures (e.g., TR2-Trip Reduction Programs, TR15-Public Outreach and Education, BL1 Green Buildings, NW2 Urban Tree Planting, WA4-Recycling and Waste Reduction, and WR2-Support Water Conservation.)

In addition to regulations identified in the Compliance Checklist Table for Greenhouse Gas Analysis (Table 2: Municipal Projects),[55] the proposed project or project variants would be subject to all applicable local and state codes including the City's planning code, Environment Code, Health Code, green building code, Public Works Code, Administrative Code, Housing Code, and Public Utilities Commission Code requirements and Title 24 of the

[52] Carbon sequestration is the long-term storage of carbon in plants, soils, geologic formations, and the ocean.

[53] While not a GHG, volatile organic compounds are precursor pollutants that form ground level ozone. Increased ground level ozone is an anticipated effect of future global warming that would result in added health effects locally. Reducing volatile organic compound emissions would reduce the anticipated local effects of global warming.

[54] San Francisco Planning Department, Compliance Checklist Greenhouse Gas Analysis and Greenhouse Gas Analysis for Municipal Development, Compliance Checklist Table for Greenhouse Gas Analysis: Table 2. Municipal Projects, Potrero Yard Modernization Project, 2500 Mariposa Street, May 24, 2021.

[55] San Francisco Planning Department, Compliance Checklist Greenhouse Gas Analysis and Greenhouse Gas Analysis for Municipal Development, Compliance Checklist Table for Greenhouse Gas Analysis: Table 2. Municipal Projects, Potrero Yard Modernization Project, 2500 Mariposa Street, May 24, 2021.

California Code of Regulations and the California Health and Safety Code. The SFMTA will ensure that the Project Agreement between the City and the private project co-sponsor incorporates all applicable regulations, further reducing the amount of GHGs associated with the proposed project or project variants. Therefore, because the proposed project or project variants would be consistent with the City's GHG reduction strategy, it would also be consistent with the GHG reduction goals of EO S3-05, EO B-30-15, AB 32, SB 32, and the 2017 Clean Air Plan, would not conflict with these plans, and would therefore not exceed San Francisco's applicable GHG threshold of significance. As such, the proposed project or project variants would result in less-than-significant impacts with respect to GHG emissions, and mitigation measures are not required. This topic will not be discussed in the EIR.

# E.10 Wind

| *Topics:* | *Potentially Significant Impact* | *Less Than Significant with Mitigation Incorporated* | *Less Than Significant Impact* | *No Impact* | *Not Applicable* |
|---|---|---|---|---|---|
| **10. WIND. Would the project:** | | | | | |
| a) Create wind hazards in publicly accessible areas of substantial pedestrian use? | ☒ | ☐ | ☐ | ☐ | ☐ |

EIR Section 3.F, Wind, provides a detailed analysis of the pedestrian-level wind effects of the proposed building design on publicly accessible sidewalks and other areas of substantial pedestrian use, addressing initial study checklist topic E.10(a). The EIR includes a complete description of the existing environmental setting and regulatory framework, approach to the analysis, an impact evaluation of the proposed project and its variants and cumulative impacts, and, if appropriate, identification of mitigation measures. The significance of the proposed project or project variants' effects on pedestrian-level wind speeds is based on the results of wind tunnel testing (see EIR Appendix H).

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# E.11 Shadow

| Topics: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact | Not Applicable |
|---|---|---|---|---|---|
| **11. SHADOW. Would the project:** | | | | | |
| a) Create new shadow that substantially and adversely affects the use and enjoyment of publicly accessible open spaces? | ☒ | ☐ | ☐ | ☐ | ☐ |

EIR Section 3.G, Shadow, provides a detailed analysis of the shadow cast by the proposed building design on Franklin Square – the only publicly accessible park and open space that could be substantially and adversely affected by the proposed project. The EIR addresses initial study checklist topic E.11(a) and includes a complete description of the existing environmental setting and regulatory framework, the approach to the analysis, an impact evaluation of the proposed project and its variants and cumulative impacts, and, if appropriate, identification of mitigation measures. The significance of the proposed project or project variants' effects on the use and enjoyment of Franklin Square is based on detailed shadow modeling and park user surveys (see EIR Appendix I).

# E.12 Recreation

| Topics: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact | Not Applicable |
|---|---|---|---|---|---|
| **12. RECREATION. Would the project:** | | | | | |
| a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated? | ☐ | ☐ | ☒ | ☐ | ☐ |
| b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment? | ☐ | ☐ | ☒ | ☐ | ☐ |

## Summary of Recreation Comments Received in Response to the Notice of Preparation of an EIR and Notice of Public Scoping Meeting

Issues identified in public comments on the NOP related to the proposed project's or project variants' physical environmental impacts were considered in preparing this analysis. There were no comments on the NOP related to recreation (see EIR Chapter 1, Introduction, pp. 1.3-1.5).

### Existing Recreation Resources

The San Francisco Recreation and Parks Department administers more than 220 public parks, playgrounds, and open spaces throughout the City, as well as recreational facilities such as recreation centers, swimming pools, golf courses, and athletic fields, tennis courts, and basketball courts. Table 2: Recreation and Parks Department

Resources within 0.5 Mile of the Project Site lists recreational resources within 0.5 mile of the project site. Additionally, there is one off-street multi-use path within 0.5 mile of the project site that is identified in the Recreational and Open Space Element (ROSE) of the general plan. The path begins approximately 700 feet northwest of the project site at the intersection of 16th and Harrison streets and extends to the northeast along Treat Street. There are no state- or federally owned open spaces, privately owned public open spaces, or other existing open spaces within 0.5 mile of the project site. Regional open space attractions, including City, state, and federal properties, are located throughout the City and greater Bay Area and include Golden Gate Park, the Presidio, San Bruno Mountain, and Muir Woods.

Table 2: San Francisco Recreation and Parks Department Resources within 0.5 Mile of the Project Site

| Name | Size (acres) | Distance from Project Site (feet) | 2019 Maintenance Score NOTE A | Amenities NOTES A, B, C |
|---|---|---|---|---|
| Franklin Square | 5.18 NOTE D | 30 | 87.07 | Soccer field, picnic area, playground |
| In Chan Kaajal Park | 0.85 | 1,435 | 92.82 | Outdoor courts, picnic area, playground, restrooms, community garden |
| Jackson Playground | 4.95 | 2,285 | 88.71 | Baseball field, softball field, basketball court, tennis court, bocce ball, community room, playground, picnic area, restrooms |
| Jose Coronado Playground | 1.00 | 2,305 | 94.23 | Basketball court, tennis court, multi-sport court, community room, playground |
| McKinley Square | 2.90 | 1,410 | 89.06 | Dog play area, picnic area, playground, community garden |
| Mission Recreation Center | 0.70 | 1,840 | 96.07 | Youth soccer field, basketball court, boxing, gymnastics, handball, gym, weight room, ping pong, restrooms |
| Utah & 18th Mini Park | 0.15 | 650 | 96.58 | Petanque court |

*Notes*:

NOTE A San Francisco Office of the Controller, San Francisco Park Maintenance Scores (Park Lookup Tab), 2020. *https://sfgov.maps.arcgis.com/apps/MapSeries/index.html?appid=04937b03318a44ae81d90c240de4e3d1*, accessed May 5, 2021.

NOTE B San Francisco Recreation and Parks, Parks and Facilities, 2020, *https://sfrecpark.org/Facilities*, accessed May 5, 2021.

NOTE C San Francisco Recreation and Parks, Park Evaluations – Park Features List, 2020, *https://sfrecpark.org/DocumentCenter/Index/1462*, accessed May 5, 2021.

NOTE D Franklin Square functionally covers 5.18 acres, with 4.41 acres under San Francisco Recreation and Parks jurisdiction and 0.77 acre under public works jurisdiction.

*Source:* DataSF, Recreation and Parks Properties, April 30, 2020, *https://data.sfgov.org/Culture-and-Recreation/Recreation-and-Parks-Properties/wkn6-jn8k*, accessed May 5, 2021.

In 2003, voters approved an amendment to the City Charter mandating the evaluation of park maintenance at City parks. The maintenance score for each park is based on criteria that reflect the different facilities at each park. These scores reflect the park's performance in categories such as play areas, greenspace, hardscape, lawns, restrooms, and seating areas. In 2019, scores ranged from 77 to 99 percent, with an average score of 92 percent. Table 2 shows the maintenance score for parks within 0.5 mile of the project site. The average score of all parks within 0.5 mile is 92.08 percent, which signifies that the parks are clean, well maintained, and in good condition.

## Project-Specific Impacts

Impact RE-1: The proposed project or project variants would increase the use of existing neighborhood parks and other recreational facilities, but not to such an extent that substantial physical deterioration of the facilities would occur or be accelerated or that the construction of new or expanded facilities would be required. (*Less than Significant*)

As described in Section E.3, Population and Housing, implementation of the proposed project or project variants would add approximately 548 new employees and 1,357 new residents to the project site (see Table 1, p. 22). This would represent an approximately 137 percent increase over the existing 400 employees on the project site. The residential component would be new to the project site, and the new residents would represent an approximately 0.15 percent increase in residents citywide since 2019. It would comprise approximately 0.4 percent of the population growth expected in the City between 2010 and 2040; and 4.5 percent of the projected population growth in the Eastern Neighborhoods PDA over the same period. This residential and employment population growth would increase the demand for parks, open space, and recreation facilities in the project area and citywide over existing conditions.

The proposed project or project variants would provide approximately 91,000 square feet of common open space on the top of the proposed replacement transit facility. The common open space would include a large courtyard on the northern portion of the podium, and two interior courtyards on the southern portion of the podium. The overall amount of planning code-required open space for the proposed project or project variants would be finalized through the design and planning entitlement process. New residents would be able to use the common open space provided by the proposed project or project variants, as well as parks and recreational facilities in the vicinity of the project site and in the region. Some open space on the top of the replacement transit facility would be accessible to SFMTA and other building employees. In addition to the proposed common open space, future onsite residents and employees would also be able to use the seven recreational facilities identified above within 0.5 mile of the project site as well as regional open space attractions offered in the City, such as Golden Gate Park, the Presidio, Lake Merced, and McLaren Park, among others.

Increases in population resulting from the new residents, net new onsite employees, and the relocation of the SFMTA employees would not represent substantial growth. The resulting increase in recreation demand would not be in excess of that expected, provided for, or planned for in the project area and the City as a whole. Therefore, it is unlikely that the proposed project or project variants would substantially increase the demand for or use of nearby neighborhood parks and recreational facilities or citywide facilities to the extent that physical deterioration would occur or be accelerated or require the construction or expansion of recreational facilities that could result in significant physical environmental impacts. As such, the proposed project or project variants would have a less-than-significant impact on parks and recreational facilities, and mitigation measures are not required. This topic will not be discussed in the EIR.

## Cumulative Impacts

Impact C-RE-1: The proposed project or project variants, in combination with other cumulative projects, would not result in significant cumulative impacts on recreational facilities or resources. (*Less than Significant*)

As discussed in Section E.3, Population and Housing, San Francisco had a population of approximately 881,549 in 2019. According to ABAG's Projections 2040, San Francisco's population will increase to 1,169,485 in 2040 (approximately 360,340 more than the 2010 population of 809,145).[56] The 1,357 new residents generated by the proposed project would represent an approximately 0.15 percent increase over the 2019 population and would also account for approximately 0.4 percent of the residential growth expected in the City between 2010 and 2040.

Although the proposed project or project variants would represent a small portion of the projected growth for the City, overall citywide growth would generate demand for recreational resources as the population increases. The City has accounted for such growth as part of the ROSE of the San Francisco General Plan. In addition, San Francisco voters passed two bond measures, in 2008 and 2012, to fund the acquisition, planning, and renovation of the City's network of recreational resources to meet increased demand.

The geographic context for analysis of cumulative impacts to recreational resources consists of the Mission neighborhood and the recreational facilities within it. Cumulative projects identified within 0.25 mile of the project site are expected to increase the residential population of the area. The proposed project or project variants, in combination with the cumulative projects, would increase the use of parks and recreational facilities. As shown in Table 2, p. 50, there are seven well-maintained park and recreational facilities within 0.5 mile of the project site, as well as regional open space attractions offered in the City, and planned expansion of recreational facilities in the project area. The increase in demand for recreational facilities would be distributed among the existing parks, which would minimize impacts on any single park.

Further, the City has bond funding and a capital improvement plan in place to fund necessary repairs and upgrades at existing parks or to fund building new public open spaces. For example, Green Connections envisions a network of safe, functional, and attractive streets connecting people to parks, open spaces, and waterfronts. Routes on the Green Connections network are anticipated to calm traffic and prioritize pedestrian and bicycle travel. There are three proposed Green Connections routes within 0.5 mile of the proposed project: Mission to Peaks (adjacent to the project site on 17th Street), Folsom Street: Mission Creek to McLaren (approximately 1,400 feet to the west), and Noe Valley to Central Waterfront (approximately 2,350 feet to the south). Additionally, the ROSE identifies four areas within 0.5 mile of the proposed project in which the City aims to acquire and develop properties as open space sites. These four areas are to the northeast (generally between 15th and 7th streets), east (generally between Irwin and 16th streets), south (generally between 24th and 20th streets), and west (generally between Guerrero and Folsom streets) of the project site. The ROSE also identifies school yards and San Francisco Public Utilities Commission (SFPUC) sites for potential open space development, including five sites within 0.5 mile of the

[56] MTC and ABAG, Projections 2040 by Jurisdiction (Curated), updated May 2019, *http://projections.planbayarea.org/,* accessed March 26, 2021.

proposed project, to the east, south, and west. As with the proposed project or project variants, cumulative projects would also be required to comply with the applicable open space requirements of the planning code, thereby partially offsetting their demand on parks or open spaces. Therefore, the proposed project or project variants would not combine with cumulative projects in the project vicinity to create significant cumulative recreation impacts. Mitigation measures are not required. This topic will not be discussed in the EIR.

# E.13 Utilities and Service Systems

| *Topics:* | *Potentially Significant Impact* | *Less Than Significant with Mitigation Incorporated* | *Less Than Significant Impact* | *No Impact* | *Not Applicable* |
|---|---|---|---|---|---|
| **13. UTILITIES AND SERVICE SYSTEMS. Would the project:** | | | | | |
| a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant physical environmental effects? | ☐ | ☐ | ☒ | ☐ | ☐ |
| b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years? | ☐ | ☐ | ☒ | ☐ | ☐ |
| c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | ☐ | ☐ | ☒ | ☐ | ☐ |
| d) 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? | ☐ | ☐ | ☒ | ☐ | ☐ |
| e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste? | ☐ | ☐ | ☒ | ☐ | ☐ |

## Summary of Utilities and Service Systems Comments Received in Response to the Notice of Preparation of an EIR and Notice of Public Scoping Meeting

Issues identified in public comments on the NOP related to the proposed project's or project variants' physical environmental impacts were considered in preparing this analysis. There were no comments on the NOP related to utilities and service systems (see EIR Chapter 1, Introduction, pp. 1.3-1.5).

## Project-Specific Impacts

The project site is within an urban area that is served by water storage, treatment, and distribution facilities; combined wastewater and stormwater collection, storage, treatment, and disposal facilities; solid waste collection and disposal service systems; and electric power and telecommunications facilities. The site is not served by a

natural gas provider. Because the project variants would have the same construction and land use development programs as the proposed project, the conclusions for the proposed project related to Utilities and Service Systems would also be applicable to the project variants.

**Water, Wastewater, Stormwater, Power, Telecommunications**

Impact UT-1: The proposed project or project variants would not require or result in the relocation or construction of new or expanded water, wastewater, stormwater drainage, electric power, natural gas, or telecommunications facilities. (*Less than Significant*)

The SFPUC provides and operates water storage, treatment, and distribution facilities and combined wastewater/stormwater collection, storage, treatment, and disposal facilities for the City. Pacific Gas & Electric provides the electrical distribution network (in-street distribution circuits and substations at different locations in the City). The SFPUC provides electric power to customers through the Pacific Gas & Electric distribution infrastructure. The site is not served by a natural gas provider, although there is natural gas infrastructure in the immediate vicinity. Various private companies provide telecommunications services.

**Water Distribution**

The project site is supplied with water from the Hetch Hetchy Regional Water System and is currently served by a water distribution network operated by the SFPUC's City Distribution Division. Domestic water is provided by 8-inch-diameter water lines under 17th and Bryant streets and 12-inch-diameter water lines under Hampshire and Mariposa streets. Fire-fighting water supply lines are located under 17th Street (a 36-inch line), at the corner of Hampshire/Mariposa streets (a 6-inch line), and Bryant Street (an 8-inch line). An additional fire-fighting water supply line (part of the City's Emergency Firefighting Water System) is located under Bryant Street (a 12-inch line), with hydrants located on the southeast corner of Mariposa Street and the northeast corner of 17th Street.

Given the size of the water supply lines and the configuration of the existing water distribution network in the immediate project area, the system would likely have hydraulic capacity to serve the proposed project or project variants. The SFPUC's City Distribution Division would conduct a hydraulic analysis to confirm that the existing system could meet the proposed project's or project variants' water demands, including those for fire suppression system pressure and flow. If the analysis finds the existing infrastructure is inadequate to meet the projected demands, the SFPUC would modify the water conveyance system and upsize the water lines and appurtenances if necessary. Such modifications could require a limited amount of excavation, trenching, and soil movement, which would occur within public rights-of-way. These activities, if determined to be required, would be subject to public works' SCMs and would be similar to those associated with construction of the proposed project or project variants, but more limited. Ground-disturbing activities in immediately adjacent public rights-of-way would not result in significant environmental effects not already disclosed in this initial study and EIR for construction of the proposed project or project variants. Therefore, impacts related to requiring the construction of new or the expansion of existing water storage, treatment, and distribution facilities would be less than significant. Mitigation measures are not required. This topic will not be discussed in the EIR.

***Wastewater/Stormwater Collection***

The project site is served by San Francisco's combined sewer system, which collects, transports, and treats most of the wastewater and stormwater at one of the three SFPUC treatment facilities.[57] The combined collection and treatment system is sized to accommodate both daily wastewater flows and stormwater runoff. The current collection system design standard is to provide enough drainage capacity to contain a five-year storm (a storm with a 20 percent chance of occurring in one year).[58] Wastewater and stormwater generated by the proposed project would be treated at the Southeast Water Pollution Control Plant, which currently treats 60 million gallons per day (mgd) of wastewater and has the capacity to treat up to 250 mgd during a rainstorm.[59]

The surrounding wastewater/stormwater collection infrastructure consists of an 8-inch-diameter sewer line under 17th Street that transitions to 12 inches about 200 feet west of Hampshire Street and to 14 inches west of Bryant Street. It connects with an 8-inch-diameter sewer line under Bryant Street. Under Hampshire Street, a separate 8-inch sewer line starts south of the intersection and connects with the 18-inch-diameter sewer line under Mariposa Street, which connects with the 8-inch-diameter sewer line under Bryant Street. The proposed building would connect to the existing sewer lines along 17th, Hampshire, Mariposa, and Bryant streets via sewer laterals.

Under existing conditions, there are approximately 400 employees associated with the transit facility, including approximately 295 trolley bus operators. As described above in Impact PH-1 in Section E.3, Population and Housing, the proposed project or project variants would add approximately 548 net new employees and 1,357 new permanent residents. The proposed project would also increase the number of trolley buses maintained onsite to up to 213, with three new bus wash areas.

To analyze the proposed project or project variants' projected potable and non-potable water needs, the SFPUC prepared a water supply assessment (see Appendix A [attached to this initial study]).[60] The water supply assessment assumed that the expansion of the transit use would generate an increase in water demand to maintain at least 55 new trolley buses in the new bus wash areas as well as accommodate the introduction of up to 1,905 net new persons (1,357 residents and 548 employees) to the project site.

The proposed project or project variants would incrementally increase wastewater flows from the project site due to the expanded transit fleet and the introduction of new residents and employees to the site. The proposed project or project variants would incorporate water-conserving design features, such as low-flush toilets and urinals, required by Title 24 of the California Code of Regulations and the green building code, and would integrate a system

[57] San Francisco Public Utilities Commission (SFPUC), Sewer System Improvements Fact Sheet, *http://sfwater.org/modules/showdocument.aspx?documentid=10762*, accessed March 26, 2021.

[58] SFPUC, San Francisco Sewer System Master Plan, Summary Report, Final Draft, March 2010, p. 3-4, *http://www.gestaltgraphics.com/docs/SFSSSummary.pdf*, accessed March 26, 2021.

[59] SFPUC, SFPUC Sewer System Improvement Program, July 2019, *https://sfwater.org/modules/showdocument.aspx?documentid=14116*, accessed March 26, 2021.

[60] SFPUC, Water Supply Assessment for the Potrero Yard Modernization Project (2500 Mariposa Street), October 27, 2020.

to capture and treat graywater[61] from lavatories and showers for use as flush water and/or irrigation water. The proposed project or project variants would also recycle wash water in the bus yard and divert stormwater from the roof (the stormwater management system is described below). These elements would minimize the use of potable water and maximize the re-use of water onsite.[62]

The residential component of the proposed project or project variants would be designed to incorporate water-conserving measures, as required by California Building Standards Code (state building code) section 402.0(c); residential submetering, as required by California Water Code sections 537-537.5 as added in 2016 by Senate Bill 7; and a rainwater and graywater system, as required by San Francisco's Non-potable Water Ordinance. Compliance with these regulations would reduce the amount of potable water used for building functions and therefore reduce wastewater flows. The water supply assessment determined that compliance with the Non-potable Water Ordinance would offset approximately 37 percent of projected total water demand.[63]

As discussed above, the combined sewer system is sized to accommodate both daily wastewater flows and stormwater runoff from a five-year storm; therefore, wastewater is a small component of the design flow. Most of the flow during wet weather events comes from stormwater runoff.

With regards to stormwater collection, the existing project site is completely covered with impervious surfaces. The proposed project or project variants would not expand any existing impervious surfaces and therefore would not result in an increase in stormwater runoff.

The proposed project or project variants would be required to comply with the City's Stormwater Management Ordinance (as codified in San Francisco Public Works Code [public works code] section 147) and the 2016 Stormwater Management Requirements and Design Guidelines, which requires projects replacing more than 5,000 square feet of impervious surface to decrease the existing stormwater runoff flow rate and volume at the site by 25 percent for a two-year 24-hour design storm.[64]

The proposed project or project variants would be required to implement a stormwater control plan as approved by the SFPUC. The plan would include a maintenance agreement signed by the project sponsor for proper functioning of the stormwater controls. The proposed project or project variants would incorporate several stormwater-control features to meet these requirements:

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61 Graywater is "untreated wastewater that has not been contaminated by any toilet discharge, has not been affected by infectious, contaminated, or unhealthy bodily wastes, and does not present a threat from contamination by unhealthful processing, manufacturing, or operating wastes. Graywater includes, but is not limited to, wastewater from bathtubs, showers, bathroom sinks, clothes washing machines, and laundry tubs, but does not include wastewater from kitchen sinks or dishwashers." Source: San Francisco Health Code, Article 12C, Alternate Water Sources for Non-Potable Applications, *https://sfwater.org/Modules/ShowDocument.aspx?documentID=10422*, accessed May 28, 2021.

62 Design Criteria Document, Version 2, p. 37 and p. 71.

63 SFPUC, Water Supply Assessment for the Potrero Yard Modernization Project (2500 Mariposa Street), October 27, 2020, p. 13.

64 SFPUC, Stormwater Management Requirements and Design Guidelines, May 2016, *https://sfwater.org/Modules/ShowDocument.aspx?documentID=9026*, accessed March 26, 2021.

- An onsite stormwater holding tank would be installed to capture stormwater for use as a non-potable water supply for the bus wash water recycling system and irrigation.
- Streetscape improvements would include low-impact design measures, such as vegetated sidewalk planting areas and permeable pavement.
- Onsite rainwater and graywater capture systems would be installed to provide a non-potable water supply for use as flush water for bathroom facilities within the expanded transit facility and the proposed residential and commercial uses.[65]

These features would manage stormwater onsite and limit demand on the City's stormwater collection system and facilities.

Given that the proposed project or project variants would be designed to reduce the peak stormwater runoff flow rate and volume for a two-year, 24-hour design storm event by at least 25 percent over existing conditions, the existing downstream conveyance system for wastewater and stormwater would have sufficient capacity to accommodate the combined wastewater/stormwater flows generated by the proposed project.

The project sponsor team would be required to work with the SFPUC and the San Francisco Public Works' Engineering Hydraulics Division to determine if existing and adjacent wastewater and stormwater infrastructure could accommodate the flows. If the existing infrastructure is found to be inadequate to meet the proposed project's or project variants' demand, the SFPUC would modify the wastewater/stormwater conveyance system and upsize the existing sewer lines and appurtenances if necessary.[66] The construction of the larger conveyance facilities could require a limited amount of excavation, trenching, and soil movement, which would occur mostly within public rights-of-way. These activities would be subject to public works' SCMs and would be similar to those associated with construction of the proposed project or project variant, but more limited. Ground-disturbing activities in immediately adjacent public rights-of-way would not result in significant environmental effects not already disclosed in this initial study and EIR. Therefore, impacts related to requiring the construction of new or the expansion of existing combined wastewater and stormwater collection, storage, treatment, and disposal facilities would be less than significant, and mitigation measures are not required. This topic will not be discussed in the EIR.

***Electricity and Telecommunications***

The site is not served by a natural gas provider. The site is served by SFPUC electric power using the Pacific Gas & Electric distribution infrastructure (i.e., via the Potrero PP (A) 1119 Circuit – a 12-kilovolt circuit under the east portion of 17th Street and north portion of Hampshire Street).[67] Existing electrical usage at Potrero Yard indicates an average monthly demand of 18,853 kilowatt-hours (approximately 226 megawatt-hours of electricity per year).[68] Although

[65] Design Criteria Document, Version 2, pp. 37-38.

[66] City and County of San Francisco, E-mail communication between Rachel Alonso, Project Manager, Public Works, and Bimayendra Shrestha, P.E., Public Works, November 23, 2020.

[67] WSP USA, Inc, Zero Emission Facility and Fleet Transition Plan, Task 1: Existing Electrical Supply and Electrical Demand Baseline Assessment for the SFMTA, Final Draft, September 2020, p. 1 and pp. 30-36.

[68] WSP USA, Inc, Zero Emission Facility and Fleet Transition Plan, Task 1: Existing Electrical Supply and Electrical Demand Baseline Assessment for the SFMTA, Final Draft, September 2020, p. 34.

Potrero Yard does not use Pacific Gas & Electric power, the 226 megawatt-hours of electricity usage would represent less than 1.0 percent of the electricity consumed from PG&E in San Francisco in 2019 and distributed through their electrical network.[69]

The Potrero PP (A) 1119 circuit has an existing capacity of 8.2 megawatts. Pacific Gas & Electric estimates that the projected peak load of this circuit is 5.7 megawatts, leaving approximately 2.5 megawatts of available capacity.[70] This voltage is fed from the Potrero Substation along Illinois Street between 23rd and 24th streets, approximately 1.7 miles from the project site. The Potrero Substation has a distribution capacity of 74 megawatts. Additionally, there are two 12-kilovolt circuits and one 4.2-kilovolt circuit in the vicinity of the project site, as follows:

- the Potrero PP (A) 1101 Circuit – a 12-kilovolt circuit under Mariposa Street and the southern portion of Hampshire Street with an existing capacity of 9.5 megawatts and a projected peak load capacity of 7.8 megawatts, leaving approximately 1.7 megawatts of available capacity;
- the Mission (X) 1125 Circuit – a 12-kilovolt circuit under Bryant Street with an existing capacity of 12.2 megawatts and a projected peak load capacity of 7.5 megawatts, leaving approximately 4.7 megawatts of available capacity; and
- the SF E 0409 Circuit – a 4.2-kilovolt circuit under 17th Street with an existing capacity of 2.4 megawatts and a projected peak load capacity of 0.9 megawatts, leaving approximately 1.5 megawatts of available capacity.

The maximum capacity at a single nearby circuit is 4.7 megawatts. The average existing capacity of the nearby circuits is 2.61 megawatts, and the surround grid capacity is 10.4 megawatts.[71]

The proposed building (including the expanded transit facility) would be designed to meet LEED Gold Certification and would include an electrical distribution system for charging the future electric bus fleet and electric non-revenue vehicles.[72] Basic electrical systems requirements for the replacement transit facility would include battery-electric bus charging modules, conduit, and plug-in features; powering the mechanical systems and maintenance equipment; convenience receptacle power; interior and exterior lighting systems with controls; and an addressable fire alarm system to provide power to other utilization pieces of equipment throughout the facility.[73] Automatic load management and intelligent switchgear incorporated into the building design would function as backup to limit peak demand. Additionally, for service to the redeveloped site, electrical transformers and four electrical utility service interrupters would be required. The electrical utility service interrupters would be located on the building's

[69] In 2019, San Francisco customers purchased 5.6 million megawatt hours (MWh) of electricity from Pacific Gas & Electric. California Energy Commission, Electricity Consumption by County, *http://www.ecdms.energy.ca.gov/elecbycounty.aspx*, accessed May 28, 2021.

[70] Peak loads for the Potrero 1119 Circuit are monitored by Pacific Gas & Electric and published on their Integration Capacity Analysis map. The load increases in winter months and has peaks at 9 a.m. and 8 p.m. Usage is at its minimum between 2 a.m. and 6 a.m.

[71] WSP USA, Inc, Zero Emission Facility and Fleet Transition Plan, Task 1: Existing Electrical Supply and Electrical Demand Baseline Assessment for the SFMTA, Final Draft, September 2020, p. 60.

[72] The SFMTA Board of Directors has committed to an electric bus fleet by 2035.

[73] Design Criteria Document, Version 2, p. 48.

exterior along 17th Street.[74] If the electrical transformer vault is not located in the basement level it would be located in subsurface sidewalk areas with proper encroachment permits from public works.

The expanded transit facility and introduction of new residential and commercial uses would increase demand for electric power on the project site, with a projected peak demand of up to 12.8 megawatts to accommodate the transit facility (building) peak demand and the peak demand associated with existing buses and the new battery-electric bus fleet and non-revenue vehicles.[75] The projected peak demand for the residential and commercial components of the project would be 3 megawatts and 5 megawatts, respectively, for an overall peak demand of 20.8 megawatts for the proposed project or project variants.[76]

Energy efficiency requirements and features such as those described above generally seek to reduce energy use on a permanent and consistent basis through the installation of energy efficient technologies. However, it is also important to manage peak energy usage. This is achieved through load management, which focuses on either curtailing or shifting electrical demands away from peak demand periods when the power grid is under the most strain. Load management is important in maintaining a reliable electricity source and in avoiding the need to construct additional electricity, generation, or distribution facilities to meet peak demands that typically occur on the order of hours per year. As noted above, with load management the peak daily electricity demand of the proposed project or project variants would reach approximately 20.8 megawatts. Although Potrero Yard does not use Pacific Gas & Electric power, the proposed project's or project variants' contribution to peak energy demands would represent less than 0.09 percent of the peak load in Pacific Gas & Electric planning area.[77] The peak load would be able to be accommodated by existing electric power infrastructure at the Pacific Gas & Electric planning area level; however, localized improvement (i.e., on the project site and in the immediately adjacent public rights-of-way) would be required for interconnections.

The SFMTA is currently in the planning process for systemwide facility conversion to support battery-electric bus charging infrastructure as part of the SFMTA's zero emission facility and fleet transition plan. The design of the proposed building will incorporate battery-electric bus infrastructure. Power needs are anticipated to increase to accommodate the shift to a battery electric fleet; therefore, the SFMTA and the SFPUC, the site's power provider, are engaged in distribution capacity review to secure adequate services.[78] It is not anticipated that the increase in electric power demand for the expanded transit facility and its battery electric fleet and the joint development

[74] WSP USA, Inc, Zero Emission Facility and Fleet Transition Plan, Task 1: Existing Electrical Supply and Electrical Demand Baseline Assessment for the SFMTA, Final Draft, September 2020, p. 36.

[75] SFMTA, Potrero Yard Modernization Project, 2500 Mariposa Street, SF Public Utilities Commission (PUC) Wholesale Distribution Tariff (WDT) Application for Power Service, April 15, 2021.

[76] SFMTA, Potrero Yard Modernization Project, 2500 Mariposa Street, SF Public Utilities Commission (PUC) Wholesale Distribution Tariff (WDT) Application for Power Service, April 15, 2021.

[77] The projected peak electricity demand in the Pacific Gas & Electric planning area for the 2030 high demand case is 22,694 megawatts. (California Energy Commission, California Energy Demand, 2020-2030 Baseline Forecast - High Demand Case, Peak Demand, *https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2019-integrated-energy-policy-report/2019-iepr*, accessed May 28, 2021.

[78] WSP USA, Inc, Zero Emission Facility and Fleet Transition Plan, Task 2: Facilities Power Needs and Technology Assessment Report.

components (residential and commercial uses) would require the relocation or construction of new or expanded electrical power facilities.[79]

The SFPUC is currently implementing the Bay Corridor Transmission and Distribution project, a new 230-kilovolt and 12-kilovolt GIS Substation to be completed in 2021, which is fed from Pacific Gas & Electric's Potrero Substation and available to serve the project site. This new substation will feed an estimated total of 60 megawatts of existing and future loads through 12-kilovolt feeders.[80]

The proposed project or project variants' expanded transit use (including its shift to battery electric bus fleet) and new residential and commercial components together would result in an increase in the demand for electricity and telecommunications, but this increase would not exceed the capacity of utility service providers in the project area.[81] The proposed project or project variants would install new connections to the surrounding electrical and telecommunication networks to expand service to the proposed building. The environmental impacts associated with their construction would also be subject to public works' SCMs and are evaluated in this initial study and in the EIR.

Although implementation of the proposed project or project variants would expand the existing transit use and add new residents, employees, and visitors to the project site, the proposed project would not result in the construction or relocation of new or expanded water, wastewater, stormwater drainage, electric power, or telecommunications facilities, other than the installation of localized connections and upgrades to the existing systems. Therefore, this impact would be less than significant, and mitigation measures are not required. This topic will not be discussed in the EIR.

**Water Supply**

Impact UT-2: Sufficient water supplies are available to serve the proposed project or project variants and reasonably foreseeable future development in normal, dry, and multiple dry years, unless the Bay Delta Plan Amendment is implemented; in that event, the SFPUC may develop new or expanded water supply facilities to address shortfalls in single and multiple dry years, but this would occur with or without the proposed project or project variants. Impacts related to new or expanded water supply facilities cannot be identified at this time or implemented in the near term; instead, the SFPUC would address supply shortfalls through increased rationing, which could result in significant cumulative effects, but the proposed project or project variants would not make a considerable contribution to impacts from increased rationing. (*Less than Significant*)

In 2016, the SFPUC adopted its 2015 Urban Water Management Plan for the City and County of San Francisco (2015 Urban Water Management Plan), which estimates a projected retail supply of 89.9 mgd through the year 2040

[79] WSP USA, Inc, Zero Emission Facility and Fleet Transition Plan, Task 1: Existing Electrical Supply and Electrical Demand Baseline Assessment for the SFMTA, Final Draft, September 2020, p. 60.

[80] WSP USA, Inc, Zero Emission Facility and Fleet Transition Plan, Task 1: Existing Electrical Supply and Electrical Demand Baseline Assessment for the SFMTA, Final Draft, September 2020, p. 1.

[81] WSP USA, Inc, Zero Emission Facility and Fleet Transition Plan, Task 1: Existing Electrical Supply and Electrical Demand Baseline Assessment for the SFMTA, Final Draft, September 2020, p. 60.

from its regional water system and local water supply sources.[82] The SFPUC considers water users within San Francisco to be its retail customers, served separately from its wholesale customers in the neighboring counties of Santa Clara, Alameda, San Mateo, San Joaquin, and Tuolumne. In 2015, the SFPUC provided an average of approximately 65.6 mgd of water to its in-City retail customers.[83] The 2015 Urban Water Management Plan estimates that current and projected water supplies will meet future retail demand through 2040 under normal-year, single-dry-year, and multiple-dry-year conditions.[84] However, if a multiple-dry-year event occurs, the SFPUC will implement water use and supply reductions through its retail water shortage allocation plan to address potential shortages in the 2040 time horizon without development of additional supply.

The project site is currently served by the SFPUC's water delivery infrastructure. Development of the proposed project in accordance with the joint development concept, i.e., the expansion of the existing transit facility and the introduction of new residential and commercial uses, would not require expansion of the City's water supply system and would not adversely affect the City's water supply.

The determination that the SFPUC has sufficient water supply available to serve the proposed project and cumulative projects during normal, dry, and multiple dry years from existing entitlements and resources and would not require new or expanded water supply resources or entitlements is based on the SFPUC's project-specific water supply assessment, which considers implementation of the Bay Delta Plan Amendment.[85]

***Construction***

During construction, non-potable water would be required for dust control in accordance with public works code article 21 (and as otherwise permitted by law).[86] Non-potable water may not be used for demolition, pressure washing, or dust control through aerial spraying. The proposed project or project variants would use relatively small amounts of potable water for various site needs such as drinking water, onsite sanitary needs, and for cement mixing. This small increase in potable water demand would not be substantial. Thus, water use during construction would be short term and temporary and would cease with completion of construction. The SFPUC collects and transports water from various sources, e.g., the Hetch Hetchy regional water system described below, and manages the water supply such that short-term spikes in water use can be accommodated. Therefore, project construction would not require the SFPUC to develop new or expanded water supply resources or entitlements. This impact would be less than significant and will not be discussed in the EIR.

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82 SFPUC, 2015 Urban Water Management Plan for the City and County of San Francisco, June 2016 (hereinafter "2015 UWMP"), Section 7.5, Table 7-4, p. 7-10, *https://www.sfwater.org/modules/showdocument.aspx?documentid=9300*, accessed March 26, 2021.

83 SFPUC, 2015 UWMP, Section 4.1, Table 4-1, p. 4-5. This is the volume of water provided to San Francisco alone; note that there are a small number of additional retail customers outside of the City, including Groveland in the Sierra Nevada foothills.

84 SFPUC, 2015 UWMP, Section 7.5, pp. 7-9 to 7-11.

85 SFPUC, Water Supply Assessment for the Potrero Yard Modernization Project (2500 Mariposa Street), October 27, 2020.

86 San Francisco Public Works Code, Article 21: Restriction of Use of Potable Water for Soil Compaction and Dust Control Activities, *http://www.sfwater.org/modules/showdocument.aspx?documentid=1295*, accessed March 26, 2021.

As discussed under Impact UT-1 on pp. 54-57, the project site and immediate area is served by a well-developed water collection and distribution network and would continue to be supplied with water from SFPUC's Hetch Hetchy Regional Water System. As such, the proposed project or project variants would not require the construction of new water storage, treatment, and distribution facilities or the expansion of existing facilities. This impact would be less than significant and will not be discussed in the EIR.

***Operation***

During operation of the proposed project or project variants, the demand for potable water would increase to serve the expanded transit facility as well as the new residential and commercial uses. The following analysis evaluates: (1) whether sufficient water supplies are available to serve the proposed project and cumulative projects in normal, dry, and multiple dry years, and (2) whether the proposed project would require or result in the relocation or construction of new or expanded water supply facilities, the construction or relocation of which would have significant environmental impacts. To support this analysis, the SFPUC prepared a project-specific water supply assessment (Appendix A of the initial study). Background on the City's water system and the updated growth projections is provided below.

*Hetch Hetchy Regional Water System*

San Francisco's Hetch Hetchy regional water system, operated by the SFPUC, supplies water to approximately 2.7 million people. The system supplies both retail customers – primarily in San Francisco – and 27 wholesale customers in Alameda, Santa Clara, and San Mateo counties. The system supplies an average of 85 percent of its water from the Tuolumne River watershed, stored in Hetch Hetchy Reservoir in Yosemite National Park, and the remaining 15 percent from local surface waters in the Alameda and Peninsula watersheds. The split between these resources varies from year to year depending on hydrological conditions and operational circumstances. Separate from the regional water system, the SFPUC owns and operates an in-City distribution system that serves retail customers in San Francisco.

Approximately 97 percent of the San Francisco retail water is supplied by the SFPUC regional water system. The remaining 3 percent is supplied by local water supplies, including recycled water, groundwater, and non-potable water.[87]

*Water Supply Reliability and Drought Planning*

In 2008, the SFPUC adopted the Phased Water System Improvement Program (WSIP) to ensure the ability of the regional water system to meet certain levels of service goals for water quality, seismic reliability, delivery reliability, and water supply through 2018.[88] The SFPUC's level of service goals for regional water supply are to meet customer water needs in non-drought and drought periods and to meet dry-year delivery needs while limiting rationing to a

[87] SFPUC, 2015 UWMP, Section 6.2, p. 6-10.

[88] On December 11, 2018, the SFPUC Commission extended the timing of the WSIP water supply decision through 2028 in its Resolution No. 18-0212.

maximum of 20 percent system-wide. In approving the WSIP, the SFPUC established a supply limitation of up to 265 mgd to be delivered from its water supply resources in the Tuolumne, Alameda, and Peninsula watersheds in years with normal (average) precipitation.[89] The SFPUC's water supply agreement with its wholesale customers provides that approximately two-thirds of this total (up to 184 mgd) is available to wholesale purchasers and the remaining one-third (up to 81 mgd) is available to retail customers. The total amount of water the SFPUC can deliver to retail and wholesale customers in any one year depends on several factors, including the amount of water that is available from natural runoff, the amount of water in reservoir storage, and the amount of that water that must be released from the system for purposes other than customer deliveries (e.g., required instream flow releases below reservoirs). A "normal year" is based on historical hydrological conditions that allow the reservoirs to be filled by rainfall and snowmelt, allowing full deliveries to customers; similarly, a "wet year" and a "dry year" are based on historical hydrological conditions with above and below "normal" rainfall and snowmelt, respectively.

For planning purposes, the SFPUC uses a hypothetical drought that is more severe than what has historically been experienced. This drought sequence is referred to as the "design drought" and serves as the basis for planning and modeling of future scenarios. The design drought sequence used by the SFPUC for water supply reliability planning is an 8.5-year period that combines the following elements to represent a drought sequence more severe than historical conditions:

- Historical Hydrology – a six-year sequence of hydrology from the historical drought that occurred from July 1986 to June 1992
- Prospective Drought – a 2.5-year period which includes the hydrology from the 1976-1977 drought
- System Recovery Period – The last six months of the design drought are the beginning of the system recovery period. The precipitation begins in the fall, and by approximately the month of December, inflow to reservoirs exceeds customer demands and SFPUC system storage begins to recover.

While the most recent drought (2012 through 2016) included some of the driest years on record for the SFPUC's watersheds, the design drought still represents a more severe drought in duration and overall water supply deficit. Based on historical records of hydrology and reservoir inflow from 1920 to 2017, current delivery and flow obligations, and fully implemented infrastructure under the WSIP, normal or wet years occurred 85 out of 97 years. This translates into roughly nine normal or wet years out of every 10 years. Conversely, system-wide rationing is required roughly one out of every 10 years. The frequency of dry years is expected to increase as climate change intensifies, potentially requiring greater levels of rationing, which may change the amount or frequency of rationing required. The exact level of rationing that the SFPUC will impose is not ascertainable at this time because the effect that climate change has on the SFPUC water supply and delivery systems is unknown.

[89] SFPUC Resolution No. 08-200, Adoption of the Water System Improvement Program Phased WSIP Variant, October 30, 2008.

*2015 Urban Water Management Plan*

The California Urban Water Management Planning Act[90] requires urban water supply agencies to prepare *urban water management plans* to plan for the long-term reliability, conservation, and efficient use of California's water supplies to meet existing and future demands. The act requires water suppliers to update their plans every five years based on projected growth for at least the next 20 years.

Accordingly, the current urban water management plan for the City and County of San Francisco is the 2015 Urban Water Management Plan update.[91] The 2015 plan update presents information on the SFPUC's retail and wholesale service areas, the regional water supply system and other water supply systems operated by the SFPUC, system supplies and demands, water supply reliability, Water Conservation Act of 2009 compliance, water shortage contingency planning, and water demand management.

The water demand projections in the 2015 plan reflect anticipated population and employment growth, socioeconomic factors, and the latest conservation forecasts. For San Francisco, housing and employment growth projections are based on the San Francisco Planning Department's Land Use Allocation 2012,[92] which in turn is based on the Association of Bay Area Governments' growth projections through 2040.[93] The 2015 plan presents water demand projections in five-year increments over a 25-year planning horizon through 2040. The SFPUC will prepare the next update – the 2020 Urban Water Management Plan update – for adoption in 2021. The 2020 update will consider updated population and employment projections and anticipated water supply and demand through 2045.

The 2015 plan compares anticipated water supplies to projected demand through 2040 for normal, single-dry, and multiple-dry water years. Retail water supplies are comprised of regional water system supply, groundwater, recycled water, and non-potable water. Under normal hydrologic conditions, the total retail supply is projected to increase from 70.1 mgd in 2015 to 89.9 mgd in 2040. According to the 2015 plan, available and anticipated future water supplies would fully meet projected demand in San Francisco through 2040 during normal years.

On December 11, 2018, by Resolution No. 18-0212, the SFPUC amended its 2009 Water Supply Agreement between the SFPUC and its wholesale customers. That amendment revised the Tier 1 allocation in the *Water Supply Allocation Plan* to require a minimum reduction of 5 percent of the regional water system supply for San Francisco retail customers whenever system-wide reductions are required due to dry-year supply shortages.[94] When accounting for the requirements of this recently amended agreement, existing and planned supplies would meet projected retail water system demands in all years except for an approximately 3.6 to 6.4 mgd or 5.0 to 7.4 percent shortfall during dry years through the year 2040. The 6.8 percent shortfall is expected to occur during years seven and eight of the 8.5-year design drought based on 2040 demand levels. This relatively small shortfall is primarily due to

[90] California Water Code, division 6, part 2.6, sections 10610 through 10656, as last amended in 2015.
[91] SFPUC, 2015 UWMP.
[92] SFPUC, 2015 UWMP, Appendix E, Table 5, p. 21.
[93] Association of Bay Area Governments, Jobs-Housing Connection Strategy, May 2012.
[94] SFPUC, Resolution No. 18-0212, December 11, 2018.

implementation of the amended 2009 water supply agreement. In such an event, the SFPUC would implement the SFPUC's Retail Water Shortage Allocation Plan and could manage this relatively small shortfall by prohibiting certain discretionary outdoor water uses and/or calling for voluntary rationing among all retail customers. Based on experience in past droughts, retail customers could reduce water use to meet this projected level of shortfall. The required level of rationing is well below the SFPUC's regional water supply level of service goal of limiting rationing to no more than 20 percent on a system-wide basis.

Based on the 2015 Urban Water Management Plan, as modified by the 2018 amendment to the 2009 Water Supply Agreement, sufficient retail water supplies would be available to serve projected growth in San Francisco through 2040. While concluding that the supply is sufficient, the 2015 plan also identifies projects that are underway or planned to augment local supply. Projects that are underway or recently completed include the San Francisco Groundwater Supply Project and the Westside Recycled Water Project. A more current list of potential regional and local water supply projects that the SFPUC is considering is provided below under "Additional Water Supplies."

In addition, the 2015 plan describes the SFPUC's ongoing efforts to improve dry-year water supplies, including participation in Bay Area regional efforts to improve water supply reliability through projects such as interagency interties, groundwater management and recharge, potable reuse, desalination, and water transfers. While no specific capacity or supply has been identified, this program may result in future supplies that would benefit SFPUC customers.

*2018 Bay-Delta Plan Amendment*

In December 2018 the state water board adopted amendments to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (the Bay-Delta Plan Amendment). The amendments establish water quality objectives to maintain the health of the rivers and the Bay-Delta ecosystem.[95] Among the goals of the adopted Bay-Delta Plan Amendment is to increase salmonid populations in the San Joaquin River, its tributaries (including the Tuolumne River), and the Bay-Delta. Specifically, the plan amendment requires increasing flows in the Stanislaus, Tuolumne, and Merced rivers to 40 percent of unimpaired flow[96] from February through June every year, whether it is wet or dry. During dry years, this would result in a substantial reduction in the SFPUC's water supplies from the Tuolumne River watershed.

If the Bay-Delta Plan Amendment is implemented, the SFPUC would be able to meet the projected retail water demands presented in the 2015 plan in normal years but would experience supply shortages in single dry years and multiple dry years. Implementation of the Bay-Delta Plan Amendment would result in substantial dry-year water supply shortfalls throughout the SFPUC's regional water system service area, including San Francisco. The 2015 plan assumes limited rationing for retail customers may be needed in multiple dry years to address an anticipated supply

[95] State Water Resources Control Board Resolution No. 2018-0059, Adoption of Amendments to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary and Final Substitute Environmental Document, December 12, 2018, *https://www.waterboards.ca.gov/plans_policies/docs/2018wqcp.pdf*, accessed March 26, 2021.

[96] "Unimpaired flow" represents the water production of a river basin, unaltered by upstream diversions, storage, or by export or import of water to or from other watersheds.

shortage by 2040; the 2018 amendment to the 2009 Water Supply Agreement with wholesale customers would slightly increase rationing levels indicated in the 2015 plan. By comparison, implementation of the Bay-Delta Plan Amendment would result in supply shortfalls in all single dry years and multiple dry years and rationing to a greater degree than previously anticipated to address supply shortages not accounted for in the 2015 plan or as a result of the 2018 amendment to the 2009 Water Supply Agreement.

The state water board has stated that it intends to implement the plan amendment by the year 2022, assuming all required approvals are obtained by that time. However, at this time, the implementation of the Bay-Delta Plan Amendment is uncertain for several reasons, as described below.

First, since adoption of the Bay-Delta Plan Amendment, over a dozen lawsuits have been filed in state and federal court, challenging the water board's adoption of the plan amendment, including legal challenges filed by the federal government at the request of the U.S. Bureau of Reclamation. That litigation is in the early stages, and there have been no dispositive court rulings as of this date.

Second, the Bay-Delta Plan Amendment is not self-executing and does not allocate responsibility for meeting its new flow requirements to the SFPUC or any other water rights holders. Rather, the plan amendment merely provides a regulatory framework for flow allocation, which must be accomplished by other regulatory and/or adjudicatory proceedings, such as a comprehensive water rights adjudication or, in the case of the Tuolumne River, the Clean Water Act, section 401 certification process in the Federal Energy Regulatory Commission's relicensing proceeding for Don Pedro Dam. The license amendment process is currently expected to be completed in the 2022-2023 timeframe. This process and other regulatory and/or adjudicatory proceeding would likely face legal challenges and have lengthy timelines, and quite possibly could result in a different assignment of flow responsibility for the Tuolumne River than currently exists (and therefore a different water supply effect on the SFPUC).

Third, in recognition of the obstacles to implementation of the Bay-Delta Plan Amendment, the water board directed its staff to help complete a "Delta watershed-wide agreement, including potential flow measures for the Tuolumne River by March 1, 2019, and to incorporate such agreements as an 'alternative' for a future amendment to the Bay-Delta Plan to be presented to the [water board] as early as possible after December 1, 2019." In accordance with the water board's instruction, on March 1, 2019, the SFPUC, in partnership with other key stakeholders, submitted a proposed project description for the Tuolumne River that could be the basis for a voluntary agreement with the state water board that would serve as an alternative path to implementing the Bay-Delta Plan's objectives. On March 26, 2019, the SFPUC adopted Resolution No. 19-0057 to support its participation in the voluntary agreement negotiation process. In a written progress report to the Voluntary Agreement Plenary Participants dated July 1, 2019, the California secretaries for Environmental Protection and for Natural Resources stated that the collective state agencies should be able "to determine the adequacy" of the various proposed voluntary agreements, including the proposed Tuolumne Voluntary Agreement, by October 15, 2019, and that if the state team recommends the voluntary agreements to the state water board, then (1) scientific peer review of the voluntary agreements would be completed by the spring of 2020, and (2) a draft CEQA document would be released for public comment in the summer of 2020, with a finalized CEQA document completed the following year. To date,

those negotiations are ongoing. Negotiations for the Tuolumne Voluntary Agreement continued beyond the October 15, 2019, date and are ongoing, pushing back the completion timeline anticipated in the July 1, 2019, letter. On February 4, 2020, the secretaries for Environmental Protection and for Natural Resources issued a presentation summarizing the framework of the voluntary agreement process that did not include new deadlines for completion.

For these reasons, whether, when, and the form in which the Bay-Delta Plan Amendment will be implemented, and how those amendments will affect the SFPUC's water supply, is currently unknown.

*Additional Water Supplies*

In light of the adoption of the Bay-Delta Plan Amendment and the resulting potential limitation to the SFPUC's regional water system supply during dry years, the SFPUC is expanding and accelerating its efforts to develop additional water supplies and explore other projects that would improve overall water supply resilience. Developing these supplies would reduce water supply shortfalls and reduce rationing associated with such shortfalls. The SFPUC has taken action to fund the study of additional water supply projects, which are listed below:

- Daly City Recycled Water Expansion
- Alameda County Water District Transfer Partnership
- Brackish Water Desalination in Contra Costa County
- Alameda County Water District-Union Sanitary District Purified Water Partnership
- Crystal Springs Purified Water
- Eastside Purified Water
- San Francisco Eastside Satellite Recycled Water Facility
- Additional Storage Capacity in Los Vaqueros Reservoir from Expansion
- Calaveras Reservoir Expansion

The capital projects that are under consideration would be costly and are still in the early feasibility or conceptual planning stages. One or more of these projects may require additional environmental review. These projects would take 10 to 30 or more years to implement and would require environmental permitting negotiations, which may reduce the amount of water that can be developed. The yield from these projects is unknown and not currently incorporated into SFPUC's supply projections.

In addition to capital projects, the SFPUC is also considering developing related water demand management policies and ordinances, such as funding for innovative water supply and efficiency technologies and requiring potable water offsets for new developments.

*Water Supply Assessment*

Under sections 10910 through 10915 of the California Water Code, urban water suppliers like the SFPUC must prepare water supply assessments for certain large "water demand" projects, as defined in CEQA Guidelines section

15155.[97] Water supply assessments rely on information contained in the water supplier's urban water management plan and on the estimated water demand of both the proposed project and projected growth within the relevant portion of the water supplier's service area. Because up to 575 residential units would be developed, the proposed project meets the definition of a water demand project under CEQA and requires a water supply assessment. The project-specific analysis of impacts on water supply facilities is provided below. Accordingly, the SFPUC approved a water supply assessment for the proposed project on October 27, 2020, and determined that it has adequate supplies to meet project demand.[98] Because the project variants would have similar, but slightly reduced, land use development programs as the proposed project (e.g., fewer residential units and reduced bus storage and maintenance) the conclusions for the proposed project related to Water Supply would also be applicable to the project variants.

The analysis of water supply capacity is based on review of SFPUC data on water supply (principally the commission's current 2015 Urban Water Management Plan); demand is calculated largely based on SFPUC-generated demand factors (furnished by SFPUC's district-scale non-potable water calculator version 6). The water supply assessment for the proposed project identifies the total water demand, including a breakdown of potable and non-potable water demands. The proposed project is subject to San Francisco's Non-potable Water Ordinance (article 12C of the San Francisco Health Code [health code]). The Non-potable Water Ordinance requires new commercial, mixed-use, and multi-family residential development projects with 250,000 square feet or more of gross floor area to install and operate an onsite non-potable water system. Such projects must meet their toilet and urinal flushing and irrigation demands through the collection, treatment, and use of available graywater, rainwater, and foundation drainage. While not required, projects may use treated blackwater or stormwater if desired. Furthermore, projects may choose to apply non-potable water to other non-potable water uses, such as cooling tower blowdown and industrial processes, but are not required to do so under the ordinance.

In 2026, when the proposed project would be in operation, the anticipated total water demand of the project would be 0.076 mgd (of which 0.028 mgd could be met by non-potable water). Accordingly, approximately 37 percent of the proposed project's total water demand would be met by non-potable water in 2040.

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[97] Pursuant to CEQA Guidelines section 15155(1), "a water-demand project" means:
(A) A residential development of more than 500 dwelling units.
(B) A shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.
(C) A commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor area.
(D) A hotel or motel, or both, having more than 500 rooms,
(E) an industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.
(F) a mixed-use project that includes one or more of the projects specified in subdivisions (a)(1)(A), (a)(1)(B), (a)(1)(C), (a)(1)(D), (a)(1)(E), and (a)(1)(G) of this section.
(G) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

[98] SFPUC, Water Supply Assessment for the Potrero Yard Modernization Project (2500 Mariposa Street), October 27, 2020, p. 19.

Future retail (citywide) water demand through 2040 is estimated based on the population and employment growth projections contained in the department's Land Use Allocation 2012. The department has determined that the proposed project represents a portion of the planned growth accounted for in the department's Land Use Allocation 2012. Therefore, the proposed project's demand is incorporated in the 2015 Urban Water Management Plan.

The proposed project's anticipated potable water demand of 0.048 mgd would contribute 0.05 percent to the projected total retail demand of 89.9 mgd in 2040. Similarly, the proposed project's total water demand of 0.076 mgd, which does not account for the 0.028 mgd savings anticipated through compliance with the Non-potable Water Ordinance, would represent 0.08 percent of the total retail demand in 2040. Thus, the proposed project represents a small fraction of the total projected water demand in San Francisco through 2040.

Due to the 2018 Bay-Delta Plan Amendment, the proposed project's water demand estimates are considered under three water supply scenarios. The ability of the water supply system to meet the demand of the proposed project, in combination with both existing development and projected growth in San Francisco, is evaluated under the following water supply scenarios:

- Scenario 1: Current Water Supply
- Scenario 2: Bay-Delta Plan Voluntary Agreement
- Scenario 3: 2018 Bay-Delta Plan Amendment

As discussed below, water supplies would be available to meet the demand of the proposed project in combination with both existing development and projected growth in San Francisco through 2040 under each of these water supply scenarios with varying levels of rationing during dry years.

SCENARIO 1 – CURRENT WATER SUPPLY

Scenario 1 assumes no change to the way in which water is supplied, and that neither the Bay-Delta Plan Amendment nor a Bay-Delta Plan Voluntary Agreement would be implemented. Thus, the water supply and demand assumptions contained in the 2015 plan and the 2009 Water Supply Agreement as amended would remain applicable for the proposed project. As stated above, the proposed project is accounted for in the demand projections in the 2015 plan.

Under Scenario 1, water supplies would be available to meet the demand of the proposed project in combination with existing development and projected growth in all years, except for an approximately 3.6 to 6.4 mgd or 5 to 7.4 percent shortfall during dry years through the year 2040. This relatively small shortfall is primarily due to implementation of the amended 2009 Water Supply Agreement. To manage a small shortfall such as this, the SFPUC may prohibit certain discretionary outdoor water uses and/or call for voluntary rationing by its retail customers. During a prolonged drought at the end of the 20-year planning horizon, the proposed project could be subject to voluntary rationing in response to a 7.4 percent supply shortfall, when the 2018 amendments to the 2009 Water Supply Agreement are taken into account. This level of rationing is well within the SFPUC's regional water system

supply level of service goal of limiting rationing to no more than 20 percent on a system-wide basis (i.e., an average throughout the regional water system).

SCENARIO 2 – BAY-DELTA PLAN VOLUNTARY AGREEMENT

Under Scenario 2, a voluntary agreement would be implemented as an alternative to the adopted Bay-Delta Plan Amendment. The March 1, 2019, proposed voluntary agreement submitted to the state water board has yet to be accepted, and the shortages that would occur with its implementation are not known. The voluntary agreement proposal contains a combination of flow and non-flow measures that are designed to benefit fisheries at a lower water cost, particularly during multiple dry years, than would occur under the Bay-Delta Plan Amendment. The resulting regional water system supply shortfalls during dry years would be less than those under the Bay-Delta Plan Amendment and would require rationing of a lesser degree and closer in alignment to the SFPUC's adopted level of service goal for the regional water system of rationing of no more than 20 percent system-wide during dry years. SFPUC Resolution No. 19-0057, which authorized the SFPUC staff to participate in voluntary agreement negotiations, stated its intention that any final voluntary agreement allow the SFPUC to maintain both the water supply and sustainability level of service goals and objectives adopted by the SFPUC when it approved the WSIP. Accordingly, it is reasonable to conclude that if the SFPUC enters into a voluntary agreement, the supply shortfall under such an agreement would be of a similar magnitude to those that would occur under Scenario 1. In any event, the supply shortfall of water supplies would be of a similar magnitude to those that would occur under Scenario 1. Rationing under Scenario 2, with implementation of the voluntary agreement, would be to a lesser degree than that under Scenario 3, with implementation of the Bay-Delta Plan Amendment as adopted.

SCENARIO 3 – BAY-DELTA PLAN AMENDMENT

Under Scenario 3, the 2018 Bay-Delta Plan Amendment would be implemented as it was adopted by the state water board without modification. As discussed above, there is considerable uncertainty whether, when, and in what form the plan amendment will be implemented. However, because implementation of the plan amendment cannot be ruled out at this time, an analysis of the cumulative impact of projected growth on water supply resources under this scenario is included in this document to provide a worst-case impact analysis.

Under this scenario, which is assumed to be implemented after 2022, water supplies would be available to meet projected demands through 2040 in wet and normal years with no shortfalls. However, under Scenario 3 the entire regional water system—including both the wholesale and retail service areas—would experience significant shortfalls in single dry and multiple dry years, which over the past 97 years occur on average just over once every 10 years. Significant dry-year shortfalls would occur in San Francisco, regardless of whether the proposed project is approved and constructed. Except for the currently anticipated shortfall to retail customers of about 6.1mgd (6.8 percent) that is expected to occur under Scenario 1 during years seven and eight of the 8.5-year design drought based on 2040 demand levels, these shortfalls to retail customers would exclusively result from supply reductions resulting from implementation of the Bay-Delta Plan Amendment. The retail supply shortfalls under this scenario would not be attributed to the incremental demand associated with the proposed project, because this demand is incorporated already in the growth and water demand/supply projections contained in the 2015 plan.

Under the Bay-Delta Plan Amendment, existing and planned dry-year supplies would be insufficient for the SFPUC to satisfy its regional water system supply level of service goal of no more than 20 percent rationing system-wide. The SFPUC's Water Shortage Allocation Plan does not specify allocations to retail supply during system-wide shortages above 20 percent. However, the plan indicates that if a system-wide shortage greater than 20 percent were to occur, regional water system supply would be allocated between retail and wholesale customers per the rules corresponding to a 16 to 20 percent system-wide reduction, subject to consultation and negotiation between the SFPUC and its wholesale customers to modify the allocation rules. These allocation rules result in shortfalls of 15.6 to 49.8 percent across the retail service area as a whole under Scenario 3, from 2025 through 2040. Total shortfalls under Scenario 3 would range from 12.3 mgd (15.6 percent) in a single dry year to 36.1 mgd (45.7 percent) in years seven and eight of the 8.5-year design drought based on 2025 demand levels and from 21 mgd (23.4 percent) in a single dry year to 44.8 mgd (49.8 percent) in years seven and eight of the 8.5-year design drought based on 2040 demand.[99]

*Impact Analysis*

As described above, the supply capacity of the Hetch Hetchy regional water system that provides the majority of the City's drinking water far exceeds the potential demand of any single development project in San Francisco. No single development project alone in San Francisco would require the development of new or expanded water supply facilities or require the SFPUC to take other actions, such as imposing a higher level of rationing across the City in the event of a supply shortage in dry years. Therefore, a separate project-only analysis is not provided for this topic. The following analysis instead considers whether the proposed project, in combination with both existing development and other projected growth through 2040, would require new or expanded water supply facilities, the construction or relocation of which could have significant cumulative impacts on the environment. It also considers whether a high level of rationing would be required that could have significant cumulative impacts. It is only under this cumulative context that development in San Francisco could have the potential to require new or expanded water supply facilities or require the SFPUC to take other actions, which in turn could result in significant physical environmental impacts related to water supply. If significant cumulative impacts could result, then the analysis considers whether the proposed project would make a considerable contribution to the cumulative impact.

IMPACTS RELATED TO NEW OR EXPANDED WATER SUPPLY FACILITIES

The SFPUC's adopted water supply level of service goal for the regional water system is to meet customer water needs in non-drought and drought periods. The system performance objective for drought periods is to meet dry-year delivery needs while limiting rationing to a maximum of 20 percent system-wide reduction in regional water service during extended droughts. As the SFPUC has designed its system to meet this goal, it is reasonable to assume that to the extent the SFPUC can achieve its service goals, sufficient supplies would be available to serve existing development and planned growth accounted for in the 2015 plan (which includes the proposed project) and that new or expanded water supply facilities are not needed to meet system-wide demand. While the focus of this

[99] Technical Memorandum from Steven Ritchie, SFPUC Water Enterprise, to Lisa Gibson, San Francisco Planning Department, May 31, 2019, Table 3, p. 10.

analysis is on the SFPUC's retail service area and not the regional water system as a whole, this cumulative analysis considers the SFPUC's regional water supply level of service goal of rationing of not more than 20 percent in evaluating whether new or expanded water supply facilities would be required to meet the demands of existing development and projected growth in the retail area through 2040. If a shortfall would require rationing more than 20 percent to meet system-wide dry-year demand, the analysis evaluates whether, as a result, the SFPUC would develop new or expanded water supply facilities that result in significant physical environmental impacts. It also considers whether such a shortfall would result in a level of rationing that could cause significant physical environmental impacts. If the analysis determines that there would be a significant cumulative impact, then per CEQA Guidelines section 15130, the analysis considers whether the project's incremental contribution to any such effect is "cumulatively considerable."

Existing and planned dry-year supplies would meet projected retail demands through 2040 under Scenario 1 within the SFPUC's regional water system adopted water supply reliability level of service goal. Therefore, the SFPUC could meet the water supply needs for the proposed project, in combination with existing development and other projected growth in San Francisco through 2040, from the SFPUC's existing system. The SFPUC would not be expected to develop new or expanded water supply facilities for retail customers under Scenario 1 and there would be no significant cumulative environmental impact.

The effect of Scenario 2 cannot be quantified at this time, but as explained previously, if it can be designed to achieve the SFPUC's level of service goals and is adopted, it would be expected to have effects similar to Scenario 1. Given the SFPUC's stated goal of maintaining its level of service goals under Scenario 2, it is expected that Scenario 2 effects would be more similar to Scenario 1 than to Scenario 3. In any event, any shortfall effects under Scenario 2 that exceed the SFPUC's service goals would be expected to be less than those under Scenario 3. Therefore, the analysis of Scenario 3 would encompass any effects that would occur under Scenario 2 if it were to trigger the need for increased water supply or rationing in excess of the SFPUC's regional water system level of service goals.

Under Scenario 3, the SFPUC's existing and anticipated water supplies would be sufficient to meet the demands of existing development and projected growth in San Francisco, including the proposed project, through 2040 in wet and normal years, which have historically occurred in approximately nine out of 10 years on average. During dry and multiple dry years, retail supply shortfalls of 15.6 to 49.8 percent could occur.

As a result of the adoption of the Bay-Delta Plan Amendment and the resulting potential limitations on supply to the regional water system during dry years, the SFPUC is increasing and accelerating its efforts to develop additional water supplies and explore other projects that would increase overall water supply resilience. The SFPUC is beginning to study water supply options, but it has not determined the feasibility of the possible projects, has not made any decision to pursue any particular supply projects, and has determined that any identified potential projects would take anywhere from 10 to 30 years or more to implement.

There is also a substantial degree of uncertainty associated with the implementation of the Bay-Delta Plan Amendment and its ultimate outcome; and therefore, there is substantial uncertainty in the amount of additional

water supply that may be needed, if any. Moreover, there is uncertainty and lack of knowledge as to the feasibility and parameters of the possible water supply projects the SFPUC is beginning to explore. Consequently, the physical environmental impacts that could result from future supply projects is quite speculative at this time and would not be expected to be reasonably determined for a period of time ranging from 10 to 30 years. Although it is not possible at this time to identify the specific environmental impacts that could result, this analysis assumes that if new or expanded water supply facilities, such as those listed above under "Additional Water Supplies," were developed, the construction and/or operation of such facilities could result in significant adverse environmental impacts, and that this would be a significant cumulative impact.

As discussed above, in 2040 the proposed project would represent 0.08 percent of total retail water demand and 0.05 percent of total potable water demand in San Francisco, whereas implementation of the Bay-Delta Plan Amendment would result in a retail supply shortfall of up to 49.8 percent. Thus, new or expanded dry-year water supplies would be needed under Scenario 3 regardless of whether the proposed project is approved or constructed. As such, any physical environmental impacts related to the construction and/or operation of new or expanded water supplies would occur with or without the proposed project. Therefore, the proposed project would not have a considerable contribution to any significant cumulative impacts that could result from the construction or operation of new or expanded water supply facilities developed in response to the Bay-Delta Plan Amendment.

IMPACTS RELATED TO RATIONING

Given the long lead times associated with developing additional water supplies, in the event the Bay-Delta Plan Amendment were to take effect sometime after 2022 and result in a dry-year shortfall, the expected action of the SFPUC for the next 10 to 30 years (or more) would be limited to requiring increased rationing. The remaining analysis therefore focuses on whether rationing at the levels that might be required under the Bay-Delta Plan Amendment could result in any cumulative impacts, and if so, whether the proposed project would make a considerable contribution to these impacts.

The SFPUC has established a process through its Retail Water Shortage Allocation Plan for actions it would take under circumstances requiring rationing. Rationing at the level that might be required under the Bay-Delta Plan Amendment would require changes to how businesses operate, changes to water use behaviors (e.g., shorter and/or less-frequent showers), and restrictions on irrigation and other outdoor water uses (e.g., car washing), all of which could lead to undesirable socioeconomic effects. Any such effects would not constitute physical environmental impacts under CEQA.

High levels of rationing could, however, lead to adverse physical environmental effects, such as the loss of vegetation cover resulting from prolonged restrictions on irrigation. Prolonged high levels of rationing within the City could also make San Francisco a less desirable location for residential and commercial development compared to other areas of the state not subject to such substantial levels of rationing, which, depending on location, could lead in turn to increased urban sprawl. Sprawl development is associated with numerous environmental impacts, including, for example, increased greenhouse gas emissions and air pollution from longer commutes and lower density development, higher energy use, loss of farmland, and increased water use from less water-efficient

suburban development.[100] In contrast, as discussed in the EIR Section 3.C, Transportation and Circulation, the project site is located in an area where VMT per capita is well below the regional average; development projects in San Francisco are required to comply with numerous regulations that would reduce greenhouse gas emissions, as discussed in initial study Section E.9, Greenhouse Gas Emissions, and San Francisco's per capita water use is among the lowest in the state. Thus, the higher levels of rationing on a citywide basis that could be required under the Bay-Delta Plan Amendment could lead directly or indirectly to significant cumulative impacts. The question, then, is whether the proposed project would make a considerable contribution to impacts that may be expected to occur in the event of high levels of rationing.

While the levels of rationing described above apply to the retail service area as a whole (i.e., 5 to 7.4 percent under Scenario 1, 15.6 to 49.8 percent under Scenario 3), the SFPUC may allocate different levels of rationing to individual retail customers based on customer type (e.g., dedicated irrigation, single-family residential, multi-family residential, commercial, etc.) to achieve the required level of retail (citywide) rationing. Allocation methods and processes that have been considered in the past and may be used in future droughts are described in the SFPUC's current Retail Water Shortage Allocation Plan.[101] However, additional allocation methods that reflect existing drought-related rules and regulations adopted by the SFPUC during the recent drought are more pertinent to current and foreseeable development and water use in San Francisco and may be included in the SFPUC's update to its Retail Water Shortage Allocation Plan.[102] The Retail Water Shortage Allocation Plan will be updated as part of the 2020 Urban Water Management Plan update in 2021. The SFPUC anticipates that the updated Retail Water Shortage Allocation Plan would include a tiered allocation approach that imposes lower levels of rationing on customers who use less water than other customers in the same customer class and would require higher levels of rationing by customers who use more water. This approach aligns with the state water board's statewide emergency conservation mandate imposed during the recent drought, in which urban water suppliers who used less water were subject to lower reductions than those who used more water. Imposing lower rationing requirements on customers who already conserve more water is also consistent with the implementation of prior rationing programs based on past water use in which more efficient customers were allocated more water.

The SFPUC anticipates that, as a worst-case scenario under Scenario 3, the multi-family mixed-use residential and commercial land uses that would be developed under the proposed project as well as the transit facility uses and its associated operation and maintenance uses could be subject to up to 38 percent rationing during a severe drought.[103] In accordance with the Retail Water Shortage Allocation Plan, the level of rationing that would be imposed on individual development projects/customers would be determined at the time of a drought or other

[100] According to the SFPUC's 2015 UWMP update, San Francisco's per capita water use is among the lowest in the state.

[101] SFPUC, 2015 UWMP, Appendix L – Retail Water Shortage Allocation Plan, June 2016.

[102] SFPUC, 2015-2016 Drought Program, adopted by Resolution 15-0119, May 26, 2015.

[103] This worst-case rationing level for San Francisco multi-family residential was estimated for the purpose of preparing comments on the Draft Substitute Environmental Document in Support of Potential Changes to the Bay-Delta Plan (SED), dated March 16, 2017. See comment letter Attachment 1, Appendix 3, Page 5, Table 3. The comment letter and attachments are available at *https://www.waterboards.ca.gov/public_notices/comments/2016_baydelta_plan_amendment/docs/dennis_herrera.pdf*, accessed March 26, 2021.

water shortage and cannot be established with certainty prior to the shortage event. However, the newly constructed building, such as the proposed project, would have water-efficient fixtures and non-potable water systems that comply with the latest regulations. Thus, if the proposed building's multi-family residential and transit uses demonstrate below-average water use, either of them would likely be subject to a lower level of rationing than other retail customers that meet or exceed the average water use for the same customer class.

While any substantial reduction in water use in a new, water-efficient building likely would require behavioral changes by building occupants that are inconvenient, temporary rationing during a drought is expected to be achievable through actions that would not cause or contribute to significant environmental effects. The effect of such temporary rationing would likely cause occupants to change behaviors but would not cause the substantial loss of vegetation because vegetation on this urban infill site would be limited to ornamental landscaping, and non-potable water supplies would remain available for landscape irrigation and bus wash stations in dry years. The proposed project would consist of an expanded transit facility and multi-family residential uses along with some commercial uses, and it is not anticipated to include uses that would be forced to relocate because of temporary water restrictions, such as a business that relies on significant volumes of water for its operations. While high levels of rationing that would occur under Scenario 3 could result in future development locating elsewhere, existing and future SFMTA employees and operations as well as future residents, workers, and businesses within the project site would be expected to tolerate rationing for the temporary duration of a drought.

As discussed above, implementation of the Bay-Delta Plan Amendment would result in substantial system-wide water supply shortfalls in dry years. These shortfalls would occur with or without implementation of the proposed project. The proposed project's incremental increase in potable water demand (0.05 percent of total retail demand in 2040) would have a negligible effect on the levels of rationing that would be required throughout San Francisco under Scenario 3 in dry years.

As such, temporary rationing that could be imposed on the proposed project would not cause or contribute to significant environmental effects associated with the high levels of rationing that may be required on a citywide basis under Scenario 3, even if that rationing is more frequent due to the effects of climate change. Thus, the proposed project would not make a considerable contribution to any significant cumulative impacts that may result from increased rationing that may be required with implementation of the Bay-Delta Plan Amendment, were it to occur.

As stated above, there is considerable uncertainty as to whether the Bay-Delta Plan Amendment will be implemented. If the plan amendment is implemented, the SFPUC will need to impose higher levels of rationing than its regional water system level of service goal of no more than 20 percent rationing during drought years by 2025 and for the next several decades. Implementation of the plan amendment would result in a dry year shortfall beginning in 2025 ranging from 15.6 percent in a single dry year and year one of multiple dry years to up to 45.7 percent in years seven and eight of the 8.5-year design drought; and dry-year shortfalls by 2040 ranging from 23.4 percent in a single dry year and year one of multiple dry years to up to 49.8 percent in years seven and eight of the 8.5-year design drought. While the SFPUC may seek new or expanded water supply facilities, it has not made

any definitive decision to pursue particular actions and there is too much uncertainty associated with this potential future decision to identify environmental effects that would result. Such effects are therefore currently speculative. In any case, the need to develop new or expanded water supplies in response to the Bay Delta Plan Amendment and any related environmental impacts would occur irrespective of the water demand associated with the proposed project. Given the long lead times associated with developing additional supplies, the SFPUC's expected response to implementation of the Bay-Delta Plan Amendment would be to ration in accordance with procedures in its Retail Water Shortage Allocation Plan.

Both direct and indirect environmental impacts could result from high levels of rationing. However, the proposed development is the expansion and modernization of an existing transit use on an urban infill site with integrated residential and commercial uses within one building, and, as such, would be expected to tolerate the levels of rationing imposed on those uses for the duration of the drought. Thus, it would not contribute to sprawl development as a result of rationing under the Bay-Delta Plan Amendment. Furthermore, the proposed project would be subject to the requirements of the Non-potable Water Ordinance, and, as a result, would not be expected to contribute to a loss of vegetation because project-generated non-potable supplies would remain available for irrigation in dry years. The small increase in potable water demand attributable to the proposed project compared to citywide demand would not substantially affect the levels of dry-year rationing that would otherwise be required throughout the City. Thus, the proposed project would not make a considerable contribution to a cumulative environmental impact caused by implementation of the Bay-Delta Plan Amendment. Therefore, for the reasons described above, under all three scenarios, this impact would be considered less than significant. Mitigation measures are not required. This topic will not be discussed in the EIR.

**Wastewater Capacity**

Impact UT-3: Implementation of the proposed project or project variants would not result in a determination by the wastewater treatment provider which serves the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments. (*Less than Significant*)

The project site is located in the Channel subdrainage area of the Bayside Drainage Basin, also called the Channel watershed,[104] and is served by San Francisco's combined sewer system, which collects, transports, and treats sanitary sewage and stormwater runoff in the same facilities prior to discharge to federal and state waters (i.e., San Francisco Bay).[105] As stated above on p. 55, wastewater and stormwater generated by the proposed project or project variants would be treated at the Southeast Water Pollution Control Plant, which currently treats 60 mgd of wastewater and has the capacity to treat up to 250 mgd during a rainstorm. Discharges to federal and state waters from the water pollution control plant are permitted under Bayside National Pollutant Discharge Elimination

[104] SFPUC, Sewer System Improvements Fact Sheet, *http://sfwater.org/modules/showdocument.aspx?documentid=10762*, accessed March 26, 2021.

[105] San Francisco is roughly divided into two major drainage areas: the Bayside and Westside Basins, which are further divided into eight subdrainage areas. SFPUC, Draft San Francisco Sewer System Improvement Program Report, August 10, 2010, Figure 1. San Francisco Major Drainage Basins and Wastewater Facilities, p. 2, *https://www.sfwater.org/modules/showdocument.aspx?documentid=984*, accessed March 26, 2021.

System Permit No. CA0037664 (Bayside NPDES Permit),[106] issued and enforced by the San Francisco Bay Regional Water Quality Control Board (regional water board).

***Construction***

Construction of the proposed project or project variants would remove and replace approximately 192,000 square feet of impervious surface and would involve demolition, excavation (approximately 248,900 cubic yards), site preparation, and construction that would occur over a period of approximately three to four years, with construction beginning early 2023 (see EIR Chapter 2, Project Description, p. 2.54). If excavation occurs when groundwater is elevated to the design high-groundwater level of 20 feet below ground surface, groundwater discharges would be subject to public works code article 4.1 (Industrial Waste Ordinance),[107] as supplemented by public works order no. 158170,[108] which regulates the quantity and quality of discharges to the combined sewer system. Additionally, construction contractors would be required to implement an erosion and sediment control plan for construction activities in accordance with public works code article 4.2 (Sewer System Management)[109] and the General Construction Stormwater Permit to reduce the impacts of runoff from the construction site (discussed in more detail under Impact HY-1 in initial study Section E.17, Hydrology and Water Quality, pp. 114115. During construction, workers would use portable toilets and hand-washing facilities for their sanitary needs and there would be no related wastewater discharges to the combined sewer system. Therefore, there would be minimal flows to the combined sewer system, and impacts related to exceeding the wastewater treatment capacity of the Southeast Water Pollution Control Plant during construction would be less than significant. Mitigation measures are not required. This topic will not be discussed in the EIR.

***Operation***

Under existing conditions, 100 percent of the project site is covered by impermeable surfaces, including the existing maintenance and operations building and bus storage yard. There is no landscaping or landscaped open space on the project site. There are approximately 400 employees associated with current SFMTA uses at the site, including 295 bus operators.

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[106] San Francisco Regional Water Quality Control Board, Waste Discharge Requirements for the Southeast Water Pollution Control Plant, North Point Wet Weather Facility and Bayside Wet Weather Facilities and Wastewater Collection System, Order No. R2-2013-0029, NPDES No. CA0037664, adopted August 2013, *https://www.waterboards.ca.gov/rwqcb2/board_decisions/adopted_orders/2013/R2-2013-0029.pdf*, accessed March 26, 2021.

[107] San Francisco Public Works Code, Article 4.1, Industrial Waste, *https://codelibrary.amlegal.com/codes/san_francisco/latest/sf_publicworks/0-0-0-441*, accessed March 26, 2021.

[108] City and County of San Francisco, San Francisco Department of Public Works Order No. 158170, Industrial Waste Discharge Limits into City's Sewerage System, 2008, *https://infrastructure.sfwater.org/fds/fds.aspx?lib=SFPUC&doc=619040&data=238330400*, accessed March 26, 2021.

[109] San Francisco Public Works Code, Article 4.2, Sewer System Management, *https://codelibrary.amlegal.com/codes/san_francisco/latest/sf_publicworks/0-0-0-778*, accessed March 26, 2021.

As discussed above under Impact UT-1, compliance with the Stormwater Management Ordinance and Stormwater Management Requirements and Design Guidelines[110] would require project operations to reduce the existing volume and rate of stormwater runoff discharged from the project site through appropriate stormwater management systems. These could include a stormwater holding tank (or system of tanks) to collect and detain stormwater runoff onsite and rainwater catchment systems. As currently proposed, the project would detain 100 percent of the stormwater onsite and use it as a non-potable water supply for the bus wash and irrigation system. Stormwater and recycled water from the bus wash system would be pre-treated to draw out pollutants, reduce peak flow, and recharge groundwater.[111] During the final design, the project team will determine the size of the stormwater holding tank needed to keep the bus wash and irrigation system supplied with non-potable water. If rainwater harvesting, collection, and reuse is feasible, a centralized storage tank and onsite distribution system would provide another source of non-potable water for vehicle maintenance/cleaning, toilet flushing, and irrigation.

All industrial waste from the replacement transit facility use will drain to an appropriately sized oil/water interceptor prior to connecting to the combined sewer system. The onsite stormwater system will consist of area drains, roof drains and overflow drains, and reclaimed water will be used for landscaping, as required per the green building code amendments and GS6 Form for municipal projects.[112] Used oil and coolants drained from vehicles would be collected in mobile receptacles. Diaphragm pumps located in the maintenance area would be used to pump used fluid into specific storage tanks. Full tanks would be collected and transported offsite by a registered hazardous waste materials transport company.[113] Therefore, oil and other industrial waste from the replacement transit facility would not enter the offsite storm drain system. Hazardous waste materials management is discussed further under Impact HZ-1 in initial study Section E.18, Hazards and Hazardous Materials (pp. 121124.

As discussed above, the combined sewer system is sized to accommodate both daily wastewater flows and stormwater runoff from a five-year storm; therefore, wastewater is a small component of the design flow. Most of the flow during wet weather events comes from stormwater runoff. The water supply assessment estimated that the proposed project would require approximately 17,461,000 gallons of potable water per year, or 47,838 gallons per day.[114] Therefore, assuming the historical water to wastewater ratio where wastewater constitutes approximately 95 percent of water consumption by existing uses, the proposed project would consume approximately 3,500 gallons per day of potable water.[115,116] An increase of 44,338 gallons per day of wastewater over existing conditions would not be substantial. The proposed project or project variants would represent a 0.07 percent

[110] SFPUC, San Francisco Stormwater Management Requirements and Design Guidelines, May 2016, *https://sfwater.org/Modules/ShowDocument.aspx?documentID=9026*, accessed March 26, 2021.

[111] Design Criteria Document, Version 2, pp. 35-36.

[112] Design Criteria Document, Version 2, p. 47.

[113] Design Criteria Document, Version 2, p. 57.

[114] SFPUC, Water Supply Assessment for the Potrero Yard Modernization Project (2500 Mariposa Street), October 27, 2020, Attachment B: 2500 Mariposa Street/SFMTA Potrero Bus Yard Project Demand Memo, September 16, 2020, p. 6.

[115] City of County of San Francisco, 2030 Wastewater Master Plan, Task 100 Technical Memorandum No. 102, Wastewater Flow and Load Projections, Final Draft, August 2009, pp. 102- to 102-7, *http://www.sfwater.org/modules/showdocument.aspx?documentid=607*, accessed March 26, 2021.

[116] SFPUC, Water Supply Assessment for the Potrero Yard Modernization Project (2500 Mariposa Street), October 27, 2020, Attachment B – 2500 Mariposa Street/SFMTA Potrero Bus Yard Project Demand Memo, September 16, 2020, p. 4.

increase in the Southeast Water Pollution Control Plant's dry-weather flow treatment capacity of 60,000,000 gallons per day and an even smaller percentage of the 250,000,000-gallon-per-day wet-water treatment capacity. The Southeast Water Pollution Control Plant would be able to accommodate increase flows from the proposed project as well as existing commitments. Therefore, impacts related to exceeding the wastewater treatment capacity of the Southeast Water Pollution Control Plant during operation would be less than significant, and mitigation measures are not required. This topic will not be discussed in the EIR.

**Solid Waste**

Impact UT-4: The proposed project or project variants 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. (*Less than Significant*)

Recology, Inc. currently provides residential and commercial solid waste collection, recycling, and disposal services for the City of San Francisco. Recyclable materials are taken to Recology's Pier 96 facility, where they are separated into commodities (e.g., aluminum, glass, and paper) and transported to other users for reprocessing. Compostables (e.g., food waste, plant trimmings, soiled paper) are transferred to a Recology composting facility in Solano County, where they are converted to soil amendment and compost. The remaining material that cannot otherwise be reprocessed (trash) is primarily transported to a landfill.

In September 2015, the City entered into a landfill disposal agreement with Recology, Inc. for disposal of all solid waste collected in San Francisco, at the Recology Hay Road Landfill northeast of Vacaville in Solano County for nine years or until 3.4 million tons have been disposed, whichever occurs first. The City would have an option to renew the agreement for a period of six years or until an additional 1.6 million tons have been disposed, whichever occurs first.[117] The Recology Hay Road Landfill is permitted to accept up to 2,400 tons per day of solid waste, and at that maximum rate of acceptance, the landfill has permitted remaining capacity of 30,433,000 cubic yards and is expected to continue to receive waste approximately through the year 2077.[118] The City's contract with the Recology Hay Road Landfill is set to terminate in 2031 (at the end of the six-year optional renewal) or when 5 million tons have been disposed, whichever occurs first. At that point, the City will either further extend the Recology Hay Road Landfill contract or find and entitle another landfill site. In 2018, San Francisco generated a total of about 740,000 tons of landfill waste (approximately 2,027 average tons per day), approximately 450,000 tons of which were directed to the Hay Road Landfill and the remaining 290,000 tons received at roughly 23 other landfills, with Altamont, Corinda Los Trancos, and the Potrero Hills landfills receiving most of this remaining volume.[119]

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[117] San Francisco Planning Department, Case No 2014.0653E, Notice of Availability of and Intent to Adopt a Negative Declaration for the Agreement for Disposal of San Francisco Municipal Solid Waste at Recology Hay Road Landfill in Solano County, March 4, 2015 and Agreement for Disposal of San Francisco Municipal Solid Waste at Recology Hay Road Landfill in Solano County Final Negative Declaration, July 21, 2015, *http://sfmea.sfplanning.org/2014.0653E_Revised_FND.pdf*, accessed March 26, 2021.

[118] California Department of Resources Recycling and Recovery (CalRecycle), Solid Waste Information System (SWIS) Facility Detail, Recology Hay Road, *https://www2.calrecycle.ca.gov/swfacilities/Directory/48-AA-0002*, accessed March 26, 2021.

[119] CalRecycle, Disposal Reporting System, Jurisdiction Disposal by Facility, San Francisco, 2018, *https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Destination/DisposalByFacility*, accessed March 26, 2021.

***Construction***

Construction and demolition debris must be transported by a registered transporter to a registered facility that can process mixed construction and demolition debris pursuant to the City and County of San Francisco Construction and Demolition Ordinance. The ordinance requires that at least 65 percent of construction and demolition debris from a site go to a registered construction and demolition recycling facility. This requirement has been augmented by the Green Building Ordinance, which requires that at least 75 percent of construction and demolition debris be diverted from landfills.

Over the three- to four-year construction duration, demolition and construction activities would generate construction debris at the project site, some of which would require disposal. The project would be subject to the City's various solid waste diversion requirements, including the San Francisco Construction and Demolition Debris Recovery Ordinance, the 2019 Green Building Ordinance (enforced by the San Francisco Department of Building Inspection [department of building inspection]), and Title 24 of the California Code of Regulations. Compliance with these mandatory diversion requirements would require construction debris generated because of project implementation would not exceed permitted landfill capacity.

***Operation***

To minimize solid waste disposal volumes and maximize recycling, San Francisco Ordinance No. 100-09 (the Mandatory Recycling and Composting Ordinance) requires all San Francisco residents and commercial landlords to separate their refuse into recyclables, compost, and trash. During operation, the proposed project or project variants would be subject to this ordinance. Although the proposed project or project variants would increase total solid waste generation from the City by increasing the number of residents and employees at the project site, the increasing rate of diversion through recycling and other methods would result in a decreasing share of total waste that requires deposition into the landfill.

Operation of the proposed project or project variants would increase generation of solid waste and recyclables at the project site compared to existing conditions. According to CalRecycle, in 2018 San Francisco residents generated approximately 4.6 pounds of solid waste for disposal in a landfill per resident per day, while commercial uses generated approximately 5.6 pounds for disposal in a landfill per employee per day.[120] Based on the existing waste generation rates, the proposed project or project variants would be expected to generate a net increase of approximately 5,710 pounds of solid waste per day.[121] This volume would represent 0.14 percent of the 2018 San Francisco-generated landfill waste of 2,027 tons per day, and 0.12 percent of the Hay Road Landfill's 2,400-ton maximum daily throughput. Furthermore, the Hay Road Landfill has a remaining capacity of over 30.4 million cubic yards, with an anticipated closure in 2077, and therefore can accommodate solid waste disposal needs of the project through the duration of the proposed project.

[120] CalRecycle, Disposal Rate Calculator, San Francisco, 2018, *https://www2.calrecycle.ca.gov/LGCentral/AnnualReporting/DisposalRateCalculator,* accessed March 26, 2021.

[121] The volume of waste generated for the proposed project is the based on the following: (575 new residents × 4.6 pounds/day) + (548 net new employees x 5.6 pounds/day) = 5,713.8 net new pounds/day.

Although the proposed project or project variants would incrementally increase total waste generation from the City, given the City's progress to date on diversion and waste reduction and the existing future long-term capacity available at the Recology Hay Road Landfill, solid waste generated as a result of construction and operation of the proposed project or project variants would not result in the landfill exceeding its permitted capacity. Therefore, the proposed project or project variants would be served by landfills with sufficient permitted capacity to accommodate its solid waste disposal needs and impacts would be less than significant, and mitigation measures are not required. This topic will not be discussed in the EIR.

Impact UT-5: Construction and operation of the proposed project or project variants would comply with all applicable statutes and regulations related to solid waste. (*Less than Significant*)

The California Integrated Waste Management Act of 1989 requires municipalities to adopt an integrated waste management plan to establish objectives, policies, and programs related to waste disposal, management, source reduction, and recycling.

Reports filed by the San Francisco Department of the Environment show that the City generated approximately 873,000 tons of waste material in 2000. By 2018 that figure decreased to approximately 740,000 tons, despite growth in population and employment.[122] Solid waste diverted from landfills is defined as recycled or composted. In 2018, the City committed to zero waste goals that reduce solid waste generation by 15 percent by 2030 (including recycling, compost, and trash) and that would reduce disposal to landfill and incineration by 50 percent by 2030.[123]

San Francisco Ordinance No. 27-06 requires a minimum of 65 percent of construction and demolition debris to be recycled and diverted from landfills. The green building code also requires certain projects to submit a Recovery Plan to the San Francisco Department of the Environment demonstrating recovery or diversion of at least 75 percent of all demolition debris. Additionally, the Mandatory Recycling and Composting Ordinance requires everyone in the City to separate their refuse into recyclables, compost, and trash. Furthermore, the Recology Hay Road Landfill and other landfills that serve the City are required to meet federal, state, and local solid waste regulations. The proposed project or project variants would comply with the solid waste disposal policies and regulations identified above. Impacts related to compliance with solid waste statutes and regulations would be less than significant, and mitigation measures are not required. This topic will not be discussed in the EIR.

[122] CalRecycle, Disposal Reporting System, Jurisdiction Disposal by Facility, San Francisco, 2000 and 2018, *https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Destination/DisposalByFacility*, accessed March 26, 2021.

[123] San Francisco Department of the Environment, Mayor London Breed Challenges Cities, States and Regions Around the World to Join San Francisco in Setting Aggressive Sustainability Goals, September 2018, *https://sfenvironment.org/press-release/mayor-london-breed-challenges-cities-states-and-regions-around-the-world-to-join-san-francisco-in-setting-aggressive-sustainability*, accessed March 26, 2021.

## Cumulative Impacts

Impact C-UT-1: The proposed project or project variants, in combination with cumulative projects, would not result in significant cumulative impacts on utilities and service systems. (*Less than Significant*)

### Wastewater and Stormwater

The geographic context for cumulative wastewater and stormwater impacts is the Southeast Water Pollution Control Plant drainage basin. The City's combined sewer system and treatment facilities are designed to accept both wastewater and stormwater flows. As with the proposed project, all cumulative projects in the drainage basin would be required to comply with San Francisco regulations regarding wastewater and stormwater generation. Although cumulative projects would likely result in increased wastewater flows, regulations require that, for projects replacing 5,000 square feet or more of impervious surface, stormwater flows be reduced by 25 percent over existing conditions. The 25 percent reduction in stormwater flows would result in an overall reduction in combined flows during peak wet-weather flow events. Therefore, the proposed project or project variants, in combination with cumulative projects, would have a less-than-significant cumulative impact on the combined sewer collection and treatment system.

### Water Supply

As discussed in Impact UT-2, no single development project alone in San Francisco would require the development of new or expanded water supply facilities. The analysis provided in Impact UT-2 considers whether the proposed project, in combination with both existing development and projected growth through 2040, would require new or expanded water supply facilities, the construction or relocation of which could have significant cumulative impacts on the environment. Therefore, no separate cumulative analysis is required.

### Solid Waste

The geographic context for cumulative solid waste impacts is the City. Long-range growth forecasts are considered in planning for future landfill capacity. In addition, the City currently exceeds statewide goals for reducing solid waste and is therefore expected to reduce solid waste volumes in the future. All projects are required to comply with San Francisco's construction and demolition debris recovery and recycling and composting ordinances. As with the proposed project, compliance with these ordinances would reduce the solid waste generation from construction and operation of cumulative projects.

Although cumulative projects could incrementally increase total waste generation from the City by increasing the number of residents and excavation, demolition, and remodeling activities associated with growth, the increasing rate of landfill diversion citywide through recycling, composting, and other methods would result in a decrease of total waste that requires deposition into the landfill. Given the City's progress to date on diversion and waste reduction and given the future long-term capacity available at the Recology Hay Road Landfill and other area landfills, cumulative projects would be served by a landfill with sufficient permitted capacity to accommodate their solid waste disposal needs. For these reasons, the proposed project, in combination with cumulative projects, would have less-than-significant cumulative impacts related to solid waste.

Based on the above, the proposed project or project variants would not combine with cumulative projects to create a significant cumulative impact on utilities and service systems, and mitigation measures are not required. This topic will not be discussed in the EIR.

# E.14 Public Services

| *Topics:* | *Potentially Significant Impact* | *Less Than Significant with Mitigation Incorporated* | *Less Than Significant Impact* | *No Impact* | *Not Applicable* |
|---|---|---|---|---|---|
| **14. PUBLIC SERVICES. Would the project:** | | | | | |
| a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any public services such as fire protection, police protection, schools, parks, or other public facilities? | ☐ | ☐ | ☒ | ☐ | ☐ |

## Summary of Public Services Comments Received in Response to the Notice of Preparation of an EIR and Notice of Public Scoping Meeting

Issues identified in public comments on the NOP related to the proposed project's or project variants' physical environmental impacts were considered in preparing this analysis. There were no comments on the NOP related to public services (see EIR Chapter 1, Introduction, pp. 1.3-1.5).

## Project-Specific Impacts

The impacts of the proposed project or project variants on parks are discussed above under initial study Section E.12, Recreation. Impacts on other public services are discussed below.

Impact PS-1: The proposed project or project variants would increase demand for fire protection and police protection, schools, and other public services, but not to the extent that would require new or physically altered fire or police, schools, or other public facilities, the construction of which could result in significant environmental impacts. (*Less than Significant*)

### Fire Protection and Emergency Medical Services

The San Francisco Fire Department (fire department) provides fire suppression services and unified emergency medical services and transport, including basic life support and advanced life support services, in the City. The fire

department's firefighting companies are organized into three divisions: the Airport Division, which serves San Francisco International Airport, and Divisions 2 and 3, which serve the rest of San Francisco.[124]

The project site is located in Division 3, which is divided into five battalions (Battalions 2, 3, 6, 9, and 10). The project site is within the service area of Battalion 2. Fire stations in Battalion 2 closest to the project site include Station 29 (299 Vermont Street), Station 7 (2300 Folsom Street), Station 36 (109 Oak Street), and Station 6 (135 Sanchez Street). Of these, Station 29 is the fire station closest to the project site, located approximately 0.30 mile northeast of the project site, and would likely be first on the scene of a fire.[125] Station 29 is equipped with an engine.[126] Station 7, located approximately 0.5 mile southwest of the project site, operates a ladder truck and would also serve the project site.[127,128]

The fire department responds to two types of calls. Code 2 calls are non-life-threatening fire and medical emergencies, and Code 3 calls are life-threatening fire and medical emergencies, the highest response priority. When responding to Code 3 calls, fire department vehicles use flashing lights and sirens and cross intersections against control lights. Responses to Code 2 calls are dispatched without lights and sirens. In San Francisco, response times are calculated from the time the dispatch is received and acknowledged at the station to the time the responding unit informs dispatch that it is at the scene.

According to policy set forth by San Francisco's Emergency Medical Services Agency, ambulances should arrive at the scene of a life-threatening emergency medical incident within 10 minutes of dispatch 90 percent of the time. The ambulance-on-time performance rate has steadily improved since the lowest rate of 76 percent in July 2014 and, as of Fiscal Year 2019-2020, now meets the 90 percent target.[129]

As discussed in Section E.3, Population and Housing, pp. 19-21, the proposed project or project variants would add approximately 1,357 new residents and 548 net new employees (from 400 to 948) to the project site. The increased population resulting from the proposed project or project variants would be expected to increase demand for fire protection and emergency medical services. However, this increase in demand would not be substantial given the overall demand for such services on a citywide basis. Furthermore, the fire department conducts ongoing assessments of its service capacity and response times to maintain acceptable service levels, given the demand resulting from changes in population.

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124 San Francisco Fire Department, Find Your Station, *https://sf-fire.org/find-your-station,* and Fire Station Locations, *http://sf-fire.org/fire-station-locations,* accessed March 26, 2021.

125 San Francisco Fire Department, *https://sf-fire.org/fire-station/san-francisco-fire-station-29,* accessed May 28, 2021.

126 Fire Department.net, Fire Equipment at San Francisco Fire Department, *https://www.firedepartment.net/directory/california/san-francisco-county/san-francisco/san-francisco-fire-department/fire-equipment*, accessed March 26, 2021.

127 San Francisco Fire Department, *https://sf-fire.org/fire-station/san-francisco-fire-station-7*, accessed March 26, 2021.

128 Fire Department.net, Fire Equipment at San Francisco Fire Department, *https://www.firedepartment.net/directory/california/san-francisco-county/san-francisco/san-francisco-fire-department/fire-equipment*, accessed March 26, 2021.

129 City and County of San Francisco, City Performance Scorecards, Ambulance Response to Life-Threatening Emergencies, *http://sfgov.org/scorecards/public-safety/ambulance-response-life-treatening-emergencies*, accessed March 26, 2021.

The proposed project or project variants would be required to comply with all applicable building and fire code requirements, which identify specific fire protection systems, including, but not limited to, the provision of state-mandated smoke alarms, fire alarm and sprinkler systems, fire extinguishers, required number and location of egress points with appropriate distance separation, and emergency response notification systems. The overall height of the structure would be approximately 150 feet and, for the purposes of fire protection, would be classified as a high-rise building. As such, the proposed project or project variants would comply with Section 907 of the San Francisco Fire Code, which requires a secondary water supply and fire pump capable of supplying the required fire flow for fire protection to be installed on site.

For these reasons, implementation of the proposed project or project variants would not require the construction of new, or alteration of existing, fire protection facilities. This impact would be less than significant, and mitigation measures are not required. This topic will not be discussed in the EIR.

**Police Protection Services**

The San Francisco Police Department (police department) provides police protection in the City. Police department services include responding to calls for police assistance, monitoring and managing traffic, and performing general surveillance duties. The department consists of the Golden Gate and Metro divisions and the Operations, Special Operations, and Administration bureaus. The Golden Gate and Metro divisions contain ten separate districts that cover the City. The project site is within the Mission Police District, and the closest police station is the Mission Street Station at 630 Valencia Street, approximately 0.7 mile west of the project site.[130]

The police department does not have an adopted standard for the ratio of officers to population or developed acreage and bases its staffing levels on the number of service calls and crime incidents. Total call volume, comprised of emergency and nonemergency calls, is growing. Between March 2019 and January 2020, the City received approximately 2,000 daily 911 calls, up from approximately 1,400 calls per day in 2008.[131]

Implementation of the proposed project or project variants would add approximately 1,357 new residents and 548 net new employees to the project site, which could increase the demand for police protection services. The Mission Police District serves a population of approximately 80,000 and handled 13.7 percent of all calls in the City from 2008 to 2013.[132] The increased demand generated by the proposed project or project variants would be small relative to the existing service population, would not impact a high-demand district, and could be accommodated by existing services.

The increased demand for police services related to the proposed project's or project variants' onsite population of residents, workers, and visitors would be incremental. The incremental increases in costs incurred by the police

[130] San Francisco Police Department, Station Finder Map, *https://www.sanfranciscopolice.org/your-sfpd/sfpd-stations/station-finder*, accessed March 26, 2021.

[131] San Francisco Police Department, 911 Call Volume and Response, *https://sfgov.org/scorecards/public-safety/911-call-volume-and-response*, accessed March 26, 2021.

[132] Public Safety Strategies Group LLC, District Station Boundary Analysis Report, 2015, p. 33.

department related to the proposed project or project variants would be funded largely through project-related increases to the City's tax base. The increased demand would not be considered substantial given the relatively low demand for such services at the district level and the ongoing staffing analysis and dynamic resource deployment that occurs on a citywide basis. In compliance with City charter mandate, police department resources are regularly redeployed based on need in order to maintain charter-mandated staffing and acceptable service ratios.

For these reasons, implementation of the proposed project or project variants would not require the construction of new, or alteration of existing, police facilities. This impact would be less than significant, and mitigation measures are not required. This topic will not be discussed in the EIR.

**Schools**

The San Francisco Unified School District (school district) operates San Francisco's public schools. There are both attendance area and citywide schools in the school district.[133] The project site is within the attendance area for the Moscone Elementary School, located at 2576 Harrison Street. Other nearby public schools are the Marshall Elementary School (1575 15th Street), John O'Connell High School (2355 Folsom Street), and Downtown High School (693 Vermont Street). Starting at the elementary school level, students can choose between the two categories and list their preferred choices on the application. There are several tiebreakers used to help place students in a requested school when the number of requests for a school exceeds spaces available. At the elementary school level, these tiebreakers include older siblings already attending the preferred school, whether the student attended a school district's pre-kindergarten, the test score area in which the student resides, and the attendance area in which the student resides.

The school district maintains a property and building portfolio that has a student capacity for over 63,400 students.[134,135] Between 2000 and 2010, overall enrollment in the school district experienced a decline but the district has experienced a gradual increase in enrollment during the past decade. Total enrollment in the district increased to about 52,763 in the 2017–2018 school year.[136] In addition, for the 2018–2019 school year, approximately 4,502 students enrolled in public charter schools that are operated by other organizations but located in school

[133] San Francisco Unified School District, 2019-2020 School Year Location Map, *https://archive.sfusd.edu/en/assets/sfusd-staff/enroll/files/2019-20/2019-20_schools_map.pdf*, accessed March 26, 2021.

[134] This analysis was informed, in part, by a Target Enrollment Survey the San Francisco Unified School District performed of all schools in 2010.

[135] San Francisco Unified School District, *San Francisco Bay Area Planning and Urban Research (SPUR) Forum Presentation, Growing Population, Growing Schools*, August 31, 2016, *https://www.spur.org/sites/default/files/events_pdfs/SPUR%20Forum_August%2031%202016.pptx_.pdf*, accessed May 26, 2021.

[136] Lapkoff & Gobalet Demographic Research, Inc., Demographic Analyses and Enrollment Forecasts for the San Francisco Unified School District, January 2020.

district facilities.[137] Thus, even with increasing enrollment, school district facilities throughout the City are underutilized and the district has more classrooms district-wide than needed.[138]

The school district has engaged a demographic consultant to assist in preparation of demographic analyses and enrollment projections (the study), which are being updated over time as additional data are available. The most recent analysis projects the enrollment contribution through 2040 from several new and ongoing large-scale developments (Mission Bay, Candlestick Point, Hunters Point Shipyard/San Francisco Shipyard, and Treasure/Yerba Buena Islands, Parkmerced, and others) as well as planned housing units outside those areas. The study developed public school student yield assumptions informed by historical yield, building type, unit size, unit price, ownership (rented or owner-occupied), whether units are subsidized, whether subsidized units are in stand-alone buildings or in inclusionary buildings, and other site-specific factors. For most developments constructed since 2010, the study found that outside of public housing, new stand-alone family and affordable housing units have the highest student yields – 0.48 students per unit. The study found that student yields for other housing types constructed since 2010 include approximately 0.22 students per unit for inclusionary affordable housing units and 0.01 students per unit for market-rate housing.[139] Implementation of the proposed project or project variants would result in the construction of up to 575 residential units and an anticipated 1,375 residents. Some of the new residents would consist of families with school-aged children who might attend school district schools, while others might attend private schools. Assuming the residential uses under the proposed project or project variants would be 100 percent affordable, the anticipated number of public school children as a result of the project would be within 127 to 276 public school students.

The proposed project or project variants would generate a direct incremental increase in the demand for school services. As stated above, the school district has adequate capacity for the new students generated by the proposed project or project variants. Furthermore, the proposed project would be required to pay a school impact fee based on the construction of net new residential square footage to fund school district facilities and operations.

For these reasons, implementation of the proposed project or project variants would not result in a substantial unmet demand for school facilities and would not require new school construction or alteration of existing school facilities. This impact would be less than significant, and mitigation measures are not required. This topic will not be discussed in the EIR.

[137] Lapkoff & Gobalet Demographic Research, Inc., Demographic Analyses and Enrollment Forecasts for the San Francisco Unified School District, January 2020.

[138] San Francisco Unified School District, *San Francisco Bay Area Planning and Urban Research (SPUR) Forum Presentation, Growing Population, Growing Schools*, August 31, 2016, *https://www.spur.org/sites/default/files/events_pdfs/SPUR%20Forum_August%2031%202016.pptx_.pdf*, accessed May 26, 2021.

[139] Lapkoff & Gobalet Demographic Research, Inc., Demographic Analyses and Enrollment Forecasts for the San Francisco Unified School District, January 2020.

### Libraries

Library services are provided by the San Francisco Public Library, which operates a main branch at 100 Larkin Street and 27 other neighborhood branches throughout San Francisco. Library branches nearest the project site are the Mission Library (1 mile southwest), Potrero Hill (0.6 mile southeast), and the main branch (1 mile north).[140]

Implementation of the proposed project or project variants would add about 1,357 new residents and 548 net new employees (from 400 to 948) to the project site and would result in an increase in demand for library services. It is anticipated that the nearby libraries would be able to accommodate the minor increase in demand for library services generated by the new residents and employees. Thus, project-generated demand would not be substantial given the overall demand for library services on a citywide basis.

For these reasons, implementation of the proposed project or project variants would not require the construction of new, or alteration of existing, library facilities. This impact would be less than significant, and mitigation measures are not required. This topic will not be discussed in the EIR.

## Cumulative Impacts

### Impact C-PS-1: The proposed project or project variants, in combination with cumulative projects in the vicinity, would not result in significant cumulative impacts on public services. (*Less than Significant*)

Cumulative projects in the vicinity would result in an intensification of land uses and a cumulative increase in the demand for fire protection, police protection, school services, and other public services. The fire and police departments, libraries, and other City agencies respond to growth and other changing service needs through ongoing analysis of applicable metrics, such as staffing, capacity, response times, and call volumes. As a result, projected future development would not result in any service gap in citywide police, fire, and emergency medical services. Because there is no shortfall with respect to library services, there would not be any service gaps in citywide library services.

With respect to public schools, the school district currently has capacity for additional students anticipated through 2030. The school district works with the planning department and other City agencies to develop public school student enrollment projections and inform its facility planning. As the school district's teaching methods and best practice space utilization for learning evolve, historical capacities will need to be updated to reflect new standards. The school district is currently assessing how best to incorporate the education field's best practices in terms of space utilization for 21st-century education. This assessment will inform how to accommodate anticipated future school population and whether new or different types of facilities are needed. Should additional capacity be required to meet the updated educational space standards and projected public school student population, the school district is considering several options. A new school anticipated to have capacity for 500 students is under development in Mission Bay at the corner of Owens Street and Nelson Rising Lane. In addition, in the near term,

[140] San Francisco Public Library, Library Locations, *https://sfpl.org/locations/*, accessed March 26, 2021.

there is an existing school site on Treasure Island that will be leased by the school district.[141] There is also a project planned for the replacement, renovation, and expansion of the district's 135 Van Ness Avenue property for the Arts Center Campus. The school district could also renovate and reconfigure other existing school facilities and assets owned by the school district but not currently in school use, as necessary. However, it is too speculative to conduct a meaningful environmental review or identify significant cumulative impacts at this time without more information regarding what action or actions the school district would take to accommodate the additional students. The school district may choose to accommodate the additional students in a manner that would result in physical changes to the environment, but it is not possible to identify exactly where those actions would occur.

The school district has identified options for accommodating the anticipated future public student population, as described above. The proposed project or project variants would result in an incremental increase of between 127 and 276 public school children in a transit- and amenity-rich area that is targeted for future housing production. Moreover, the numerous sources of uncertainty discussed above create challenges for accurately determining future student enrollment projections, particularly beyond 2030, as well as the location and capacity of facilities, if any, that may be constructed, reconfigured, or expanded. As a result, any determination of a significant cumulative effect related to provision of public school facilities would be speculative. Therefore, the proposed project or project variants would not be expected to result in a significant contribution to a cumulative public services impact related to schools.

For these reasons, the proposed project or project variants would not combine with cumulative projects in the vicinity to create a significant cumulative impact on public services. This impact would be less than significant, and mitigation measures are not required. This topic will not be discussed in the EIR.

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[141] Renovation and expansion of that school site was studied in the Treasure Island / Yerba Buena Island Redevelopment Project Draft EIR. For more information, please see *Treasure Island / Yerba Buena Island Redevelopment Project Draft EIR*, Planning Case No. 2007.0903E.

# E.15 Biological Resources

| Topics: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact | Not Applicable |
|---|---|---|---|---|---|
| **15. BIOLOGICAL RESOURCES. Would the project:** | | | | | |
| a) 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) 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? | ☐ | ☐ | ☐ | ☐ | ☒ |
| c) 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? | ☐ | ☐ | ☐ | ☐ | ☒ |
| d) 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? | ☐ | ☐ | ☒ | ☐ | ☐ |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | ☐ | ☐ | ☒ | ☐ | ☐ |
| f) Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan? | ☐ | ☐ | ☐ | ☐ | ☒ |

## Summary of Biological Resources Comments Received in Response to the Notice of Preparation of an EIR and Notice of Public Scoping Meeting

Issues identified in public comments on the NOP related to the proposed project's or project variants' physical environmental impacts were considered in preparing this analysis. Comments on the NOP received during the NOP scoping period and related to biological resources expressed concern with the project glazing and bird strikes, the effects of construction and outdoor lighting on birds, and the need for nesting bird surveys (see EIR Chapter 1, Introduction, pp. 1.3-1.5).

## Project-Specific Impacts

The project site is occupied by an asphalt surface parking lot and a building and is completely covered by impervious surfaces. The project site does not contain federally protected wetlands as defined by section 404 of the Clean Water Act, riparian habitat, or other sensitive natural communities. The nearest mapped water bodies are 0.7 mile northwest (China

Basin Water Channel) and 1.2 miles west (San Francisco Bay).[142] Implementation of the proposed project or project variants therefore would not adversely affect federally protected wetlands, riparian habitat, or sensitive natural communities protected by federal or state laws or regulations. In addition, the project site is not located within an adopted habitat conservation plan, a natural community conservation plan, or other approved local, regional, or state habitat conservation plan areas. Thus, initial study checklist topics E.15(b), E.15(c), and E.15(f) are not applicable to the proposed project or project variants and will not be analyzed further in this initial study and the EIR.

As stated in Section D, Summary of Environmental Effects, p. 11, and EIR Chapter 2, Project Description, pp. 2.49-2.54, the proposed project or project variants would be subject to public works' SCMs. SCM #7, Biological Resources, and SCM #8, Visual and Aesthetic Considerations, Project Site, establish procedures for compliance with federal and state requirements and for implementation of best site management practices as they relate to bird protection, tree conservation, environmentally sensitive areas, and construction staging. Through implementation of applicable measures, significant impacts to biological resources would be avoided (see EIR Appendix C).

Impact BI-1: The proposed project or project variants would not have a substantial adverse effect, either directly or indirectly 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; and the proposed project or project variants would not interfere substantially with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. (*Less than Significant*)

The project site is covered entirely by impervious surfaces. It has no intermittent or permanent streams and no connectivity to wildlife habitats. While there is no vegetation onsite, there are 27 street trees on sidewalks adjacent to the project site: nine on 17th Street, seven on Hampshire Street, and 11 on Bryant Street. (See EIR Figure 2.2, p. 2.5.) Franklin Square, across 17th Street to the north, is an approximately 4.4-acre landscaped public park with a centrally located soccer field and mature trees and landscaping along 17th, Bryant, and 16th streets. The surrounding area is developed with buildings and roadways, including the Safeway Potrero Center at 16th and Bryant streets. Because the project site is located within a built urban environment, it is subject to routine disturbances, including pedestrian and vehicular activity as well as activity at the transit facility, which serves up to 158 trolley buses and 56 non-revenue vehicles.

The project site does not serve as a nursery site or corridor for native resident or migratory fish or wildlife. As further detailed under Impact BI-2 and as described in EIR Chapter 2, Project Description, p. 2.47, the proposed project or project variants would retain some mature street trees along Bryant, 17th, and Hampshire streets, to the maximum extent feasible; replace those that have to be removed; and plant new street trees such that all adjacent sidewalks would have trees once landscaping is completed. The proposed project or project variants would also develop a 5-foot-wide landscaping zone along the approximately 480-foot-long 17th Street frontage.

[142] United States Fish and Wildlife Service (USFWS), National Wetlands Inventory, October 8, 2019, *https://www.fws.gov/wetlands/data/Mapper.html*, accessed March 26, 2021.

Due to the developed nature of the project site and the surrounding area, the project site does not provide suitable habitat for any candidate, sensitive, or special-status plant or wildlife species. The existing trees adjacent to the project site could support habitat for migratory nesting birds protected under the California Fish and Game Code or the Migratory Bird Treaty Act, as discussed below.

**Resident and Migratory Birds-**

The street trees on the adjacent sidewalks on 17th, Hampshire, and Bryant streets, as well as street trees and landscaped areas in the project vicinity including Franklin Square across 17th Street to the north, may provide suitable habitat for resident and migratory birds covered under the Migratory Bird Treaty Act of 1918 (16 U.S.C. 703–711) and the California Fish and Game Code (sections 3503 and 3503.5).

Nesting birds may be present in the existing street trees surrounding the project site. The proposed project or project variants would result in the loss of nesting habitat because some street trees along adjacent sidewalks would be removed. Additionally, the proposed project or project variants could result in the loss of nesting habitat in the street trees or landscaped areas in the project vicinity due to construction disturbance. Any loss of nesting habitat would be temporary, and after the proposed project's or project variants' approximately three- to four-year construction period, including any required street tree planting and landscaping improvements, birds would be expected to return.

The SFMTA and private project co-sponsor would be required to comply with California Fish and Game Code section 3500 et seq., which provide that it is unlawful to take or possess any migratory nongame bird or needlessly destroy nests of birds except as otherwise outlined in the code. The California Department of Fish and Wildlife enforces the code by requiring that projects incorporate measures to avoid and minimize impacts to nesting birds if any tree removal would occur during the nesting or breeding season. Tree removal and construction-related activities associated with the proposed project or project variants could adversely affect bird breeding and nest behaviors adjacent to the project site and in the immediate vicinity. Construction activities that may cause visual disturbance or alter the ambient noise environment include demolition of the existing maintenance and operations building and bus storage yard and appurtenances and construction of the foundation for the new building, e.g., pile driving. Although adult birds can escape the project site to avoid direct harm during construction, eggs or chicks associated with active nests could still be permanently affected (i.e., abandoned or killed) by project construction activities.

Due to the removal of some street trees and construction activities, the proposed project or project variants may result in the displacement of nesting migratory birds and/or the abandonment of active nests if construction and street tree removal occur during the typical nesting season (January 15 through August 15).

SFMTA through public works would continue to provide oversight for construction of the proposed project or project variants, which would be subject to public works' SCMs (see EIR Appendix C). SCM #7, Biological Resources, specifies that projects will comply with all local, state, and federal requirements for surveys, analysis, and protection of biological resources (e.g., Migratory Bird Treaty Act, Federal and State Endangered Species Acts, etc.). The project site and the immediately surrounding area will be screened to determine whether biological resources may be

affected by construction. If biological resources are present, a qualified biologist will carry out a survey of the project site to note the presence of general biological resources and to identify whether habitat for special-status species and/or migratory birds is present. If necessary, measures will be implemented to protect biological resources, such as installing wildlife exclusion fencing, establishing work buffer zones, installing bird deterrents, having a qualified biologist conduct monitoring, and other applicable measures. Tree removal will also comply with any applicable tree protection ordinance. Additionally, SCM #8, Visual and Aesthetic Considerations, Project Site, requires all project sites to be maintained in a clean and orderly state during construction and returned to their general pre-project condition (including re-grading and re-vegetation of disturbed areas) after project completion.

Accordingly, the proposed project or project variants would be subject to public works' SCM #7, Biological Resources, to avoid potential significant impacts on biological resources. SCM #7, Biological Resources, would therefore be incorporated into the proposed project or project variants. Thus, construction activities for the proposed project or project variants would avoid impacts on nesting birds covered under the Migratory Bird Treaty Act and California Fish and Game Code by ensuring project activities do not result in the take of an active nest. This impact would be less than significant. Mitigation measures are not required. This topic will not be discussed in the EIR.

**Bird-Safe Buildings**

Structures in an urban setting may present risks for birds traversing their migratory paths due to building location and/or building features. The proposed project or project variants would construct a new building with a larger footprint and substantially increased height compared to the existing predominantly single-story maintenance and operations building on the eastern portion of the project site (i.e., from approximately 45 feet at the existing building's southeast corner with the office and shops wings to heights ranging from 75 to 150 feet across the site). This could create potential obstacles for resident or migratory birds and could result in an increase in bird injury or mortality in the event of a collision. The City has adopted guidelines to address this issue and provided regulations for bird-safe design within the City, including building design standards to reduce avian mortality rates associated with bird strikes.[143]

The building standards are based on two types of hazards: 1) location-related hazards which pertain to new buildings within 300 feet of an Urban Bird Refuge, and 2) feature-related hazards such as free-standing glass walls, wind barriers, skywalks, balconies, and greenhouses on rooftops that have unbroken glazed segments 24 square feet or larger in size. The project site is not located within 300 feet of an Urban Bird Refuge; therefore, the standards for location-related hazards would not apply.[144] The proposed project or project variants would be required to comply with the building feature-related hazard standards.

[143] San Francisco Planning Department, Standards for Bird-Safe Buildings, *https://sfplanning.org/sites/default/files/documents/reports/bird_safe_bldgs/Standards%20for%20Bird%20Safe%20Buildings%20-%2011-30-11.pdf*, accessed March 26, 2021.

[144] San Francisco Planning Department, Urban Bird Refuge Map, 2014, *https://sfplanning.org/resource/urban-bird-refuge*, accessed March 26, 2021.

Planning code section 139 addresses feature-related bird hazards for new building construction and replacement façades. The existing maintenance and operations building would be demolished, and a new building would be constructed at the project site ranging from 75 to 150 feet in height. The proposed project or project variants would comply with the feature-related standards of planning code section 139 by using bird-safe glazing treatment on 100 percent of any feature-related hazards (e.g., balconies, wind barriers, or free-standing glass walls).

With planning code section 139 compliance and implementation of public works' SCM #7, Biological Resources, the proposed project or project variants would not interfere substantially with the movement of any native resident or migratory wildlife species or with established native resident or migratory wildlife corridors. Therefore, this impact would be less than significant. Mitigation measures are not required. This topic will not be discussed in the EIR.

### Impact BI-2: The proposed project or project variants would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (*Less than Significant*)

Trees in the City and County of San Francisco are protected under public works code article 16 section 801 et seq. (the Urban Forestry Ordinance). The Urban Forestry Ordinance provides for the protection of landmark trees, significant trees, and street trees located on private or public property anywhere within the territorial limits of the City and County of San Francisco.[145]

Landmark trees are designated by the board of supervisors upon the recommendation of the Urban Forestry Council, which uses established criteria (public works code section 810) to determine whether a nominated tree meets the qualifications for designation. Significant trees are those trees within the jurisdiction of public works or trees on private property within 10 feet of the public right-of-way that meet any of three size criteria: they must have a diameter at breast height in excess of 12 inches, or a height in excess of 20 feet, or a canopy in excess of 15 feet (public works code section 810(A)(a)). Street trees are any tree growing within the public right-of-way, including unimproved public streets and sidewalks, and any tree growing on land under the jurisdiction of public works (public works code section 802(w)).

There are no trees on the project site. Therefore, there are no landmark trees or significant trees on the project site. There are 27 street trees on sidewalks adjacent to the project site: nine on 17th Street, seven on Hampshire Street, and 11 on Bryant Street. There are no street trees along the Mariposa Street frontage. As feasible, the SFMTA and the private project co-sponsor would retain existing street trees or plant new street trees on the adjacent sidewalks, including replacement of any removed street trees, to comply with the requirements of one street tree per 20 feet of street frontage.[146] Specific streetscape changes related to the retention and planting of existing and new street trees would include the following:

- On 17th Street, the existing mature trees would be retained, except for any that would conflict with the proposed location for the emergency bus exit, and new street trees would be planted.

[145] San Francisco Public Works Code, Article 16: Urban Forestry Ordinance, *https://codelibrary.amlegal.com/codes/san_francisco/latest/sf_publicworks/0-0-0-4066*, accessed March 26, 2021.

[146] San Francisco planning code section 138.1(c)(1) and public works code sections 805(a) and 806(d).

- On Bryant and Hampshire streets, trees located in the middle of the sidewalk may be replaced, and new street trees would be planted.
- On Mariposa Street, approximately six trees would be added in locations that would not conflict with the proposed trolley bus driveways.

All new and/or replacement trees would be planted in accordance with the standards in the Better Streets Plan. If site constraints (such as conflicts with driveways, trolley bus turn movements, or existing street furniture) make this infeasible, a waiver of this requirement may be requested from the Zoning Administrator, in which case the in-lieu street tree fee would be required.[147,148] The City's Urban Forestry Ordinance requires a permit from public works to remove any protected trees, and the ordinance states that public works shall require that replacement trees be planted (at a one-to-one ratio) by a project sponsor or that an in-lieu fee be paid by a project sponsor (public works code section 806(b)).[149] Additionally, in compliance with the Urban Forestry Ordinance, a project sponsor would be required to obtain a specific Tree Protection Plan prepared by an International Society of Arboriculture-certified arborist to protect the adjacent street trees during construction. Further, SCM #7, Biological Resources, incorporated as part of the proposed project or project variants, would ensure compliance with the substantive requirements of public works code article 16 for all work around significant trees. Compliance would include the determination of whether trees proposed for removal, if any, meet the criteria for significant trees, and, if so, requires implementation of the procedures for working within the dripline of or removal of significant trees described in public works code article 16. Compliance with the substantive requirements of the public works code for all work in the vicinity of significant trees would avoid any conflicts with local plans or policies protecting trees.

Therefore, the proposed project or project variants would not conflict with the City's local tree ordinance, and this impact would be less than significant. Mitigation measures are not required. This topic will not be discussed in the EIR.

## Cumulative Impacts

### Impact C-BI-1: The proposed project or project variants, in combination with cumulative projects in the vicinity, would not result in significant cumulative impacts on biological resources. (*Less than Significant*)

The geographic scope of potential cumulative biological resources impacts to which the proposed project or project variants could contribute encompasses a 0.25-mile area around the project site. (See EIR Table 3.A.1 and EIR Figure 3.A.1, pp. 3.A.7-3.A.9, for a list and map of the cumulative projects.) As described above, the project site is completely covered by a building and an impervious asphalt-paved parking lot. There are no federally protected wetlands, riparian habitat, or other sensitive natural communities on the site, and the site is not located within an adopted habitat conservation plan, a natural community conservation plan, or other approved local, regional, or state habitat conservation plan areas. Thus, potential cumulative impacts on biological resources are limited to the removal of protected trees, modification or interference with existing habitats, wildlife nursery sites, or migratory wildlife corridors.

[147] San Francisco planning code section 138.1(c)(1)(C)(iii).
[148] San Francisco planning code section 428.
[149] San Francisco Public Works Code, Article 16: Urban Forestry Ordinance, *https://codelibrary.amlegal.com/codes/san_francisco/latest/sf_publicworks/0-0-0-4066*, accessed March 26, 2021.

Construction of the cumulative projects in the vicinity would consist of infill development in an urban setting on previously disturbed sites and work in the public right-of-way (16th Street transit service enhancements and Northwest Mission Parking Management Plan); limited removal of trees and vegetation would be expected to occur. The removal of vegetation and trees during nesting seasons could result in a significant cumulative impact on nesting birds. However, cumulative projects such as 1850 Bryant Street and 321 Florida Street would also be subject to planning code section 138.1(c)(1) and public works code sections 805(a) and 806(d). The cumulative projects would also be required to comply with the requirements of the Urban Forestry Ordinance, California Department of Fish and Wildlife, and Migratory Bird Treaty Act related to nesting birds, including measures similar to those identified for the proposed project or project variants.

As noted above under Impacts BI-1 and BI-2, with the exception of the 5-foot-wide landscaping zone along the 17th Street frontage associated with the proposed project or project variants and aforementioned street tree improvements, the site and cumulative projects would not provide habitat supportive of sensitive wildlife and plants. Therefore, the proposed project or project variants would have limited potential to affect sensitive plants or wildlife with adherence to street tree protection requirements, bird-safe building requirements, and nesting bird protections requirements of the planning code, the public works code, and public works' SCM #7, Biological Resources.

Therefore, the cumulative projects would not combine with the proposed project or project variants to create a significant cumulative impact on biological resources. Mitigation measures are not required. This topic will not be discussed in the EIR.

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# E.16 Geology and Soils

| Topics: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact | Not Applicable |
|---|---|---|---|---|---|
| **16. GEOLOGY AND SOILS. Would the project:** | | | | | |
| a) 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? (Refer to Division of Mines and Geology Special Publication 42.) | ☐ | ☐ | ☒ | ☐ | ☐ |
| ii) Strong seismic ground shaking? | ☐ | ☐ | ☒ | ☐ | ☐ |
| iii) Seismic-related ground failure, including liquefaction? | ☐ | ☐ | ☒ | ☐ | ☐ |
| iv) Landslides? | ☐ | ☐ | ☐ | ☐ | ☒ |
| b) Result in substantial soil erosion or the loss of topsoil? | ☐ | ☐ | ☒ | ☐ | ☐ |
| c) Be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse? | ☐ | ☐ | ☒ | ☐ | ☐ |
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial direct or indirect risks to life or property? | ☐ | ☐ | ☒ | ☐ | ☐ |
| e) 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? | ☐ | ☐ | ☐ | ☐ | ☒ |
| f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | ☐ | ☒ | ☐ | ☐ | ☐ |

## Summary of Geology and Soils Comments Received in Response to the Notice of Preparation of an EIR and Notice of Public Scoping Meeting

Issues identified in public comments on the NOP related to the proposed project's or project variants' physical environmental impacts were considered in preparing this analysis. There were no comments on the NOP related to geology and soils (see EIR Chapter 1, Introduction, pp. 1.3-1.5).

## Existing Setting

The information in this section describes the geology, soils, and seismicity characteristics of the project site and immediate vicinity and relies on the information and findings in the November 2019 Geotechnical Engineering Report[150] prepared by the joint venture of Arup/RYCG, unless otherwise noted.

The scope of the geotechnical report included reviewing, exploring, and analyzing the subsurface conditions regarding soil and groundwater at the project site. It included a site visit; limited field investigations, which included six soil borings to a maximum depth of 121 feet, a review of available geologic and geotechnical data for the site vicinity from previous geotechnical studies, an engineering analysis of the proposed project in the context of geologic and geotechnical site conditions, and project-specific design and construction recommendations which include, but are not limited to, options for foundation systems.

The project site is located within the Coast Ranges geomorphic province within the Fort Point-Hunter Point shear zone. The site is located at the northwestern extent of the Potrero Hill bedrock outcrop, which is characterized by serpentinite and sheared shale matrix mélange of the Franciscan complex. The Franciscan rock is highly deformed and fractured and is composed of shear zones trending in a northwest-southwest configuration.

The project site is underlain by sandy clay, clayey sand, and sand associated with the Colma and Franciscan formations, as well as weathered bedrock associated with the Franciscan Complex. As described in the geotechnical report, six boreholes were drilled at the project site in March 2018. The borehole samples were laboratory tested for soil index properties and strength and were also used to inform a model of the site's subsurface stratigraphy. The soil profile varies significantly throughout the project site but contains similar soil units of varying thickness.

In the northeast corner of the site, the existing maintenance and operations building is founded directly on bedrock in the Franciscan Formation, consisting of weathered shale and serpentinite rock. The serpentinite and shale rock encountered in boreholes on the site were typically highly to completely weathered, extremely to very weak, and very soft to soft. Based on the findings for Borehole 2, the weathered bedrock dips steeply towards the southwest corner of the site (Mariposa and Bryant streets) where it is approximately 69 feet below ground surface. Borehole 2 extended to 121 feet below ground surface and encountered 52 feet of weathered bedrock before the borehole was terminated. Where the weathered bedrock is not present at or close to the ground surface, it is generally overlain by varying thicknesses of dense to very dense sand which is in turn overlain by loose to very dense clayey sand.

In the northwest corner of the site a layer of stiff to very stiff sandy clay is locally present above the clayey sand layer. Fill of varying thicknesses exists across the entire site. Outside the footprint of the existing maintenance and operations building, the site is covered by pavement consisting of asphalt over concrete approximately 10 to 12 inches thick. Below this, the fill generally comprises silty sand and silty gravel between approximately 1 to 6 feet thick. Borehole 5, located within the maintenance and operations building, encountered a 7-inch-thick concrete slab overlying approximately 4 feet of artificial sand fill. In the northwest corner of the site, a localized layer of stiff to very stiff sandy clay was encountered

[150] ARUP/RYCG, SFMTA Potrero Yard Facility Rebuild Geotechnical Engineering Report, November 11, 2019.

beneath the fill to a depth of about 5 to 8 feet below ground surface. Loose to very dense clayey sand ranging from approximately 8 to 21 feet in thickness was present in all boreholes on the site except those in the northeast corner where weathered bedrock is near the ground surface. Poorly graded dense to very dense sand, sometimes with some silt or clay content, was found to be present in thicknesses between 5 and 47 feet above the top of the weathered bedrock. Based on evidence from two boreholes, perched groundwater was encountered at a depth of approximately 9 feet, with groundwater encountered at a depth between 30 and 35 feet below the existing ground surface. Groundwater levels are likely to experience seasonal fluctuations, as the volume of seepage occurring through the weathered rock mass varies. However, the design groundwater elevation for purposes of determining the foundation capacity is defined as 33 feet below ground surface. Further, to account for fluctuations in groundwater to conservatively assess liquefaction potential, a groundwater elevation of 20 feet below ground surface was assumed.

## Regulatory Setting

Existing laws and regulations that stipulate a regulatory process to address seismic and geologic hazards to achieve minimum levels of safety in the construction of new structures are described below.

### Federal and State Regulations

The Earthquake Hazard Reduction Act of 1977[151] was enacted to reduce risks to life and property from earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards reduction program. Implementation of these requirements is regulated, monitored, and enforced at the state and local levels. In particular, the Alquist-Priolo Act regulates development and construction of buildings intended for human occupancy to avoid the hazard of surface fault rupture. The State Geologist maps active faults and designates Earthquake Fault Zones along mapped faults. In addition, pursuant to the Seismic Hazard Mapping Act of 1990[152], the State Geologist has delineated Seismic Hazard Zones for landslide and liquefaction hazards. City, county, and state agencies are directed to use seismic hazard zone maps in their land use planning and permitting processes. In accordance with the Seismic Hazards Mapping Act, site-specific geotechnical reports must be performed prior to permitting most urban development projects within seismic hazard zones. Through the requirements of the act, the loss of life and property is minimized by identifying and mitigating seismic hazards, such as those associated with strong ground shaking, liquefaction, landslides, other ground failures, or other hazards caused by earthquakes.

### California Building Standards Code and San Francisco Building Code

The state building code generally applies to all occupancies in California, with modifications adopted in some instances by state agencies or local governing bodies. Relevant sections of the California Building Standards Code are provided below under Impact GE-1 on p. 101. The San Francisco Building Code (building code) adopts the state code with some amendments. In addition, administrative bulletins have been adopted as part of the building code, and the department of building inspection issues information sheets that form implementing procedures in their role of enforcing the building codes.

[151] United States Code Title 42, Chapter 86.
[152] Public Resources Code Chapter 7.8, Division 2.

**CEQA Section 5097.5**

Requirements for paleontological resource management are included in Public Resources Code, Division 5, Chapter 1.7, Section 5097.5, and Division 20, Chapter 3, Section 30244, which states:

> "No person shall knowingly and willfully excavate upon, or remove, destroy, injure or deface any historic or prehistoric ruins, burial grounds, archeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor."

## Project-Specific Impacts

The project site is not located within a mapped seismic hazard zone for earthquake-induced landslides.[153,154] The approximate elevation on the northeast corner of the site (17th and Hampshire streets) is 75 feet SFVD13.[155] The approximate elevation on the southwest corner of the site (Bryant and Mariposa streets) is 48 feet SFVD13. The project site slopes up toward the north and east (17th and Hampshire streets) and slopes downhill toward the south and west (Mariposa and Bryant streets) with minimal slope gradient. The northeast-to-southwest slope is approximately 4.3 percent. The north-to-south slope is approximately 5.5 percent along Hampshire Street and 3.5 percent along Bryant Street. The east-to-west slope along 17th Street is approximately 3 percent and along Mariposa Street it is relatively flat or at grade with a slope of 1 percent. Thus, the proposed project or project variants would have limited to no potential to exacerbate the potential for earthquake-induced landslides. As such, initial study checklist topic E.16(a)(IV) is not applicable to the proposed project or project variants and is not discussed below. The new building associated with the proposed project or project variants would connect to the existing combined sewer system and would not use septic tanks or alternative wastewater disposal systems (see initial study Section E.13, Utilities and Service Systems). Therefore, initial study checklist topic E.16(e) is not applicable.

As described in EIR Chapter 2, Project Description, p. 2.55, site features would be removed, including the retaining walls along the north, east, and west sides of the site, and excavation would extend up to 35 feet below grade level. The proposed foundation system for the 150-foot-tall structure would consist of a shallow foundation of spread footings at column locations or a structural mat slab bearing on bedrock along the northeast portion of the site (where bedrock is near the surface) with a deeper foundation bearing on pile groups of between 4 to 12 piles per

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153 City and County of San Francisco, Community Safety Element of the San Francisco General Plan (hereinafter referred to as "Community Safety Element"), Map 4 (Seismic Hazard Zones San Francisco, 2012), *https://generalplan.sfplanning.org/Community_Safety_Element_2012.pdf*, accessed March 26, 2021.

154 State of California, Seismic Hazard Zones, City and County of San Francisco, Official Map, November 17, 2000, *https://sfgov.org/esip/sites/default/files/FileCenter/Documents/10438-California%20Seismic%20Hazard%20Zones%20Map.pdf*, accessed March 26, 2021.

155 SFVD13 is the new San Francisco Vertical Datum. Vertical Datum is a measure of vertical height of the ground above a specified zero point and is used to describe the topography of a site. Old San Francisco Datum, in use until about 2014, was based on the National Geodetic Vertical Datum of 1929 (NGVD29). NGVD29 uses mean sea level as the zero point; the zero point for the old SF Datum was approximately 8.6 feet above mean sea level. The City began revising its database in 2013 and completed the new vertical datum in 2014. SFVD13 is based on the North American Vertical Datum of 1988 (NAVD88) and was established using more precise measurements than the Old San Francisco Datum.

column to support development in other areas of the site.[156] The deep foundation system would be supported by driven steel piles; however, non-displacement auger cast in place piles are also identified as an option in the geotechnical report.

The proposed project and its variants would use similar demolition, excavation, and construction techniques with no change to the depth of excavation or intensity of earthwork activity based on variant chosen. Thus, this analysis is applicable to both the proposed project and its variants.

As stated in Section D, Summary of Environmental Effects, p. 11, and EIR Chapter 2, Project Description, pp. 2.49-2.54, the proposed project or project variants would be subject to public works' SCMs. SCM #1, Seismic Studies, requires project sponsors to complete and submit geotechnical engineering reports for projects that involve excavation and building construction. Additionally, SCM #3, Water Quality, requires a project sponsor to implement erosion and sedimentation controls to prevent discharges of sediment and other pollutants to storm drains and a stormwater control plan or a stormwater pollution prevention plan, as applicable. Furthermore, SCM #3 requires that if uncontaminated groundwater is encountered during excavation activities, it will be discharged in compliance with applicable water quality standards and discharge permit requirements (see public works' SCM #6, Hazardous Materials, for groundwater contamination). Through implementation of applicable measures, significant seismic-related and groundwater-related impacts would be avoided (see EIR Appendix C).

Impact GE-1: The proposed project or project variants would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, and seismic-related ground failure including liquefaction. (*Less than Significant*)

**Fault Rupture**

Faults are weak areas in the earth's crust where tectonic plates slide past each other. Earthquakes occur when movement occurs along the faults and they rupture or slip. The California Geologic Survey publishes maps of the Alquist-Priolo earthquake fault zones, which are regulatory zones around the surface of active faults. The project site does not fall within an Alquist-Priolo fault zone and no active faults are recorded within the project site.[157,158] Therefore, the proposed project or project variants would not exacerbate the potential for surface rupture, and impacts related to surface rupture would not occur. Mitigation measures are not required. This topic will not be discussed in the EIR.

**Ground Shaking**

The Working Group for California Earthquake Probabilities estimates a 95 percent chance of having one or more magnitude 6.7 or larger earthquakes in the San Francisco Bay Area over the next 30 years (range 2014 – 2043). The closest major active faults include the San Andreas fault (approximately 7.3 miles southwest), San Gregoria fault

[156] Geotechnical Report, p. 27-39.
[157] Geotechnical Report, p. 9.
[158] Community Safety Element, Map 1 (Bay Area Earthquake Faults, 2007), *https://generalplan.sfplanning.org/Community_Safety_Element_2012.pdf*, accessed March 26, 2021.

(approximately 10.3 miles southwest), and the Hayward fault (approximately 11.3 miles northeast).[159] These faults have a 22 percent chance, a 6 percent chance, and a 33 percent chance of experiencing a magnitude 6.7 or greater earthquake over the next 30 years, respectively.[160] During a major earthquake, very strong ground shaking is expected to occur at the project site and its vicinity.[161] A magnitude 6.0 earthquake is felt by everyone, indoors and outdoors, and poorly built buildings may be damaged. A magnitude 7.0 earthquake causes damage and severe damage or the partial or complete collapse of poorly built structures and is felt across great distances (a 7.0 earthquake is approximately 1/16th as strong at a distance of 50 miles).[162,163] However, damage is generally negligible in buildings of good design and construction, while considerable damage may occur in poorly built buildings and structures.[164]

Although the potential for very strong seismic ground shaking is present, the intensity of earthquake ground motion on the project site and in the vicinity of the site would depend on the characteristics of the generating fault, the distance to the earthquake's epicenter, the magnitude and duration of the earthquake, and site geologic conditions. In the event of an earthquake that exhibits very strong seismic ground shaking, considerable damage could occur to the new building, potentially injuring building occupants and neighbors.

The proposed structure would be designed in accordance with the recommendations of the seismic design standards provided in the site-specific design-level geotechnical report prior to construction and the building would be constructed in conformance with accepted building and engineering standards in the building codes. The submittal documents for a building permit include plans, specifications, engineering calculations, diagrams, soil investigation reports, special inspection and structural observation programs and other data. The building permit application, including detailed addenda submittals to the site permit,[165] or equivalent permit for the proposed project or project variants would be reviewed by the department of building inspection for conformance with recommendations in the site-specific design-level geotechnical report, ensuring that potential effects from seismically induced ground shaking would be addressed in the building design process.

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159 Geotechnical Report, p. 9.

160 U.S. Geological Survey, Earthquake Outlook for the San Francisco Bay Region 2014-2043, *https://pubs.usgs.gov/fs/2016/3020/fs20163020.pdf*, accessed March 26, 2021.

161 Association of Bay Area Governments, San Francisco County Earthquake Hazard, *http://resilience.abag.ca.gov/earthquakes/sanfrancisco/*, accessed March 26, 2021.

162 U.S. Geological Society, Magnitude/Intensity Comparison, *https://www.usgs.gov/faqs/what-difference-between-earthquake-magnitude-and-earthquake-intensity-what-modified-mercalli?qt-news_science_products=0#qt-news_science_products*, accessed March 26, 2021.

163 University of Portland, Building and Earthquakes – Which stands? Which falls?, *https://www.iris.edu/hq/files/programs/education_and_outreach/retm/tm_100112_haiti/BuildingsInEQs_2.pdf,* accessed March 26, 2021.

164 U.S. Geological Survey, the Modified Mercalli Intensity Scale, *https://www.usgs.gov/natural-hazards/earthquake-hazards/science/modified-mercalli-intensity-scale?qt-science_center_objects=0#qt-science_center_objects*, accessed March 26, 2021.

165 San Francisco Building Code, Sections 106A.3.1, 106A.3.2, and 106A.3.4.2, and 106A.4.1.4, *https://codelibrary.amlegal.com/codes/san_francisco/latest/sf_building/0-0-0-92027*, accessed May 28, 2021. Actual construction authorization of specific elements of a project are addressed through more detailed addenda submittals to the site permit, and these more detailed drawings are checked for code compliance before issuance.

The department of building inspection would also review the proposed building permit applications for compliance with the applicable provisions of the building code and state building code. The building codes provide minimum standards for use in building design to maintain public safety in the case of extreme ground shaking likely to occur during an earthquake. The purpose of the earthquake provisions within the building codes is primarily to safeguard against major structural failures and loss of life and to provide for the continuation of essential public services.

The state building code generally applies to all occupancies in California, with modifications adopted in some instances by state agencies or local governing bodies. The current state building code incorporates, by adoption, the 2019 edition of the International Building Code of the International Code Council with the California amendments. In particular, state building code Chapter 18, Soils and Foundations, provides the parameters for geotechnical investigations and structural considerations in the selection, design, and installation of foundation systems to support the loads from the structure above. Relevant sections include the following:

- Section 1803 sets forth the basis and scope of geotechnical reports conducted.
- Section 1804 specifies considerations for excavation, grading, and fill to protect adjacent structures and prevent destabilization of slopes due to erosion and/or drainage.
- Section 1804.1, Excavation Near Foundations, requires that adjacent foundations be protected against a reduction in lateral support as a result of project excavation. This is typically accomplished by underpinning or protecting said adjacent foundations from detrimental lateral or vertical movement, or both.
- Section 1807 specifies requirements for foundation walls, retaining walls, and embedded posts and poles for stability against overturning, sliding, and excessive pressure, and water lift including seismic considerations.
- Sections 1808 (foundations), 1809 (shallow foundations), and 1810 (deep foundations) specify requirements for foundation systems such that the allowable bearing capacity of the soil is not exceeded, and differential settlement is minimized based on the most unfavorable loads specified in Chapter 16, Structural, for the structure's seismic design category and soil classification at the project site.

For the reasons stated above including the project's incorporation of public works' SCM #1, Seismic Studies, the proposed project or project variants would not expose persons or structures to substantial adverse effects related to ground shaking and would not exacerbate existing conditions related to ground shaking, and the impact would be less than significant. Mitigation measures are not required. This topic will not be discussed in the EIR.

**Liquefaction**

Liquefaction is a phenomenon that occurs when loose, saturated, or silty soils contract as a result of a strong ground shaking event. The soil contraction causes the soil to lose shear strength by increasing the pore pressure.[166] As part of the geotechnical investigation, liquefaction analysis was conducted for the proposed project or project variants. The analysis concluded that there is a low potential for the triggering of liquefaction at the site.[167] Additionally, the

[166] Geotechnical Report, p. 9.
[167] Geotechnical Report, p. 9.

project site is not located within a mapped liquefaction hazard zone.[168,169] Because the soils at the project site are not susceptible to liquefaction, the proposed project or project variants would not expose persons or structures to substantial adverse effects related to liquefaction, and would not exacerbate existing conditions related to liquefaction, and the impact would be less than significant. Mitigation measures are not required. This topic will not be discussed in the EIR.

**Seismic Densification**

Seismic densification is a phenomenon that can occur during strong seismic shaking in loose, clean granular deposits above the water table, resulting in ground surface settlement that can cause damage to overlying structures. As noted in the geotechnical report and existing setting section above, portions of the project site above the bedrock contain loose clayey sand and silty sand.[170] These soils may densify during an earthquake. However, excavation for the proposed project or project variants would remove soil susceptible to seismic densification. Further, as recommended by the geotechnical report, the proposed project or project variants could be supported on foundations (spread footing or mat slab for the shallow east/northeast portion and driven or drilled piles for the deeper portion); all bearing on bedrock associated with the Franciscan Formation, which consists of weathered shale and serpentinite rock. As such, the proposed project or project variants would not be constructed on unstable soils susceptible to seismic densification and the impact would be less than significant. Mitigation measures are not required. This topic will not be discussed in the EIR.

Impact GE-2: The proposed project or project variants would not result in substantial loss of topsoil or erosion. (*Less than Significant*)

The project site is composed of an existing maintenance and operations building and other impervious surfaces (e.g., the paved bus storage yard including the bus wash area and running repair station).

As soils are exposed and moved during site preparation and excavation activities, they would be subject to wind- and water-borne erosion. The SFMTA and private project co-sponsor would be required to develop and implement an erosion and sediment control plan for construction activities in accordance with public works code article 4.2. Compliance with this section of the public works code would also be required pursuant to public works' SCM #3, Water Quality. The SFPUC must review and approve the erosion and sediment control plan prior to the plan's implementation. Contractors and site supervisors are responsible for ensuring that best management practices are implemented and maintained throughout the construction process, and failure to comply would result in citation and civil penalties. Erosion and sediment control best management practices would be implemented to minimize and stabilize disturbed areas, protect slopes and channels, control the site perimeter, and retain sediment. Examples of best management practices include check dams, silt fencings, catch basins, and proper waste storage

[168] Community Safety Element, Map 4 (Seismic Hazard Zones San Francisco, 2012).

[169] State of California, Seismic Hazard Zones, City and County of San Francisco, Official Map, November 17, 2000, *https://sfgov.org/esip/sites/default/files/FileCenter/Documents/10438-California%20Seismic%20Hazard%20Zones%20Map.pdf*, March 26, 2021.

[170] Geotechnical Report, p. 27.

and disposal.[171] The SFMTA and private project co-sponsor would also be required to develop and implement a site-specific dust control plan, pursuant to section 1242 of the health code and public works' SCM #4, Air Quality. The project sponsor would implement best management practices specified in the erosion and sediment control plan and the dust control plan, which would reduce construction impacts related to erosion and the loss of topsoil to less-than-significant levels.

At project buildout, the project site would be more intensely developed and landscaped, with limited open areas susceptible to erosion or loss of topsoil. Therefore, operation of the proposed project or project variants would have a less-than-significant impact related to soil erosion and loss of topsoil, and mitigation measures are not required. This topic will not be discussed in the EIR.

Impact GE-3: The proposed project or project variants would not be located on a geologic unit or soil that is unstable, or that could become unstable as a result of the project, resulting in an onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse. (*Less than Significant*)

The project site is underlain with dense to very dense, stiff to very stiff clay, and weathered bedrock. As noted above under Impact GE-1, the project site is largely flat and is not located in an area designated as being susceptible to earthquake-induced landslides or liquefaction.[172,173] Lateral spreading is a phenomenon that occurs as surficial soil displaces along a shear zone that has formed within an underlying liquefied layer. Because the soils at the project site are not likely to trigger liquefaction, foundations would be installed on bedrock and stable soils (i.e., soils that contain low moisture content and high load bearing capacity), and the proposed excavation depth would extend beneath the groundwater table, the potential for settlement leading to unstable soils, lateral spreading, and subsidence would be very low. Therefore, the impact would be less than significant, and mitigation measures are not required. This topic will not be discussed in the EIR.

Because excavation would extend to 35 feet below ground surface—below the depth where perched groundwater was encountered (9 feet below ground surface), the design groundwater level of 20 feet, and the estimated groundwater table (approximately 33 feet below ground surface)[174]—temporary dewatering of groundwater would be required to gain adequate foundation support and during drilling for pile foundations or for utility trenching. Dewatering would be limited to construction and would not be expected to result in subsidence. Further, the SFMTA and private project co-sponsor would adhere to state building code Chapter 18, Soils and Foundations, which provides the parameters for geotechnical reports and structural considerations in the selection, design, and installation of foundation systems including foundation walls and retaining walls. Adherence to building code requirements would minimize any risk of damage to onsite or offsite structures and adjacent sidewalks.

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171 SFPUC, Construction Best Management Practices Handbook, August 2013, Chapter 4, *https://sfwater.org/modules/showdocument.aspx?documentid=4282*, accessed March 26, 2021.

172 Community Safety Element, Map 4 (Seismic Hazard Zones San Francisco, 2012).

173 State of California, Seismic Hazard Zones, City and County of San Francisco, Official Map, November 17, 2000, *https://sfgov.org/esip/sites/default/files/FileCenter/Documents/10438-California%20Seismic%20Hazard%20Zones%20Map.pdf*, accessed March 26, 2021.

174 Geotechnical Report, p. 41.

Given the above, the proposed project or project variants would not be located on an unstable geologic unit or soils or cause a geologic unit or soils to become unstable, potentially resulting in an onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse. Therefore, the impact would be less than significant, and mitigation measures are not required. This topic will not be discussed in the EIR.

### Impact GE-4: The proposed project or project variants 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. (*Less than Significant*)

Expansive soils expand and contract in response to changes in soil moisture, creating potential impacts to structures supported by the soil. The soil layers overlying the bedrock generally comprise dense to very dense sand, loose to very dense clayey sand, and stiff to very stiff sandy clay, which generally have no to slight plasticity, meaning the liquid limit of the soil is low and their expansive quality is minimal.[175,176] Any soil layers that may exhibit expansive qualities would be above the excavation depth. The proposed building would be supported on foundations bearing on bedrock with minimal expansive potential. Therefore, the proposed project or project variants would not be located on expansive soil that would create or exacerbate a substantial risk to life or property, and the impact would be less than significant. Mitigation measures are not required. This topic will not be discussed in the EIR.

### Impact GE-5: The proposed project or project variants would not directly or indirectly destroy a unique geologic feature. (*No Impact*)

A unique geologic or physical feature embodies distinctive characteristics of any regional or local geologic principles, provides a key piece of information important to geologic history, contains minerals not known to occur elsewhere in the county, and/or is used as a teaching tool. No unique geologic features exist at the project site; therefore, no impacts on unique geological features would occur. Mitigation measures are not required. This topic will not be discussed in the EIR.

### Impact GE-6: The proposed project or project variants could directly or indirectly destroy a unique paleontological resource or site. (*Less than Significant with Mitigation*)

Paleontological resources are the fossilized evidence of past life found in the geologic record. Fossils are preserved in sedimentary rocks, which are the most abundant rock type exposed at the surface of the earth. Despite the abundance of these rocks, and the vast numbers of organisms that have lived through time, preservation of plant or animal remains as fossils can be a rare occurrence. In many cases, fossils of animals and plants occur only in limited areas and in small numbers relative to the distribution of the living organisms they represent. Fossils of vertebrates—animals with backbones—are sufficiently rare to be considered nonrenewable resources.

The probability for finding paleontological resources can be broadly predicted from the geologic units present at or near the surface. Therefore, geologic mapping classifications of soil units can be used for assessing the potential for

[175] Geotechnical Report, p. 21.
[176] Geotechnical Report, Appendix C, Borehole Logs.

the occurrence of paleontological resources.[177] Most fossils in San Francisco and the San Francisco Peninsula are found along the Pacific Coast in marine units, such as the Purisima Formation, Monterey Formation, Butano Formation, Colma Formation, and Merced Formation, and in locations within the outcropping marine units in the Santa Cruz Mountains. Fossils found along the coast include vertebrates (e.g., extinct camels, horses, and sea mammals) and invertebrates (e.g., clams, snails, echinoderms, and crustaceans). Fossil localities diminish along the eastern flank of the Santa Cruz Mountains, likely due to the presence of chaotically mixed and severely fractured Franciscan Complex bedrock and geologically younger alluvial deposits in the upland foothills.

**Geologic Setting**

The following information is provided as context for the paleontological resources analysis for initial study checklist topic E.16(f). San Francisco is primarily underlain by Franciscan Complex bedrock, Merced Formation, Colma Formation, and surficial deposits such as dune sand and artificial fill. The surficial sedimentary deposits found in the City are primarily Holocene-age artificial fill; Holocene- and Pleistocene-age dune sand, bay mud, slope debris and ravine fill; and undifferentiated Quaternary[178] (i.e., Holocene- or Pleistocene-age) sedimentary deposits. Small portions of San Francisco are also underlain by igneous rocks which do not contain fossils. Fossils are typically found in river, lake, and bog deposits, although they may occur in nearly any type of sedimentary sequence. As mentioned above, the potential for paleontological discoveries can largely be predicted from the type of geologic units present.

Note that significance may also be stated for a particular rock unit, predicated on the research potential of fossils suspected to occur in that unit. Such significance is often stated as "sensitivity" or "potential." In most cases, decisions about how to manage paleontological resources must be based on this potential because the actual situation cannot be known until construction excavation for the project is underway. As such, a brief discussion of the geologic units commonly encountered in San Francisco and the paleontological resource potential of each is provided below.

***Franciscan Complex***

The Franciscan Complex is a Cretaceous- to Jurassic-age mixture of sedimentary, igneous, and metamorphic rocks that sits unconformably (indicating a gap in time) on the older bedrock that underlies much of San Francisco Bay. Although uncommon in the low-grade metamorphic Franciscan rocks, fossils from widely scattered localities have been important in sorting out the depositional history of the Franciscan Complex. The Franciscan Formation has a low potential to support significant paleontological resources because it is heavily deformed and metamorphosed in most locations.

[177] Bureau of Land Management, Potential Fossil Yield Classification System for Paleontological Resources on Public Lands, July 8, 2016, *https://www.blm.gov/sites/blm.gov/files/uploads/IM2016-124_att1.pdf*, accessed March 26, 2021.

[178] Quaternary is relating to or denoting the most recent period in the Cenozoic era in the International Geologic Time Scale, following the Tertiary period and comprising the Pleistocene and Holocene epochs (and thus including the present). International Commission on Stratigraphy. Available at International Union of Geological Sciences, online at *https://www.iugs.org/ics*, accessed March 26, 2021.

***Merced Formation***

The Pleistocene- to Pliocene-age Merced formation is composed of marine sand, silt, and clay, with minor amounts of gravel, lignite, and volcanic ash that was deposited in a small sedimentary basin formed by the San Andreas fault system. A search of the fossil collections database at the University of California Museum of Paleontology (UCMP) identified the fossil remains of nine vertebrate mammals collected at Fort Funston Beach, located in the southwest area of San Francisco, from the Merced Formation. In addition to these UCMP recorded fossils, the National Park Service Golden Gate National Recreation Area guidance document also identified trace fossils (marks left behind by organisms, such as trackways, burrows, footprints, or feces), a wing of a beetle, clams, terrestrial mammal remains (camels, mammoths, whales, and bison), bird remains (common murre), and diatoms (major group of algae that leaves silica remains).[179]

***Colma Formation***

The Pleistocene-age Colma Formation is mostly comprised of sandy deposits laid down between 80,000 and 120,000 years ago, during the last major interglacial period. The origins of the poorly consolidated Colma sands are unclear, but they appear to represent shallow bay-to-dune, and valley-fill debris deposits. The formation extends under the San Francisco Bay and may be found as high as 500 feet above sea level.

As described in more detail in the following subsection on surficial sediments, identified fossils within this formation include mammoth, bison, and ground sloth remains from various locations in San Francisco. Diatoms, trees, and pollen have also been reported from the Colma Formation.

***Surficial Sediments***

Surficial sediments within the City are Holocene to Pleistocene in age. Holocene-age sediments are typically too young to contain fossils,[180] but they may overlie sensitive older (i.e., Pleistocene- to Pliocene-age) deposits at various depths within the City. Pleistocene-age sediments have produced significant vertebrate fossils throughout California, including the Bay Area. Recently discovered Pleistocene vertebrate fossils near San Francisco Bay include Mammuthus columbi, Paramylodon harlani, Equus sp., Bison sp., and Capromeryx minor (pronghorn antelope), among other taxa.[181]

Soils and bedrock underlying the project site would be disturbed by project grading and excavation. The results of the geotechnical report prepared for the proposed project indicate that the project site is underlain by dense to very dense sand, loose to very dense clayey sand, and stiff to very stiff sandy clay over weathered bedrock consisting of serpentinite. As noted in the geotechnical report, the soil profile varies significantly across the project site.[182] The

[179] Henkel, C.J., W.P. Elder, V.L. Santucci and E.C. Clites. 2015. Golden Gate National Recreation Area: Paleontological resource inventory. Natural Resource Report NPS/GOGA/NRR-2015/915. National Park Service, Fort Collins, Colorado.

[180] Society of Vertebrate Paleontology's 2010 Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources.

[181] Maguire, K.C. and P.C. Holroyd. 2016. Pleistocene Vertebrates of Silicon Valley (Santa Clara County). PaleoBios, v. 33, no 1, p. 1–14.

[182] Geotechnical Report, Appendix C.

upper surface of the Colma Formation is present at depths of 5 to 14 feet below present parcel grade. The Colma Formation (and, variably, bedrock) at the site are overlain by clayey sand, and by an uppermost layer of fill or disturbed native soil that ranges from 1 to 6 feet thick, as observed on geotechnical cores.[183] Weathered bedrock is present near the ground surface in the northeast corner of the site and dips steeply towards the southwest corner of the site (Mariposa and Bryant streets) where it is approximately 69 feet below ground surface. These soils and bedrock are characteristic of the Colma and Franciscan formations, described above The oldest rocks within this formation date from the late Jurassic period (approximately 150 million years before present) of the Mesozoic era.[184] The Colma and Franciscan formations that underlie the project site have moderate and low potential for fossil yield, respectively.

Excavation activities across the whole project site for the basement level and/or foundations could vary from a minimum depth near northwest corner for the shallow portion of the foundation to a maximum depth on the other portions of the project site where the bedrock dips steeply (i.e., the west, south-central and southeast portions) for the deep foundation with driven or drilled piles that could extend beyond 69 feet to reach bedrock. Excavation on the western portion of the site would likely extend into soils that are characteristic of the Colma Formation, while that on the east side would encounter bedrock of the Franciscan Formation. Because these geologic deposits have low to moderate paleontological sensitivity, excavation activities could expose and cause impacts on unknown paleontological resources, which would be a potentially significant impact. For paleontologically sensitive areas, the objective of implementing mitigation measures is to reduce adverse impacts on paleontological resources by recovering fossils and associated contextual data prior to and during ground-disturbing activities. This impact would be reduced to a less-than-significant level with implementation of Mitigation Measure M-GE-6a: Inadvertent Discovery of Paleontological Resources and Mitigation Measure-GE-6b: Preconstruction Paleontological Monitoring Report.

Mitigation Measure M-GE-6a: Inadvertent Discovery of Paleontological Resources

Worker Awareness Training - Prior to commencing construction, and ongoing throughout ground disturbing activities (e.g., excavation, utility installation, the project sponsor and/or their designee shall ensure that all project construction workers are trained on the contents of the Paleontological Resources Alert Sheet, as provided by the Planning Department. The Paleontological Resources Alert Sheet shall be prominently displayed at the construction site during ground disturbing activities for reference regarding potential paleontological resources.

In addition, the project sponsor team shall inform the contractor and construction personnel of the immediate stop work procedures and other procedures to be followed if bones or other potential fossils are unearthed at the project site. Should new workers that will be involved in ground disturbing construction activities begin employment after the initial training has occurred, the construction supervisor shall ensure that they receive the worker awareness training as described above.

[183] Arup/RYCG Joint Venture, Geotechnical Engineering Report, San Francisco Public Works, SFMTA Potrero Facility Rebuild, November 2019.

[184] Unites States Department of the Interior, Geological Survey, Geology of the San Francisco North Quadrangle, California (Schlocker, Julius), Geological Survey Professional Paper 782, 1974, pp. 9-73, *https://pubs.er.usgs.gov/publication/pp782*, accessed March 26, 2021.

The project sponsor team shall complete the standard form/affidavit confirming the timing of the worker awareness training to the Environmental Review Officer (ERO). The affidavit shall confirm the project's location, the date of training, the location of the informational handout display, and the number of participants. The affidavit shall be transmitted to the ERO within five (5) business days of conducting the training.

Paleontological Resource Discoveries - In the event of the discovery of an unanticipated paleontological resource during project construction, ground disturbing activities shall temporarily be halted within 25 feet of the find until the discovery is examined by a qualified paleontologist as recommended by the Society of Vertebrate Paleontology standards (SVP 2010) and Best Practices in Mitigation Paleontology (Murphey et al. 2019). Work within the sensitive area shall resume only when deemed appropriate by the qualified paleontologist in consultation with the ERO.

The qualified paleontologist shall determine: 1) if the discovery is scientifically significant; 2) the necessity for involving other responsible or resource agencies and stakeholders, if required or determined applicable; and 3) methods for resource recovery. If a paleontological resource assessment results in a determination that the resource is not scientifically important, this conclusion shall be documented in a Paleontological Evaluation Letter to demonstrate compliance with applicable statutory requirements (e.g., Federal Antiquities Act of 1906, CEQA Guidelines Section 15064.5, California Public Resources Code Chapter 17, Section 5097.5, Paleontological Resources Preservation Act 2009). The Paleontological Evaluation Letter shall be submitted to the ERO for review within 30 days of the discovery.

If the qualified paleontologist determines that a paleontological resource is of scientific importance, and there are no feasible measures to avoid disturbing this paleontological resource, the qualified paleontologist shall prepare a Paleontological Mitigation Program. The mitigation program shall include measures to fully document and recover the resource of scientific importance. The qualified paleontologist shall submit the mitigation program to the ERO for review and approval within 10 business days of the discovery. Upon approval by the ERO, ground disturbing activities in the project area shall resume and be monitored as determined by the qualified paleontologist for the duration of such activities.

The mitigation program shall include: 1) procedures for construction monitoring at the project site; 2) fossil preparation and identification procedures; 3) curation of paleontological resources of scientific importance into an appropriate repository; and 4) preparation of a Paleontological Resources Report (report or paleontology report) at the conclusion of ground disturbing activities. The report shall include dates of field work, results of monitoring, fossil identifications to the lowest possible taxonomic level, analysis of the fossil collection, a discussion of the scientific significance of the fossil collection, conclusions, locality forms, an itemized list of specimens, and a repository receipt from the curation facility. The project sponsor team shall be responsible for the preparation and implementation of the mitigation program, in addition to any costs necessary to prepare and identify collected fossils, and for any curation fees charged by the paleontological repository. The paleontology report shall be submitted to the ERO for review within 30 business days from conclusion of ground disturbing activities, or as negotiated following consultation with the ERO.

### Mitigation Measure M-GE-6b: Preconstruction Paleontological Evaluation and Monitoring Plan during Construction

The project sponsor team shall engage a qualified paleontologist to develop a site-specific monitoring plan prior to commencing soil-disturbing activities at the project site. The Preconstruction Paleontological Monitoring Plan would determine project construction activities requiring paleontological monitoring based on those may affect sediments with moderate sensitivity for paleontological resources. Prior to issuance of any demolition permit, the project sponsor team shall submit the Preconstruction Paleontological Monitoring Plan to the ERO for approval.

At a minimum, the plan shall include:

1. Project Description
2. Regulatory Environment – outline applicable federal, state, and local regulations
3. Summary of Sensitivity Classification
4. Research Methods, including but not limited to:

    4.a. Field studies conducted by the approved paleontologist to check for fossils at the surface and assess the exposed sediments.

    4.b. Literature Review to include an examination of geologic maps and a review of relevant geological and paleontological literature to determine the nature of geologic units in the project area.

    4.c. Locality Search to include outreach to the University of California Museum of Paleontology in Berkeley.

5. Results: to include a summary of literature review and finding of potential site sensitivity for paleontological resources; and depth of potential resources if known.
6. Recommendations for any additional measures that could be necessary to avoid or reduce any adverse impacts to recorded and/or inadvertently discovered paleontological resources of scientific importance. Such measures could include:

    6.a. Avoidance: If a known fossil locality appears to contain critical scientific information that should be left undisturbed for subsequent scientific evaluation.

    6.b. Fossil Recovery: If isolated small, medium- or large-sized fossils are discovered within a project area during field surveys or construction monitoring, and they are determined to be scientifically significant, they should be recovered. Fossil recovery may involve simply collecting a fully exposed fossil from the ground surface, or may involve a systematic excavation, depending upon the size and complexity of the fossil discovery.

    6.c. Monitoring: Monitoring involves systematic inspections of graded cut slopes, trench sidewalls, spoils piles, and other types of construction excavations for the presence of fossils, and the fossil recovery and documentation of these fossils before they are destroyed by further ground disturbing actions. Standard monitoring is typically used in the most paleontologically sensitive geographic areas/geologic units (moderate, high, and very high potential); while spot-check monitoring is typically used in geographic areas/geologic units of moderate or unknown paleontological sensitivity (moderate or unknown potential).

    6.d. Data recovery and reporting: Fossil and associated data discovered during soils disturbing activities should be treated according to professional paleontological standards and documented in a data recovery report. The plan should define the scope of the data recovery report.

    The consultant shall document the monitoring conducted according to the monitoring plan and any data recovery completed for significant paleontological resource finds discovered, if any. Plans and reports prepared by the consultant shall be considered draft reports subject to revision until final approval by the ERO. The final monitoring report and any data recovery report shall be submitted to the ERO prior to the certificate of occupancy.

Mitigation Measures M-GE-6a and M-GE-6b would reduce potential adverse effects on paleontological resources by recovering fossils and associated contextual data prior to and during ground-disturbing activities; therefore, the

proposed project or project variants would have a less-than-significant impact on paleontological resources. The mitigation measures will be included in the project's mitigation monitoring and reporting program. This topic will not be discussed in the EIR.

## Cumulative Impacts

Impact C-GE-1: The proposed project or project variants, in combination with cumulative projects in the vicinity, would not result in significant cumulative impacts related to geology, soils and paleontological resources. (*Less than Significant*)

Geology, soils, and paleontological resource impacts are generally site-specific and localized. The closest cumulative projects that would include below-grade work are across Mariposa and Bryant streets – 2601 Mariposa Street (improvements to existing foundation to support building load for single floor vertical addition and other interior improvements) and 1850 Bryant Street (excavation for new construction). All other projects would be further away from the project site. Although the closest cumulative projects could require various levels of excavation and grading, it is unlikely they will combine to result in cumulative impacts on geology, soils, and paleontological resources.

Further, these cumulative projects are also subject to the same department of building inspection requirements for geotechnical review and would be required to comply with the state and local building codes, implementing procedures, regulations, and guidelines including mandatory or local seismic safety standards. As such, the department of building inspection will review project-specific geotechnical reports during review of building permits for cumulative projects for conformance with recommendations in the geotechnical reports, based on site conditions. For the above reasons, the proposed project or project variants and nearby cumulative projects would result in a less-than-significant cumulative impact on geology, soils, or paleontological resources.

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# E.17 Hydrology and Water Quality

| *Topics:* | *Potentially Significant Impact* | *Less Than Significant with Mitigation Incorporated* | *Less Than Significant Impact* | *No Impact* | *Not Applicable* |
|---|---|---|---|---|---|
| **17. HYDROLOGY AND WATER QUALITY. Would the project:** | | | | | |
| a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality? | ☐ | ☐ | ☒ | ☐ | ☐ |
| b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? | ☐ | ☐ | ☒ | ☐ | ☐ |
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would: | ☐ | ☐ | ☒ | ☐ | ☐ |
| i) Result in 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 off-site; | ☐ | ☐ | ☒ | ☐ | ☐ |
| 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? | ☐ | ☐ | ☒ | ☐ | ☐ |
| d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? | ☐ | ☐ | ☐ | ☐ | ☒ |
| e) Conflict or obstruct implementation of a water quality control plan or sustainable groundwater management plan? | ☐ | ☐ | ☒ | ☐ | ☐ |

## Summary of Hydrology and Water Quality Comments Received in Response to the Notice of Preparation of an EIR and Notice of Public Scoping Meeting

Issues identified in public comments on the NOP related to the proposed project's or project variants' physical environmental impacts were considered in preparing this analysis. There were no comments on the NOP related to hydrology and water quality (see EIR Chapter 1, Introduction, pp. 1.3-1.5).

## Project-Specific Impacts

Regarding initial study checklist topic E.17(d), according to the SFPUC's 100-Year Storm Flood Risk Map, the project site is not located within a 100-year flood hazard area,[185] or in an area identified as being subject to potential

[185] City and County of San Francisco, 100-Year Storm Flood Risk Map, July 2019, *https://sfplanninggis.org/floodmap/*, accessed March 26, 2021.

inundation in the event of a tsunami along the San Francisco coast or a dam or levee failure.[186] Therefore, the proposed project or project variants would not create a risk related to a release of pollutants due to inundation in a flood hazard, tsunami, or seiche zone. As such, initial study checklist topic E.17(d) is not applicable to the proposed project or project variants and is not discussed below or further in the EIR. The remaining initial study checklist topics for the hydrology and water quality analysis are discussed below.

As stated in Section D, Summary of Environmental Effects, p. 11, and EIR Chapter 2, Project Description, pp. 2.49-2.54, proposed project or project variants would be subject to public works' SCMs. SCM #3, Water Quality, requires all projects to:

- Prepare either a stormwater control plan or a stormwater pollution prevention plan, and
- implement tailored erosion and sedimentation controls to prevent potential discharges of sediment and other pollutants to storm drains and all surface waterways.

Furthermore, SCM #3 requires that if uncontaminated groundwater is encountered during excavation activities, it will be discharged in compliance with applicable water quality standards and discharge permit requirements (see public works' SCM#6, Hazardous Materials for contaminated groundwater). Through implementation of applicable measures, significant hydrology and water quality impacts associated with accidental sediment and hazardous materials discharges would be avoided (see EIR Appendix C).

Impact HY-1: The proposed project or project variants would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality, create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, or conflict with or obstruct implementation of a water quality control plan. (*Less than Significant*)

**Construction Dewatering and Stormwater Runoff**

The proposed project or project variants would involve excavation to a maximum depth of 35 feet below ground surface for construction of the building foundation and below-grade basement level. Excavation activities would require dewatering, given that perched groundwater was encountered at depth of 9 feet below ground surface and the groundwater table is located at approximately 33 feet below ground surface.[187] If wells are used for groundwater dewatering during construction, the project would comply with article 12B of the health code (Soil Boring and Well Regulations Ordinance)[188], which requires approvals from both the San Francisco Department of Public Health (health department) and the SFPUC. Any groundwater encountered during construction would be subject to the requirements of public works code article 4.1, which include the requirement that groundwater meet specified

[186] City and County of San Francisco, Community Safety Element of the San Francisco General Plan, 2012 (hereinafter referred to as "Community Safety Element"), Map 5 (Tsunami Hazard Zones San Francisco) and Map 6 (Potential Inundation Areas Due to Reservoir Failure), *https://generalplan.sfplanning.org/Community_Safety_Element_2012.pdf*, accessed March 26, 2021.

[187] Geotechnical Report, p. 41.

[188] San Francisco Health Code, Article 12B, Soil Boring and Well Regulations *https://codelibrary.amlegal.com/codes/san_francisco/latest/sf_health/0-0-0-2288*, accessed March 26, 2021.

water quality standards before it is discharged into the sewer system. The SFPUC must be notified regarding projects that necessitate dewatering and obtain a Batch Wastewater Discharge Permit from the SFPUC Wastewater Enterprise Collection System Division prior to any dewatering activities. The SFPUC may require additional water analysis prior to permit approval.

During construction, the proposed project or project variants would be required to comply with public works code article 4.2. Specifically, the proposed project or project variants would comply with public works code section 146.7 by implementing an erosion and sediment control plan. Compliance with this section of the public works code would also be required pursuant to public works' SCM #3, Water Quality, and SCM #6, Hazardous Materials. The erosion and sediment control plan would identify best management practices and tailored erosion and sedimentation control measures to prevent sediment from entering the City's combined sewer system. The construction best management practices that would most likely be implemented as part of the proposed project or project variants would address inspection and maintenance, water conservation, spill prevention and control, street cleaning, and prevention of illicit connection and discharge. These best management practices would minimize disturbance to the project site, adjacent areas, and storm drains and would prevent sediment from entering the combined sewer system. The SFPUC's Construction Runoff Control Program staff enforces this requirement through periodic and unplanned site inspections. In addition, prior to the commencement of any land-disturbing activities, the project sponsor would be required to obtain a construction site runoff control permit.

Construction stormwater discharged to the City's combined sewer system would be subject to the requirements of public works code article 4.1, which incorporates the requirements of the City's National Pollutant Discharge Elimination System (NPDES) permit and the federal Combined Sewer Overflow Control Policy. Stormwater drainage during construction would flow to the City's combined sewer system, where it would receive treatment at the Southeast Water Pollution Control Plant and be discharged through an existing outfall or overflow structure in compliance with the existing pollutant discharge permit. Therefore, the proposed project's or project variants' compliance with applicable permits and regulatory requirements would reduce water quality impacts during construction and dewatering activities.

**Operational Wastewater and Stormwater Discharges**

During operation, wastewater discharges would be related to the expanded transit use and the new residential and commercial uses. Stormwater discharges would include runoff from streets, sidewalks, and other impervious surfaces. The proposed project or project variants would pre-treat stormwater to draw out pollutants, reduce peak flows, and to recharge groundwater.[189] Discharges from the proposed project or project variants would be subject to the permit requirements of public works code article 4.1[190] and supplemented by public works order

[189] Design Criteria Document, Version 2, p. 37.

[190] San Francisco Public Works Code, Article 4.1, Industrial Waste, *https://codelibrary.amlegal.com/codes/san_francisco/latest/sf_publicworks/0-0-0-441*, accessed March 26, 2021.

no. 158170.[191] Wastewater and stormwater generated at the project site would be directed to the City's combined sewer system and treated to the standards of the National Pollutant Discharge Elimination System (NPDES) permit for the Southeast Water Pollution Control Plant prior to discharge to San Francisco Bay.

The proposed project or project variants would be required to implement a stormwater control plan in accordance with the City's stormwater management ordinance. The SFMTA and private project co-sponsor would be required to submit a stormwater control plan for review and approval by the SFPUC. The stormwater control plan must comply with the Stormwater Design Guidelines and meet performance measures set by the SFPUC related to the proposed project's or project variants' stormwater runoff rate and volume. To ensure the proposed project or project variants meet the SFPUC's requirements, low-impact development features are proposed and would include a stormwater catchment system designed using best management practices in accordance with existing SFPUC regulations and standards. Additionally, as discussed under Impact UT-3 in initial study Section E.13, Utilities and Service Systems, the proposed project or project variants would incorporate low-impact design features to limit the amount of water entering the combined sewer system. Therefore, the proposed project or project variants would implement stormwater, rainwater, and graywater capture systems for onsite reuse. Captured stormwater, rainwater, and graywater would be held in a system of tanks located in the proposed basement level. The captured water flows would be treated and reused onsite for the SFMTA bus wash system, for landscape irrigation, and as flush water, or treated and discharged to the combined sewer system and conveyed to the Southeast Water Pollution Control Plant. These features would be designed to reduce the stormwater peak flow and volume from a two-year, 24-hour storm event by at least 25 percent, as required. This would reduce peak flows entering the combined sewer system during wet-weather events and minimize the potential for downstream or localized flooding.[192] Compliance with San Francisco's Stormwater Design Guidelines would reduce the quantity and rate of stormwater runoff to the City's combined sewer system and improve the water quality of those discharges.

In summary, the proposed project's or project variants' construction and operational activities would not result in significant water quality impacts or obstruct implementation of a water quality control plan. Furthermore, the proposed project or project variants would not violate water quality standards or release substantial additional sources of polluted runoff. This impact would be less than significant, and mitigation measures are not required. This topic will not be discussed in the EIR.

[191] City and County of San Francisco, San Francisco Department of Public Works Order No. 158170, Industrial Waste Discharge Limits into City's Sewerage System, 2008, *https://infrastructure.sfwater.org/fds/fds.aspx?lib=SFPUC&doc=619040&data=238330400*, accessed March 26, 2021.

[192] SFPUC, Stormwater Management Requirements and Design Guidelines, 2016, *https://sfwater.org/Modules/ShowDocument.aspx?documentID=9026*, accessed March 26, 2021.

Impact HY-2: The proposed project or project variants would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project would impede sustainable groundwater management of the basin, nor would it conflict with a sustainable groundwater management plan. (*Less than Significant*)

The project site is located in the Downtown San Francisco Groundwater Basin. This basin is not used as a potable water source and there are no plans for development of this basin for groundwater production. Therefore, a sustainable groundwater management plan has not been adopted for the Downtown San Francisco Groundwater Basin. The project site is currently developed with a maintenance and operations building and paved bus storage yard and is completely covered with impervious surfaces. The proposed project or project variants would not increase the amount of impervious surface at the project site and would therefore not alter groundwater infiltration and runoff patterns on the project site beyond that required to meet the Stormwater Management Ordinance, i.e., a 25 percent stormwater peak flow and volume reduction.

The geotechnical report prepared for the proposed project or project variants assumed a design groundwater level of 20 feet below ground surface for purposes of the foundation capacity analysis assessment. The geotechnical investigation encountered perched groundwater at 9 feet below ground surface with the groundwater table at approximately 33 feet; however, groundwater levels in the area are likely to fluctuate, with historical records indicating the potential for groundwater within 10 feet of the existing ground surface.[193] The project site would be excavated to a depth of approximately 35 feet below ground surface (including over excavation for allowance of engineered fill, elevator pits and lower level work areas). Because groundwater would likely be encountered during excavation, dewatering would be required during construction. If wells are used for groundwater dewatering during construction, the project would comply with health code article 12B, which requires approvals from both the health department and the SFPUC. Once dewatering is completed, groundwater levels would return to normal. The proposed project or project variants would not require long-term dewatering and would not be expected to extract any underlying groundwater supplies. Therefore, the proposed project or project variants would not substantially deplete groundwater resources, interfere with groundwater recharge, or conflict with a sustainable groundwater management plan. Impacts related to groundwater would be less than significant, and mitigation measures are not required. This topic will not be discussed in the EIR.

Impact HY-3: The proposed project or project variants 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 through the addition of impervious surfaces, in a manner that would result in substantial erosion or siltation onsite or offsite; substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite; or impede or redirect flood flows. (*Less than Significant*)

The project site is covered entirely by impervious surfaces and has no streams or creeks. The proposed project or project variants would not expand any existing impervious surfaces; therefore, site drainage would remain generally the same as under existing conditions. Through implementation of low-impact design measures as required by the City's Stormwater Management Ordinance and Stormwater Management Requirements and Design Guidelines, the

[193] Geotechnical Report, p. 41.

proposed project or project variants would incrementally reduce the amount of surface water runoff from the project site. Specifically, the proposed project or project variants would be required to reduce the existing stormwater runoff rate and volume at the project site by 25 percent for a two-year 24-hour design storm with the implementation of low-impact design measures. The proposed project or project variants would meet this requirement by installing stormwater and rainwater catchments systems to manage onsite stormwater and using permeable pavement or other low-impact design features as part of the streetscape to promote infiltration, e.g., the proposed landscaping along 17th Street and street tree wells along the adjacent sidewalks. Therefore, the proposed project or project variants would not be expected to result in substantial erosion or flooding associated with changes in drainage patterns. The impact of the proposed project or project variants related to potential erosion or flooding would be less than significant, and mitigation measures are not required. This topic will not be discussed in the EIR.

## Cumulative Impacts

### Impact C-HY-1: The proposed project or project variants, in combination with other cumulative projects, would not result in significant cumulative impacts on hydrology and water quality. (*Less than Significant*)

Cumulative projects in the vicinity (see EIR Table 3.A.1 and EIR Figure 3.A.1 on pp. 3.A.7-3.A.9) would result in an intensification of land uses, a cumulative increase in water consumption, a cumulative increase in stormwater runoff, and a cumulative increase in stormwater and wastewater generation. Increases would result in cumulative impacts to wastewater, stormwater, and groundwater, as described below. The SFPUC has accounted for such growth in its service projections through 2040.[194] The SFPUC's infrastructure capacity plans account for projected population and employment growth in relation to the capacity of its collection, storage, and treatment system.[195]

Water quality impacts are related to changes in wastewater and stormwater flows to the Channel subdrainage area of the Bayside Drainage Basin. Wastewater and stormwater generated by the proposed project would be treated at the Southeast Water Pollution Control Plant. Therefore, the geographic scope of potential cumulative impacts on water quality encompasses the Channel subdrainage area of the combined sewer system where the project is located and the bay where the Southeast Water Pollution Control Plant effluent is discharged. Like the proposed project or project variants, construction and operation of cumulative projects within the Channel subdrainage area (including all cumulative projects listed in EIR Table 3.A.1) would require the implementation of and compliance with applicable regulatory requirements for hydrology and water quality, including the City's stormwater management ordinance and guidelines. As a result, cumulative development would not substantially change the amount of new impervious surface and all stormwater and wastewater would be treated to the standards in the City's NPDES permit. Therefore, cumulative impacts related to increased runoff and water quality would be less than significant.

[194] SFPUC, 2015 UWMP, Section 1, p. 1-1.

[195] SFPUC, San Francisco Sewer System Master Plan, 2010, *http://www.gestaltgraphics.com/docs/SFSSSummary.pdf*, accessed March 26, 2021. The Sewer System Master Plan evolved into the Sewer System Improvement Program and then the 2015 San Francisco Sewer System Management Plan.

With regards to groundwater dewatering, cumulative projects in the vicinity would be within the same groundwater basin as the proposed project or project variants (the Downtown Groundwater Basin). Dewatering associated with construction activities of cumulative projects, if needed based on excavation depths, would be temporary and limited to construction. Like the proposed project or project variants, construction of cumulative projects within the Downtown Groundwater Basin (including all cumulative projects listed in EIR Table 3.A.1) would require the implementation of and compliance with applicable regulatory requirements, including health code article 12B if groundwater wells are part of cumulative development. Like the proposed project or project variants, once any temporary groundwater dewatering is completed, groundwater levels would be expected to return to normal. The Downtown Groundwater Basin is not a potable water source; thus, like the proposed project or project variants, cumulative projects would not be expected to require long-term dewatering and would not propose to extract any underlying groundwater supplies. Therefore, cumulative impacts related to chronic lowering of groundwater levels or an unreasonable depletion of groundwater supply would be less than significant.

Cumulative projects listed in EIR Table 3.A.1 would drain to the Channel subdrainage area of the City's combined sewer system and could result in drainage system capacity or flooding impacts. Like the proposed project or project variants, compliance with applicable regulatory requirements designed to reduce the cumulative effects of development on drainage system capacity and flooding (i.e., the stormwater management ordinance) would ensure that cumulative projects would not result in any significant drainage system capacity or flooding impacts.

Overall, compliance with existing regulations would ensure that the proposed project or project variants in combination with cumulative projects in the immediate vicinity, in the Channel subdrainage area of the combined sewer system, and in San Francisco would result in less-than-significant cumulative impacts on hydrology and water quality. Mitigation measures are not required. This topic will not be discussed in the EIR.

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# E.18 Hazards and Hazardous Materials

| Topics: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact | Not Applicable |
|---|---|---|---|---|---|
| **18. HAZARDS AND HAZARDOUS MATERIALS. Would the project:** | | | | | |
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | ☐ | ☐ | ☒ | ☐ | ☐ |
| b) 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? | ☐ | ☐ | ☒ | ☐ | ☐ |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | ☐ | ☐ | ☒ | ☐ | ☐ |
| d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? | ☐ | ☐ | ☒ | ☐ | ☐ |
| e) 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? | ☐ | ☐ | ☐ | ☐ | ☒ |
| f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | ☐ | ☐ | ☒ | ☐ | ☐ |
| g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires? | ☐ | ☐ | ☐ | ☐ | ☒ |

## Summary of Hazards and Hazardous Materials Comments Received in Response to the Notice of Preparation of an EIR and Notice of Public Scoping Meeting

Issues identified in public comments on the NOP related to the proposed project's or project variants' physical environmental impacts were considered in preparing this analysis. There were no comments on the NOP related to hazards and hazardous materials (see EIR Chapter 1, Introduction, pp. 1.3-1.5).

## Project-Specific Impacts

As stated in Section D, Summary of Environmental Effects, p. 11, and EIR Chapter 2, Project Description, pp. 2.49-2.54, the proposed project or project variants would be subject to public works' SCMs. SCM #6, Hazardous Materials, requires projects located in a Maher Zone that involve excavation of 50 cubic yards of soils to comply with the Maher

Ordinance.[196] It also requires projects that are not currently located on sites in a Maher Zone but have the potential to contain hazardous materials in soil and/or groundwater to be referred to the health department as newly identified Maher sites (see EIR Appendix C). SCM #6 requires a project sponsor to coordinate with health department staff, who oversee Maher compliance, to complete a screening assessment to determine (based on excavation volume, project site location, and need for a permit, e.g., grading, building, demolition) if a Maher Application is required. If enrollment in the Maher Program is required, health department staff determine the scope of additional studies and remedial actions as appropriate for the proposed uses.

Because the project site is located in a Maher Zone and project construction would require a building permit and exceed the 50-cubic-yard excavation volume threshold, the SFMTA consulted with the health department and submitted a Maher Application on January 27, 2020. The information in this section is based on the Phase II environmental site assessment[197], health department communications related to enrollment in the Maher Program, the submission of the Maher Application, and the health department's determination.[198] The section summarizes the environmental site assessment and the health department's determination of the required approach to site remediation in light of existing conditions. Through implementation of applicable measures, significant impacts related to hazardous materials would be avoided.

### Impact HZ-1: The proposed project or project variants would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. (*Less than Significant*)

The project site currently supports a bus storage yard and maintenance and operations building. This existing use involves the use, storage, and disposal of various hazardous materials typical of electric-powered automotive facilities, such as oils and lubricants. Hazardous waste generated from bus maintenance activities would continue to be hauled off site for disposal at a qualified waste disposal facility in accordance with relevant federal, state, and local regulations governing the handling of hazardous waste, as described below under "Operation." The batteries associated with the electric buses would be disposed of at a licensed recycling facility in accordance with applicable regulations such as Title 22 of the California Code of Regulations, Division 4.5, Chapter 23, which regulates the disposal and management of Universal Waste (including end-of-life rechargeable batteries in electric vehicles).

#### Construction

Project construction would involve the routine transport, use, or disposal of hazardous materials such as fuels, lubricants, paints, and solvents associated with construction vehicles, equipment, and supplies. Project construction would also involve the excavation of soil that is considered hazardous. The handling and disposal of contaminated soil is addressed below in Impact HZ-2.

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196 San Francisco Health Code, Article 22A: Analyzing Soils for Hazardous Waste, *https://codelibrary.amlegal.com/codes/san_francisco/latest/sf_health/0-0-0-4093*, and San Francisco Building Code, Article 106A.3.2.4, *https://codelibrary.amlegal.com/codes/san_francisco/latest/sf_building/0-0-0-92027*, accessed May 28, 2021.

197 AEW Engineering, Inc., Final Phase II, Environmental Site Assessment Report, June 2018, Figure 3 (hereinafter referred to as "Phase II ESA").

198 San Francisco Department of Public Health, Site Assessment and Mitigation Program, Phase II Subsurface Report Approval/Site Mitigation and Separate Dust Control Plan Request, 2500 Mariposa Street, May 14, 2020.

The construction contractor would be required to adhere to federal, state, and local regulations pertaining to the handling of hazardous materials. Relevant federal regulations include the Occupational Safety and Health Administration (OSHA), Title 29 of the Code of Federal Regulations, section 1910, which prescribes occupational safety and health standards related to the handling of hazardous materials and the use of personal protective equipment. Relevant state regulations include the California Occupational Safety and Health Administration (Cal/OSHA), Title 8 of the California Code of Regulations, which establishes occupational health and safety standards related to employee training, availability of safety equipment, accident prevention programs, and hazardous substance exposure warnings. Title 8 of the California Code of Regulations also requires the construction contractor to implement a communication program that includes label warnings, safety data sheets, and information and training for workers about the chemicals to which they could be exposed.

Additionally, as described in initial study Section E.17, Hydrology and Water Quality, the proposed project or project variants would be subject to the State Water Resources Control Board General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ (Construction General Stormwater Permit), which requires the preparation and implementation of a stormwater pollution prevention plan and the identification of best management practices designed to prevent the risk of sediment discharge. Relevant local regulations include public works code article 4.2, which requires the preparation and implementation of an Erosion and Sediment Control Plan. The erosion and sediment control plan would include site-specific best management practices designed to prevent discharge of hazardous materials. As stated there, compliance applicable regulations would also be ensured pursuant to public works' SCM #3, Water Quality, and SCM #6, Hazardous Materials.

In accordance with the stormwater pollution prevention plan and erosion and sediment control plan, which would be reviewed and approved by the SFPUC, the construction contractor would identify hazardous materials sources within the construction area and recommend site-specific best management practices to prevent discharge of these materials. The minimum best management practices that would be required include maintaining an inventory of materials used onsite; storing chemicals in water-tight containers protected from rain; developing a spill response plan and procedures to address hazardous and nonhazardous spills; maintaining spill cleanup equipment onsite; assigning and training spill response personnel; and preventing leaks of oil, grease, and fuel from equipment.

The construction contractor and/or vendors responsible for transporting hazardous materials would comply with Title 22 of the California Code of Regulations, Division 4.5, Chapters 13 and 29, which prescribe regulatory requirements for the transport of hazardous waste. In accordance with these regulations, all hazardous waste transporters must have identification numbers. Hazardous waste transporters must also comply with the California Vehicle Code, California Highway Patrol regulations (contained in Title 13 of the California Code of Regulations); the California State Fire Marshal regulations (contained in Title 19 of the California Code of Regulations); U.S. Department of Transportation regulations (Title 49 of the Code of Federal Regulations); and U.S. Environmental Protection Agency (EPA) regulations (contained in Title 40 of the Code of Federal Regulations).

**Operation**

Project operation for the expanded and modernized transit facility would involve an increase in the use of hazardous materials such as lubricants, grease, and oils associated with the operation and maintenance of SFMTA's expanded revenue and non-revenue fleet (buses [from 158 to 213] and non-revenue vehicles [from 56 to 97]). The SFMTA's current maintenance and operation activities would generally continue without any change to the transit facility's routine transport, use, or disposal of hazardous materials. The facility would also include the use of batteries for the project's all-electric bus fleet. After their operational life, batteries would be recycled at an appropriate licensed recycling facility in accordance with all applicable regulations.

The proposed residential and retail uses would involve the occasional use of relatively small quantities of common hazardous materials such as paints, cleaners, toners, solvents, and disinfectants for routine purposes. These products are labeled to inform users of potential risks and to instruct them in appropriate handling procedures. Routine use consumes or neutralizes most of these materials, resulting in little hazardous waste. The proposed project or project variants would also include three diesel-fueled engine generator sets for emergency/standby system loads (two associated with the transit use and one for the residential use) and storage tanks with a capacity to store 24 hours of fuel located in the basement and a mechanical equipment room on the rooftop of the residential component of the development along Mariposa Street.[199,200]

The proposed project or project variants would include parking for 213 buses and 97 non-revenue vehicles, which is 55 and 41 more parking spaces, respectively, than the existing maintenance and operations building currently has. As such, the proposed project or project variants would generate more waste associated with bus and non-revenue vehicle maintenance activities than it does under existing conditions. The use, storage, and transport of hazardous waste would be conducted in compliance with all applicable provisions provided in OSHA, Title 29 of the Code of Federal Regulations, section 1910, and Cal/OSHA. In addition, these activities would also be conducted in compliance with health code article 21. In accordance with article 21, any facility that handles hazardous materials, including hazardous wastes, in excess of specified quantities (i.e., 500 pounds for solids, 55 gallons for liquids, and 200 cubic feet for compressed gases) would be required to obtain a Certificate of Registration from the health department and to implement a Hazardous Materials Business Plan that includes inventories, a program for reducing the use of hazardous materials and generation of hazardous wastes, site layouts, a program and implementation plan for training all new employees and annual training for all employees, and emergency response procedures and plans.

The aboveground storage tanks for the diesel-fueled engine generator sets would be sited and maintained in compliance with all applicable laws and regulations such as the Aboveground Petroleum Storage Act, which requires the preparation of a Spill Prevention Control and Countermeasures Plan. The Spill Prevention Control and Countermeasures Plan details the procedures, equipment, and workforce commitment necessary for a business to

[199] Design Criteria Document, Version 2, Section 5.13 (Electrical), p. 96.
[200] Design Criteria Document, Version 2, Section 5.9 (Plumbing), p. 85.

prevent and contain oil discharges from its facility. Impacts related to emissions from the diesel generators are discussed in EIR Section 3.D, Air Quality.

For these reasons, the proposed project or project variants would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Thus, impacts would be less than significant, and mitigation measures are not required. This topic will not be discussed in the EIR.

### Impact HZ-2: The proposed project or project variants would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. (*Less than Significant*)

The site is located within a Maher zone, an area designated by the health department as containing hazardous substances in the soil or groundwater.[201] Excavation for proposed basement and foundation construction would remove approximately 248,900 cubic yards of soils and would extend into bedrock that contains naturally occurring asbestos.[202] As such, the project site was characterized in accordance with health code article 22A (Maher Ordinance).[203]

Soil samples were excavated from the project site and were evaluated against established regulatory screening criteria. Screening criteria are used to evaluate whether concentrations of chemicals in the soil exceed levels that would result in adverse effects to human health or the environment. The regulatory screening criteria consist of U.S. EPA's Regional Screening Levels, San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels, and the California EPA Department of Toxic Substances Control's modified screen levels for soil (DTSC-SLs).[204]

The results from the soil samples indicated that the samples contained various metals, hydrocarbons, volatile organic compounds, semi-volatile organic compounds (SVOCs), and pesticides and polychlorinated biphenyls identified as hazardous substances in Title 22 of the California Code of Regulations and subject to regulation governing waste generation, handling, storage, and disposal.[205] Of the substances subject to regulation under Title 22, metals (i.e., arsenic, cobalt, nickel), chromium VI, and SVOCs (i.e., benzo(a)pyrene and naphthalene) were detected in concentrations above their respective regulatory screening levels.[206]

The health department reviewed the documentation of onsite contamination related to the current and past site uses, and, based on their assessment and the associated documentation, determined that separate construction dust control and site mitigation plans would be required, and that further soil testing would be needed to determine

[201] Phase II ESA, Figure 3.
[202] Phase II ESA, June 2018, p. 1-1.
[203] The Maher ordinance requires the health department to oversee the characterization and mitigation of hazardous substances in soil or groundwater when project activities involve the disturbance of 50 or more cubic yards of soil in designated Maher zones. San Francisco Health Code, Article 22A: Analyzing Soils for Hazardous Waste, *https://codelibrary.amlegal.com/codes/san_francisco/latest/sf_health/0-0-0-4093*, accessed May 28, 2021.
[204] Phase II ESA, pp. 4-1 - 4-2.
[205] Phase II ESA, p. 4-3.
[206] Phase II ESA, p. 4-6.

the full scope of site remediation under the site mitigation plan if soil excavation and disturbance extends beyond the limits identified in the submitted documentation.[207]

**Construction**

***Contaminated Soil***

During construction, particularly excavation and grading, construction workers could be exposed to chemicals in the soil (including those found in concentrations above their respective regulatory screening levels) and groundwater through skin contact, ingestion, or inhalation of airborne dust or vapors. The public, including nearby offsite residents, could be exposed to these chemicals through inhalation of airborne dust or vapors or contact with accumulated dust if proper precautions were not implemented.

To minimize the exposure of construction workers and the public to chemicals, prior to construction, a site mitigation plan and a demolition and construction dust control plan would be prepared in compliance with health code articles 22A and 22B (Construction Dust Control Requirements) for review and approval by the health department.[208] The demolition and construction dust control plan would include best management practices to reduce dust during construction, such as limiting travel on unpaved roads; wetting and tarping solid bulk material for offsite transport; and paving main access points to the project site. The site mitigation plan would include soil and groundwater handling procedures, designs for minimization measures that control human exposure to remaining hazardous substances, an environmental contingency plan, and a health and safety plan. Compliance with health code articles 22A and 22B would ensure that implementation of the proposed project or project variants would not create a significant hazard to the public or the environment through reasonably foreseeable conditions involving the release of hazardous materials into the environment. This impact would be less than significant, and mitigation measures are not required. This topic will not be discussed in the EIR.

***Hazardous Building Materials***

Demolition of the existing maintenance and operations building and paved bus yard would generate approximately 124,300 cubic yards of demolition debris.[209] Based on the age of the transit facility, hazardous building materials such as asbestos, lead-based paint, electrical transformers containing polychlorinated biphenyls (PCBs), fluorescent light ballasts containing PCBs or bis (2-ethylhexyl) phthalate (DEHP), and fluorescent light tubes containing mercury vapors may be present. If these materials are present, they could escape into the environment and pose health concerns for construction workers and the public if not properly handled or disposed of in accordance with applicable regulations.

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[207] San Francisco Department of Public Health, Site Assessment and Mitigation Program, Phase II Subsurface Report Approval/Site Mitigation and Separate Dust Control Plan Request, 2500 Mariposa Street, May 14, 2020.

[208] San Francisco Health Code, Article 22B: Construction Dust Control Requirements, *https://codelibrary.amlegal.com/codes/san_francisco/latest/sf_health/0-0-0-4199*, and San Francisco Building Code, Article 106A.3.2.6, *https://codelibrary.amlegal.com/codes/san_francisco/latest/sf_building/0-0-0-92027*, accessed May 28, 2021.

[209] City and County of San Francisco, E-mail communication between Tim Kempf, Project Manager, Public Works, and Ajay Singh, PMP, CPE, QSP, CQM, LEED AP BD+C, CISEC, Dabri Inc., August 11, 2020.

Demolition and construction activities would follow all applicable standards and regulations for hazardous building materials, including the California Health and Safety Code. Currently, section 19827.5 of the California Health and Safety Code requires local agencies to not issue demolition or alteration permits until an applicant has demonstrated compliance with notification requirements under applicable federal regulations regarding hazardous air pollutants, including asbestos.

The Bay Area Air Quality Management District (air district) is vested by the California legislature with authority to regulate airborne pollutants, including asbestos, through both inspection and law enforcement and is to be notified 10 days in advance of any proposed demolition or asbestos abatement work. The notification must include: (1) the address of the operation; (2) the names and addresses of those who are responsible; (3) the location and description of the structure to be altered, including size, age, prior use, and the approximate amount of friable (i.e., easily crumbled) asbestos; (4) scheduled start and completion dates for the asbestos abatement work; (5) nature of the planned work and methods to be employed; (6) procedures to be employed to meet the air district's requirements; and (7) the name and location of the waste disposal site to be used. The air district randomly inspects asbestos removal operations and will inspect any removal operation about which a complaint has been received. Any asbestos-containing building material disturbance at the project site would be subject to the requirements of the air quality management district's Regulation 11, Rule 2: Hazardous Materials; Asbestos Demolition, Renovation, and Manufacturing.

The local office of Cal/OSHA must also be notified of any asbestos abatement that is to be carried out. Asbestos abatement contractors must follow state regulations contained in Title 8 of the California Code of Regulations, section 1529, and Title 8, sections 341.6 through 341.14, where there is asbestos-related work involving 100 square feet or more of asbestos-containing building material. Asbestos removal contractors must be certified as such by the Contractors Licensing Board of the State of California. The owner of the property where abatement is to occur must have a Hazardous Waste Generator Number assigned by and registered with the Office of the California Department of Health Services in Sacramento. The contractor and hauler of the material are required to file a Hazardous Waste Manifest that details the hauling of the material from the site and the disposal of it. Pursuant to California law, department of building inspection will not issue the required permit until the project sponsor has complied with the notice requirements described above.

If lead-based paint is present, demolition would be subject to the Cal/OSHA Lead in Construction Standard (Title 8 of the California Code of Regulations, section 1532.1), which requires development and implementation of a lead compliance plan when materials that contain lead would be disturbed during construction. The plan must describe activities that could emit lead, methods that will be used to comply with the standard, safe work practices, and a plan to protect workers from exposure to lead during construction activities. Cal/OSHA would require 24-hour notification if more than 100 square feet of materials that contain lead would be disturbed. Any other hazardous building materials identified either before or during demolition or renovation would be abated according to federal, state, and local laws and regulations.

If PCBs are present, disposal of PCBs would be subject to the Federal Toxic Substances Control Act, U.S. Code, Title 15, Chapter 53; and implementing regulations in Title 40 of the Code of Federal Regulations (40 CFR 761) and Title 22 of the California Code of Regulations (22 CCR 66261.24). Disposal of these materials as hazardous waste must comply with applicable laws and regulations and may involve incineration or other treatment or disposal in an approved chemical waste landfill. Mercury is regulated as a hazardous waste under Title 22 (22 CCR 66262.11 and 22 CCR 66273.4) Its disposal as hazardous waste is also regulated under Title 22 (22 CCR 66261.50).

Compliance with the existing regulatory framework would provide protection to construction workers and the environment, and, therefore, would also protect members of the public in the project vicinity. Thus, potential project-related hazards impacts associated with public and environmental exposure to these hazardous building materials would be less than significant, and mitigation measures are not required. This topic will not be discussed in the EIR.

***Serpentinite (Naturally Occurring Asbestos)***

The northeast portion of the project site is underlain by bedrock containing serpentinite, which contains naturally occurring asbestos.[210] During project excavation, naturally occurring asbestos minerals may present a human health hazard if they become airborne and are inhaled. The Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations in areas of serpentine and other ultramafic[211] rocks (contained in Title 17 of the California Code of Regulations, section 93105) protects public health and the environment by requiring the use of best available dust mitigation measures to prevent the offsite migration of asbestos-containing dust from road construction and maintenance activities, construction and grading operations, and quarrying and surface mining operations in areas of ultramafic rock, serpentine, or naturally occurring asbestos. The air district implements the regulation in San Francisco.

As the proposed project or project variants would disturb more than 1 acre of land where asbestos-containing materials are present, project construction activities must comply with the asbestos control measure. The construction contractor would be required to prepare an asbestos dust mitigation plan specifying measures that would be taken so that no visible dust crosses the property boundary during construction. The asbestos dust mitigation plan must be submitted to and approved by the air district prior to the beginning of construction, and the construction contractor would ensure the implementation of all specified dust mitigation measures throughout the construction of the proposed project or project variant. In addition, the air district may require air monitoring for offsite migration of asbestos dust during construction activities and may change the plan on the basis of the air monitoring results. The construction contractor would also be required to comply with the work practices and personnel exposure monitoring requirements specified in Title 8 of the California Code of Regulations, section 1529.

[210] AEW Engineering, Inc., Final Phase II, Environmental Site Assessment Report, June 2018, p. 1-1.

[211] Ultramafic rocks are one type of igneous rock (formed at high temperatures well below the surface of the earth) that is rich in iron and magnesium.

In addition, San Francisco's building inspection and public works departments would administer and enforce any dust control requirements specified in the construction dust control plan, which requires contractors to implement practices, at a minimum, that will achieve the goal of "no visible dust" emissions. Compliance with the required asbestos dust mitigation plan and the construction dust control plan would ensure that project construction activities do not create a significant hazard to the public or the environment from naturally occurring asbestos. Therefore, this impact would be less than significant, and mitigation measures are not required. This topic will not be discussed in the EIR.

**Operation**

Various chemicals in the soil (i.e., arsenic, cobalt, nickel, chromium VI, and benzo(a)pyrene and naphthalene) were detected in concentrations above their respective regulatory screening levels.[212] However, as described in the Phase II ESA report,[213] the chemicals in the soil are not expected to pose substantial adverse health impacts to site occupants and the public for the following reasons:

- Soils containing chemicals exceeding regulatory screening levels would be paved/capped, thereby minimizing direct exposure to humans.
- Detected arsenic concentrations are within published background concentrations and therefore are considered to be naturally occurring (the elevated concentration above the average concentration may be an anomaly at the site).
- Metals such as arsenic, cobalt, nickel, and chromium VI are relatively immobile and inert.

The proposed project or project variants would be constructed using materials free of hazardous materials such as asbestos, lead-based paints, and PCB-containing light ballasts. Therefore, site occupants and the public would not be exposed to hazardous building materials during operation of the proposed project or project variants.

Project operation would involve the handling of hazardous materials such as lubricants, grease, and oils associated with operation and maintenance activities of SFMTA's bus fleet and non-revenue vehicles. The hazardous waste would be handled in compliance with all applicable provisions provided in OSHA, Title 29 of the Code of Federal Regulations, section 1910, and Cal/OSHA. In addition, these activities would also be conducted in compliance with health code article 21. The proposed aboveground fuel storage tanks and chemicals would be stored indoors and in compliance with applicable laws and regulations such as the Aboveground Petroleum Storage Act, which would require secondary containment, spill prevention, and response procedures.

Therefore, operation of the proposed project or project variants 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. As such, this impact would be less than significant, and mitigation measures are not required. This topic will not be discussed in the EIR.

[212] Phase II ESA, p. 4-6.
[213] Phase II ESA, pp. 5-1 - 5-2.

Impact HZ-3: The proposed project or project variants 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. (*Less than Significant*)

Several schools and daycare facilities are located within a 0.25-mile radius of the project site, including Sweet Peas Preschool (2730 17th Street), the International Child Resource Exchange Institute's Project Commotion-Las Luciernagas (2095 Harrison Street), and Brightworks School (1960 Bryant Street).[214] There are no known proposed schools in the vicinity of the project site.

**Construction**

Development of the project would involve demolition and construction, both of which would require the handling and transport of hazardous wastes, as described above in Impact HZ-1 and Impact HZ-2. The SFMTA and private project co-sponsor and their construction contractors would be required to comply with regulations described under Impact HZ-1 and Impact HZ-2, which would require that hazardous materials are handled safely and would not be released within 0.25 mile of existing schools.

As discussed above in Impact HZ-2, a site mitigation plan, demolition and construction dust control plan, and an asbestos dust mitigation plan would be prepared to minimize hazardous emissions during construction. Therefore, there would be limited potential for such materials to affect the nearest school, and the proposed project or project variants would have a less-than-significant impact with respect to the handling of hazardous materials within 0.25 mile of an existing school, and mitigation measures are not required. This topic will not be discussed in the EIR. Impacts related to emissions from construction vehicles will be discussed in EIR Section 3.E, Air Quality.

**Operation**

As discussed under Impact HZ-1, except for the batteries associated with the all-electric bus fleet, project operations would be similar to the existing transit facility use located at the property and involve the use of hazardous materials such as lubricants, grease, and oils associated with the operation and maintenance of SFMTA's bus fleet and non-revenue vehicles. The batteries would be disposed of at an appropriately licensed recycling facility following their operational life. The handling of hazardous lubricants, grease, and oils would be conducted in compliance with all applicable provisions provided in OSHA, Title 29 of the Code of Federal Regulations, section 1910 and Cal/OSHA, article 21 of the health code. The proposed aboveground fuel storage tank and chemicals would be stored indoors and in compliance with applicable laws and regulations such as the Aboveground Petroleum Storage Act, which would require secondary containment, spill prevention, and response procedures. In addition, the residential and commercial uses associated with the proposed project or project variants would involve the use of common household items in quantities too small to create a significant hazard to the public or the environment. Therefore, the proposed project or project variants would have a less-than-significant impact from the handling of hazardous

[214] San Francisco Planning Department, San Francisco Property Information Map, 2500 Mariposa Street, *http://propertymap.sfplanning.org*, and Google Earth Pro V 7.3.2 map showing location of schools and day care facilities within 0.25 mile of the project site, *https://earth.google.com/web/,* accessed March 24, 2021.

materials within 0.25 mile of an existing or proposed school, and mitigation measures are not required. This topic will not be discussed in the EIR.

Impact HZ-4: The project site is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5, but the proposed project or project variants would not create a significant hazard to the public or the environment. (*Less than Significant*)

The project site contains a Leaking Underground Storage Tank (LUST) listed as a "LUST Cleanup Site (Closed)" on the State Water Resources Control Board (water resources control board) List (Geotracker ID T0607500109).[215] The LUST was discovered and stopped in December 1990 and the water resources control board closed the remediation case in September 1991.[216] Although the project site was remediated, the Phase II ESA found concentrations of SVOCs and metals in the soil above their respective regulatory screening levels.[217] However, as described in the Phase II ESA report,[218] the chemicals in the soil are not expected to pose substantial adverse health impacts to construction workers or the surrounding public for the following reasons:

- Soils containing chemicals exceeding regulatory screening levels would be paved/capped, thereby minimizing direct exposure to humans;
- Detected arsenic concentrations are within published background concentrations and therefore are considered to be naturally occurring (the elevated concentration above the average concentration may be an anomaly at the site); and
- Metals such as arsenic, cobalt, nickel, and chromium VI are relatively immobile and inert.

In addition, the proposed project or project variants would be required to comply with health code article 22A and SCM #6, Hazardous Materials, which would require the implementation of a site mitigation plan in coordination with the department of public health and measures tailored to ensure that that if contaminated groundwater is encountered during excavation activities, appropriate remediation occurs prior to discharge to combined sewer system. The site mitigation plan would include soil, groundwater, and stormwater management protocols such as sampling and proper disposal of any hazardous waste encountered during excavation activities.

Therefore, although the project site is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5, the proposed project or project variants would not create a significant risk to the public or the environment from exposure to hazardous materials from historical site uses. The impact would be less than significant, and mitigation measures are not required. This topic will not be discussed in the EIR.

[215] Phase II ESA, Figure 4.

[216] State Water Resources Control Board, Geotracker, *https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0607500109*, accessed March 24, 2021.

[217] Phase II ESA, p. 4-6.

[218] Phase II ESA, pp. 5-1 - 5-2.

Impact HZ-5: The proposed project or project variants would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. (*Less than Significant*)

The City has published an Emergency Response Plan, prepared by the Department of Emergency Management as part of the City's Emergency Management Program, which includes plans for hazard mitigation and disaster preparedness and recovery.[219] The Emergency Response Plan addresses the roles and responsibilities of the City during hazards-related emergency response, in particular their interaction with regional, state, and federal entities and the role of the San Francisco Emergency Operations Center and City agencies.[220] The Emergency Response Plan contains 16 "annexes" (similar to appendices) that cover a number of emergency topics.

The Transportation Annex describes the procedures for assessment, identification of temporary alternative solutions, and restoration of damage to transportation systems, facilities, and infrastructure due to an emergency incident. Project construction and operation activities would be considered to have a significant impact on the implementation or interference of the City's Emergency Response Plan or emergency evacuation planning if activities were to interfere with emergency response vehicle travel or if they were to restrict access to critical public service facilities. Project impacts related to the circulation system and its effect on emergency response and evacuation will be discussed in EIR Section 3.C, Transportation and Circulation.

The Earthquake Annex sets forth planning assumptions for a series of earthquakes of varying magnitudes on different faults, and procedures for assessment of damage and injuries, as well as operational response strategies in the event of a major earthquake. The project site is subject to very strong ground shaking.[221] During a major earthquake, glass, and in some cases building cladding, may endanger those on the streets and sidewalks. However, construction of the proposed project would be subject to the most up-to-date building and structural standards, and this would reduce the potential for damage in the event of a major earthquake. Therefore, persons visiting, living, or working in and around the project site as well as those passing by would be relatively safer than those in some older existing buildings. In addition, the proposed project or project variants are required to include provisions for emergency response for visitors and residents. These provisions would integrate and be compatible with and would not obstruct implementation of the City's Emergency Response Plan, nor interfere with emergency evacuation planning. Therefore, impacts related to interference with emergency response or evacuation plans would be less than significant, and mitigation measures are not required. This topic will not be discussed in the EIR.

[219] San Francisco Department of Emergency Management, City and County of San Francisco Emergency Response Plan (hereinafter referred to as "Emergency Response Plan"), *http://www.sfdem.org/Modules/ShowDocument.aspx?documentid=1154*, accessed March 26, 2021.

[220] Emergency Response Plan.

[221] Association of Bay Area Governments, San Francisco County Earthquake Hazard, *http://resilience.abag.ca.gov/earthquakes/sanfrancisco/*, accessed March 26, 2021.

### Cumulative Impacts

Impact C-HZ-1: The proposed project or project variants, in combination with cumulative projects in the vicinity, would not result in significant cumulative impacts related to hazards and hazardous materials. (*Less than Significant*)

Environmental impacts related to hazards and hazardous materials are site-specific. The proposed project's or project variants' impacts would not combine with nearby cumulative project impacts related to hazardous and hazardous materials. For these reasons including required compliance with the applicable local, state, and federal regulations described in Impact HZ-1 through Impact HZ-5, the proposed project or project variants would not combine with cumulative projects in the project vicinity to create a significant cumulative impact related to hazards and hazardous materials. Impacts would be less than significant, and mitigation measures are not required. This topic will not be discussed in the EIR.

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# E.19 Mineral Resources

| *Topics:* | *Potentially Significant Impact* | *Less Than Significant with Mitigation Incorporated* | *Less Than Significant Impact* | *No Impact* | *Not Applicable* |
|---|---|---|---|---|---|
| **19. MINERAL RESOURCES. Would the project:** | | | | | |
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | ☐ | ☐ | ☐ | ☒ | ☐ |
| b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? | ☐ | ☐ | ☐ | ☒ | ☐ |

### Summary of Mineral Resources Comments Received in Response to the Notice of Preparation of an EIR and Notice of Public Scoping Meeting

Issues identified in public comments on the NOP related to the proposed project's or project variants' physical environmental impacts were considered in preparing this analysis. There were no comments on the NOP related to mineral resources (see EIR Chapter 1, Introduction, pp. 1.3-1.5).

### Project-Specific Impacts

Impact MR-1: The proposed project or project variants would not result in the loss of availability of a known mineral resource or locally important mineral resource recovery site. (*No Impact*)

Areas of land within the City and County of San Francisco have different Mineral Resource Zone classifications, as defined by the California Division of Mines and Geology (CDMG) under the Surface Mining and Reclamation Act of

1975, based on their likelihood to contain mineral resources and the economic significance of the deposit.[222,223] The project area is within an urbanized area designated as Mineral Resource Zone-4 (MRZ-4), which signifies an area of unknown mineral resource significance, and Mineral Resource Zone-1 (MRZ-1), which signifies an area of no mineral resource significance.[224,225] Thus, the project site is not a designated area of known significant mineral deposits or a locally important mineral resource recovery site.

Based on the geotechnical report, the northeast corner of the site is underlain directly by bedrock, which dips down towards the southwest, where the site is underlain by sand and clayey sand. The project site is completely developed and located within a developed area of the City. As with most land within the City and County of San Francisco, the project site would likely not be a significant source of construction aggregate or significant mineral resources; however, some of the excavated onsite soil, if clean, is likely to be reused onsite or at other construction sites as fill material. Therefore, implementation of the proposed project or project variants would not adversely affect mineral resources, nor would it result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state. Furthermore, there are no operational mineral resource recovery sites in the project vicinity whose accessibility or operations would be affected by the construction or operation of the proposed project. Additionally, the project site does not contain any known mineral resources delineated in the general plan or any other land use plans and does not include mineral resources that are of value to the region and the residents of the state. Therefore, there would be no impact on mineral resources, and mitigation measures are not required. This topic will not be discussed in the EIR.

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[222] California Division of Mines and Geology, Special Report 146, Plate 2.41, Mineral Land Classification Map: Aggregate Resources Only San Francisco County, March 1, 1983, p. 141, *https://ia902602.us.archive.org/35/items/minerallandclass00stin/minerallandclass00stin.pdf*, accessed March 26, 2021.

[223] California Division of Mines and Geology, Mineral Land Classification: Aggregate Materials in the San Francisco – Monterey Bay Area, Special Report 146 Part I, Project Description: Mineral Land Classification for Construction Aggregate in the San Francisco – Monterey Bay Area, 1986; and Special Report 146 Part II, Classification of Aggregate Resource Areas South San Francisco Bay Production-Consumption Region, 1987, *https://archive.org/details/specialreport1461cali/mode/2up and https://ia902602.us.archive.org/35/items/minerallandclass00stin/minerallandclass00stin.pdf*, accessed May 24, 2021.

[224] California Department of Conservation, Division of Mines and Geology, Update of Mineral Land Classification: Aggregate Materials in the South San Francisco Bay Production-Consumption Region, 1996 (hereinafter referred to as "Mineral Land Classification Update"), *http://ab900balboa.com/EIR_References/1996_cdc%20dmg_OFR_96-03_Text.pdf*, accessed March 26, 2021.

[225] Mineral Land Classification Update, Plate 1, *https://filerequest.conservation.ca.gov/?q=OFR_96-03*, accessed May 24, 2021.

# E.20 Energy

| *Topics:* | *Potentially Significant Impact* | *Less Than Significant with Mitigation Incorporated* | *Less Than Significant Impact* | *No Impact* | *Not Applicable* |
|---|---|---|---|---|---|
| **20. ENERGY. Would the project:** | | | | | |
| a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? | ☐ | ☐ | ☒ | ☐ | ☐ |
| b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency? | ☐ | ☐ | ☐ | ☒ | ☐ |

## Summary of Energy Comments Received in Response to the Notice of Preparation of an EIR and Notice of Public Scoping Meeting

Issues identified in public comments on the NOP related to the proposed project's or project variants' physical environmental impacts were considered in preparing this analysis. There were no comments on the NOP related to energy (see EIR Chapter 1, Introduction, pp. 1.3-1.5).

## Project-Specific Impacts

In California, energy consumption in buildings is regulated by Title 24 of the California Code of Regulations (California Green Building Standards Code [CalGreen]). Title 24 includes standards that regulate energy consumption for the heating, cooling, ventilation, and lighting of residential and nonresidential buildings. In San Francisco, documentation demonstrating compliance with Title 24 standards is required to be submitted with a building permit application. Compliance with Title 24 standards is enforced by the department of building inspection. The proposed project or project variants would be an infill development that would include construction of a new transit facility with ground-floor commercial uses and new residential uses within the transit facility podium and atop the new transit facility. The proposed project or project variants would be required to comply with the standards of Title 24 and the requirements of the current green building code. In addition, as described above on p. 45 in initial study Section E.9, Greenhouse Gas Emissions, the proposed project or project variants would be required to be built to LEED certification at a minimum Gold Standard in compliance with Chapter 7 of the San Francisco Environment Code; thus, minimizing the amount of fuel, water, and energy used for operation of the proposed project or project variants (see EIR Chapter 2, Project Description, p. 2.46, for further details).

Impact EN-1: The proposed project or project variants would not encourage activities which result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner or conflict with or obstruct state or local plans for renewable energy or energy efficiency. (*Less than Significant*)

**Construction**

Construction of the proposed project or project variants would require increased fuel, water, and energy use for the construction vehicles and equipment, and water for construction site activities, such as dust control and equipment wash downs. Specifically, electricity would be used to operate construction equipment such as hand tools and lighting. Construction vehicles and equipment would primarily use diesel fuel, and construction workers would use gasoline, diesel, and electricity to travel to and from the project site. In sum, the energy use associated with construction of the proposed project or project variants would include:

- electricity usage associated with water consumption for dust control,
- diesel fuel consumption from on-road hauling trips and off-road construction diesel equipment,
- and gasoline consumption from on-road worker commute and vendor trips.

The amounts of fuel and energy used during construction would be typical of a public works project and would not be expected to be used in a wasteful manner. As described under Impact UT-3 in initial study Section E.13, Utilities and Service Systems, non-potable water is required to be used for construction dust control pursuant to public works code article 21. As described under in Section E.9, Greenhouse Gas Emissions, the proposed project or project variants also would be required to comply with the Resource Efficiency and Green Building Ordinance and Construction Recycled Content Ordinance, which indirectly reduces energy use by reducing the need to extract, transport, and manufacture new construction materials. Additionally, construction of the proposed project or project variants would last approximately three to four years; thus, construction-related energy use would be temporary.

As a result, construction activities would not have a measurable effect on regional energy supplies or on peak energy demand resulting in a need for additional capacity. Therefore, as a temporary activity, construction of the proposed project or project variants would not be considered inefficient or wasteful.

**Operation**

As analyzed under Impact UT-1 in initial study Section E.13, Utilities and Service Systems, pp. 57-60, energy use associated with operation of the proposed project or project variants would include onsite electricity usage associated with operation of the proposed building (including the transit facility and commercial and residential uses), electricity for charging the bus fleet and non-revenue vehicles, electricity for offsite water treatment and distribution, diesel fuel for three new emergency generators, and fuel from mobile sources. The new transit facility would continue to store and maintain the all-electric trolley bus fleet and non-revenue vehicles as well as a limited number of diesel- and gasoline-fueled buses and non-revenue vehicles. Although SFMTA non-revenue vehicles would likely be transitioned to be all-electric prior to reinitiating transit service from Potrero Yard in 2026, the short term

operation-related energy consumption for the new transit facility would include a limited amount of diesel and gasoline fuels associated with the operation and maintenance of SFMTA's bus fleet and non-revenue vehicles.

The project's design incorporates energy conservation design features to meet state and local goals for energy efficiency and renewable energy to reduce wasteful, inefficient, and unnecessary consumption of energy during operation. These features could include, but would not be limited to, electrical infrastructure capable of supplying electricity for electric vehicle charging at all new parking spaces and other strategies or mechanisms, such as daylight harvesting, through the use of a network of occupancy and vacancy sensors; solar photovoltaic panels on rooftops to produce onsite power; rooftop coverings to minimize heat island effects; and Title 24-compliant components for plumbing and other building systems such as HVAC.[226] The project would serve an all-electric bus fleet and any existing non-revenue service vehicles that are gasoline- or diesel-powered would transition to all electric before or soon after project completion in 2026. The proposed project's or project variant's design would also include transportation demand management measures such as bicycle parking and car-share vehicles. Furthermore, the proposed project or project variants would be located near major public transit stops, which would help minimize the amount of transportation fuel consumed.

Based on required compliance with the Title 24 conservation standards of the California Code of Regulations, operation of the proposed project or project variants would not have a measurable effect on regional energy supplies or on peak energy demand resulting in a need for additional capacity. Electric service would be provided to meet the needs of the project, as required by the California Public Utilities Commission, which obligates Pacific Gas & Electric and the SFPUC to provide service to its existing and potential customers. Pacific Gas & Electric and the SFPUC update their service projections in order to meet regional energy and water demand. Energy conservation and transportation demand management features associated with the proposed project or project variants would decrease overall energy consumption, and together with the proposed onsite solar generation facilities, decreases reliance on non-renewable energy sources, and increases reliance on renewable energy sources. The proposed project or project variants would also be consistent with San Francisco's greenhouse gas reduction strategy[227] (see Section E.9, Greenhouse Gas Emissions). Furthermore, construction energy consumption would be a temporary energy expenditure and would not occur in an inefficient or wasteful manner.

Energy demand for the proposed project or project variants would be typical for the residential and commercial components of the project. Although energy demand would be expanded for the project due to the shift to all-electric bus fleet for the transit component; all applicable state and local codes and standards concerning energy consumption in the Green Building Ordinance and Title 24 of the California Code of Regulations would be met or exceeded as part of an overall minimum LEED Gold strategy. As documented in the GHG compliance checklist,[228]

[226] Design Criteria Document, Version 2, Section 4.4 (Sustainability), Section 4.12 (Electrical), Section 5.3 (Exterior Enclosure), Section 5.8 (Plumbing), and Section 5.10 (HVAC), pp. 36-38, 46, 48-50, 71, 84, 88, 95, and 103-104.

[227] San Francisco Planning Department, 2017 Greenhouse Gas Reduction Strategy Update, *https://sfmea.sfplanning.org/GHG/GHG_Strategy_October2017.pdf*, accessed March 26, 2021.

[228] San Francisco Planning Department, Compliance Checklist Greenhouse Gas Analysis and Greenhouse Gas Analysis for Municipal Development, Compliance Checklist Table for Greenhouse Gas Analysis: Table 2. Municipal Projects, Potrero Yard Modernization Project, 2500 Mariposa Street, May 24, 2021.

the proposed project or project variants would be required to comply with applicable regulations promoting water conservation and reducing potable water use. As discussed in EIR Section 3.C, Transportation and Circulation, the project site is in a transportation analysis zone that experiences low levels of VMT per capita. Therefore, the proposed project or project variants would not encourage the use of large amounts of fuel, water, or energy, and would not use these resources in a wasteful manner.

In summary based on the reasons above, construction and operation of the proposed project or project variants would not use energy resources in an inefficient or wasteful manner. Therefore, the proposed project or project variants would have a less-than-significant impact on energy resources, and mitigation measures are not required. This topic will not be discussed in the EIR.

### Impact EN-2: The proposed project or project variants would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. (*No Impact*)

In 2002, California established its Renewables Portfolio Standard Program, with the goal of increasing the percentage of renewable energy in the state's electricity mix to 20 percent of retail sales by 2017. In November 2008, Executive Order S-14-08 was signed requiring all retail sellers of electricity to serve 33 percent of their load with renewable energy by 2020. In 2015, Senate Bill 350 codified the requirement for the renewables portfolio standard to achieve 50 percent renewable energy by 2030, and in 2018, Senate Bill 100 requires 60 percent renewable energy by 2030 and 100 percent by 2045.[229]

San Francisco's electricity supply is 41 percent renewable, and San Francisco's goal is to meet 100 percent of its electricity demand with renewable power.[230] CleanPowerSF is the City's Community Choice Aggregation Program operated by the SFPUC, which provides renewable energy to residents and businesses. GreenFinanceSF allows commercial property owners to finance renewable energy projects, as well as energy and water efficiency projects, through a municipal bond and repay the debt via their property tax account.

As described in Section E.9, Greenhouse Gas Emissions, the proposed project or project variants were determined to be consistent with San Francisco's GHG reduction strategy, including the long-term GHG reduction goals of EO S-3-05, EO B-30-15, AB 32, SB 32 and the 2017 Clean Air Plan. Therefore, the proposed project or project variants would not conflict with these plans and would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. No impact would occur, and mitigation measures are not required. This topic will not be discussed in the EIR.

[229] California Energy Commission, California Renewable Energy Overview and Programs, *https://www.energy.ca.gov/programs-and-topics/topics/renewable-energy*, accessed May 26, 2021.

[230] San Francisco Mayor's Renewable Energy Task Force Recommendations Report, September 2012, *https://sfenvironment.org/sites/default/files/fliers/files/sfe_re_renewableenergytaskforcerecommendationsreport.pdf*, accessed May 26, 2021.

## Cumulative Impacts

Impact C-EN-1: The proposed project or project variants, in combination with cumulative projects, would not result in significant cumulative impacts on energy resources. (*Less than Significant*)

All development projects within San Francisco, including cumulative projects in the immediate vicinity, are required to adhere to all applicable rules and regulations in the City's Green Building Ordinance and Title 24 of the California Code of Regulations. These regulations reduce both energy use and potable water use associated with construction and operation of the proposed project or project variants and implement the latest energy conservation measures that discourage activities which result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner. Furthermore, the majority of San Francisco is located within a transportation analysis zone that experiences low levels of VMT per capita compared to regional VMT levels (see EIR Section 3.C, Transportation and Circulation).

The City also plans to reduce greenhouse gas emissions to 40 percent below 1990 levels by the year 2025 and ultimately to 80 percent below 1990 levels by 2050, which would be achieved through a number of different strategies, including energy efficiency.[231] Despite a 22.5 percent growth in population and a 166 percent growth in gross domestic product (i.e., economic activity) since 1990, San Francisco's 2017 GHG emission levels were 36.6 percent below 1990 levels, thus achieving a major reduction milestone of a 25 percent reduction by 2017, per San Francisco Board of Supervisors Ordinance 81-08.[232]

For these reasons, the proposed project or project variants, combined with cumulative projects in the project vicinity and citywide, would not encourage activities that use large amounts of fuel, water, or energy or use these in a wasteful manner that would result in a significant cumulative impact on energy resources. Mitigation measures are not required. This topic will not be discussed in the EIR.

*Remainder of page intentionally left blank*

[231] San Francisco established greenhouse gas emissions targets in section 902 of the environment code, as follows: by 2017, reduce greenhouse gas emissions by 25 percent below 1990 levels; by 2025, reduce greenhouse gas emissions by 40 percent below 1990 levels; and by 2050, reduce greenhouse gas emissions by 80 percent below 1990 levels.

[232] San Francisco Department of Environment, 2017 San Francisco Geographic Greenhouse Gas Emissions Inventory at a Glance, *https://sfenvironment.org/sites/default/files/fliers/files/sfe_cc_2017_community_inventory_report.pdf*, accessed March 26, 2021.

# E.21 Agriculture and Forestry Resources

| Topics: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact | Not Applicable |
|---|---|---|---|---|---|
| **21. AGRICULTURE AND FORESTRY RESOURCES:** In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. | | | | | |
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | ☐ | ☐ | ☐ | ☐ | ☒ |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | ☐ | ☐ | ☐ | ☐ | ☒ |
| c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)) or timberland (as defined by Public Resources Code Section 4526)? | ☐ | ☐ | ☐ | ☐ | ☒ |
| d) Result in the loss of forest land or conversion of forest land to non-forest use? | ☐ | ☐ | ☐ | ☐ | ☒ |
| e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or forest land to non-forest use? | ☐ | ☐ | ☐ | ☐ | ☒ |

## Summary of Agriculture and Forestry Resources Comments Received in Response to the Notice of Preparation of an EIR and Notice of Public Scoping Meeting

Issues identified in public comments on the NOP related to the proposed project's or project variants' physical environmental impacts were considered in preparing this analysis. There were no comments on the NOP related to agriculture and forestry resources (see EIR Chapter 1, Introduction, pp. 1.3-1.5).

## Project-Specific Impacts

The project site is located within an urbanized area and does not contain traditional or urban agricultural uses, and it is not zoned for such uses. The California Department of Conservation's Farmland Mapping and Monitoring Program identifies the project site as Urban and Built-Up Land, which is defined as "... land [that] is used for residential, industrial, commercial, institutional, public administrative purposes, railroad and other transportation

yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes."[233] Because the project site does not contain agricultural uses and is not zoned for such uses, the proposed project would not convert any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use, and it would not conflict with existing zoning for agricultural use or a Williamson Act contract. It would not involve any changes to the environment that could result in the conversion of farmland. Therefore, initial study checklist topics E.21(a), E.21(b), and E.21(e) are not applicable to the proposed project or project variants.

Additionally, the project site does not contain forest land or timberland and is not zoned for such uses. Forest land is defined as "land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits" (CEQA section 12220(g)). Timberland is defined as "privately owned land, or land acquired for state forest purposes, which is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, and which is capable of growing an average annual volume of wood fiber of at least 15 cubic feet per acre" (Government Code section 51104). The proposed project or project variants would not convert any forest land or timberland to non-forest use and would not conflict with existing zoning for forest land or timberland use, nor would they involve any changes to the environment that could result in the conversion of forest land or timberland. Therefore, initial study checklist topics E.21(c) and E.21(d) are not applicable to the proposed project or project variants. This topic will not be discussed in the EIR.

*Remainder of page intentionally left blank*

[233] California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, San Francisco Bay Area Important Farmland 2012, September 2015, *ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/regional/2012/bay_area_2012_fmmp_base.pdf*, accessed March 26, 2021.

# E.22 Wildfire

| Topics: | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact | Not Applicable |
|---|---|---|---|---|---|
| **22. WILDFIRE. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:** | | | | | |
| a) Substantially impair an adopted emergency response plan or emergency evacuation plans? | ☐ | ☐ | ☐ | ☐ | ☒ |
| b) 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? | ☐ | ☐ | ☐ | ☐ | ☒ |
| c) 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? | ☐ | ☐ | ☐ | ☐ | ☒ |
| d) 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? | ☐ | ☐ | ☐ | ☐ | ☒ |

## Summary of Wildfire Comments Received in Response to the Notice of Preparation of an EIR and Notice of Public Scoping Meeting

Issues identified in public comments on the NOP related to the proposed project's or project variants' physical environmental impacts were considered in preparing this analysis. There were no comments on the NOP related to wildfire (see EIR Chapter 1, Introduction, pp. 1.3-1.5).

## Project-Specific Impacts

California Department of Forestry and Fire Protection (CAL FIRE) is an emergency response and resource protection department that protects California's people, property, and natural resources from wildfires.[234] CAL FIRE has a legal responsibility to provide fire protection and emergency services on all State Responsibility Area lands. State responsibility area lands are designated based on an evaluation of an area's fuel loading,[235] slope, critical weather, and other relevant factors. CAL FIRE identifies three types of fire threat based on degree of fire risk: Moderate, High, and Very High. CAL FIRE also maps Very High Hazard Severity Maps for Local Responsibility Areas, which are areas the local government has responsibility for wildland fire protection.[236]

[234] CAL FIRE, What is Cal FIRE, *https://www.fire.ca.gov/media/4925/whatiscalfire.pdf*, accessed March 26, 2021.

[235] Fuel loading refers to the amount of flammable vegetation within a given area.

[236] CAL FIRE, Wildland Hazard and Building Codes, *https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/*, accessed March 26, 2021.

The City and County of San Francisco does not contain any state responsibility area lands or lands classified in any fire hazard severity zones.[237] Therefore, the project site is not located within or near mapped state responsibility area lands or on lands classified as Very High Fire Hazard Severity. The topic of wildfire is not applicable to the proposed project or project variants., and mitigation measures are not required. This topic will not be discussed in the EIR.

# F. Public Notice and Comment

On August 19, 2020, the planning department mailed a Notice of Preparation of an Environmental Impact Report and Notice of Public Scoping Meeting to property owners and tenants within 300 feet of the project site; the Mission, Potrero, South of Market and citywide neighborhood group lists; and other potentially interested parties. In addition, the planning department held a public scoping meeting on September 2, 2020, to receive input on the scope of the environmental review for this project.

During the NOP scoping period, a total of eight comments were provided: one speaker provided oral comments at the virtual public scoping meeting and seven comment letters and emails were submitted to the planning department. Comments received expressed concern about the preservation of the historic building and the decision to construct a new facility rather than rehabilitate the existing one; parking, noise, wind, and shadow impacts; impacts on the neighborhood character; impacts on Franklin Square; impacts on birds and other wildlife; impacts on cyclists and the potential increase in bicycle-related traffic accidents; the context and feasibility of the project given budgetary constraints and capital deferrals resulting from circumstances surrounding COVID-19; effects of increased pedestrian traffic on adjacent properties; upgrades to transportation infrastructure; requirements of Assembly Bill 52 and Senate Bill 18; and California Native American Heritage Commission standard recommendations for cultural resources research, surveys, and reporting.

Overall, concerns and issues raised by the public in response to the notice of preparation of an EIR and at the NOP scoping meeting were taken into consideration and addressed in this initial study and the EIR to which this initial study is attached, as appropriate. See EIR Chapter 1, Introduction, for additional detail on the public noticing and comments. The notice of preparation of an EIR is included as EIR Appendix A.

# G. Mitigation Measures

The following mitigation measures have been identified in this initial study to reduce potentially significant impacts resulting from the proposed project or project variants to less-than-significant levels. Other potentially significant impacts are fully analyzed in EIR Chapter 3, Environmental Setting and Impacts.

[237] CAL FIRE, Fire and Resource Assessment Program, Fire Hazard Severity Zone Viewer, *https://egis.fire.ca.gov/FHSZ/*, accessed March 26, 2021.

### Mitigation Measure M-TCR-1: Tribal Cultural Resources Preservation and/or Interpretive Program

During ground-disturbing activities that encounter archeological resources, if the Environmental Review Officer (ERO) determines that a significant archeological resource is present, and if in consultation with the affiliated Native American tribal representatives, the ERO determines that the resource constitutes a tribal cultural resource (TCR) and that the resource could be adversely affected by the proposed project, the proposed project shall be redesigned so as to avoid any adverse effect on the significant tribal cultural resource, if feasible.

If the ERO, in consultation with the project sponsor, determines that preservation-in-place of the TCR would be both feasible and effective, then the archeological consultant shall prepare an archeological resource preservation plan (ARPP). Implementation of the approved ARPP by the archeological consultant shall be required when feasible.

If the ERO, in consultation with the affiliated Native American tribal representatives and the project sponsor, determines that preservation-in-place of the TCR is not a sufficient or feasible option, then the project sponsor shall implement an interpretive program of the TCR in consultation with affiliated Native American tribal representatives. An interpretive plan produced in consultation with affiliated Native American tribal representatives, at a minimum, and approved by the ERO, would be required to guide the interpretive program. The plan shall identify proposed locations for installations or displays, the proposed content and materials of those displays or installation, the producers or artists of the displays or installation, and a long-term maintenance program. The interpretive program may include artist installations, preferably by local Native American artists, oral histories with local Native Americans, artifacts displays and interpretation, and educational panels or other informational displays.

### Mitigation Measure M-GE-6a: Inadvertent Discovery of Paleontological Resources

Worker Awareness Training - Prior to commencing construction, and ongoing throughout ground disturbing activities (e.g., excavation, utility installation, the project sponsor team and/or their designee shall ensure that all project construction workers are trained on the contents of the Paleontological Resources Alert Sheet, as provided by the Planning Department. The Paleontological Resources Alert Sheet shall be prominently displayed at the construction site during ground disturbing activities for reference regarding potential paleontological resources.

In addition, the project sponsor team shall inform the contractor and construction personnel of the immediate stop work procedures and other procedures to be followed if bones or other potential fossils are unearthed at the project site. Should new workers that will be involved in ground disturbing construction activities begin employment after the initial training has occurred, the construction supervisor shall ensure that they receive the worker awareness training as described above.

The project sponsor team shall complete the standard form/affidavit confirming the timing of the worker awareness training to the Environmental Review Officer (ERO). The affidavit shall confirm the project's location, the date of training, the location of the informational handout display, and the number of participants. The affidavit shall be transmitted to the ERO within five (5) business days of conducting the training.

Paleontological Resource Discoveries - In the event of the discovery of an unanticipated paleontological resource during project construction, ground disturbing activities shall temporarily be halted within 25 feet of the find until the discovery is examined by a qualified paleontologist as recommended by the Society of Vertebrate Paleontology standards (SVP 2010) and Best Practices in Mitigation Paleontology (Murphey et al. 2019). Work within the sensitive area shall resume only when deemed appropriate by the qualified paleontologist in consultation with the ERO.

The qualified paleontologist shall determine: 1) if the discovery is scientifically significant; 2) the necessity for involving other responsible or resource agencies and stakeholders, if required or determined applicable; and 3) methods for resource recovery. If a paleontological resource assessment results in a determination that the

resource is not scientifically important, this conclusion shall be documented in a Paleontological Evaluation Letter to demonstrate compliance with applicable statutory requirements (e.g., Federal Antiquities Act of 1906, CEQA Guidelines Section 15064.5, California Public Resources Code Chapter 17, Section 5097.5, Paleontological Resources Preservation Act 2009). The Paleontological Evaluation Letter shall be submitted to the ERO for review within 30 days of the discovery.

If the qualified paleontologist determines that a paleontological resource is of scientific importance, and there are no feasible measures to avoid disturbing this paleontological resource, the qualified paleontologist shall prepare a Paleontological Mitigation Program. The mitigation program shall include measures to fully document and recover the resource of scientific importance. The qualified paleontologist shall submit the mitigation program to the ERO for review and approval within 10 business days of the discovery. Upon approval by the ERO, ground disturbing activities in the project area shall resume and be monitored as determined by the qualified paleontologist for the duration of such activities.

The mitigation program shall include: 1) procedures for construction monitoring at the project site; 2) fossil preparation and identification procedures; 3) curation of paleontological resources of scientific importance into an appropriate repository; and 4) preparation of a Paleontological Resources Report (report or paleontology report) at the conclusion of ground disturbing activities. The report shall include dates of field work, results of monitoring, fossil identifications to the lowest possible taxonomic level, analysis of the fossil collection, a discussion of the scientific significance of the fossil collection, conclusions, locality forms, an itemized list of specimens, and a repository receipt from the curation facility. The project sponsor team shall be responsible for the preparation and implementation of the mitigation program, in addition to any costs necessary to prepare and identify collected fossils, and for any curation fees charged by the paleontological repository. The paleontology report shall be submitted to the ERO for review within 30 business days from conclusion of ground disturbing activities, or as negotiated following consultation with the ERO.

### Mitigation Measure M-GE-6b: Preconstruction Paleontological Evaluation and Monitoring Plan during Construction

The project sponsor team shall engage a qualified paleontologist to develop a site-specific monitoring plan prior to commencing soil-disturbing activities at the project site. The Preconstruction Paleontological Monitoring Plan would determine project construction activities requiring paleontological monitoring based on those may affect sediments with moderate sensitivity for paleontological resources. Prior to issuance of any demolition permit, the project sponsor team shall submit the Preconstruction Paleontological Monitoring Plan to the ERO for approval.

At a minimum, the plan shall include:

1. Project Description
2. Regulatory Environment – outline applicable federal, state and local regulations
3. Summary of Sensitivity Classification(s)
4. Research Methods, including but not limited to:

    4.a. Field studies conducted by the approved paleontologist to check for fossils at the surface and assess the exposed sediments.

    4.b. Literature Review to include an examination of geologic maps and a review of relevant geological and paleontological literature to determine the nature of geologic units in the project area.

    4.c. Locality Search to include outreach to the University of California Museum of Paleontology in Berkeley.

5. Results: to include a summary of literature review and finding of potential site sensitivity for paleontological resources; and depth of potential resources if known.

6. Recommendations for any additional measures that could be necessary to avoid or reduce any adverse impacts to recorded and/or inadvertently discovered paleontological resources of scientific importance. Such measures could include:

    6.a. Avoidance: If a known fossil locality appears to contain critical scientific information that should be left undisturbed for subsequent scientific evaluation.

    6.b. Fossil Recovery: If isolated small, medium- or large-sized fossils are discovered during field surveys or construction monitoring, and they are determined to be scientifically significant, they should be recovered. Fossil recovery may involve collecting a fully exposed fossil from the ground surface, or may involve a systematic excavation, depending upon the size and complexity of the fossil discovery.

    6.c. Monitoring: Monitoring involves systematic inspections of graded cut slopes, trench sidewalls, spoils piles, and other types of construction excavations for the presence of fossils, and the fossil recovery and documentation of these fossils before they are destroyed by further ground disturbing actions. Standard monitoring is typically used in the most paleontologically sensitive geographic areas/geologic units (moderate, high, and very high potential); while spot-check monitoring is typically used in geographic areas/geologic units of moderate or unknown paleontological sensitivity (moderate or unknown potential).

    6.d. Data recovery and reporting: Fossil and associated data discovered during soils disturbing activities should be treated according to professional paleontological standards and documented in a data recovery report. The plan should define the scope of the data recovery report.

The consultant shall document the monitoring conducted according to the monitoring plan and any data recovery completed for significant paleontological resource finds discovered, if any. Plans and reports prepared by the consultant shall be considered draft reports subject to revision until final approval by the ERO. The final monitoring report and any data recovery report shall be submitted to the ERO prior to the certificate of occupancy.

*Remainder of page intentionally left blank*

# H. Determination

On the basis of this Initial Study:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an environmental impact report is required.

☒ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, no further environmental documentation is required.

| | |
|---|---|
| DATE | Lisa Gibson, Environmental Review Officer<br>for Rich Hillis, Director of Planning |

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# APPENDIX A

**Water Supply Assessment**
**Potrero Yard Modernization Project**
**2500 Mariposa Street**

# PUBLIC UTILITIES COMMISSION

City and County of San Francisco

RESOLUTION NO. **20-0216**

WHEREAS, Under the California Environmental Quality Act (CEQA) and State of California Water Code (Section 10910(g)(1)), the San Francisco Public Utilities Commission (SFPUC) is required to prepare and approve a Water Supply Assessment (WSA) for the cumulative water demands presented by the proposed 2500 Mariposa Street/SFMTA Potrero Bus Yard Project, which would result in replacement of the existing Potrero Yard Trolley Coach Facility with a new structure to accommodate bus parking and circulation, SFMTA maintenance, operation, and administrative uses, and a mix of commercial and residential uses, including 575 residential units; and

WHEREAS, The 2500 Mariposa Street/SFMTA Potrero Bus Yard Project is required to comply with the City's Non-potable Water Ordinance, Article 12C of the San Francisco Health Code, and as a result, the Project will offset its potable water use through the use of alternate water sources; and

WHEREAS, A WSA is an informational document that assesses the adequacy of water supplies to serve a proposed project and is required to be prepared as part of the CEQA environmental review process; and

WHEREAS, The water demand associated with the 2500 Mariposa Street/SFMTA Potrero Bus Yard Project is encompassed within the 2015 Urban Water Manament Plan water demand projections; and

WHEREAS, Approval of a WSA as an informational document is not considered an approval action as defined in Section 15378 of the CEQA Guidelines; and

WHEREAS, A WSA must be approved at a public meeting by the governing body of the public water supplier that would serve the proposed project; and

WHEREAS, On December 12, 2018, the State Water Resources Control Board adopted an amendment to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (i.e., Bay-Delta Plan Amendment), which, if implemented in the future, would affect the Regional Water System supply and the SFPUC's ability to meet the projected demands of existing and future retail customers, including the proposed project; and

WHEREAS, Multiple lawsuits are pending challenging the Bay-Delta Plan Amendment, and the City is a party to one of those suits; and

WHEREAS, In accordance with the State Water Resources Control Board's instruction, on March 1, 2019, the SFPUC, in partnership with other key stakeholders, submitted a proposed "voluntary agreement" (March 1st Proposed Voluntary Agreement) for the State's consideration as a substitute or replacement of the Bay-Delta Plan Amendment; and

WHEREAS, On March 26, 2019 by Resolution No. 19-0057, this Commission endorsed the SFPUC's continued participation in the voluntary agreement negotiation process and stated its intent that the terms of any final voluntary agreement would improve the health of the fisheries and maintain the reliability of its water supply including maintenance of its level of service (LOS) goal of no more than 20% system-wide rationing; and

WHEREAS, Because implementation of the Bay-Delta Plan Amendment or an alternative Voluntary Agreement is uncertain at this time, the SFPUC staff prepared the attached WSA for the proposed 2500 Mariposa Street/SFMTA Potrero Bus Yard Project, analyzing water supply and demand under three scenarios: (1) No implementation of the Bay-Delta Plan Amendment or the March 1st Proposed Voluntary Agreement ("Scenario 1"), (2) Implementation of the March 1st Proposed Voluntary Agreement ("Scenario 2"), and (3) Implementation of the Bay-Delta Plan Amendment ("Scenario 3"); and

WHEREAS, The WSA concludes that the SFPUC's total projected water supplies through 2040 will (1) meet the demands of the proposed project in normal years under all three scenarios, (2) meet the demands of the proposed project in dry years without rationing beyond the SFPUC's LOS goal of 20% system-wide rationing under Scenario 1, (3) meet the demands of the proposed project in dry years but require rationing closer to the LOS goal under Scenario 2, and (4) not reliably meet the demands of the proposed project without rationing at a level greater than that required to achieve the LOS goal under Scenario 3; now, therefore, be it

RESOLVED, This Commission approves the attached Water Supply Assessment for the proposed 2500 Mariposa Street/SFMTA Potrero Bus Yard Project pursuant to the State of California Water Code Section 10910(g).

*I hereby certify that the foregoing resolution was adopted by the Public Utilities Commission at its meeting of October 27, 2020.*

Donna Hood

*Secretary, Public Utilities Commission*

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission

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September 25, 2020

TO: Commissioner Ann Moller Caen, President
Commissioner Anson Moran
Commissioner Sophie Maxwell
Commissioner Tim Paulson

THROUGH: Harlan L. Kelly, Jr., General Manager

FROM: Steven R. Ritchie, Assistant General Manager, Water

RE: Water Supply Assessment for the 2500 Mariposa Street/SFMTA Potrero Bus Yard Project

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# 1.0 Summary

## *1.1 Introduction*

Under the Water Supply Assessment law (Sections 10910 through 10915 of the California Water Code), urban water suppliers like the San Francisco Public Utilities Commission (SFPUC) must furnish a Water Supply Assessment (WSA) to the city or county that has jurisdiction to approve the environmental documentation for certain qualifying projects (as defined in Water Code Section 10912 (a)) subject to the California Environmental Quality Act (CEQA). The WSA process typically relies on information contained in a water supplier's Urban Water Management Plan (UWMP), and involves answering specific questions related to the estimated water demand of the proposed project. This memo serves as the WSA for the proposed 2500 Mariposa/SFMTA Potrero Bus Yard Project ("proposed project"), for use in the preparation of an environmental impact report by the San Francisco Planning Department (case no. 2019-021884ENV, San Francisco Planning Department).

### 1.1.1 2015 Urban Water Management Plan

The SFPUC's most current UWMP is the UWMP update for 2015, which the Commission adopted in June 2016 (Resolution No. 16-0118). The water demand projections in the UWMP incorporated 2012 Land Use Allocation (LUA 2012) housing and employment growth projections from the San Francisco Planning Department. The water demand projections are presented in five-year increments through 2040, meeting Water Code requirements. Growth associated with the proposed project was encompassed within the LUA 2012, and water demand associated with the proposed project was encompassed within the 2015 UWMP water demand projections. In other words, **the proposed project has already been already accounted for in SFPUC's water supply planning**.

The WSA for a qualifying project within the SFPUC's retail service area[1] may use information from the UWMP. Therefore, ***the 2015 UWMP is incorporated via***

[1] SFPUC's "retail service area" refers to water customers inside the City and County of San Francisco, as well as select areas outside of the City.

***references throughout this WSA shown in bold, italicized text.*** The UWMP may be accessed at www.sfwater.org/uwmp.

### 1.1.2 2018 Bay-Delta Plan Amendment

In December 2018, the State Water Resources Control Board (SWRCB) adopted amendments to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan Amendment) to establish water quality objectives to maintain the health of the Bay-Delta ecosystem. The SWRCB is required by law to regularly review this plan. The adopted Bay-Delta Plan Amendment was developed with the stated goal of increasing salmonid populations in three San Joaquin River tributaries (the Stanislaus, Merced, and Tuolumne Rivers) and the Bay-Delta. The Bay-Delta Plan Amendment requires the release of 40% of the "unimpaired flow"[2] on the three tributaries from February through June in every year type, whether wet, normal, dry, or critically dry.

If the Bay-Delta Plan Amendment is implemented, the SFPUC will be able to meet the projected water demands presented in the 2015 UWMP in normal years but would experience supply shortages in single dry years or multiple dry years. The 2015 UWMP already assumes limited rationing may be needed in multiple dry years to address an anticipated supply shortage by 2040, but implementation of the Bay-Delta Plan Amendment will require rationing in all single dry years and multiple dry years and to a greater degree to address supply shortages not accounted for in the 2015 UWMP.

The SWRCB has stated that it intends to implement the Bay-Delta Plan Amendment on the Tuolumne River by the year 2022, assuming all required approvals are obtained by that time. But implementation of the Plan Amendment is uncertain for several reasons. First, under the Clean Water Act, the United States Environmental Protection Agency (U.S. EPA) must approve the water quality standards identified in the Plan Amendment within 90 days from the date the approval request is received. It is uncertain whether the U.S. EPA will approve or disapprove the water quality standards. Furthermore, the determination could result in litigation.

Second, since adoption of the Bay-Delta Plan Amendment, over a dozen lawsuits have been filed in both state and federal court, challenging the SWRCB's adoption of the Bay-Delta Plan Amendment, including a legal challenge filed by the federal government, at the request of the U.S. Department of Interior, Bureau of Reclamation. That litigation is in the early stage and there have been no dispositive court rulings as of this date.

Third, the Bay-Delta Plan Amendment is not self-implementing and does not allocate responsibility for meeting its new flow requirements to the SFPUC or any other water rights holders. Rather, the Plan Amendment merely provides a regulatory framework for flow allocation, which must be accomplished by other regulatory and/or adjudicatory proceedings, such as a comprehensive water rights adjudication or, in the case of the Tuolumne River, the 401 certification process in the Federal Energy Regulatory Commission's relicensing proceeding for Don Pedro Dam. The license amendment process is currently expected to be completed in the 2022-23 timeframe. This process and the other regulatory and/or adjudicatory proceedings would likely face legal challenges and have lengthy timelines, and quite possibly could result in a different assignment of flow responsibility (and therefore a different water supply impact on the SFPUC).

Fourth, in recognition of the obstacles to implementation of the Bay-Delta Plan Amendment, SWRCB Resolution No. 2018-0059 adopting the Bay-Delta Plan Amendment directed staff to help complete a "Delta watershed-wide agreement, including potential flow measures for the Tuolumne River" by March 1, 2019, and to

[2] Unimpaired flow represents the water production of a river basin, unaltered by upstream diversions, storage, or by export or import of water to or from other watersheds. Bay-Delta Plan Amendment, Introduction, p.1-8.

incorporate such agreements as an "alternative" for a future amendment to the Bay-Delta Plan to be presented to the SWRCB "as early as possible after December 1, 2019." In accordance with the SWRCB's instruction, on March 1, 2019, SFPUC, in partnership with other key stakeholders, submitted a proposed project description for the Tuolumne River that could be the basis for a voluntary substitute agreement with the SWRCB ("March 1st Proposed Voluntary Agreement"). On March 26, 2019, the Commission adopted Resolution No. 19-0057 to support SFPUC's participation in the Voluntary Agreement negotiation process. To date, those negotiations are ongoing under the California Natural Resources Agency and the leadership of the Newsom administration.[3] The negotiations for a voluntary agreement have made significant progress since an initial framework was presented to the SWRCB on December 12, 2018. The package submitted on March 1, 2019 is the product of renewed discussions since Governor Newsom took office. In a written progress report to the Voluntary Agreement Plenary Participants dated July 1, 2019, California Secretary for Environmental Protection Jared Blumenfeld and California Secretary for Natural Resources Wade Crowfoot stated that the collective State agencies (i.e., State Team) should be able "to determine the adequacy" of the various proposed voluntary agreements, including the proposed Tuolumne Voluntary Agreement, by October 15, 2019. The report further states that if the State Team decides to recommend the Voluntary Agreements to the SWRCB, then (1) scientific peer review of the Voluntary Agreements would be completed by the spring of 2020, and (2) a draft CEQA document would be released for public comment in the summer of 2020, with a finalized CEQA document completed the following year.

For all these reasons, whether and when the Bay-Delta Plan Amendment will be implemented, and how those amendments if implemented will affect the SFPUC's water supply is currently uncertain and possibly speculative. Given this uncertainty, this WSA analyzes water supply and demand through 2040 under three scenarios: (1) No implementation of the Bay-Delta Plan Amendment or the March 1st Proposed Voluntary Agreement ("Scenario 1"), (2) Implementation of the March 1st Proposed Voluntary Agreement ("Scenario 2"), and (3) Implementation of the Bay-Delta Plan Amendment ("Scenario 3").

### 1.1.3 Basis for Requiring a WSA for the Proposed Project

The proposed project has not been the subject of a previous WSA, nor has it been part of a larger project for which a WSA was completed.

The proposed project qualifies for preparation of a WSA under Water Code Section 10912(a) because it is a mixed-use development that includes more than 500 dwelling units. The proposed project is characterized further in Section 1.2.

### 1.1.4 Conclusion of this WSA

This WSA concludes that under Scenarios 1, 2, and 3, the SFPUC's total projected water supplies would meet the demands of the proposed project and cumulative retail water demands through 2040 in normal years. Based on historic records of hydrology and reservoir inflow from 1920 to 2017, current delivery and flow obligations, and fully-implemented infrastructure under the 2018 Phased Water System Improvement Program (WSIP) Variant, normal or wet years occurred 85 out of 97 years. This translates into roughly 9 normal or wet years out of every 10 years. Conversely, system-wide rationing is required roughly 1 out of every 10 years. This frequency is expected to increase as climate change intensifies.

**Scenario 1 - No Implementation of the Bay-Delta Plan Amendment or the Voluntary Agreement:** Under Scenario 1, SFPUC's total projected water supplies would meet the projected demands of the retail service area in normal years. During

[3] California Natural Resources Agency. "Voluntary Agreements to Improve Habitat and Flow in the Delta and its Watersheds." http://resources.ca.gov/voluntary-agreements/. Accessed April 8, 2019.

dry years, there would be a shortfall of 3.6-6.1 million gallons per day (mgd), or 5-7%. The SFPUC could manage this relatively small shortfall by prohibiting certain discretionary outdoor water uses and/or calling for voluntary rationing among all retail customers pursuant to its Retail Water Shortage Allocation Plan (***Appendix L of the UWMP***).

**Scenario 2 - Implementation of the Voluntary Agreement:** The March 1st Proposed Voluntary Agreement has yet to be accepted by SWRCB as an alternative to the Bay-Delta Plan Amendment and thus the shortages that would occur with its implementation are not known with certainty. An analysis of water supply impacts comparable to the one provided in this WSA for Scenarios 1 and 3 is not available for Scenario 2. However, the flow releases under the Voluntary Agreement, unlike the Bay-Delta Plan Amendment, are not based on an unimpaired flow approach but on a combination of flow and non-flow measures that are designed to benefit fisheries at a lower water cost, particularly during multiple dry years when less flow is required, preserving more of the SFPUC's stored water supply from the Tuolumne River. The resulting RWS supply shortfalls during dry years under the Voluntary Agreement would be less than those under the Bay-Delta Plan Amendment, and therefore would require rationing of a lesser degree and closer in alignment to the SFPUC's adopted level of service (LOS) goal for the RWS of rationing of no more than 20% system-wide during dry years than that which would occur under Scenario 3. Indeed, in Resolution No. 19-0057, the Commission stated its intention that any final voluntary agreement "would allow the SFPUC to maintain the (1) Water Supply Level of Service Goal and Objectives and (2) Sustainability Level of Service Goal and Objectives adopted in Commission Resolution No. 08-0200." Under Scenario 2, if SFPUC's March 1st Proposed Voluntary Agreement were accepted by the SWRCB as an alternative to the Bay-Delta Plan Amendment, SFPUC would still face a shortfall in single dry and multiple dry years, thus requiring rationing across the retail service area, but of a much smaller magnitude. Rationing under Scenario 2, with implementation of the Voluntary Agreement, would be to a lesser degree than that under Scenario 3, with implementation of the Bay-Delta Plan Amendment.

**Scenario 3 - Implementation of the Bay-Delta Plan Amendment:** Under Scenario 3, during single dry and multiple dry years starting as soon as the year 2022, the estimated year of implementation of the Bay-Delta Plan Amendment, the SFPUC's total projected water supplies cannot meet the demands of the retail service area, including those of the proposed project, without gradually increasing higher levels of water rationing of up to 50% through 2040 across the retail service area. For the proposed project specifically, the SFPUC may impose a lower level of rationing that takes into account the installation of water-efficient plumbing fixtures and non-potable water systems associated with new construction.

The relatively small volume of water demand generated by the proposed project itself would not exacerbate the projected shortfalls resulting from implementation of the Bay-Delta Plan Amendment. Regardless of whether the proposed project is constructed, with implementation of the Bay-Delta Plan Amendment, the SFPUC's existing and planned water supplies will not meet the water demands of its retail service area in dry years without greater rationing than previously projected in the 2015 UWMP.

Refer to Section 4.0, Conclusion, for a tabulated comparison of projected retail water supplies and demands under Scenarios 1 and 3, the resulting shortfalls, and the implications of rationing to the proposed project.

## *1.2 Proposed Project Description*

The project sponsor, the San Francisco Municipal Transportation Agency (SFMTA), proposes to replace the Potrero Yard Trolley Coach Facility at 2500 Mariposa Street (Potrero Yard). The proposed project would accommodate the expansion of the SFMTA's transit vehicle fleet in a new replacement structure that would include space for bus parking and circulation (up to 213 buses); SFMTA maintenance, operation, and administrative uses; and joint development uses.

The new approximately 1,300,000 gross-square-foot (GSF) structure would occupy the 4.4-acre (192,000 square feet) site and rise to heights ranging from 75 to 150 feet. The new structure would contain a three-level, approximately 75-foot-tall replacement transit facility plus a mix of commercial and residential uses in the remainder of the proposed project as part of a joint development program between SFMTA and a private project cosponsor. The joint development program would include a ground-floor commercial use (approximately 33,000 GSF) and residential entry lobbies, with integrated residential and transit facility uses on the second through sixth floors of the three-level replacement transit facility. Most of the residential development would be atop the replacement transit facility on the 7th to 13th floors. The proposed project includes 544,000 square feet for 575 residential units.

Of the 192,000 square foot (SF) project site, the building footprint is 189,860 SF, with a 5-foot wide planting strip along the 17th Street frontage (2,140 GSF). The building footprint includes 91,000 GSF of rooftop courtyard and 98,860 GSF of standard rooftop.

The SFMTA estimates that construction of the proposed project would take three to four years to complete, with construction beginning in 2023 and building occupancy by the end of 2026.

For additional details on the proposed project, see Attachment B.

# 2.0 Water Supply

This section reviews San Francisco's existing and planned water supplies.

## *2.1 Regional Water System*

See ***Section 3.1 of the UWMP*** for descriptions of the RWS and ***Section 6.1 of the UWMP*** for water rights held by City and County of San Francisco and the SFPUC Water System Improvement Program (WSIP).

## *2.2 Existing Retail Supplies*

Retail water supplies from the RWS are described in ***Section 6.1 of the UWMP***.

Local groundwater supplies, including the Westside Groundwater Basin, are described in ***Section 6.2.1 of the UWMP***.

Local recycled water supplies, including the Harding Park Recycled Water Project and Pacifica Recycled Water Project, are described in ***Section 6.2.1 of the UWMP***.

## *2.3 Planned Retail Water Supply Sources*

The San Francisco Groundwater Supply Project is described in ***Section 6.2.2 of the UWMP***. Since adoption of the UWMP, four wells have been completed and the start-up phase of the project has begun. Starting in April 2017, small amounts of groundwater have been blended with RWS supplies for drinking water. Two remaining wells are under construction as part of the next phase of the project.

The proposed Westside and Eastside Recycled Water Projects, as well as non-potable water supplies associated with onsite water systems implemented in compliance with San Francisco's Non-potable Water Ordinance (Health Code Chapter 12C), are also described in ***Section 6.2.2 of the UWMP***.

## 2.4 Summary of Current and Future Retail Water Supplies

A breakdown of water supply sources for meeting SFPUC retail water demand through 2040 in normal years is provided in ***Section 6.2.5 of the UWMP***. For dry years, see the next section.

Based on historic records of hydrology and reservoir inflow from 1920 to 2017, current delivery and flow obligations, and fully-implemented infrastructure under the 2018 Phased Water System Improvement Program (WSIP) Variant, normal or wet years occurred 85 out of 97 years. This translates into roughly 9 normal or wet years out of every 10 years. Conversely, system-wide rationing is required roughly 1 out of every 10 years. This frequency is expected to increase as climate change intensifies.

## 2.5 Dry-Year Water Supplies

A description of dry-year supplies developed under WSIP is provided in ***Section 7.2 of the UWMP***. Other water supply reliability projects and efforts that are currently underway or completed are described in ***Section 7.4 of the UWMP***. Since adoption of the UWMP, the following milestones have occurred:

- Calaveras Dam Replacement Project – Construction of the new dam was completed in September 2018, and the reservoir resumed fill during the winter season of 2019/2020.
- Regional Groundwater Storage and Recovery Project – Construction of this project is still underway. Phase 1 of the project, consisting of installation of 13 production wells, will be completed in 2019. Since May/June 2016, the project has been in a storage phase through periodic deliveries of RWS surface water in lieu of groundwater pumping by Daly City, San Bruno, and the California Water Service Company.

## 2.6 Additional Water Supplies

In light of the adoption of the Bay-Delta Plan Amendment and the resulting potential limitations to RWS supply during dry years, the SFPUC is increasing and accelerating its efforts to acquire additional water supplies and explore other projects that would increase overall water supply resilience. Developing these additional supplies would reduce water supply shortfalls and reduce rationing associated with such shortfalls. In addition to the Daly City Recycled Water Expansion project[4], which was a potential project identified in the 2015 UWMP and had committed funding at that time, the SFPUC has taken action to fund the study of potential additional water supply projects. Capital projects under consideration to develop additional water supplies include surface water storage expansion, recycled water expansion, water transfers, desalination, and potable reuse. The SFPUC is also considering developing related policies and ordinances, such as funding for innovative water supply and efficiency technologies and requiring potable water offsets for new developments. A more detailed list and descriptions of these efforts are provided below.

The capital projects that are under consideration would be costly and are still in the early feasibility or conceptual planning stages. Because these water supply projects would take 10 to 30 or more years to implement, and because required environmental permitting negotiations may reduce the amount of water that can be developed, the yield from these projects are not currently incorporated into SFPUC's supply projections. Capital projects would be funded through rates from both Wholesale and Retail Customers based on mutual agreement, as the additional supplies would benefit all customers of the RWS, unless otherwise noted. State and federal grants and other financing opportunities would also be pursued for eligible projects, to the extent feasible, to offset costs borne by ratepayers.

[4] While this potential project was identified in the 2015 UWMP, it has since been approved by Daly City following environmental review and has a higher likelihood of being implemented.

1. **Daly City Recycled Water Expansion (Regional, Normal- and Dry-Year Supply, 3 mgd)**

   **Project Description:** The SFPUC and North San Mateo County Sanitation District (NSMCSD, or Daly City) have been exploring ways to increase the recycled water treatment capacity in Daly City to serve additional customers and decrease irrigation water withdrawals from the Westside Groundwater Basin, both in San Francisco and further south of Daly City. The majority of the irrigation demand met by groundwater withdrawals, approximately 2 mgd, serves cemeteries in Colma. An initial feasibility study completed in 2010 identified the capital requirements that would be needed to produce additional capacity at the existing treatment plant location. The study demonstrated that a new tertiary treatment facility would be required onsite to produce additional capacity of up to 3.4 mgd. Currently, flows that exceed the capacity of the existing treatment plant are discharged into the Pacific Ocean. With this project, some of that discharge may be treated and used for irrigation. New facilities would include a treatment facility, pump station, distribution pipelines, and storage.

   **Estimated Costs and Financing:** The capital cost is estimated to be $85 million, which is budgeted for in the SFPUC's 10-year capital planning horizon. The annual operations and maintenance (O&M) cost is estimated to be $3 million. This project may present regional benefits that would result in cost-sharing with Wholesale Customers because the replacement of groundwater used for irrigation with recycled water will result in a greater volume of groundwater storage that can be used in dry years as part of the SFPUC's existing Groundwater Storage and Recovery project, approved by the SFPUC in 2014 in Resolution no. 14-0127.

   **Permits and Approvals:** Daly City adopted a Final Initial Study/Mitigated Negative Declaration (IS/MND) and Mitigation Monitoring and Reporting Program (MMRP) for the proposed project in September 2017. The SFPUC has not yet approved its participation in the project. Other permits and/or approvals that may be needed for this project include: BART, CAL/OSHA, San Francisco Bay RWQCB, and encroachment permits from Caltrans, Daly City, South San Francisco, SFPUC, San Mateo County, and Colma to construct distribution and storage facilities. Institutional agreements between the project partners for project construction and operation, as well as with the customers whose supplies will change from groundwater to recycled water, will also need to be developed.

   **Estimated Acquisition:** Construction may occur as soon as 2023 with operation beginning in 2027.

2. **Alameda County Water District Transfer Partnership** (Regional, Normal- and Dry-Year Supply, 5 mgd)

   **Project Description:** Water would be acquired from Contra Costa Water District (CCWD) for delivery to Alameda County Water District (ACWD) through the South Bay Aqueduct utilizing a planned expansion of the Los Vaqueros Reservoir.

   **Estimated Costs and Financing:** The capital cost is estimated to be $50-150 million, with an annual O&M cost of $2.5 million.

   **Permits and Approvals:** Planning and environmental review of the Los Vaqueros Reservoir Expansion is underway by CCWD, and has several objectives beyond water deliveries to the SFPUC. CCWD has identified over 15 permits, approvals and consultations that will be necessary such as Dredge and Fill, National Pollutant Discharge Elimination System (NPDES), Streambed Alteration, and Encroachment permits. These permits and approvals will be obtained by CCWD and/or its contractor. To enable a water supply transfer between ACWD and the SFPUC, water right modifications may be necessary and if additional infrastructure is

needed, additional permits will be required. As this project is in the conceptual stage, permitting details have not yet been identified.

**Estimated Acquisition:** Construction may occur as soon as 2028 with operation beginning in 2032.

3. **Brackish Water Desalination in Contra Costa County** (Regional, Normal- and Dry-Year Supply, 9+ mgd)

**Project Description:** The Bay Area Brackish Water Treatment (Regional Desalination) Project is a partnership between CCWD, East Bay Municipal Utility District (EBMUD), SFPUC, Santa Clara Valley Water District (SCVWD) and Zone 7 to turn brackish water into a reliable, drought-proof drinking water supply, delivering a total of up to 10-20 mgd in drought and non-drought years (i.e., dry and normal years), throughout the region. A new brackish water treatment plant would be constructed in East Contra Costa and tie into the existing CCWD system for delivery through Los Vaqueros Reservoir and the South Bay Aqueduct, or delivery via a connection with EBMUD.

The SFPUC would rely on existing infrastructure and institutional agreements to receive water transfers from partner agencies. For planning and cost estimation purposes, it was assumed that the SFPUC's share of the regional water supply would be 9 mgd in all year types; however, if additional capacity is available, the SFPUC may secure additional water supply, based on negotiations with partner agencies.

**Estimated Costs and Financing:** The capital cost is estimated to be $200-800 million, with an annual O&M cost of $12-20 million.

**Permits and Approvals:** To proceed, this concept would require extensive institutional agreements, permitting, and environmental review. Construction of a new desalination plant will require construction and operating permits such as NPDES, Dredge and Fill, consultations with federal and state agencies, and others. In addition, water rights will need to be secured and/or modified. In California, permitting and regulatory approvals of desalination projects has typically taken 10-18 years. In addition, institutional agreements among partner agencies will be needed.

**Estimated Acquisition:** Construction may occur as soon as 2032 and be phased so that 5-9 mgd would be available to the region by 2035 and a total of 5-11 mgd would be available after 2040.

4. **ACWD-USD Purified Water Partnership** (Regional, Normal- and Dry-Year Supply, 5 mgd)

**Project Description:** This may be an indirect or direct potable reuse project that would inject highly-treated water from Union Sanitary District (USD) for groundwater recharge, then recover the water through the ACWD Brackish Groundwater Desalination Plant. How the water is transferred to the SFPUC remains to be determined.

**Estimated Costs and Financing:** The capital cost is estimated to be $200-400 million, with an annual O&M cost of $2.5 million.

**Permits and Approvals:** An initial assessment will be underway in 2019, which will identify potential project scenarios. Permitting and approvals for a project will depend on its design and nature, which have not yet been identified.

**Estimated Acquisition:** Construction may occur as soon as 2038 with operation beginning in 2045.

5. **Crystal Springs Purified Water** (Regional, Normal- and Dry-Year Supply, 6+ mgd)

   **Project Description:** This is an indirect potable reuse project that would blend wastewater from Silicon Valley Clean Water and possibly San Mateo into Crystal Springs Reservoir and treat the blended water at Harry Tracy Water Treatment Plant for potable reuse.

   **Estimated Costs and Financing:** The capital cost is estimated to be $400-700 million, with an annual O&M cost of $18-25 million.

   **Permits and Approvals:** Construction and operating permits would be required for this project. They would likely include NPDES, Encroachment, consultations with state and federal agencies, and others. Surface water augmentation is regulated by the SWRCB, and consultations and public hearings would be required.

   **Estimated Acquisition:** Construction may occur as soon as 2034 and be phased so that 3-5 mgd would be available to the region by 2035 and a total of 3-7 mgd would be available after 2040.

6. **Eastside Purified Water** (Retail, Normal- and Dry-Year Supply, 5 mgd)

   **Project Description:** A purified water plant would be constructed at the Southeast Treatment Plant to blend wastewater with Regional Water System supplies for potable use.

   **Estimated Costs and Financing:** The capital cost is estimated to be $220-400 million, with an annual O&M cost of $5-10 million.

   **Permits and Approvals:** There is currently no regulatory framework in place to enable direct potable reuse. In California, no regulations are anticipated before 2025, but it is anticipated that extensive consultation will be required with the SWRCB. In addition, construction and operating permits and approvals will be required, as identified.

   **Estimated Acquisition:** Construction may occur as soon as 2025 with operation beginning in 2030.

7. **San Francisco Eastside Satellite Recycled Water Facility** (Retail, Normal- and Dry-Year Supply, < 1 mgd)

   **Project Description:** A centralized recycled water treatment facility would be constructed on the eastern side of San Francisco, along with pipelines and a storage reservoir, to meet demands not addressed by the Non-potable Water Ordinance and Auxiliary Water Supply System (AWSS).

   **Estimated Costs and Financing:** The capital cost is estimated to be $200 million, with an annual O&M cost of $2.5 million.

   **Permits and Approvals:** In addition to construction-related permits and approvals, this project would require a permit from the Regional Water Quality Control Board under its General Order for water reuse. Discharges from the recycled water treatment plant to the San Francisco Bay would also require NPDES permitting by the Regional Water Quality Control Board.

   **Estimated Acquisition:** Construction may occur as soon as 2032 with operation beginning in 2037.

8. **Additional Storage Capacity in Los Vaqueros Reservoir from Expansion** (Regional)

   **Project Description:** Expansion of storage capacity in Los Vaqueros is to allow the ACWD Transfer Partnership and Brackish Water Desalination in Contra Costa County to be optimized.

   **Estimated Costs and Financing:** The capital cost is estimated to be $20-50 million. SFPUC's portion of the project yield and cost share are not yet known. The annual O&M cost is yet to be estimated.

   **Permits and Approvals:** Planning and review of the Los Vaqueros Reservoir Expansion is underway by CCWD, and has several objectives beyond water deliveries to the SFPUC. CCWD has identified over 15 permits, approvals and consultations that will be necessary such as Dredge and Fill, NPDES, Streambed Alteration, and Encroachment permits. These permits and approvals will be obtained by CCWD and/or its contractor. To enable a water supply transfer between ACWD and the SFPUC, water rights modifications may be necessary and if additional infrastructure is needed, additional permits will be required. As this project is in the conceptual stage, permitting details have not yet been identified.

   **Estimated Acquisition:** Construction may occur as soon as 2021 with operation beginning in 2027.

9. **Calaveras Reservoir Expansion** (Regional)

   **Project Description:** Calaveras Reservoir would be expanded to create 289,000 AF additional capacity to store excess Regional Water System supplies or other source water in wet and normal years. In addition to reservoir enlargement, the project would involve infrastructure to pump water to the reservoir, such as pump stations and transmission facilities.

   **Estimated Costs and Financing:** The costs of this project is yet to be determined.

   **Permits and Approvals:** Similar to Los Vaqueros Reservoir Expansion, this project would require numerous permits, approvals and consultations, such as Dredge and Fill, NPDES, Streambed Alteration, Encroachment, possible water right modifications, etc. These permits and approvals will be obtained by SFPUC and/or its contractor. As this project is in the conceptual stage, permitting details have not yet been identified.

   **Estimated Acquisition:** Construction may occur as soon as the early 2040s with operation beginning around 2050.

Even if all the capital projects above are implemented, the total amount of water and storage yielded would not be enough to make up for the dry year shortfall that may result from implementation of the Bay-Delta Plan Amendment as adopted, and would occur years after such shortfalls begin. Thus, the SFPUC continues to proactively explore opportunities for reuse and innovation, such as the following policies and ordinances:

- **Evaluation of Recycled Water Throughout Service Area** (Regional and Retail)

  Wastewater treatment plants throughout the SFPUC service area would be surveyed to identify potential non-potable, indirect potable, and direct potable projects.

- **Innovative Technology Project Funding** (Retail)

  SFPUC would award grants for innovative demonstration projects that would increase water efficiency and availability (e.g., fog catchers, heat exchangers in non-potable water systems, rainwater for potable use, breweries treating process water for reuse).

- **New Development Potable Offset Ordinance** (Retail)

  The Board of Supervisors could adopt an ordinance requiring certain large development projects, to offset the water demand impacts above historical water consumption averages for the corresponding parcel(s). Developments could be required to achieve a certain offset of potable demands.

# 3.0 Water Demand

This section reviews the climatic and demographic factors that may affect San Francisco's water use, projected retail water demands, and the demand associated with the proposed project.

## *3.1 Climate*

San Francisco has a Mediterranean climate. Summers are cool and winters are mild with infrequent rainfall. Temperatures in the San Francisco area average 57 degrees Fahrenheit annually, ranging from the mid-40s in winter to the upper 60s in late summer. Strong onshore flow of wind in summer keeps the air cool, generating fog through September. The warmest temperatures generally occur in September and October. Rainfall in the San Francisco area averages about 22 inches per year and is generally confined to the "wet" season from late October to early May. Except for occasional light drizzles from thick marine stratus clouds, summers are nearly completely dry. A summary of the temperature and rainfall data for the City of San Francisco is included in Table 1.

**Table 1: San Francisco Climate Summary**

| Month | Average Maximum Temperature (°F) | Average Minimum Temperature (°F) | Average Monthly Rainfall (inches) |
|---|---|---|---|
| January | 58.0 | 45.7 | 4.36 |
| February | 60.3 | 47.3 | 4.41 |
| March | 61.4 | 48.1 | 2.98 |
| April | 62.3 | 49.1 | 1.38 |
| May | 63.2 | 50.9 | 0.68 |
| June | 64.8 | 52.7 | 0.18 |
| July | 65.6 | 54.3 | 0.02 |
| August | 66.6 | 55.3 | 0.06 |
| September | 68.1 | 55.0 | 0.19 |
| October | 67.8 | 53.3 | 1.04 |
| November | 61.2 | 48.1 | 2.85 |
| December | 58.3 | 45.9 | 4.33 |
| **Annual Average** | **63.3** | **50.6** | **22.45** |

Source: Western Regional Climate Center (www.wrcc.dri.edu), 1981-2010 data from two San Francisco monitoring stations (Mission Dolores/SF#047772 and Richmond/SF#047767).

### *3.2 Proposed Project Water Demand*

The project sponsor's consultants provided a memo describing the methods and assumptions used to estimate the water demand of the proposed project, along with the resulting demand (Attachment B).

Because the proposed project must comply with San Francisco's Non-potable Water Ordinance (Article 12C of the San Francisco Health Code), estimates for both potable and non-potable demands were submitted as part of the WSA request. The Non-potable Water Ordinance requires new commercial, mixed-use, and multi-family residential development projects with 250,000 square feet or more of gross floor area to install and operate an onsite non-potable water system. Such projects must meet their toilet and urinal flushing and irrigation demands through the collection, treatment, and use of available graywater, rainwater, and foundation drainage. While not required, projects may use treated blackwater or stormwater if desired. Furthermore, projects may choose to apply non-potable water to other non-potable water uses, such as cooling tower blowdown and industrial processes, but are not required to do so under the ordinance. As indicated in the water demand memo provided on behalf of the project sponsor in Attachment B, the proposed project would exceed the requirements of the Non-potable Water Ordinance by using graywater, rainwater, and bus washdown water to meeting toilet and urinal flushing, irrigation, cooling tower make-up water, and bus washdown demands.

Both potable and non-potable demands for the project were estimated using the SFPUC's Non-potable Water Calculator and supplemented with additional calculations for cooling tower makeup water. The SFPUC reviewed the memo to ensure that the methodology is appropriate for the types of proposed water uses, the assumptions are valid and thoroughly documented along with verifiable data sources, and a professional standard of care was used. The SFPUC concluded that the demand estimates provided on behalf of the project sponsor are reasonable. Water demand associated with the proposed project over the 20-year planning horizon is shown in the following Table 2.

The non-potable demand estimates in Table 2 are based on building uses anticipated at the time the WSA was requested, i.e., during the planning and environmental review stage of the proposed project. It is understood that these estimates will likely change as the proposed project's design progresses, and information submitted for the WSA request is not part of the proposed project's compliance with the Non-potable Water Ordinance. City review and approval of a proposed onsite water system must be performed separately through the Non-potable Water Program. However, the intent of providing a breakdown of potable and non-potable demand estimates in this WSA is to demonstrate that the proposed project will incorporate water reuse per City requirements and the proposed project's sustainability goals, if any. As noted earlier, the total demand of the proposed project, regardless of non-potable use, is already encompassed in the 2015 UWMP water demand projections. Furthermore, total demand represents the most conservative estimate and accounts for back-up potable supplies that must be provided by the SFPUC in the event that non-potable supplies serving the proposed project are unavailable.

**Table 2: Water Demand Based on Project Phasing**

| Demand of Proposed Project (mgd) | 2020 | 2025 | 2030 | 2035 | 2040 |
|---|---|---|---|---|---|
| Potable Demand | -- | 0 | 0.048 | 0.048 | 0.048 |
| Non-potable Demand | -- | 0 | 0.028 | 0.028 | 0.028 |
| Total Demand | -- | 0 | 0.076 | 0.076 | 0.076 |
| Potential Potable Water Savings as Percentage of Total Demand | -- | -- | 37% | 37% | 37% |

mgd = million gallons per day

Notes:
Total demand conservatively assumes that all demands are met with potable supplies. For the estimated portion of demands that could be met with non-potable supplies, refer to Attachment B.

Of the non-potable demands shown in this table, 0.018 mgd (65%) reflect use for cooling tower make-up water and bus washdown water, which are not required to be met with non-potable water under San Francisco's Non-Potable Water Ordinance.

The San Francisco Planning Department has determined that the proposed project is encompassed within the projections presented in LUA 2012 as indicated in the letter from the Planning Department to the SFPUC (Attachment A). Therefore, the demand of the proposed project is also encompassed within the San Francisco retail water demands that are presented in ***Section 4.1 of the UWMP***, which considers retail water demand based on the LUA 2012 projections. The following Table 3 shows the demand of the proposed project relative to total retail demand.

**Table 3: Proposed Project Demand Relative to Total Retail Demand**

| | 2020 | 2025 | 2030 | 2035 | 2040 |
|---|---|---|---|---|---|
| Total Retail Demand (mgd)[1] | 72.1 | 79.0 | 82.3 | 85.9 | 89.9 |
| Potable Demand of Proposed Project (mgd) | -- | 0 | 0.048 | 0.048 | 0.048 |
| Potable Demand of Proposed Project as Percentage of Total Retail Demand | -- | -- | 0.06% | 0.06% | 0.05% |
| Total Demand of Proposed Project (mgd) | -- | 0 | 0.076 | 0.076 | 0.076 |
| Total Demand of Proposed Project as Percentage of Total Retail Demand[2] | -- | -- | 0.09% | 0.09% | 0.08% |

Notes:
1. Retail water demands per ***Table 4-1 of the UWMP***, except for the 2020 demand projection, which was re-projected to take into account the lower demands being experienced due to the recent drought and the lag in occupancy of built units.
2. The proposed project is accounted for in the LUA 2012 projections, and subsequently, total demands associated with the proposed project are accounted for in the 2015 UWMP retail water demand projections.

# 4.0 Conclusion

## *4.1 Comparison of Projected Supply and Demand*

### 4.1.1 Scenario 1: No Implementation of the Bay-Delta Plan Amendment or the Voluntary Agreement

Table 4 below is adapted from ***Section 7.5 of the UWMP*** (Table 7-4) and compares the SFPUC's retail water supplies and demands through 2040 during normal year, single dry-, and multiple dry-year periods under Scenario 1.

Local supplies (i.e., supplies not from the RWS) correspond to those in ***Table 6-7 of the UWMP***. Procedures for determining RWS supply availability per the SFPUC's WSAP, applicable to all three scenarios, are described in ***Section 8.3 of the UWMP***.

The projections shown in Table 4 differ from those in the 2015 UWMP due to two reasons. First, the 2009 Water Supply Agreement between SFPUC and its Wholesale Customers was recently amended and approved by the Commission on December 11, 2018 by Resolution No. 18-0212. Table 4 incorporates the minimum level of 5% rationing during supply shortages as required by the amendment, and therefore, the resulting shortfalls are greater than those previously projected in the 2015 UWMP.

Second, the projections in Table 4 differ from those in the 2015 UWMP because Table 4 reflects SFPUC's full 8.5-year design drought sequence instead of the minimum 3-year sequence required to be provided in the 2015 UWMP. Under legislation adopted in 2018 (S.B. 606) future UWMPs will be required to project water supply availability during a minimum of 5 years of continuous drought (Water Code section 10631(b)(1)).

As explained previously in Section 3.2, water demands associated with the proposed project are already captured in the retail demand projections presented in the UWMP. The proposed project is expected to represent up to 0.09% of the total retail water demand. Total retail demands correspond to those in ***Table 4-1 of the UWMP***, and reflect both passive and active conservation, as well as water loss.

As shown in Table 4, under Scenario 1 without implementation of the Bay-Delta Plan Amendment, existing and planned supplies would meet all projected RWS demands in all years except for an approximately 3.6-6.1 mgd, or 5-7%, shortfall during dry years through the year 2040. This relatively small shortfall is primarily due to implementation of the amended 2009 Water Supply Agreement. To manage a small shortfall such as this, the SFPUC may prohibit certain discretionary outdoor water uses and/or call for voluntary rationing by its retail customers pursuant to its Retail Water Shortage Allocation Plan (***Appendix L of the UWMP***). The required level of rationing is well below the SFPUC's RWS LOS goal of limiting rationing to no more than 20% on a system-wide basis (i.e., an average throughout the RWS).

**Table 4: Projected Supply and Demand Comparison Under Scenario 1**
**(No Implementation of the Bay-Delta Plan Amendment or the Voluntary Agreement) (mgd)**

| | | Normal Year | Single Dry Year[1] | Multiple Dry Years | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Year 1[1] | Year 2[2] | Year 3[2] | Year 4[2] | Year 5[2] | Year 6[2] | Year 7[3] | Year 8[3] |
| 2020 | Total Retail Demand[4] | 72.1 | 72.1 | 72.1 | 72.1 | 72.1 | 72.1 | 72.1 | 72.1 | 72.1 | 72.1 |
| | Total Retail Supply[5] | 72.1 | 68.5 | 68.5 | 68.5 | 68.5 | 68.5 | 68.5 | 68.5 | 68.5 | 68.5 |
| | Shortfall | 0.0 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 |
| | Shortfall as % of Demand | 0.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% |
| 2025 | Total Retail Demand[4] | 79.0 | 79.0 | 79.0 | 79.0 | 79.0 | 79.0 | 79.0 | 79.0 | 79.0 | 79.0 |
| | Total Retail Supply[5] | 79.0 | 75.0 | 75.0 | 75.0 | 75.0 | 75.0 | 75.0 | 75.0 | 75.0 | 75.0 |
| | Shortfall | 0.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| | Shortfall as % of Demand | 0.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% |
| 2030 | Total Retail Demand[4] | 82.3 | 82.3 | 82.3 | 82.3 | 82.3 | 82.3 | 82.3 | 82.3 | 82.3 | 82.3 |
| | Total Retail Supply[5] | 82.3 | 78.2 | 78.2 | 78.2 | 78.2 | 78.2 | 78.2 | 78.2 | 78.2 | 78.2 |
| | Shortfall | 0.0 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 |
| | Shortfall as % of Demand | 0.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% |
| 2035 | Total Retail Demand[4] | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 |
| | Total Retail Supply[5] | 85.9 | 81.6 | 81.6 | 81.6 | 81.6 | 81.6 | 81.6 | 81.6 | 79.5 | 79.5 |
| | Shortfall | 0.0 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 6.4 | 6.4 |
| | Shortfall as % of Demand | 0.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 7.4% | 7.4% |
| 2040 | Total Retail Demand[4] | 89.9 | 89.9 | 89.9 | 89.9 | 89.9 | 89.9 | 89.9 | 89.9 | 89.9 | 89.9 |
| | Total Retail Supply[5] | 89.9 | 85.4 | 85.4 | 84.4 | 84.4 | 84.4 | 84.4 | 84.4 | 83.8 | 83.8 |
| | Shortfall | 0.0 | 4.5 | 4.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 6.1 | 6.1 |
| | Shortfall as % of Demand | 0.0% | 5.0% | 5.0% | 6.2% | 6.2% | 6.2% | 6.2% | 6.2% | 6.8% | 6.8% |

Notes:
1. During a single dry year and multiple dry year 1 (year 2 of SFPUC's design drought sequence), the retail allocation under the WSAP is 36.0% of available RWS supply, or 85.9 mgd. However, due to the Phased WSIP Variant, only 81 mgd of RWS supply can be delivered. RWS supply is capped at this amount.
2. During multiple dry years 2-6 (years 3-7 of SFPUC's design drought sequence), the retail allocation under the WSAP is 37.5% of available RWS supply, or 79.5 mgd.
3. During multiple dry years 7 and 8 (years 8 and 8.5 of SFPUC's design drought sequence), the retail allocation under the WSAP is 37.5% of available RWS supply, or 74.5 mgd.
4. Total retail demands correspond to those in ***Table 4-1 of the UWMP***, except for the 2020 demand projection, which was re-projected to take into account the lower demands being experienced due to the recent drought and the lag in occupancy of built units.
5. Local supplies (i.e., supplies not from the RWS, including groundwater, recycled water, and non-potable water) correspond to those in ***Table 6-7 of the UWMP***, with an additional 5% reduction in retail water use (incorporated as a reduction in total retail supply) per the amended Water Supply Agreement. Local supplies are assumed to be used before RWS supplies to meet retail demand.

### 4.1.2 Scenario 2: Implementation of the Voluntary Agreement

As stated earlier, the March 1st Proposed Voluntary Agreement has yet to be accepted by SWRCB as an alternative to the Bay-Delta Plan Amendment and thus the shortages that would occur with its implementation are not known with certainty. However, given that the objectives of the Voluntary Agreement are to provide fishery improvements while protecting water supply through flow and non-flow measures, the RWS supply shortfalls under the Voluntary Agreement would be less than those under the Bay-Delta Plan Amendment, and therefore would require rationing of a lesser degree than that which would occur under Scenario 3. The degree of rationing would also more closely align with the SFPUC's RWS LOS goal of limiting rationing to no more than 20% on a system-wide basis in drought years. This goal was adopted in 2008 by the Commission (Resolution No. 08-0200).

### 4.1.3 Scenario 3: Implementation of the Bay-Delta Plan Amendment

Table 5 below provides projected supplies and demands under Scenario 3. The RWS is projected to experience significant shortfalls in single dry and multiple dry years starting as soon as 2022 and through 2040, regardless of whether the proposed project is constructed. These significant shortfalls are a result of implementation of the Bay-Delta Plan Amendment and not attributed to the incremental retail demand associated with the proposed project. Shortfalls would range from about 12 to 45 mgd, corresponding to rationing in the retail service area ranging 16-50%, over the next 20 years.

If additional water supplies were not acquired before the Bay-Delta Plan Amendment were implemented, the SFPUC would impose customer rationing to help balance water supply deficits during dry years.

Given the severity of the reduction in RWS supply with implementation of the Bay-Delta Plan Amendment, existing and planned dry-year supplies would not be enough to meet projected retail demands without rationing above the SFPUC's RWS LOS goal of limiting rationing to 20% on a system-wide basis for all dry years starting as soon as 2022. Although the WSAP does not address implications to retail supply during system-wide shortages above 20%, the WSAP indicates that if system-wide shortage greater than 20% were to occur, RWS supply would be allocated between retail and Wholesale Customers per the rules corresponding to a 16-20% system-wide reduction, subject to consultation and negotiation between the SFPUC and its Wholesale Customers to modify the allocation rules. The allocation rules corresponding to the 16-20% system-wide reduction are reflected in Table 5 above for Scenario 3. These allocation rules result in shortfalls of 16-50% across the retail service area as a whole under Scenario 3.

**Table 5: Projected Supply and Demand Comparison Under Scenario 3 (Implementation of the Bay-Delta Plan Amendment) (mgd)**

| | | Normal Year | Single Dry Year[1] | Multiple Dry Years | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Year 1[1] | Year 2[2] | Year 3[2] | Year 4[2] | Year 5[2] | Year 6[2] | Year 7[3] | Year 8[3] |
| 2020 | Total Retail Demand[4] | 72.1 | 72.1 | 72.1 | 72.1 | 72.1 | 72.1 | 72.1 | 72.1 | 72.1 | 72.1 |
| | Total Retail Supply[5] | 72.1 | 68.5 | 68.5 | 68.5 | 68.5 | 68.5 | 68.5 | 68.5 | 68.5 | 68.5 |
| | Shortfall | 0.0 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 |
| | Shortfall as % of Demand | 0.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% |
| 2025 | Total Retail Demand[4] | 79.0 | 79.0 | 79.0 | 79.0 | 79.0 | 79.0 | 79.0 | 79.0 | 79.0 | 79.0 |
| | Total Retail Supply[5] | 79.0 | 66.7 | 66.7 | 52.8 | 52.8 | 52.8 | 52.8 | 52.8 | 42.9 | 42.9 |
| | Shortfall | 0.0 | 12.3 | 12.3 | 26.2 | 26.2 | 26.2 | 26.2 | 26.2 | 36.1 | 36.1 |
| | Shortfall as % of Demand | 0.0% | 15.6% | 15.6% | 33.2% | 33.2% | 33.2% | 33.2% | 33.2% | 45.7% | 45.7% |
| 2030 | Total Retail Demand[4] | 82.3 | 82.3 | 82.3 | 82.3 | 82.3 | 82.3 | 82.3 | 82.3 | 82.3 | 82.3 |
| | Total Retail Supply[5] | 82.3 | 68.7 | 68.7 | 54.8 | 54.8 | 54.8 | 54.8 | 54.8 | 44.9 | 44.9 |
| | Shortfall | 0.0 | 13.6 | 13.6 | 27.5 | 27.5 | 27.5 | 27.5 | 27.5 | 37.4 | 37.4 |
| | Shortfall as % of Demand | 0.0% | 16.5% | 16.5% | 33.4% | 33.4% | 33.4% | 33.4% | 33.4% | 45.4% | 45.4% |
| 2035 | Total Retail Demand[4] | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 | 85.9 |
| | Total Retail Supply[5] | 85.9 | 68.8 | 68.8 | 54.9 | 54.9 | 54.9 | 54.9 | 54.9 | 45.0 | 45.0 |
| | Shortfall | 0.0 | 17.1 | 17.1 | 31.0 | 31.0 | 31.0 | 31.0 | 31.0 | 40.9 | 40.9 |
| | Shortfall as % of Demand | 0.0% | 19.9% | 19.9% | 36.1% | 36.1% | 36.1% | 36.1% | 36.1% | 47.6% | 47.6% |
| 2040 | Total Retail Demand[4] | 89.9 | 89.9 | 89.9 | 89.9 | 89.9 | 89.9 | 89.9 | 89.9 | 89.9 | 89.9 |
| | Total Retail Supply[5] | 89.9 | 68.9 | 68.9 | 55.0 | 55.0 | 55.0 | 55.0 | 55.0 | 45.1 | 45.1 |
| | Shortfall | 0.0 | 21.0 | 21.0 | 34.9 | 34.9 | 34.9 | 34.9 | 34.9 | 44.8 | 44.8 |
| | Shortfall as % of Demand | 0.0% | 23.4% | 23.4% | 38.8% | 38.8% | 38.8% | 38.8% | 38.8% | 49.8% | 49.8% |

Notes:
1. During a single dry year and multiple dry year 1 (year 2 of SFPUC's design drought sequence), the retail allocation under the WSAP is 37.5% of available RWS supply, or 59.6 mgd.
2. During multiple dry years 2-6 (years 3-7 of SFPUC's design drought sequence), the retail allocation under the WSAP is 37.5% of available RWS supply, or 45.7 mgd.
3. During multiple dry years 7 and 8 (years 8 and 8.5 of SFPUC's design drought sequence), the retail allocation under the WSAP is 37.5% of available RWS supply, or 35.8 mgd.
4. Total retail demands correspond to those in ***Table 4-1 of the UWMP***, except for the 2020 demand projection, which was re-projected to take into account the lower demands being experienced due to the recent drought and the lag in occupancy of built units.
5. Local supplies (i.e., supplies not from the RWS, including groundwater, recycled water, and non-potable water) correspond to those in ***Table 6-7 of the UWMP***. Local supplies are assumed to be used before RWS supplies to meet retail demand.

## *4.2 Rationing Implications to the Proposed Project*

While the levels of rationing described above apply to the retail service area as a whole (i.e., 5-7% under Scenario 1, 16-50% under Scenario 3), the SFPUC may allocate different levels of rationing to individual retail customers based on customer type (e.g., dedicated irrigation, single family residential, multi-family residential, commercial, etc.) to achieve the required level of retail system-wide rationing. Allocation methods and processes that have been considered in the past and may be used in future droughts are described in the SFPUC's current Retail Water Shortage Allocation Plan (***Appendix L of the UWMP***). However, additional allocation methods that reflect existing drought-related rules and regulations adopted by the Commission during the recent drought (2015-2016 Drought Program adopted by Resolution 15-0119) are more pertinent to current and foreseeable development and water use in San Francisco and may be included in the SFPUC's update to its Retail Water Shortage Allocation Plan. The updated Retail Water Shortage Allocation Plan will be brought forward to the Commission along with the 2020 Urban Water Management Plan for consideration and adoption through a public hearing process in 2021. It is anticipated that the updated Retail Water Shortage Allocation Plan would include a tiered allocation approach that imposes lower levels of rationing on customers who use less water than similar customers in the same customer class, and would require higher levels of rationing by customers who use more water. This approach aligns with the SWRCB's statewide emergency conservation mandate imposed during the recent drought, in which urban water suppliers who used less water were subject to lower reductions than those who used more water. Imposing lower rationing requirements on customers who already conserve more water is also consistent with the implementation of prior rationing programs based on past water use, in which more efficient customers were allocated more water through an appeal process administered by the General Manager. Staff expects that under a future Retail Water Shortage Allocation Plan adopted by the Commission, the allocation method or combination of methods that would be applied during water shortages caused by drought would similarly be subject to the discretion of the General Manager.

The SFPUC anticipates that, as a worst-case scenario under Scenario 3, a mixed-use residential customer such as the proposed project could be subject to up to 38% rationing during a severe drought.[5] In accordance with the Retail Water Shortage Allocation Plan, the level of rationing that would be imposed on the proposed project would be determined at the time of a drought or other water shortage and cannot be established with certainty prior to the shortage event. However, newly-constructed buildings, such as the proposed project, have water-efficient fixtures and non-potable water systems that comply with the latest regulations. Thus, if these buildings can demonstrate below-average water use, they would likely be subject to a lower level of rationing than other retail customers that meet or exceed the average water use for the same customer class.

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[5] This worst-case rationing level for San Francisco multi-family residential was estimated for the purpose of preparing comments on behalf of the City and County of San Francisco on the SWRCB's Draft Substitute Environmental Document in Support of Potential Changes to the Bay-Delta Plan, dated March 16, 2017. See comment letter Attachment 1, Appendix 3, Page 5, Table 3. The comment letter and attachments are available on the SWRCB website: https://www.waterboards.ca.gov/public_notices/comments/2016_baydelta_plan_amendment/docs/dennis_herrera.pdf. The rationing estimates prepared for the comment letter apply to the first 6 years of the SFPUC's 8.5-year design drought as they reflect the 1987-92 drought. For the last 2.5 years of the design drought, a corresponding worst-case rationing level for San Francisco mixed-use residential customers was not estimated. While the level of rationing imposed on the retail system will be higher for the outer years of the design drought compared to the first 6 years, it is reasonable to assume that mixed-use residential customers would not have to conserve more than 38%.

### *4.3 Findings*

Regarding the availability of water supplies to serve the proposed project beginning in 2026, the SFPUC finds, based on the entire record before it, as follows:

- During normal years, the SFPUC's total projected water supplies will meet the projected demands of its retail customers, including those of the proposed project, existing customers, and foreseeable future development under Scenario 1, Scenario 2, and Scenario 3.
- During single dry years and multiple dry years under Scenario 1—No implementation of the Bay-Delta Plan Amendment or the March 1st Proposed Voluntary Agreement—the SFPUC can meet the projected demands of its retail customers, including those of the proposed project, existing customers, and foreseeable future development without the need for rationing beyond the LOS goal of 20% system-wide rationing. Based on past hydrology, statistically speaking dry years occur roughly once out of every 10 years.
- During single dry years and multiple dry years under Scenario 2—Implementation of the March 1st Proposed Voluntary Agreement—the SFPUC would still face a shortfall in single dry and multiple dry years, thus requiring rationing, but to a lesser degree and in closer alignment to the LOS goal of no more than 20% system-wide rationing compared to that which would occur under Scenario 3.
- During single dry years and multiple dry years under Scenario 3—Implementation of the Bay-Delta Plan Amendment—the SFPUC cannot reliably meet the projected demands of its retail customers, including the proposed project, existing customers, and foreseeable future development, without rationing at a level greater than that required to achieve the LOS goal of a maximum of 20% system-wide average rationing starting as soon as 2022. The SFPUC estimates it would impose up to 50% rationing across the retail service area and up to 38% rationing for mixed-use residential customers such as the proposed project.

Approval of this WSA by the Commission is not equivalent to approval of the development project for which the WSA is prepared. A WSA is an informational document required to be prepared for use in the City's environmental review of a project under CEQA. It assesses the adequacy of water supplies to serve the proposed project and cumulative demand.

Furthermore, this WSA is not a "will serve" letter and does not verify the adequacy of existing distribution system capacity to serve the proposed project. A "will serve" letter and/or hydraulic analysis must be requested separately from the SFPUC City Distribution Division to verify hydraulic capacity.

While this WSA contains information provided by or on behalf of the project sponsor regarding the proposed project's plans for onsite water reuse and demand estimates using the SFPUC's Non-potable Water Calculator, any information submitted to the SFPUC for preparation of this WSA does not fulfill the requirements of the Non-potable Water Ordinance. City review and approval of a proposed onsite water system must be performed separately through the Non-potable Water Program.

If there are any questions or concerns, please contact Steve Ritchie at (415) 934-5736 or SRitchie@sfwater.org.

Attachments: Attachment A, Communications from San Francisco Planning Department
Attachment B, 2500 Mariposa/SFMTA Potrero Bus Yard Project Demand Memo

# Attachment A –

## Communications from San Francisco Planning Department

SAN FRANCISCO
**PLANNING DEPARTMENT**

**MEMO**

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**DATE:** June 13, 2013

**TO:** SF Planning EP Planners & SFPUC Planners

**FROM:** Scott T. Edmondson, AICP; Aksel Olsen

**RE:** Project Types Represented in the Land Use Allocation

This Memorandum explains the Planning Department's Land Use Allocation (LUA) and the types of projects included in the LUA. The 2012 LUA is the most recent update and uses the Association of Bay Area Governments' (ABAG) May 2012 Jobs-Housing Connection Scenario. As this memorandum explains, the Planning Department expects that the LUA will encompass the vast majority of development proposals that project sponsors will present to the Planning Department. This memorandum also identifies possible unusual circumstances under which EP Planners and the SF PUC Planners may want to consult further with the Planning Department's Information and Analysis Group to determine whether a project is encompassed within the LUA.

**ABAG's Projections of San Francisco's Economic Growth and the LUA**

The LUA takes ABAG's 30-year projections of citywide household and job growth and allocates them to smaller geographic units, in this case, the traffic analysis zones of the SF Transportation Authority's Countywide Transportation Model. Thus, the LUA does not project growth but simply allocates ABAG's growth projections to subarea locations within the city. The current 2012 LUA uses ABAG's Jobs-Housing Connection Scenario projections for San Francisco and covers the period from 2010 to 2040; these projections were released in May 2012 and are represented in five-year increments.

ABAG derives its demographic and economic growth projections from assumptions about long-term demographic and economic growth.[1] ABAG maintains its own set of regional models and develops each forecast with its in-house experts and private economic consultants.[2] The forecasting is informed by the best information and assumptions available through federal and State agencies, such as the State Department of Finance, and private sources. However, ABAG develops its forecast based on local knowledge from over 50 years of forecasting and develops the forecast to reflect local conditions in contrast to more general forecasting assumptions of State or federal sources. ABAG's estimate of total citywide growth for the 30-year period is expected to best represent actual growth at the end of the 30-year period. However, projected growth for any portion of the projection period, such as growth in a one-year or a five-year period, would be expected to vary from actual growth in such periods. Within the 30-year growth projection period, higher than average growth periods could be followed by lower than average growth periods such that growth over the period would ultimately equal the projected 30-year

total. All projection methodologies make assumptions based on the best available information at the time. To minimize the effects of imprecision intrinsic to any projections methodology when used in for planning decisions, ABAG follows professional best practices and updates its projections every two years. Accordingly, the Planning Department updates its LUA every two years. The planning practice of frequently updating projections and plans allows the incorporation of new information over time to provide for the most up-to-date projections.

The SFPUC updates its Urban Water Management Plan (UWMP) every five years. The UWMP typically relies on LUA projections or similar information. But, because the LUA is updated every two years, the SFPUC may want to review the LUA issued within SFPUC's 5-year UWMP cycle; and if it varies in a significant way from the SFPUC's projections used in its UWMP, discuss with Planning whether it should make any changes in its own water supply needs assessment during an UWMP cycle.

**Types of Projects Included in the LUA**

The LUA translates ABAG's projected household and job growth into total expected development in San Francisco over a 30-year period. The LUA translates ABAG's household growth into residential housing units and ABAG's job growth into commercial space.[3] Thus, the LUA projections of housing units and commercial space include all project types expected from San Francisco growth, such as housing, office, retail, production-distribution-repair (PDR), visitor, and cultural-institutional-educational (CIE). The LUA does not exclude any project type or potential growth. As such, the LUA and the ABAG economic projections upon which it is based contain the best estimates available of reasonably foreseeable growth and development in San Francisco over a 30-year period.

**Unusual Circumstances**

The LUA can be considered to include all reasonably expected growth and development and it is frequently updated to correct for expected variations. Nevertheless, there are possible unusual circumstances under which the EP Planners or SFPUC Planners may want to request further Planning Department consultation with the Information and Analysis Group to determine if a particular project falls within the LUA. ABAG's projections and the Department's LUA take into account urban economic trends and based on that information capture all reasonably foreseeable growth in San Francisco. Limited capital and aggregate demand of any urban economy constrains growth. However, occasionally the reality or perception may arise that a project lies outside the normal growth constraints of the San Francisco economy for some reason, and therefore lies outside ABAG's projection's and the Department's current spatial allocation in its LUA.

One can envision the rare case of a project arising outside the City's economy (demand and capital) from an organization not located in San Francisco using nonprofit foundation funds or private donations to construct a large institutional project in San Francisco, such as a major hospital, a university, or an office complex. These projects would represent spending and demand beyond that normally active in the San Francisco economy, and therefore represent net additions to projected growth beyond that captured by ABAG's projections and reflected in the Department's LUA. Indicative characteristics of such projects

would include those with non-local sponsors, of large size, and for an institutional land use. Alternatively, very large project proposals from local project sponsors active in the SF economy involving a large site, land assembly, a planned unit development (PUDs), master plans, or area plan and rezoning proposals may warrant individual assessment for a range of reasons even though they are likely captured in ABAG's projections and the LUA. Such projects would be similar to recent projects such as Hunters Point/Candlestick, Park Merced, Treasure Island, Pier 70 Master Plan, Eastern Neighborhoods, or the Transit Center District Plan.

The bi-annual update of ABAG's projections and the LUA would be able to capture development associated with such projects. However, should such a project be proposed between updates, the EP Planners and SFPUC could treat its appearance as sufficient cause to request the Planning Department's assistance in determining whether to consider the project outside the latest LUA projections.

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[1] Please see ABAG's summary of its research and forecasting on its website: http://www.abag.ca.gov/planning/research/index.html

[2] ABAG describes its current Jobs-Housing Scenario policy-based forecast here: http://onebayarea.org/pdf/JHCS/May_2012_Jobs_Housing_Connection_Strategy_Appendices_Low_Res.pdf.

[3] The LUA citywide totals only differ slightly, up to within one percent of ABAG totals (+/-). The difference is produced by LUA's complex method of translating ABAG projections into development (residential units and commercial space) and allocating total citywide growth to subarea locations. The minor difference between the LUA and ABAG citywide totals is real in absolute terms, but not in the sense that they are different projections. The one percent difference does not constitute a difference of projections. ABAG and MTC consider variation of one percent in citywide totals, plus or minus, as sufficiently representing ABAG's projections for consistency with the MTC regional projections and modeling purposes (congestion management, etc.). Even if a few versions of the LUA must be done to make minor subarea spatial allocation corrections, as long as the LUA's citywide totals are within one percent of ABAG's projections, and ABAG's projections have not changed, the LUA citywide totals have not effectively changed either. Any of those LUA versions' citywide totals fully represent the same unchanged ABAG projection totals.

# Attachment B –

## 2500 Mariposa Street/SFMTA Potrero Bus Yard Project Demand Memo

SAN FRANCISCO
PLANNING DEPARTMENT

MEMO

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**DATE:** September 17, 2020

**TO:** Sarah Triolo, SFPUC

**FROM:** David Young, Environmental Planning

**CC:** Laura Lynch, Environmental Planning

**RE:** 2500 Mariposa Street/SFMTA Potrero Bus Yard - Water Supply Assessment Request (Planning Department Case No. 2019-021884ENV)

The purpose of this memorandum is to request that the San Francisco Public Utilities Commission (SFPUC) prepare a Water Supply Assessment (WSA) for the proposed 2500 Mariposa Street/SFMTA Potrero Bus mixed-use project in compliance with CEQA Guidelines Section 15155 and Sections 10910 through 10915 of the California Water Code.

As indicated in the attached memorandum from the project sponsor, the San Francisco Municipal Transportation Agency (SFMTA), proposes to replace the Potrero Yard Trolley Coach Facility at 2500 Mariposa Street (Potrero Yard). The project proposes a mix of commercial and residential uses in the remainder of the project as part of a joint development program between SFMTA and a private project co-sponsor. The proposed project would accommodate the expansion of the SFMTA's transit vehicle fleet in a new replacement structure that would include space for bus parking and circulation (up to 213 buses); SFMTA maintenance, operation, and administrative uses; and joint development uses. The new approximately 1,300,000 gross-square-foot (GSF) structure would occupy the 4.4-acre (192,000 square feet) site and rise to heights ranging from 75 to 150 feet. Table 1 provides the proposed project's overall land uses in GSF.

**Table1: Proposed Project Constructed Gross Areas by Land Use**

| | GSF |
|---|---|
| Bus Service and Storage | 186,000 |
| Administration and Common Areas | 52,000 |
| Residential (575 units) | 544,000 |
| Commercial | 33,000 |
| Ramps and Drives | 485,000 |
| **TOTAL** | **1,300,000** |
| *Notes: GSF= gross square feet.* | |

The project sponsor has provided project information intended to meet the requirements outlined in the SFPUC guidance memo dated September 6, 2016. A summary of the project description, average daily water demands, and supporting tables prepared by the project sponsor's consultant (based on the SFPUC Non-Potable Water Calculator Version 6), are attached.

Should you have questions or need additional information from the Planning Department or the project sponsor, please contact me at 628-652-7494 or david.l.young@sfgov.org.

| | |
|---|---|
| **Subject:** | **SFMTA Potrero Yard Modernization Project (Case No. 2019-021884ENV)**<br><br>**Water Supply Assessment Analysis** |
| **Prepared By:** | Beth Goldstein, PE |
| **Reviewed By:** | David Young, Environmental Planning |
| **Date:** | September 16, 2020 |
| **HCE Reference:** | 190002 |

# 1 Introduction

Under sections 10910 through 10915 of the California Water Code, urban water suppliers like the SFPUC must prepare water supply assessments for certain large "water demand" projects, as defined in CEQA Guidelines section 15155. Water supply assessments rely on information contained in the water supplier's urban water management plan and on the estimated water demand of both the proposed project and projected growth within the relevant portion of the water supplier's service area. Because up to 575 residential units would be developed, the Project meets the definition of a water demand project under CEQA Guidelines section 15155 (a)(1)(g) and requires a water supply assessment (CEQA Guidelines section 15155 (b)).

This memorandum provides the necessary information for the preparation of a Water Supply Assessment by the Planning Department and the SFPUC. This water demand estimate for the Project was developed according to the guidance provided by the San Francisco Public Utilities Commission as outlined in their memo to project proponents dated September 6, 2016.[1]

# 2 Proposed Project

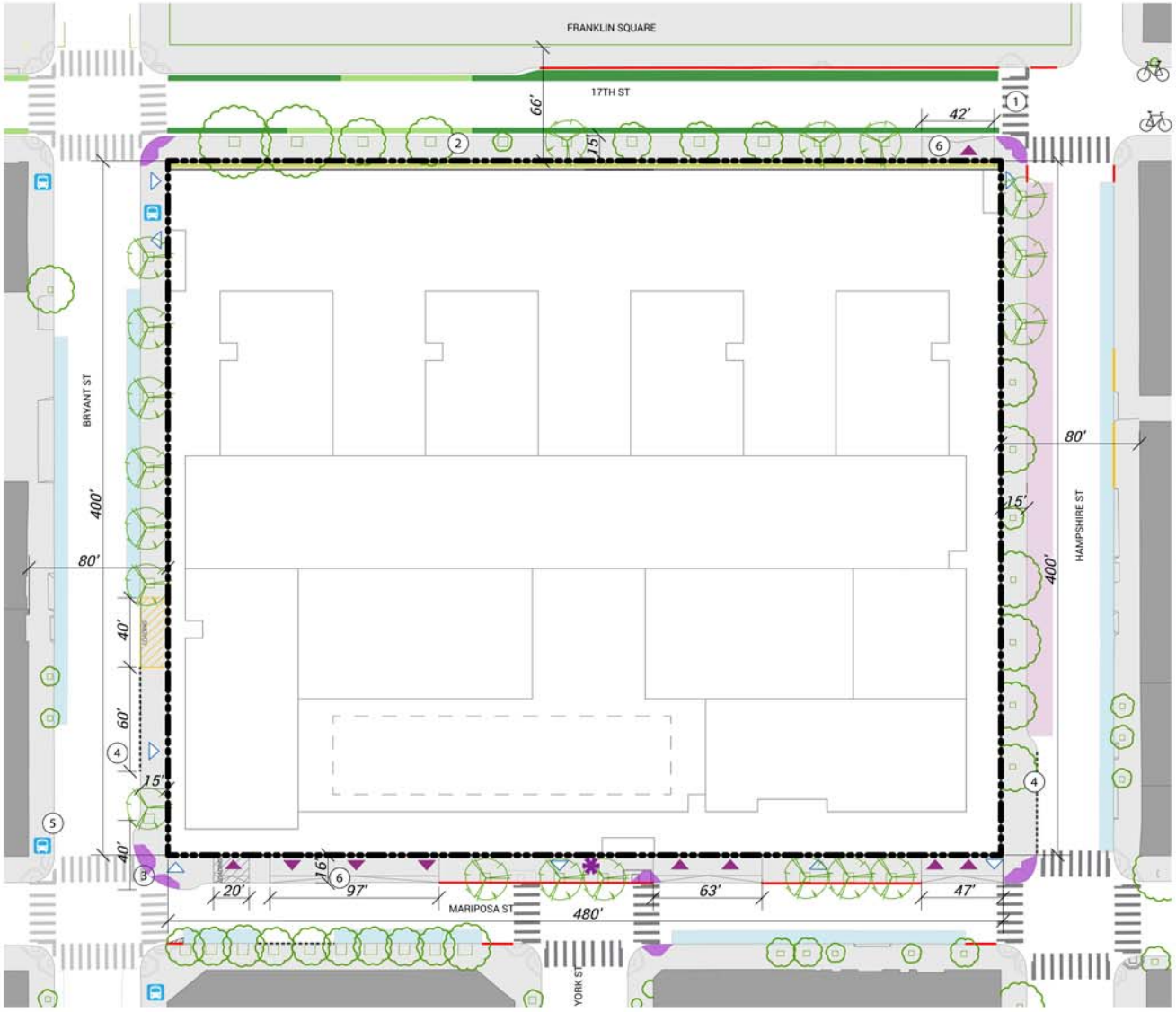
The project sponsor, the San Francisco Municipal Transportation Agency (SFMTA), proposes to replace the Potrero Yard Trolley Coach Facility at 2500 Mariposa Street (Potrero Yard). The Project would accommodate the expansion of the SFMTA's transit vehicle fleet in a new replacement structure that would include space for bus parking and circulation (up to 213 buses); SFMTA maintenance, operation, and administrative uses; and joint development uses (see **Table 1**). The new approximately 1,300,000 gross-square-foot (GSF) structure would occupy the 4.4-acre (192,000 square feet) site and rise to heights ranging from 75 to 150 feet. The new structure would contain a three-level, approximately 75-foot-tall replacement transit facility plus a mix of commercial and residential uses in the remainder of the Project as part of a joint development program between SFMTA and a private project co-sponsor. The joint development program would include a ground-floor commercial use (approximately 33,000 GSF) and residential entry lobbies, with integrated residential and transit facility uses on the second through sixth floors of the three-level replacement transit

[1] SFPUC, "Project Demand Memo for Preparation of WSA", September 6, 2016.

facility. Most of the residential development would be atop the replacement transit facility on the 7th to 13th floors.

**Table 1. Basic Project Information**

| | |
|---|---|
| Project Address | 2500 Mariposa Street |
| Project Block/Lot(s) | Block 3971/Lot 001 |
| Planning Department Case Number | 2019-021884ENV |
| ENV Case Manager | Laura Lynch / David Young |
| Zoning District | Public [P] |
| Height/Bulk | 65-X |
| Estimated Construction Duration | 2023-2026 |
| Current Land Use(s) | SFMTA Bus Storage and Maintenance (PDR)<br>SFMTA Offices |
| Proposed Land Use(s) | SFMTA Bus Storage and Maintenance (PDR)<br>SFMTA Offices<br>Residential<br>Retail |
| Site Size (sf) | 192,000 |
| Site Size (acres) | 4.4 |
| Project Size (constructed GSF) | 1,300,000 |
| Days of Operation / Annually | 365 |
| *Notes:*<br>*The areas used are constructed gross floor area (GSF) as required by the SFPUC Water Calculator. These areas do not include the deductions allowed under the San Francisco Planning Code for gross floor area.* | |




EXACT STREET DESIGN TBD BY FUTURE TRAFFIC ENGINEER

Source: SFMTA and Sitelab, 2020



**FIGURE 1: PROPOSED SITE PLAN**

The three new transit levels in the replacement transit facility would be designed to include space for circulation (ramps, drive aisles, and vertical circulation), parking for 213 buses, 18 maintenance bays and maintenance support areas, operations, an SFMTA operator training center, storage (parts and battery-electric infrastructure), administrative uses/common areas (e.g., offices, conference rooms, break rooms), and joint development uses. A total of 310 vehicle spaces would be provided: 63 spaces for the 40-foot-long buses, 150 spaces for the articulated 60-foot-long buses, and 97 parking spaces for large and standard non-revenue vehicles. The Project is not proposing any off-street accessory vehicular parking for the entirety of the Project, including the proposed joint development. See **Table 2** for approximate floor areas for the replacement transit facility. Ramps would provide one-way internal driveways within the replacement transit facility so that buses can access the work bays, bus wash bays (one per level), and parking spaces on the three new transit levels.

**Table 2. Proposed Project Constructed Gross Areas by Land Use**

| | GSF |
|---|---|
| Bus Service and Storage | 186,000 |
| Administration and Common Areas | 52,000 |
| Residential (575 units) | 544,000 |
| Commercial | 33,000 |
| Ramps and Drives | 485,000 |
| **TOTAL** | **1,300,000** |
| *Notes: GSF= gross square feet.* | |

Of the 192,000 square foot (SF) project site, the building footprint is 189,860 SF, with a 5-foot wide planting strip along the 17th Street frontage (2,140 GSF). The building footprint includes 91,000 GSF of rooftop courtyard and 98,860 GSF of standard rooftop.

## 3 Existing Water Usage

Based on records supplied by SFMTA for the months of January and February 2020, the existing potable water demand is 3,500 gallons per day (gpd). Using the SFPUC Single Site calculator[2] (the SFPUC calculator) the existing 109,000 GSF of bus service/storage can be estimated to use 1,200 gpd. The remaining 2,300 gpd is assumed to be bus washdown use. There is no non-potable water system at the existing site.

## 4 Proposed Water Usage

One study for the Project was conducted using the SFPUC Single Site Water Calculator (Version 6). The three project variants only differ from the project in that they would shift the emergency exit location from 17th Street to Hampshire Street, would shift the residential

[2] SFPUC, "NP.xls", version 6, December 26, 2018

entrances from Mariposa Street to Hampshire Street, and would shift some of the active ground-floor uses (from Bryant Street to 17th Street). Thus, the proposed water uses under the project variants would be the same as the Project, and a separate study for the project variants is not required. A complete accounting of all proposed water uses, with water volumes listed in units of gallons per year based on output calculated by the SFPUC Water Calculator, is attached (see **Attachment 1**).

The default calculator assumptions and inputs were used as follows:

- "General Office" applied to administrative offices and common space
- "Retail" applied to general ground floor commercial
- "Service (e.g. financial, auto)" applied to bus service (maintenance + storage)

Non-defaults inputs include:

- HVAC demands estimates were provided by Arup (see **Attachment 2** for memo dated 7/1/2020) and assumed non-potable
- Bus washdown was calculated by scaling the existing demand from 158 to 213 buses per day
- No additional demand, beyond HVAC, was assumed for driveways and ramps.

The potable and non-potable demand estimates generated by the SFPUC Water Calculator are presented in **Table 3**. As shown, the total possible annual water demand is estimated to be 27,750,460 gallons per year (gpy) with potable demand at 17,460,806 gpy and non-potable demand at 10,289,654 gpy.

**Table 3. Proposed Project Water Demands**

| Demand Type | Potable Demand (gpy) | Non-potable Demand (gpy) |
|---|---|---|
| DOMESTIC FIXTURES - Commercial | | |
| Showerhead | 6,857 | - |
| Lavatory Faucet | 94,035 | - |
| Urinals | - | 153,260 |
| Toilet (Water Closet) | - | 863,399 |
| Kitchen Faucet | 34,164 | - |
| DOMESTIC FIXTURES - Multi-Family Residential | | |
| Showerhead | 4,496,908 | - |
| Bathroom Faucet | 822,605 | - |
| Bath | 1,054,622 | - |
| Washing Machine | 4,825,528 | - |
| Toilet (Water Closet) | - | 2,564,840 |
| Kitchen Faucet | 5,937,943 | - |
| Dishwasher | 188,145 | - |
| HVAC/COOLING | | |
| Cooling Tower Makeup Water | - | 5,548,000 |
| OTHER INDOOR DEMANDS | | |
| Other Non-Potable Demand (Bus Washdown) | - | 1,131,500 |
| OUTDOOR DEMANDS | | |
| Landscape Irrigation | - | 28,655 |
| **TOTALS** | **17,460,806** | **10,289,654** |
| *Notes: gpy = gallons per year* | | |

# 5 Project Phasing

The SFMTA estimates that construction of the Project would take three to four years to complete, with construction beginning in 2023 and building occupancy by the end of 2026. Because the Water Supply Assessment analyzes projected water supplies and demands through 2045 in five-year intervals and the Project construction is projected to be completed in 2026, demands estimated for the project are provided in this format in **Table 4**. The first column does not include water demands for the Project, as construction is not expected to be completed until 2026.

**Table 4. Project Potable and Non-Potable Demand (2025-2045)**

| Demand of Proposed Project | 2025 | 2026-2030 | 2030 | 2035 | 2040 | 2045 |
|---|---|---|---|---|---|---|
| Potable Demand (mgd) | 0.0000 | 0.0479 | 0.0479 | 0.0479 | 0.0479 | 0.0479 |
| Non-potable Demand (mgd) | 0.0000 | 0.0282 | 0.0282 | 0.0282 | 0.0282 | 0.0282 |
| **Total Demand (mgd)** | 0.0000 | 0.0762 | 0.0762 | 0.0762 | 0.0762 | 0.0762 |
| *Notes: mgd = million gallons per day.* | | | | | | |

# 6 Overall Site Water Management

As this Project is subject to the requirements of the San Francisco Green Building Code requirements for water use reduction, Stormwater Management Requirements (SMRs) and the Non-potable Ordinance (NPO), as well as the Water Efficient Irrigation, Residential Water Conservation and Commercial Water Conservation Ordinances, there is a clear direction to reduce water consumption by pursuing a non-potable water reuse strategy that prioritizes the collection of rainwater to meet the SMRs and supplemental use of graywater to meet the NPO. Use of blackwater captured and treated on-site is not part of the Project's water re-use strategy. Further, based on site characteristics, foundation drainage is not expected to be an element of the non-potable water reuse strategy.

A water balance analysis of the potential alternative sources and projected non-potable demands was based on:

- Building constructed gross square footage (GSF)
- Occupancy load factors per the SFPUC calculator
- Water demand and fixture flowrates
- Pervious and irrigated open space areas

Rainwater and graywater will be collected and treated on site to meet the non-potable demands for toilet and urinal flushing, cooling tower make-up water and outdoor irrigation. The bus washdown water will be collected and treated onsite to be reused as bus washdown water. The reuse approach of rainwater and graywater is projected to offset 37% of the annual volume of potable water otherwise required for the Project and meets 100% of the required non-potable demands. A discussion how the Project will meet each requirement is presented in the following subsections.

## 6.1 Stormwater Management Requirements

The Project must comply with all SMRs regulated by the SFPUC, which require new and redevelopment projects to manage stormwater runoff using green infrastructure (GI) where feasible. GI is a stormwater management strategy that takes advantage of sustainable processes, such as infiltration and rainwater harvesting to manage stormwater runoff at its source.

As the project site is within the Combined Sewer System (CSS) area with an existing imperviousness of greater than 50%, the SMR requires a stormwater runoff rate and volume by 25% relative to pre-development conditions for the 2-year, 24-hour design storm. Additionally, the SMR requires project applicants to assess the feasibility of meeting this requirement using rainwater harvesting before looking to other stormwater management/GI approaches such as bioretention planters, permeable pavement, or green roofs.

The project sponsor is committed to harvesting 100% of the rainwater, which will require approximately 80,000 gallons of rainwater storage.

## 6.2 Non-potable Ordinance

The Project meets the criteria for and must comply with the City's NPO, which requires that new developments with greater than 250,000 square feet of gross floor area to implement an onsite water reuse system to meet non-potable demands. In general, the NPO requires that qualifying projects utilize where practicable rainwater (defined as runoff from building roofs and other above-ground surfaces, distinct from stormwater which in this context refers to runoff from at- or below-grade surfaces), graywater (wastewater from showers, bathroom sinks, and laundry), blackwater (wastewater containing bodily or other biological wastes, as from toilets, dishwashers, kitchen sinks, and utility sinks), or foundation drainage (nuisance subsurface water collected to maintain a building's structural integrity or to dewater below grade floors that would typically be discharged into the sewer system) and use these alternate water sources to meet the non-potable demands e.g. toilet/urinal flushing and irrigation.

To the maximum extent practicable, the Project will address the NPO by using rainwater and graywater captured and treated onsite to meet 100% of the toilet and urinal flushing and outdoor irrigation demands. The non-potable demand for toilet/urinal flushing, irrigation, and cooling tower makeup water is expected to be met by the Project's water reuse system.

## 6.3 Recycled Water Ordinance

The Project is not subject to the Recycled Water Ordinance as it is outside the designated water use areas.

## 6.4 Water Efficient Irrigation Ordinance

The Project meets the criteria for and must comply with the Water Efficient Irrigation Ordinance, which applies to projects with new or modified landscaping equal to or greater than 500 square feet. The Project will include more than 500 square feet of new landscaping and would comply with rules adopted by the SFPUC for Tier 2 project landscaping. The Project would install water efficient landscaping using primarily drought-tolerant planting, recycled water systems to provide non-potable water for irrigation, and a centrally controlled weather-based or other smart irrigation system. An application and a certificate of completion will be required.

## 6.5 Residential and Commercial Water Conservation Ordinances

The Project is subject to the residential water conservation ordinance. High-efficiency fixtures and appliances will be installed in compliance with current California plumbing standards.

The Project is not subject to the commercial water conservation ordinance as that is applicable only to alterations of existing commercial buildings.

The Project is subject to the San Francisco Green Building Code (Sections 4.103.2.2 and 5.103.1.2) which states that all new buildings must comply with current California water fixture and fitting efficiency requirements. The Project, as a new large commercial and high-rise residential project, will verify that it meets maximum fixture flow rates in accordance with the California Plumbing Code.

ATTACHMENTS:

1. SFPUC, "NP_SFMTA_PotreroYard.xlsx", July 19, 2020
2. ARUP, "HVAC Water Estimate for Potrero Bus Yard's CEQA Analysis (DEIR)", July1, 202

# ATTACHMENT 1

# NON-POTABLE WATER CALCULATOR

## Project Summary Sheet

**Project Contact:** Licinia Iberri
(415) 646-2715
Licinia.Iberri@sfmta.com

Estimated Site/Building Permit Issuance Date: 1/1/2023

### 1. Demands and Supplies Summary

**Grant Criteria Status:** This building is 250,000 sq.ft. or greater in size and is not eligible for a grant

| | | |
|---|---|---|
| Demands Met by Non-Potable Supply for Project (gpy): | 10,289,700 | Meets grant criteria of offsetting a minimum of 1,000,000 gal/yr of potable water use |
| Demands Met by Non-Potable Supply for Project *: | 37% | |
| Project Total Annual Water Demand (gpy) *: | 27,750,460 | |
| Project Total Annual Toilet + Irrigation Water Demand (gpy) *: | 3,610,154 | |
| Toilet + Irrigation Demands Met by Non-Potable Supply *: | 100.0% | |
| Potable Water Allocation (gpy): | 26,554,336 | Potable supplies are allocated to this project to meet remaining demands. Projects are allocated an additional 10% in potable supplies that are available as a buffer. |
| Daily Wet Weather Potable Allocation (gpd): | 72,984 | Projects are allocated these potable supplies during wet weather months (October - March) |
| Daily Dry Weather Potable Allocation (gpd): | 72,614 | Projects are allocated these potable supplies during dry weather months (April - September) |

*Note: Estimates for *Demands Met by Non-Potable Supply for Project* and *Project Total Annual Water Demand* based on Tab 6 - Building Potential Summary total water demand values. Manually entered non-potable demands that exceed auto-calculated non-potable demands from Tab 6 may result in Total Annual Water demands greater than the value used in this analysis.
*Project Total Annual Toilet Water Demand* and *Toilet Demands Met by Non-Potable Supply* based on Tab 6 - Building Potential Summary toilet demands.

### 2. Building Information Summary

| | | | |
|---|---|---|---|
| Project / Building Name: | Potrero Yard Modernization Project | Building Type: | Mixres |
| Project Address: | 2500 Mariposa Street<br>San Francisco, CA | (gross square footage or GSF): | 1,300,000 |
| | | Total Lot Size (ft²): | 192,000 |
| | | Number of Residential Units: | 575 |
| Assessor's Block & Lot No. / APN: | 3971001 | Impervious Surface Above Grade (ft²): | 189,860 |
| Year Online: | 2026 | Impervious Surface Below Grade (ft²): | 189,860 |
| | | Landscaped Area (ft²): | 2,140 |
| | | Site Location (Zone): | Eastern SF |

### 3. Summary of Non-Potable Demands and Supplies for the Project

**Non-Potable Water Supply Estimates**

| On-site Alternate Water Source Supplies | Water Quantity (gpy) |
|---|---|
| Rainwater: | 1,750,333 |
| Stormwater: | 0 |
| Graywater: | 10,170,499 |
| Blackwater: | 0 |
| Foundation Drainage | 0 |
| Cooling & Other Supplies | 1,131,500 |
| TOTAL: | 13,052,332 |

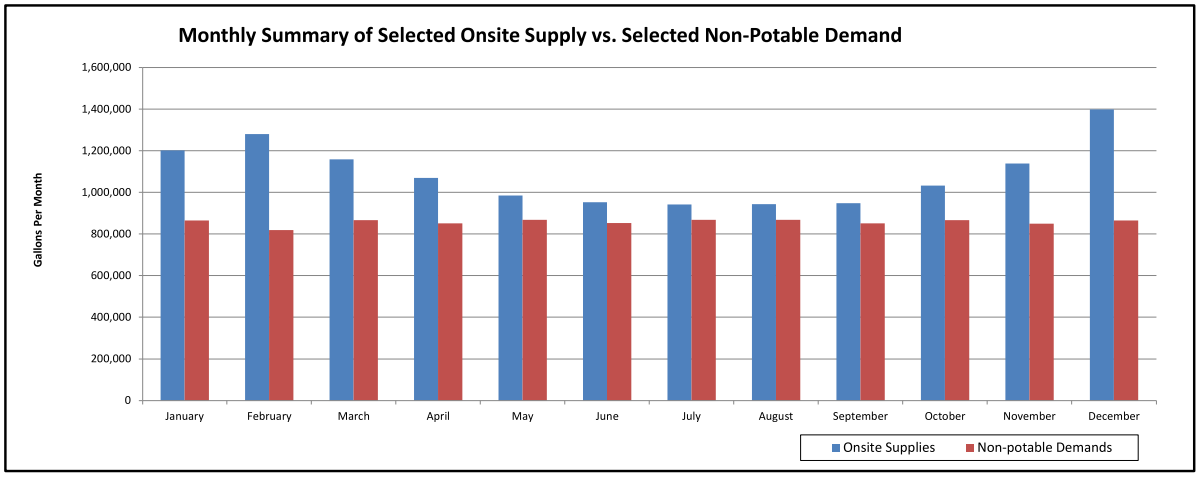
**Non-Potable Water Demand Estimates**

| Project Specific Non-Potable Application Demands | Quantity (gpy) |
|---|---|
| Toilets/Urinals: | 3,581,499 |
| Irrigation: | 28,655 |
| Toilets/Urinals + Irrigation | 3,610,154 |
| Cooling Tower: | 5,548,000 |
| Commercial Laundry & Other | 1,131,500 |
| Total: | 10,289,654 |

### 4. Project Summary

| | | |
|---|---|---|
| Demands Met by Non-Potable Supply for Projects (gpy): | 10,289,700 | |
| Total Water Demand (gpy): | 27,750,460 | Based on Tab 6 - Building Potential Summary tab |
| Total Water Demand Offset: | 37% | |
| Potable Water Allocation (gpy): | 26,554,336 | Amount of Potable Water Allocated to Project to Meet Total Demands |
| Daily Wet Weather Potable Allocation (gpd): | 72,984 | Amount of Potable Water Allocated Daily during Wet Weather Months |
| Daily Dry Weather Potable Allocation (gpd): | 72,614 | Amount of Potable Water Allocated Daily during Dry Weather Months |
| Total Toilet + Irrigation Water Demand (gpy): | 3,610,154 | Based on Tab 6 - Building Potential Summary tab |
| Total Toilet + Irrigation Water Demand Offset: | 100% | Based on Tab 6 - Building Potential Summary tab |
| Selected Toilet + Irrigation Water Demand (gpy): | 3,610,154 | Based on selections on Tab 7 - Project Definition |
| Selected Toilet + Irrigation Water Demand: | 100% | Based on selections on Tab 7 - Project Definition |

This offset analysis assumes the full year of supplies is available to offset non-potable demands. Some scenarios may require storage to store excess supplies from one month in order to use those supplies in another month with unmet demands.



# ATTACHMENT 2

# Memorandum

ARUP

| | | | |
|---|---|---|---|
| To | Licinia Iberri, SFMTA | Date | July 1, 2020 |
| Copies | Tim Kempf, SFPW | Reference number | 272758 |
| From | Rob Best; Ignacio Barandiaran | File reference | |
| Subject | HVAC Water Estimate for Potrero Bus Yard's CEQA analysis (DEIR) | | |

Arup has produced an estimate of the average daily water use required for a water-based cooling system for the Potrero Bus Yard development, including both the bus facility and the proposed residential development. This memo summarizes the estimate, the calculation approach, and key assumptions. The water use estimate is intended to serve as a likely estimate for the analysis supporting the Draft Environmental Impact Report (DEIR), and is based on benchmarks from similar projects. It does not represent an actual design for the Potrero Bus Yard cooling system.

Based on the assumptions and calculation approach below, we have estimated that the likely average daily water usage for the project is **15,200 gallons per day** (or 11 gallons per minute). This represents the makeup water required for cooling towers. Other systems (e.g., chillers, boilers) are closed systems and do not require makeup water in normal operation. Note that this is an average flow per day for the year. We estimate that on the peak cooling day, up to 29,300 gallons of makeup water may be required. However, given the mild weather in San Francisco, this peak day is not representative of the annual condition. Furthermore, this estimate has been based on a water-based cooling system, using typical estimates of building cooling loads. Further design refinement may reduce the cooling load or select lower water use HVAC systems, thereby reducing the proposed water use.

## Assumptions and Calculation

The estimate of cooling water use has been based on the program outlined in the June 12, 2020, SFMTA Potrero Yard Modernization Project Request for Qualifications, Appendix D. The areas for each program type have been consolidated from the table provided within that document and used to generate likely cooling loads using cooling load benchmarks by space type. These benchmarks are based on recent Arup projects in San Francisco at a similar stage of design. It is possible that the final design will improve upon these benchmarks, but these are intended to represent a typical building for the area. The table below provides the areas and cooling benchmarks assumed, and the resulting cooling load by space type.

# Memorandum

| Land Use Category | Space Type | Area (SF) | Cooling Density (SF/Ton) | Total Cooling Load (Tons) |
|---|---|---|---|---|
| Bus Facility | Storage | 186,000 | 700 | 266 |
| | Bus Administration | 52,000 | 400 | 130 |
| | Parking/Circulation | 485,000 | 0 | - |
| Residential | Residential | 394,000 | 700 | 563 |
| | Circulation | 66,000 | 700 | 94 |
| | Common Area | 7,000 | 700 | 10 |
| | Storage | 58,000 | 700 | 83 |
| Shared | Circulation | 19,000 | 400 | 48 |
| Commercial | Active Use | 33,000 | 350 | 94 |
| | | | **Total Cooling Load** | **1,288** |
| | | | **Rounded Cooling Load** | **1,300** |

The 1,300 ton assumed cooling load can be provided by a variety of system types. To estimate water use for the project, we have assumed that cooling would be provided by a cooling tower coupled either to a central chiller or water source heat pumps located in each unit or non-residential zone. Cooling towers have significant water use due to evaporation of water. Cooling towers filter water through an evaporative medium and use a fan to draw air over the medium to cool the water. Water is lost in this process both through drift, where water particles are carried away by the induced draft from the fan, and by evaporation as the water cools. Drift is assumed to be 0.005% of the total water circulation, while evaporation is based both on the temperature change desired in the cooling tower and the flow rate. For this estimate, we have assumed that the cooling tower temperature change is 15 degrees Fahrenheit.

In addition, cooling tower water can only be circulated a fixed number of times through the tower before it must be drained and replaced. This is based on the buildup of chemical compounds naturally present in the water that at high concentrations can be harmful to the cooling equipment. For this estimate, we have assumed that water can be cycled through the cooling tower 6 times before it must be flushed. This is a typical value for cooling towers, particularly given the LEED goals for the project, and can be increased with additional condenser water treatment, thereby reducing the concentration of chemicals in the cooling tower water.

Based on the cooling load of 1,300 tons, we assume a peak cooling tower circulation rate of 3,120 GPM. Of this, at peak flow, 37.5 GPM is anticipated to be lost to evaporation, 0.16 GPM to drift, and

7.5 GPM to reducing the concentration of chemicals built up in the water. Combining these flows leads to a peak makeup water requirement of 45.1 GPM. However, this peak can be assumed to occur only in a small number of hours per year. Given the variation in weather within a single day, between days and weeks, and throughout the year, experience from similar projects in San Francisco has indicated that the average cooling tower makeup water flow is approximately 24% of the peak flow. Using this factor, leads to the results shown in the table below.

| | **Peak** | | **Average** | |
|---|---|---|---|---|
| Instantaneous Makeup Water | 45 | GPM | 11 | GPM |
| Hourly Makeup Water | 2,719 | GPH | 640 | GPH |
| Daily Makeup Water | 29,300 | GPD | 15,200 | GPD |

Note that the average values should be used for calculation of likely water use throughout the year, rather than the peak.