San Francisco Gateway Project
749 Toland Street and 2000 McKinnon Avenue

San Francisco Planning
Case No. **2015-012491ENV**

State Clearinghouse No. 2022030286

Public Draft EIR	Draft EIR Publication Date:	August 2, 2023	*Written comments should be sent to:*
	Draft EIR Public Hearing Date:	September 7, 2023	**Elizabeth White** 49 South Van Ness Ave, Suite 1400 San Francisco, CA 94103 or cpc.sfgatewayproject@sfgov.org
	Draft EIR Public Comment Period:	August 3, 2023 – September 18, 2023 at 5pm	

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San Francisco Planning

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ACRONYMS AND ABBREVIATIONS

$\mu g/m^3$	micrograms per cubic meter
AB	Assembly Bill
AC Transit	Alameda-Contra Costa Transit District
ADA	Americans with Disabilities Act
AERMOD	United States Environmental Protection Agency's regulatory dispersion model
AM	ante meridiem
APEZ	Air Pollutant Exposure Zone
AQ	Air Quality
AQI	Air Quality Index
ATCM	Airborne Toxic Control Measure
BART	Bay Area Rapid Transit
board of supervisors	San Francisco Board of Supervisors
CA MUTCD	California Manual on Uniform Traffic Control Devices
CalEEMod	California Emissions Estimator Model
CalGreen	California Green Building Standards
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
city	City and County of San Francisco
CNEA	common noise equivalent areas containing noise-sensitive land uses
CNEL	Community Noise Equivalent Level
CO	carbon monoxide
COPD	chronic obstructive pulmonary disease
COVID-19	coronavirus 2019 disease
dB	decibel
dBA	A-weighted decibel
DPM	diesel particulate matter
draft EIR	draft environmental impact report
EIR	environmental impact report
ERO	environmental review officer

FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FTA manual	Federal Transit Administration's Transit Noise and Vibration Impact Assessment Manual
GHG	Greenhouse Gas
HARP2	Hot Spots Analysis and Reporting Program
HIN	High-Injury Network
hp	horsepower
HRA	health risk assessment
HVAC	Heating, ventilation, and air conditioning
Hz	Hertz
I-	Interstate
in/sec	inches per second
kV	kiloVolt
kVA	kilovolt ampere
L_{dn}	day/night noise level
LEED	Leadership in Energy and Environmental Design
L_{eq}	equivalent continuous sound level
mil	millimeter
mph	miles per hour
Muni	San Francisco Municipal Railway
NAAQS	National Ambient Air Quality Standards
NO	Noise and Vibration
NO_2	nitrogen dioxide
NOP	notice of preparation
NO_X	nitrogen oxides
OAK	Oakland International Airport
OEHHA	Office of Environmental Health Hazard Assessment
OEMP	Operational Emissions Management Plan
PDR	production, distribution, and repair
planning department	San Francisco Planning Department
PM	particulate matter or post meridiem

PM_{10}	particulate matter of 10 microns in diameter or less
$PM_{2.5}$	particulate matter of 2.5 microns in diameter or less
ppm	parts per million
PPV	peak particle velocity
PRC	Public Resources Code
proposed project	San Francisco Gateway project
SamTrans	San Mateo County Transit District
SF transportation guidelines	San Francisco Planning Department's Transportation Impact Analysis Guidelines
SF-CHAMP	San Francisco County Transportation Authority's travel demand forecasting model
SFMTA	San Francisco Municipal Transportation Agency
SFMTA blue book	San Francisco Regulations for Working in San Francisco Streets
SFO	San Francisco International Airport
SFPUC	San Francisco Public Utilities Commission
SO_2	sulfur dioxide
TAC	toxic air contaminant
TAZ	transportation analysis zone
TDM	travel demand management
TR	Transportation and Circulation
TRU	transportation refrigeration unit
U.S. 101	United States Highway 101
U.S. EPA	United States Environmental Protection Agency
VdB	Vibration decibels
VMT	vehicle miles traveled
VOC	volatile organic compound
WETA	Water Emergency Transportation Authority
WHO	World Health Organization
Zones	transportation analysis zones

SUMMARY
SAN FRANCISCO GATEWAY EIR SUMMARY

S.1 Introduction

This document is a draft environmental impact report (draft EIR) for the proposed San Francisco Gateway project (the proposed project). This chapter of the draft EIR provides an overview of:

- the proposed project and a variant to the proposed project (the expanded streetscape variant) that would expand streetscape improvements surrounding the project site;
- anticipated environmental impacts that could result with implementation of the proposed project and expanded streetscape variant, and identified mitigation measures for those impacts on the physical environment determined to be significant (i.e., substantially adverse);
- alternatives to the proposed project, including identification of the environmentally superior alternative; and
- areas of controversy and issues to be resolved.

The San Francisco Planning Department (planning department) is the lead agency responsible for preparing this EIR in compliance with the California Environmental Quality Act (CEQA). This is a focused EIR prepared pursuant to CEQA Guidelines sections 15063(c)(3) and 15161. It discloses to the public and decision makers the impacts of the proposed project on transportation and circulation, noise and vibration, and air quality. All other potential environmental impacts of the proposed project, as analyzed under CEQA, are addressed in the initial study for this project (Appendix B).

S.2 Project Summary

The project sponsor, Prologis, L.P., proposes to redevelop two parcels in a core industrial area of San Francisco's Bayview Hunters Point neighborhood. The project site is located at 749 Toland Street and 2000 McKinnon Avenue and consists of two parcels (Assessor's Block 5284A, Lot 008; and Block 5287, Lot 002) (see Figure 2.C-1, p. 2-4), including Selby Street between Kirkwood and McKinnon avenues and portions of the surrounding streets. The combined total gross site area is approximately 743,800 square feet (17.1 gross total acres). The project site is occupied by four structures, totaling approximately 448,000 square feet[1] of production, distribution, and repair (PDR)[2] space.

The proposed project would demolish the existing four single-story PDR buildings on site and would construct two new three-story buildings (plus active roof), totaling approximately 2,160,000 gross square feet. Each building would have a maximum height of approximately 97 feet (115 feet with rooftop appurtenances included). The proposed building west of Interstate (I-)280 at 749 Toland Street is "building A," and the proposed building east of I-280 at 2000 McKinnon Street is "building B" (see Figure 2.D-1, p. 2-12). Both building A and building B would include three levels of PDR space with a multi-level vehicular system (comprising staging, circulation, and

[1] Square footages presented for the existing and proposed uses are approximate.
[2] PDR use is a grouping of uses that includes but is not limited to all industrial and agricultural, ambulance services, animal hospital, automotive service station, automotive repair, automotive wash, arts activities, business services, cat boarding, catering service, commercial storage, kennel, motor vehicle tow service, livery stable, parcel delivery service, public utilities yard, storage yard, trade office, trade shop, wholesale sales, and wholesale storage uses.

logistic yard areas) serving each level. In both buildings, all three levels of the PDR space would have direct vehicular access via a one-way ramp system for vehicles as large as tractor trailers. The roof level would provide a solar array and a screened, open-air, multipurpose deck that could be used for parking and/or material and vehicle staging.

The proposed project would construct new sidewalks along the site's perimeter and would create seven new curb cuts for access to each new building. The new sidewalks would be designed in accordance with San Francisco's Better Streets Plan standards for industrial roads.

The proposed project would provide space for several main types of PDR uses, which could include manufacturing and maker space;[3] parcel delivery service, including last-mile delivery;[4] wholesale and storage; and fleet management. Additionally, the project would allow for laboratory uses permitted in the PDR-2 zoning district. The proposed project would include a combined total of approximately 35,000 gross square feet of ground-floor maker space,[5] and 8,400 gross square feet of ground-floor retail space in buildings A and B. See Table 2.D-1 (p. 2-11) for more information on project characteristics. The proposed buildings would exceed what is allowed in the 65-J height and bulk district in which the project site is located and would require approval of a height and bulk district map amendment. The project sponsor would seek approval of an ordinance to allow proposed modifications to the existing height and bulk district and to establish a new special use district designation modifying the PDR-2 zoning.

Construction of the project would take about 31 months, occurring five to six days a week for eight hours per day. Nighttime activities may occur during specific construction phases, with city approval. Approximately 140,600 cubic yards of soil would be excavated for the proposed project.

The draft EIR describes and analyzes a mix of PDR uses that are likely to occur based on the project sponsor's familiarity with leasing trends for PDR facilities in San Francisco and the Bay Area. These PDR uses include manufacturing and maker space; parcel delivery service, including last-mile delivery; and wholesale and storage space. In addition, a combined total of approximately 8,400 gross square feet of ground-floor retail space is analyzed in buildings A and B. See Table 2.D-2 (p. 2-26) for more detailed information on the San Francisco Gateway Project's analyzed tenant use mix. For the purpose of this EIR, the term "proposed project" means the construction and operation of the San Francisco Gateway facility, the operation of which is based on the analyzed tenant use mix and related streetscape improvements.

An expanded streetscape variant is also analyzed in this draft EIR. The expanded streetscape variant would include the same land uses, floor area, and site plan as the proposed project, but would improve the remainder of adjacent public rights-of-way to Better Streets standards. The expanded streetscape variant would include improvements from the center line of each adjacent street outward to the property line of the adjacent lots, and would include new roadway surfaces, curb cuts, sidewalks, street trees, and other amenities (see Figure 2.E-1, p. 2-40).

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[3] Manufacturing and maker space is defined as a light industrial use that provides for the fabrication or production of goods, by hand or machinery, for distribution to retailers, wholesalers, or the public.

[4] Last-mile delivery is defined as the movement of goods from a transportation hub to the final delivery destination (i.e., typically a personal residence or business).

[5] The third level of this alternative consists of a small portion of enclosed space, solar array, and a screened, open-air, multipurpose deck for parking and/or material and vehicle staging.

S.3 Summary of Impacts and Mitigation Measures

In March 2022, the planning department issued a notice of preparation of an environmental impact report and initial study for public review and comment (included as Appendices A and B of this draft EIR). The department analyzed the following topics in the project's initial study:

- Land Use and Planning
- Population and Housing
- Cultural Resources
- Tribal Cultural Resources
- Greenhouse Gas Emissions
- Wind
- Shadow
- Recreation
- Utilities and Service Systems
- Public Services
- Biological Resources
- Geology and Soils
- Hydrology and Water Quality
- Hazards and Hazardous Materials
- Mineral Resources
- Energy
- Agricultural and Forestry Resources
- Wildfire

Pursuant to CEQA Guidelines 15063(c)(3), the initial study found that the proposed project and expanded streetscape variant would not result in significant impacts to the following resource topics: land use and planning, population and housing, greenhouse gas emissions, shadow, recreation, utilities and service systems, public services, biological resources, hydrology and water quality, hazards and hazardous materials, mineral resources, energy, agricultural and forest resources, and wildfire. The initial study also found that with implementation of the mitigation measures identified in the initial study, the proposed project and expanded streetscape variant would not result in significant impacts to the following resources topics: cultural resources, tribal cultural resources, wind, and paleontological resources. Finally, the initial study found that the proposed project and expanded streetscape variant could result in significant or potentially significant impacts to transportation and circulation, noise and vibration, and air quality. These resource areas require further analysis and are therefore discussed in this draft EIR. The environmental analysis for these topics is presented in Chapter 3 of this draft EIR.

Table S-1 and Table S-2 (p. S-20) summarize the potential impacts of the San Francisco Gateway Project and expanded streetscape variant, identify the significance of each impact, and present the full text of mitigation measures identified to avoid or reduce significant impacts and would be required to be implemented if the San Francisco Gateway Project is approved. Impacts and mitigation measures presented in Chapter 3 of this draft EIR are summarized in Table S-1. Impacts and mitigation measures presented in the initial study are summarized in Table S-2.

As indicated in Table S-1 and discussed in detail in Chapter 3, the analysis conducted for this draft EIR determined that the San Francisco Gateway Project or expanded streetscape variant would not result in significant and unavoidable impacts.

Table S-1 Summary of Impacts of the San Francisco Gateway Project and Expanded Streetscape Variant Identified in the EIR

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
EIR SECTION 3.B, TRANSPORTATION AND CIRCULATION			
Impact TR-1: Construction of the San Francisco Gateway Project or variant would require a substantially extended duration or intense activity due to construction, but the secondary effects of that construction would not 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.	LTS	No mitigation required.	NA
Impact TR-2: Operation of the San Francisco Gateway Project or variant would not create potentially hazardous conditions for people walking, bicycling, or driving, or public transit operations.	LTS	No mitigation required.	NA
Impact TR-3: Operation of the San Francisco Gateway Project or variant would not interfere with accessibility of people walking or bicycling to and from the project site and adjoining areas, or result in inadequate emergency access.	LTS	No mitigation required.	NA
Impact TR-4: Operation of the San Francisco Gateway Project or variant would not substantially delay public transit.	LTS	No mitigation required.	NA

IMPACT CODES:

NA = Not Applicable
NI = No impact
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Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
Impact TR-5: Operation of the San Francisco Gateway Project or variant would not cause substantial additional VMT or substantially induce automobile travel.	LTS	No mitigation required.	NA
Impact TR-6: Operation of the San Francisco Gateway Project or variant would not result in a loading deficit.	LTS	No mitigation required.	NA
Impact C-TR-1: The San Francisco Gateway Project or variant, in combination with cumulative projects, would not result in significant construction-related transportation impacts.	LTS	No mitigation required.	NA
Impact C-TR-2: The San Francisco Gateway Project or variant, in combination with cumulative projects, would not create potentially hazardous conditions.	LTS	No mitigation required.	NA
Impact C-TR-3: The San Francisco Gateway Project or variant, in combination with cumulative projects, would not interfere with accessibility.	LTS	No mitigation required.	NA
Impact C-TR-4: The San Francisco Gateway Project or variant, in combination with cumulative projects, would not substantially delay public transit.	LTS	No mitigation required.	NA

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Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
Impact C-TR-5: The San Francisco Gateway Project or variant, in combination with cumulative projects, would not cause substantial additional VMT or substantially induce automobile travel.	LTS	No mitigation required.	NA
Impact C-TR-6: The San Francisco Gateway Project or variant, in combination with cumulative projects, would not result in significant cumulative loading impacts.	LTS	No mitigation required.	NA
EIR SECTION 3.C, NOISE AND VIBRATION			
Impact NO-1: Construction of the San Francisco Gateway Project or variant would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project area in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies**.**	LTS	No mitigation required.	NA
Impact NO-2: Construction of the San Francisco Gateway Project or variant would not generate excessive groundborne vibration or groundborne noise levels.	LTS	No mitigation required.	NA

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Impact NO-3: Operation of the San Francisco Gateway Project or variant would result in the generation of a substantial temporary or permanent increase in ambient noise levels in the project area in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	S	**Mitigation Measure M-NO-3a: Fixed-Mechanical Equipment Noise Attenuation for Buildings A and B**
		Prior to the issuance of the relevant building permit that allows construction of buildings A and/or B, the project sponsor shall demonstrate that the project meets the noise limits in article 29, section 2909(b). Specifically, the project sponsor shall demonstrate that fixed-mechanical equipment does not exceed 8 dBA above the ambient noise level at any property plane. The noise level limits for each property plane are as follows, but may be updated based on empirical measurements conducted at a later date as approved by the city:
		• Property plane along Toland Street, Selby Street, and McKinnon Avenue: 59 dBA, L_{eq}
		• Property plane along Rankin Street: 58 dBA, L_{eq}
		• Property plane along Kirkwood Avenue: 60 dBA, L_{eq}
		Feasible noise reduction measures to achieve the property plane thresholds identified above may include, but are not limited to, a combination of the following:
		• **Ventilation Routing and Relocation:** Route or direct the ventilation units to exhaust away from the adjacent land uses (i.e., outside the property planes) and toward I-280. Relocate ventilation units away from the building edge and to a more-central location in each logistics yard.
		• **Acoustically Treated Ducting:** Implement an acoustically lined duct to the exhaust of each logistics yard fan in a manner that maintains the above ventilation routing requirement.
		• **Project Rooftop HVAC System:** Implement one of the following two options for rooftop HVAC unit noise reduction:
		  ○ Install a 12-foot-tall noise barrier surrounding each of the six rooftop unit areas; or
		  ○ Centralize all rooftop HVAC units at the rooftop center and install a 14-foot-tall barrier around the centralized unit area.
		Alternatively, or in addition, the project sponsor also may implement quieter ventilation fan units, quieter HVAC units, duct silencers at the outlet of the ventilation systems, and/or acoustical louvers at ventilation system terminations at the two building edges to achieve compliance with the article 29, section 2909(b) requirement. The final design of the rooftop HVAC units and logistics yard ventilation system shall be analyzed and assessed for article 29,
			LTSM

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Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		section 2909(b) compliance by an acoustical consultant as a requirement for building permit approval. **Mitigation Measure M-NO-3b: Fixed-Source Noise Attenuation for Building Tenants** Prior to the issuance of a building permit that allows for the installation of fixed sources that generate noise (e.g., mechanical systems), the project sponsor's acoustical consultant shall demonstrate that the project meets the noise limits in article 29 section 2909(b) (8 dBA above the ambient noise level at any property plane) and 2909(d) (45 dBA between the hours of 10 p.m. and 7 a.m., and 55 dBA between the hours of 7 a.m. and 10 p.m., with windows open—except where building ventilation is achieved through mechanical systems that allow windows to remain closed). All recommendations in the acoustical analysis necessary to ensure that noise sources would meet the noise limits in article 29 section 2909(b) and 2909(d) shall be incorporated into the building design and operations. Acoustical treatments may include, but are not limited to: • enclosing noise-generating mechanical equipment; • installing relatively quiet models of air handlers, exhaust fans, and other mechanical equipment; • using mufflers or silencers on equipment exhaust fans; • orienting or shielding equipment to protect noise-sensitive receptors to the greatest extent feasible; • increasing the distance between noise-generating equipment and noise-sensitive receptors; and • placing barriers around the equipment to facilitate the attenuation of noise. The project sponsor shall provide noise measurements of the installed equipment at the department's request. Should noise measurements indicate that the above-listed performance standards in article 29 that are provided above are not met, the project sponsor shall install additional noise attenuation measures necessary to ensure that the performance standards are met.	

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Impact C-NO-1: Construction of the San Francisco Gateway Project or variant, in combination with construction of cumulative projects, would not result in the generation of a substantial temporary or permanent increase in ambient noise levels in excess of standards.	LTS	No mitigation required.	NA
Impact C-NO-2: Construction of the San Francisco Gateway Project or variant, in combination with construction of cumulative projects, would not result in the generation of excessive groundborne vibration or groundborne noise levels.	LTS	No mitigation required.	NA
Impact C-NO-3: Operation of the San Francisco Gateway Project or variant, in combination with cumulative projects, would not result in the generation of a substantial temporary or permanent increase in ambient noise levels in excess of standards.	LTS	No mitigation required.	NA

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Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		EIR SECTION 3.D, AIR QUALITY	
Impact AQ-1: The San Francisco Gateway Project or variant could conflict with or obstruct implementation of the 2017 Clean Air Plan.	S	The following mitigation measures would apply as detailed below under Impact AQ-3: **Mitigation Measure M-AQ-3a: Electrification of Yard Equipment** **Mitigation Measure M-AQ-3b: Electrification of Transportation Refrigeration Units** **Mitigation Measure M-AQ-3c: Prohibition of Truck and Van Idling for More than Two Minutes** **Mitigation Measure M-AQ-3d: Limitation on Model Year of Visiting Trucks** **Mitigation Measure M-AQ-3e: Diesel Backup Generator Specifications** **Mitigation Measure M-AQ-3f: Limitation on Manufacturing and Maker Space Emissions** **Mitigation Measure M-AQ-3g: Compliance with CalGreen Tier 2 Green Building Standards** **Mitigation Measure M-AQ-3h: Requirements for Off-Road Construction Equipment** **Mitigation Measure M-AQ-3i: Development and Implementation of Operational Emission Management Plan**	LTSM
Impact AQ-2: Construction of the San Francisco Gateway Project or variant would not result in a cumulatively considerable net increase in a criteria air pollutant for which the project region is in nonattainment status under an applicable federal, state, or regional ambient air quality standard.	LTS	No mitigation required.	NA

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Impact AQ-3: The San Francisco Gateway Project or variant would result in a cumulatively considerable net increase in a criteria air pollutant for which the project region is in nonattainment status under an applicable federal, state, or regional ambient air quality standard.	S	**Mitigation Measure M-AQ-3a: Electrification of Yard Equipment** The project sponsor shall stipulate in tenant lease agreements that all yard equipment, such as forklifts, be electric to reduce NO_X emissions from these sources. **Measure M-AQ-3b: Electrification of Transportation Refrigeration Units** The project sponsor shall require that all transportation refrigeration units operating on the project site be electric or alternative zero-emissions technology, including hydrogen fuel cell transport refrigeration and cryogenic transport refrigeration, to reduce emissions of NO_X without substantially increasing other emissions. Any electric or hybrid transportation refrigeration units shall be charged via grid power (i.e., not an idling truck or diesel engine). The project design shall also include necessary infrastructure; for example, requiring all dock doors serving transportation refrigeration units to be equipped with charging infrastructure to accommodate the necessary plug-in requirements for electric transportation refrigeration units while docked or otherwise idling, as well as the electrical capacity to support the onsite power demand associated with electric transportation refrigeration unit charging requirements. **Mitigation Measure M-AQ-3c: Prohibition of Truck and Van Idling for More than Two Minutes** The project sponsor shall require that onsite idling of all visiting gasoline- or diesel-powered vans and trucks not exceed two minutes, and that appropriate signage and training for onsite workers and truck drivers be provided to support effective implementation of this limit. **Mitigation Measure M-AQ-3d: Limitation on Model Year of Visiting Trucks** The project sponsor shall require that any gasoline- or diesel-powered vehicle, whether owned or operated by tenant(s), that enters or operates on the project site and has a gross vehicle weight rating greater than 14,000 pounds, have a model year dated no more than nine years upon the completion of project construction activities (e.g., should construction be completed in year 2026, visiting trucks must be model year 2017 or newer). **Mitigation Measure M-AQ-3e: Diesel Backup Generator Specifications** The project sponsor shall ensure that the diesel backup generators meet or exceed the air board's Tier 4 final off-road emission standards. Additionally, once operational, the diesel backup generators shall be maintained in good working order for the life of the equipment, and any future replacement of the diesel backup generators shall be required to be consistent with these emissions specifications. The project sponsor shall ensure that records of the testing schedule for the diesel backup generator are maintained for the life of the diesel backup	LTSM

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		generators. If the planning department requests additional information about these tests, the project sponsor shall provide the information within three months.	
		Mitigation Measure M-AQ-3f: Limitation on Manufacturing and Maker Space Emissions The project sponsor shall prohibit the use of stationary equipment sources, such as boilers, whose combined emissions for the manufacturing and maker space uses would exceed 10 pounds per day in NO_X emissions. **Mitigation Measure M-AQ-3g: Compliance with CalGreen Tier 2 Green Building Standards** The project shall meet CalGreen Tier 2 green building standards, including all provisions related to designated parking for clean air vehicles, electric vehicle charging, and bicycle parking. **Mitigation Measure M-AQ-3h: Requirements for Off-Road Construction Equipment** The project sponsor shall comply with the following: A. Engine Requirements 1. The project sponsor shall require that the construction contractor use electric-powered construction equipment for all equipment that is readily available as plug-in or battery-electric equipment, to the maximum extent feasible during each construction phase and activity. Electric equipment may include, but is not limited to, concrete/industrial saws, sweepers/scrubbers, aerial lifts, welders, air compressors, fixed cranes, forklifts, cement and mortar mixers, pressure washers, and pumps. Where access to alternative sources of power is available (i.e., grid power), portable diesel engines (e.g., generators) shall be prohibited. If grid power is not available, alternative power such as battery storage or hydrogen fuel cells shall be used, if available. If such alternative power is not available, portable diesel engines shall meet Tier 4 Final off-road emissions standards. 2. All off-road equipment greater than 25 hp and operating for more than 20 total hours over the entire duration of construction activities shall have engines that meet or exceed either U.S. EPA's or air board's Tier 4 Final off-road emission standards. 3. Diesel engines, whether for off-road or on-road equipment, shall not be left idling for more than two minutes at any location, except as provided in exceptions to the applicable state regulations regarding idling for off-road and on-road equipment (e.g., traffic conditions and safe operating conditions). The contractor shall post legible and visible signs in English,	

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		Spanish, and Chinese in designated queuing areas and at the construction site to remind operators of the two-minute idling limit. 4. The project sponsor shall instruct construction workers and equipment operators in the maintenance and tuning of construction equipment, and require that such workers and operators properly maintain and tune equipment in accordance with manufacturer specifications. B. Waivers The planning department's environmental review officer (ERO) or designee may waive the alternative source of power requirement of subsection (A)(1) if an alternative source of power is limited or infeasible at the project site. If the ERO grants the waiver, the contractor must use the next cleanest piece of off-road equipment, or another alternative that results in comparable NO_X reductions. C. Construction Emissions Minimization Plan Before starting onsite construction activities, the contractor shall submit a construction emissions minimization plan (plan) to the ERO or designee for review and approval. The plan shall state, in reasonable detail, how the contractor will meet the engine requirements of section A. 1. The plan shall include estimates of the construction timeline by phase, with a description of each piece of off-road equipment required for every construction phase. The description may include but is not limited to equipment type, equipment manufacturer, equipment identification number, engine model year, engine certification (tier rating), horsepower, engine serial number, and expected fuel use and hours of operation. For off-road equipment using alternative fuels, the description shall also specify the type of alternative fuel being used. 2. The project sponsor shall ensure that all applicable requirements of the plan have been incorporated into the contract specifications. The plan shall include a certification statement that the project sponsor agrees to comply fully with the plan. 3. The project sponsor shall make the plan available to the public for review on site during working hours. The project sponsor shall post at the construction site a legible and visible sign summarizing the plan. The sign shall also state that the public may ask to inspect the	

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		plan for the project at any time during working hours and shall explain how to request to inspect the plan. The project sponsor shall post at least one copy of the sign in a visible location on each side of the construction site facing a public right-of-way. D. Monitoring After start of construction activities, the contractor shall submit reports every six months to the ERO or designee, documenting compliance with the plan. After completion of construction activities and prior to receiving a final certificate of occupancy, the project sponsor shall submit to the ERO a final report summarizing construction activities, including the start and end dates and duration of each construction phase, and the specific information required in the plan. **Mitigation Measure M-AQ-3i: Development and Implementation of Operational Emission Management Plan** The project sponsor shall develop and implement an Operational Emissions Management Plan (OEMP) that shall demonstrate that the project's net operational NO_X emissions do not exceed the performance standard of 54 pounds per day and 10 tons per year. "Net operational NO_x emissions" refers to the NO_X emissions generated by the proposed project minus the NO_x emissions occurring at the site as of 2017 that would be removed with implementation of the proposed project. The OEMP shall consist of the components described in this mitigation measure. Development, implementation, and reporting of the OEMP shall follow the timeline and appropriate triggers set forth below. The project sponsor shall identify one or more individuals who shall be responsible for overseeing implementation of the OEMP and shall work directly with the ERO or designee to ensure that implementation meets the following requirements and demonstrates attainment of the performance standard. A. Performance Standard The OEMP and related emissions assessments/operational emissions reports, as required below, shall be developed by the project sponsor and approved by the ERO, and shall demonstrate that the proposed project does not exceed the performance standard of a net increase of NO_X emissions consistent with the air district thresholds of 54 pounds per day and 10 tons per year.	

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B. Emissions Assessment

Prior to occupancy for each PDR tenant, the project sponsor shall require the tenant to conduct an emissions assessment. Prior to the requirement to submit an OEMP, the project sponsor shall retain all emissions assessments from individual tenants. The emissions assessment shall include:

1. A brief description of proposed tenant activities that are reasonably expected to generate NO_X emissions, and written confirmation that the tenant can and will comply with Mitigation Measures M-AQ-3a through M-AQ-3f as applicable, including compliance with requirements to provide periodic reporting and necessary evidence that the tenant is implementing the applicable measures after the start of occupancy.
2. Estimates of expected NO_X emissions in annual tons and average pounds per day for all activities associated with the tenant's use (inclusive of onsite and offsite mobile emission sources). Emission estimation methods shall generally follow the approach used in this EIR and in Appendix F, Air Quality Supporting Information, taking into account current air board- or air district-recommended emissions factors (vehicle types, model year, fleet mix, etc.), or another agreed-upon method (subject to approval by the ERO or designee and provided that such method is supported by substantial evidence).
3. The tenant's estimated expected NO_X emissions shall be itemized for each of the following sources and summed for a total of all emissions in terms of the maximum potential annual emission (tons per year) and average daily emissions (pounds per day):
   - stationary sources such as generators and specialized equipment;
   - estimated mobile source emissions accounting for offsite travel and onsite activity; and
   - other emissions sources, such as area sources.

C. Operational Emissions Management Plan

The project sponsor shall submit an OEMP to the ERO or designee for review and approval prior to one or more tenants in the project site occupying a combined total of 500,000 square feet of floor area. The OEMP shall describe, in reasonable detail, how the sum of all tenants' and total project NO_X emissions will not exceed the performance standard. Specifically, the OEMP shall include the following:

1. Responsibility. The OEMP will identify one or more individuals who shall be responsible to oversee implementation, monitoring, and reporting for the OEMP.
2. Reporting Template. The OEMP will identify, in reasonable detail, the format template and required contents of the operational emissions reports (described further below).

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		3. Emissions Assessments. Emissions assessments will be performed for each proposed tenant in the project, as described above. 4. Total Emissions Estimate. The project's performance will be documented in relation to the performance standard of daily and annual NO_X emissions, taking into account all tenancies/operations at the project site. 5. Additional Emissions Reduction Measures. If the total emissions estimate described above is projected to result in an exceedance of the NO_X performance standard, the OEMP shall identify additional specific operational emissions reduction measures to lessen the project's emissions to a level that does not exceed the performance standard. To ensure that the proposed project NO_X emissions do not exceed the performance standard, these measures shall be implemented prior to any operational activities that were projected to exceed that standard. To the extent that the identified emissions reductions can be quantified, the OEMP shall quantify the expected reductions. The OEMP shall quantitatively demonstrate that total project operations meet the daily and annual NO_X performance standard. To the extent that required emissions reduction and reporting measures are applicable to individual tenants, the OEMP shall provide that these measures be incorporated into lease terms for individual tenants of the project. Such operational emission reduction measures may include, but are not limited to, the following: • modification of project operations, including through the use of different equipment, limitations on types of tenants/uses, or limitations on the size or intensity of specific uses; • implementation of specific fleet performance metrics, including electric vehicle and zero-emission vehicle standards; minimum model year requirements that are more stringent than those required by Mitigation Measure M-AQ-3d; or achievement of regulatory requirements ahead of compliance schedules; • reductions in onsite or offsite worker vehicle trips, including through implementation of additional travel demand management (TDM) measures such as providing contributions or incentives for sustainable transportation; • funding or completing projects in coordination with community groups, as applicable, to directly reduce or eliminate sources of existing NO_X emissions not generated by the project, with emission reduction projects occurring in the	

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		following locations in order of priority to the extent available: (1) in the neighborhood surrounding the project site (i.e., Bayview Hunters Point); (2) in the city of San Francisco; and (3) in the air basin; and • other emission reduction measures that become feasible due to advances in technology, economic changes, or other factors during the lifetime of the project. 6. Updates. The OEMP shall be updated and resubmitted to the ERO for review and approval prior to occupancy by any subsequent PDR tenant until the reporting period has concluded, as described below in the "Monitoring and Reporting" section of this mitigation measure. Additionally, each tenant shall verify periodically that its emissions assessment remains accurate, and at least: (1) upon a substantial change in the tenant operations, and (2) every other year. 7. Exceptions. The following list identifies allowable exceptions for certain uses to provide an emissions assessment and for the need to update the OEMP upon a change in tenancy at the project site. • Retail uses less than 8,400 square feet and manufacturing and maker uses less than 35,000 square feet shall not be required to submit an emissions assessment unless they include any stationary source(s) that would result in NO_X emissions and would require permitting by the air district. Although uses below the identified square footages are not required to submit emissions assessments, the total project operational emissions, which are calculated (by summing all tenant emissions assessments) and compared against the performance standard for all project operations, shall include 1.3 pounds per day of NO_X for retail uses totaling up to 8,400 square feet and 12.2 pounds per day of NO_X from manufacturing and maker uses totaling up to 35,000 square feet. Should an individual retail or manufacturing and maker tenant or the cumulative total of multiple retail or manufacturing and maker uses exceed the square footages for each respective use or include any stationary source(s) that would result in NO_X emissions and would require permitting by the air district, an emissions assessment must be prepared for that tenant's operations to be included in the total project site operational emissions estimate.	

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		• The termination of a proposed or existing tenancy, or the substitution of any terminated use with a new use that is equally or less intensive based on an updated emissions assessment of estimated NO_X emissions, shall not trigger a requirement to submit an updated OEMP as long as any requirements in the former plan remain relevant and in effect. 8. Monitoring and Reporting. After the start of operations under an approved OEMP, the project sponsor shall submit annual operational emissions reports to the ERO, documenting compliance with the OEMP. Each report shall include a summary of compliance with operational controls for all applicable activities completed in the period covered by the annual report. If the project has complied with all required operational controls and no emissions-generating activity levels increase, then no further estimation of emissions is required. If any operational controls are modified or if an increase in emissions-generating activity levels has occurred, then the report shall include an estimate of NO_X emissions for the relevant emissions source. For example, if generators were operated for more hours during the reporting period than allotted in the OEMP, then the report shall include actual generator emissions, summarized from logs. In all cases, the reporting shall demonstrate that the project does not exceed the NO_X performance standard through implementation of the additional emissions reduction measures or other equivalent measures, subject to approval by the ERO or designee. The reporting period for this measure shall conclude at the earlier of (1) 10 years after commencement of operations pursuant to the initial approved OEMP; or (2) the project sponsor submitting three sequential annual reports demonstrating, to the satisfaction of the ERO or designee, that the project's actual reported emissions have not exceeded the performance standard, as described above. If the total NO_X emissions from the emissions assessments for all tenants indicate an increase or change in tenancy that would materially increase the net operational NO_X emissions to a level that would approach or exceed the performance standard, the requirements for the OEMP would be reinstated. The obligations for the preparation of emissions assessments and implementation of control measures to limit NO_X emissions to not exceed the performance standard shall remain in effect for the life of the project, subject to periodic review and monitoring by the ERO or	

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		designee. If the ERO or designee determines, on the basis of substantial evidence, that it is no longer necessary for the project sponsor to complete emissions assessments to meet the performance standard, the ERO or designee may temporarily or permanently waive the assessment requirement.	
Impact AQ-4: The San Francisco Gateway Project or variant would not result in emissions of fine particulate matter ($PM_{2.5}$) and toxic air contaminants (TACs) that would expose sensitive receptors to substantial pollutant concentrations.	LTS	No mitigation required.	NA
Impact AQ-5: The San Francisco Gateway Project or variant would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	LTS	No mitigation required.	NA
Impact C-AQ-1: The San Francisco Gateway Project or variant, in combination with existing conditions and cumulative projects, would result in a significant cumulative health risk impact. The proposed project's contribution would be less than cumulatively considerable.	LTS	No mitigation required.	NA
Impact C-AQ-2: The San Francisco Gateway Project or variant, in combination with cumulative projects, would not combine with other sources of emissions, such as those leading to odors, that would adversely affect a substantial number of people.	LTS	No mitigation required.	NA

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Table S-2 **Summary of Impacts of the San Francisco Gateway Project and Expanded Streetscape Variant Identified in the Initial Study**

Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
INITIAL STUDY SECTION E.1, LAND USE AND PLANNING (SEE APPENDIX B)			
Impact LU-1: The San Francisco Gateway Project or variant would not physically divide an established community.	LTS	No mitigation required.	NA
Impact LU-2: The San Francisco Gateway Project or variant would not cause a significant physical environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	LTS	No mitigation required.	NA
Impact C-LU-1: The San Francisco Gateway Project or variant, in combination with cumulative projects, would not result in a significant cumulative impact related to land use and planning.	LTS	No mitigation required.	NA
INITIAL STUDY SECTION E.2, POPULATION AND HOUSING (SEE APPENDIX B)			
Impact PH-1: The San Francisco Gateway Project or variant would not induce substantial unplanned population growth beyond that projected by regional forecasts, either directly or indirectly.	LTS	No mitigation required.	NA

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Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
Impact PH-2: The San Francisco Gateway Project or variant would not displace substantial numbers of existing people or housing units, necessitating the construction of replacement housing outside of the Plan area.	NA	No mitigation required.	NA
Impact C-PH-1: The San Francisco Gateway Project or variant, in combination with cumulative projects, would not result in a significant cumulative impact related to population and housing.	LTS	No mitigation required.	NA
INITIAL STUDY SECTION E.3, CULTURAL RESOURCES (SEE APPENDIX B)			
Impact CR-1: The San Francisco Gateway Project or variant would not cause a substantial adverse change in the significance of a historical resource as defined in section 15064.5, including those resources listed in article 10 or article 11 of the planning code.	NI	No mitigation required.	NA

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Impact CR-2: The San Francisco Gateway Project or variant could cause a substantial adverse change in the significance of an archeological resource pursuant to section 15064.5.	S	**Mitigation Measure M-CR-2: Archeological Testing** **Archeological Testing.** Based on a reasonable presumption that archeological resources may be present in the project site, the following measures shall be undertaken to avoid any potentially significant adverse effects from the proposed project on buried or submerged historical resources. The project sponsor shall retain the services of an archeological consultant from the rotational qualified archeological consultants list maintained by the planning department. After the first project approval action or as directed by the environmental review officer, the project sponsor shall contact the department archeologist to obtain the names and contact information for the next three archeological consultants on the qualified archeological consultants list. The archeological consultant shall undertake an archeological testing program as specified herein. In addition, the consultant shall be available to conduct an archeological monitoring and/or data recovery program if required pursuant to this measure. The archeological consultant's work shall be conducted in accordance with this measure at the direction of the environmental review officer. All plans and reports prepared by the consultant as specified herein shall be submitted first and directly to the environmental review officer for review and comment and shall be considered draft reports subject to revision until final approval by the environmental review officer. Archeological monitoring and/or data recovery programs required by this measure could suspend construction of the project for a maximum of four weeks. At the direction of the environmental review officer, the suspension of construction can be extended beyond four weeks only if such a suspension is the only feasible means to reduce to a less-than-significant level potential effects on a significant archeological resource, as defined in CEQA Guidelines section 15064.5 (a)(c). **Archeological Testing Program.** The purpose of the archeological testing program shall be to determine to the extent possible the presence or absence of archeological resources and to evaluate whether any archeological resource encountered on the site constitutes an historical resource under CEQA. The archeological testing program shall be conducted in accordance with the approved archeological testing plan. The archeological consultant and the environmental review officer shall consult on the scope of the archeological testing plan, which shall be approved by the environmental review officer prior to commencing any project-related soils-disturbing activities. The archeological testing plan shall be submitted first and directly to the environmental review officer for review and comment and shall be considered a draft subject to revision until final approval by the environmental review officer. The archaeologist shall implement the testing as specified in the approved archeological testing plan prior to and/or during construction.	LTSM

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		The archeological testing plan shall identify the property types of the expected archeological resource(s) that potentially could be adversely affected by the proposed project and lay out what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. The archeological testing plan shall also identify the testing method to be used, the depth or horizonal extent of testing, the locations recommended for testing, and the archeological monitoring requirements for construction soil disturbance, as warranted. **Paleoenvironmental Analysis of Paleosols.** When a submerged paleosol is identified during the testing program, irrespective of whether cultural material is present, samples shall be extracted and processed for dating, flotation for paleobotanical analysis, and other applicable special analyses pertinent to identification of possible cultural soils and for environmental reconstruction. **Discovery Treatment Determination.** At the completion of the archeological testing program, the archeological consultant shall submit a written summary of the findings to the environmental review officer. The findings memorandum shall describe and identify each resource and provide an initial assessment of the integrity and significance of encountered archeological deposits. If the environmental review officer, in consultation with the archeological consultant, determines that a significant archeological resource is present and that the resource could be adversely affected by the proposed project, the environmental review officer, in consultation with the project sponsor, shall determine whether preservation of the resource in place is feasible. If so, the proposed project shall be redesigned so as to avoid any adverse effect on the significant archeological resource, and the archeological consultant shall prepare an archeological resource preservation plan, which shall be implemented by the project sponsor during construction. The consultant shall submit a draft archeological resource preservation plan to the planning department for review and approval. If preservation in place is not feasible, a data recovery program shall be implemented, unless the environmental review officer determines that the archeological resource is of greater interpretive than research significance, and that interpretive use of the resource is feasible. The environmental review officer, in consultation with the archeological consultant, shall also determine whether additional treatment is warranted, which may include additional testing and/or construction monitoring.	

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		Consultation with Descendant Communities. On discovery of an archeological site associated with descendant Native Americans, the Overseas Chinese, or other potentially interested descendant group, the environmental review officer and an appropriate representative of the descendant group shall be contacted. The representative of the descendant group shall be given the opportunity to monitor archeological field investigations of the site and to offer recommendations to the environmental review officer regarding appropriate archeological treatment of the site, of recovered data from the site, and, if applicable, any interpretative treatment of the associated archeological site. A copy of the archeological resources report shall be provided to the representative of the descendant group. **Archeological Data Recovery Plan.** An archeological data recovery program shall be conducted in accordance with an archeological data recovery plan if all three of the following apply: (1) a resource has potential to be significant, (2) preservation in place is not feasible, and (3) the environmental review officer determines that an archeological data recovery program is warranted. The archeological consultant, project sponsor, and environmental review officer shall meet and consult on the scope of the archeological data recovery plan prior to preparation of a draft archeological data recovery plan. The archeological consultant shall submit a draft archeological data recovery plan to the environmental review officer. The archeological data recovery plan shall identify how the proposed data recovery program shall preserve the significant information the archeological resource is expected to contain. That is, the archeological data recovery plan shall identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the proposed project. Destructive data recovery methods shall not be applied to portions of the archeological resources if nondestructive methods are practical. The scope of the archeological data recovery plan shall include the following elements: • *Field Methods and Procedures:* descriptions of proposed field strategies, procedures, and operations • *Cataloguing and Laboratory Analysis:* description of selected cataloguing system and artifact analysis procedures • *Discard and Deaccession Policy:* description of and rationale for field and post-field discard and deaccession policies	

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		• *Security Measures:* recommended security measures to protect the archeological resource from vandalism, looting, and unintentionally damaging activities • *Final Report:* description of proposed report format and distribution of results • *Curation:* description of the procedures and recommendations for the curation of any recovered data having potential research value, identification of appropriate curation facilities, and a summary of the accession policies of the curation facilities **Coordination of Archaeological Data Recovery Investigations.** In cases in which the same resource has been or is being affected by another project for which data recovery has been conducted, is in progress, or is planned, to maximize the scientific and interpretive value of the data recovered from both archeological investigations, the following measures shall be implemented: A) In cases where neither investigation has yet begun, both archeological consultants and the environmental review officer shall consult on coordinating and collaboration on archeological research design, data recovery methods, analytical methods, reporting, curation and interpretation to ensure consistent data recovery and treatment of the resource. B) In cases where archeological data recovery investigation is already underway or has been completed for a prior project, the archeological consultant for the subsequent project shall consult with the archeological consultant for the prior project, if available; review prior treatment plans, findings, and reporting; inspect and assess existing archeological collections/inventories from the site prior to preparation of the archaeological treatment plan for the subsequent discovery; and incorporate prior findings in the final report of the subsequent investigation. The objectives of this coordination and review of prior methods and findings shall be to identify refined research questions; determine appropriate data recovery methods and analyses; assess new findings relative to prior research findings; and integrate prior findings into subsequent reporting and interpretation. **Human Remains and Funerary Objects.** The treatment of any human remains and funerary objects discovered during any soils-disturbing activity shall comply with applicable state laws, including section 7050.5 of the Health and Safety Code and Public Resources Code 5097.98. If human remains or suspected human remains are encountered during construction, the contractor and project sponsor shall ensure that ground-disturbing work within 50 feet of the remains is halted immediately and shall arrange for the protection in place of the remains until appropriate treatment and disposition have been agreed upon and implemented in accordance with this section. Upon determining that the remains are human,	

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		the project archeologist shall immediately notify the city's Medical Examiner of the find. The archeologist shall also immediately notify the environmental review officer and the project sponsor of the find. In the event of the Medical Examiner's determination that the human remains are Native American in origin, the Medical Examiner shall notify the California State Native American Heritage Commission within 24 hours. The Native American Heritage Commission shall immediately appoint and notify a most likely descendant. The most likely descendant shall complete his or her inspection of the remains and make recommendations or preferences for treatment within 48 hours of being granted access to the site. If the remains cannot be permanently preserved in place, the land owner may consult with the project archeologist, project sponsor, and CEQA lead agency and shall consult with the most likely descendant on recovery of the remains and any scientific treatment alternatives. The land owner shall then make all reasonable efforts to develop a burial agreement with the most likely descendant, as expeditiously as possible, for the treatment and disposition, with appropriate dignity, of human remains and funerary objects (as detailed in CEQA Guidelines section 15064.5(d)). In accordance with Public Resources Code 5097.98 (c)(1), the burial agreement shall address, as applicable and to the degree consistent with the wishes of the most likely descendant, the appropriate excavation, removal, recordation, scientific analysis, custodianship prior to reinterment or curation, and final disposition of the human remains and funerary objects. If the most likely descendant agrees to scientific analyses of the remains and/or funerary objects, the archeological consultant shall retain possession of the remains and funerary objects until completion of any such analyses, after which the remains and funerary objects shall be reinterred or curated as specified in the burial agreement. Both parties are expected to make a concerted and good faith effort to arrive at an agreement, consistent with the provisions of Public Resources Code 5097.98. However, if the land owner and the most likely descendant are unable to reach an agreement, the land owner, environmental review officer, and project sponsor shall ensure that the remains and/or mortuary materials are stored securely and respectfully until they can be reinterred on the property, with appropriate dignity, in a location not subject to further or future subsurface disturbance, consistent with state law. Treatment of historic-period human remains and/or funerary objects discovered during any soil-disturbing activity shall be in accordance with protocols laid out in the project archeological treatment document, and other relevant agreements established between the project sponsor, Medical Examiner, and environmental review officer. The project archeologist shall retain custody of the remains and	

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		associated materials while any scientific study scoped in the treatment document is conducted, after which the remains shall be curated or respectfully reinterred by arrangement on a case-by case-basis. **Archeological Public Interpretation Plan.** The project archeological consultant shall submit an archeological public interpretation plan if a significant archeological resource is discovered during a project. If the resource to be interpreted is a tribal cultural resource, the archeological public interpretation plan shall be prepared in consultation with and developed with the participation of tribal representatives, including the Association of Ramaytush Ohlone and other interested Ohlone parties. The archeological public interpretation plan shall describe the interpretive product(s), locations or distribution of interpretive materials or displays, the proposed content and materials, the producers or artists of the displays or installation, and a long-term maintenance program. The archeological public interpretation plan shall be sent to the environmental review officer for review and approval. The archeological public interpretation plan shall be implemented prior to occupancy of the project. **Archeological Resources Report.** Whether or not significant archeological resources are encountered, the archeological consultant shall submit a written report of the findings of the testing program to the environmental review officer. The archeological consultant shall submit a draft archeological resources report to the environmental review officer 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, and if applicable, discusses curation arrangements. Formal site recordation forms (CA DPR 523 series) shall be attached to the archeological resources report as an appendix. Once approved by the environmental review officer, copies of the archeological resources report shall be distributed as follows: California Archeological Site Survey Northwest Information Center shall receive one copy, and the environmental review officer shall receive a copy of the transmittal of the archeological resources report to the Northwest Information Center. The environmental planning division of the planning department shall receive one bound hardcopy of the archeological resources report. Digital files that shall be submitted to the environmental division include an unlocked, searchable PDF version of the archeological resources report, GIS shapefiles of the site and feature locations, any formal site recordation forms (CA DPR 523 series), and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. The PDF archeological resources report, GIS files, recordation forms, and/or nomination documentation should be submitted via USB or other stable	

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		storage device. If a descendant group was consulted during archeological treatment, a PDF of the archeological resources report shall be provided to the representative of the descendant group. **Curation.** Significant archeological collections and paleoenvironmental samples of future research value shall be permanently curated at an established curatorial facility. The facility shall be selected in consultation with the environmental review officer. Upon submittal of the collection for curation, the sponsor or archeologist shall provide a copy of the signed curatorial agreement to the environmental review officer.	
Impact CR-3: The San Francisco Gateway Project or variant could disturb human remains, including those interred outside of formal cemeteries.	S	The following mitigation measure would apply as detailed above for Impact CR-2: **Mitigation Measure M-CR-2, Archeological Testing**	LTSM
Impact C-CR-1: The San Francisco Gateway Project or variant, in combination with cumulative projects, could result in cumulative cultural resource impacts.	S	The following mitigation measure would apply as detailed above for Impact CR-2: **Mitigation Measure M-CR-2, Archeological Testing**	LTSM

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Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
INITIAL STUDY SECTION E.4, TRIBAL CULTURAL RESOURCES (SEE APPENDIX B)			
Impact TCR-1: The San Francisco Gateway Project or variant could result in a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code section 21074.	S	The following mitigation measure would apply as detailed above for Impact CR-2: **Mitigation Measure M-CR-2, Archeological Testing** **Mitigation Measure M-TCR-1: Tribal Cultural Resources Interpretive Program** **Preservation in Place.** In the event of the discovery of an archeological resource of Native American origin, the environmental review officer, the project sponsor, and the local Native American representative shall consult to determine whether preservation in place would be feasible and effective. Coordination shall take place with local Native American representatives, including the Association of Ramaytush Ohlone and other interested Ohlone parties. If it is determined that preservation-in-place of the tribal cultural resource would be both feasible and effective, then the archeological consultant, in consultation with the local Native American representative, shall prepare an archeological resource preservation plan, which shall be implemented by the project sponsor during construction. The consultant shall submit a draft archeological resource preservation plan to the planning department for review and approval. **Interpretive Program.** If the environmental review officer, in consultation with local Native American representatives (including the Association of Ramaytush Ohlone and other interested Ohlone parties) and the project sponsor, determines that preservation-in-place of the tribal cultural resources is not a sufficient or feasible option, then archeological data recovery shall be implemented as required by the environmental review officer and in consultation with affiliated Native American tribal representatives. After data recovery, the project sponsor, in consultation with local Native American representatives, shall prepare a tribal cultural resources interpretation plan to guide the interpretive program. The tribal cultural resources interpretation plan may be prepared in tandem with the archeological public interpretation plan described in Mitigation Measure M-CR-2: Archeological Testing. The tribal cultural resources interpretation plan shall be submitted to the environmental review officer for review and approval prior to implementation of the program. The plan shall identify, as appropriate, 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, cultural displays, educational panels, or other interpretive elements agreed upon by the environmental review officer, sponsor, and local Native American representatives. Upon approval of the tribal cultural resources interpretation and prior to project occupancy, the interpretive program shall be implemented by the project sponsor. Local Native American representatives who are substantially involved in preparation or implementation of the interpretive program shall be appropriately compensated by the project sponsor.	LTSM

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Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
Impact C-TCR-1: The San Francisco Gateway Project or variant, in combination with cumulative projects, could result in cumulative cultural resource impacts.	S	The following mitigation measure would apply as detailed above for Impact CR-2: **Mitigation Measure M-CR-2, Archeological Testing** The following mitigation measure would apply as detailed above for Impact TCR-1: **Mitigation Measure M-TCR-1: Tribal Cultural Resources Interpretive Program**	LTSM
INITIAL STUDY SECTION E.8, GREENHOUSE GAS EMISSIONS (SEE APPENDIX B)			
Impact C-GG-1: The San Francisco Gateway Project or variant 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.	LTS	No mitigation required.	NA

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Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		INITIAL STUDY SECTION E.9, WIND (SEE APPENDIX B)	
Impact WI-1: The San Francisco Gateway Project or variant would create wind hazards in publicly accessible areas of substantial pedestrian use.	S	**Mitigation Measure M-WI-1a: Wind Hazard Evaluation for Building Design and Streetscape Modifications** If the proposed project's design, including the wind mitigation measures (M-WI-1b), is modified in any way that could affect ground-level wind conditions, the new design shall be evaluated by a qualified wind expert to determine the potential for the modified project to result in a new wind hazard exceedance (defined as the one-hour wind hazard criterion of 26 miles per hour equivalent wind speed). The evaluation may require wind tunnel testing by the qualified expert to determine whether the modified project would result in an exceedance of the wind hazard criterion. If the modified project could exceed the wind hazard criterion, the project buildings shall be shaped (e.g., by including setbacks or using other building design techniques) or other wind-baffling measures shall be implemented, so that the project does not result in an exceedance of the one-hour wind hazard criterion of 26 miles per hour equivalent wind speed. **Mitigation Measure M-WI-1b: Maintenance of Landscaping Features that Reduce Wind Hazards** The project sponsor shall maintain, for the life of the proposed project buildings, all landscaping features required to ensure that the proposed project does not result in in an exceedance of the one-hour wind hazard criterion of 26 miles per hour equivalent wind speed. These features include installation of nine evergreen street trees, each approximately 25 feet tall with a 15-foot-diameter canopy, along the eastern sidewalk of Toland Street or any landscaping features required pursuant to Mitigation Measure M-WI-1a: Wind Hazard Evaluation for Building Design and Streetscape Modifications.	LTSM
Impact C-WI-1: The San Francisco Gateway Project or variant, in combination with cumulative projects in the project site vicinity, could result in cumulative wind impacts.	S	The following mitigation measures would apply as detailed above for Impact WI-1: **Mitigation Measure M-WI-1a, Wind Hazard Evaluation for Building Design and Streetscape Modifications** **Mitigation Measure M-WI-1b, Maintenance of Landscaping Features that Reduce Wind Hazards**	LTSM

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Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
INITIAL STUDY SECTION E.10, SHADOW (SEE APPENDIX B)			
Impact SH-1: The San Francisco Gateway Project or variant would not create new shadow in a manner that substantially and adversely affects the use and enjoyment of publicly accessible open spaces.	LTS	No mitigation required.	NA
Impact C-SH-1: The San Francisco Gateway Project or variant, in combination with cumulative projects in the project site vicinity, would result in less-than-significant cumulative shadow impacts.	LTS	No mitigation required.	NA
INITIAL STUDY SECTION E.11, RECREATION (SEE APPENDIX B)			
Impact RE-1: The San Francisco Gateway Project or variant, would not increase the use of existing parks and recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated.	LTS	No mitigation required.	NA
Impact RE-2: The San Francisco Gateway Project or variant, would not include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.	NI	No mitigation required.	NA

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Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
Impact C-RE-1: The San Francisco Gateway Project or variant, in combination with cumulative projects in the vicinity of the project site, would result in less-than-significant cumulative impacts related to recreation.	LTS	No mitigation required.	NA
INITIAL STUDY SECTION E.12, UTILITIES AND SERVICE SYSTEMS (SEE APPENDIX B)			
Impact UT-1: The San Francisco Gateway Project or variant would not require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities that could result in environmental effects beyond those evaluated throughout the initial study.	LTS	No mitigation required.	NA
Impact UT-2: The San Francisco Gateway Project or variant would not exceed the capacity of the Southeast Treatment Plant and would not require the construction of new or expansion of existing wastewater and stormwater treatment facilities.	LTS	No mitigation required.	NA

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Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
Impact UT-3: SFPUC has sufficient water supply available to serve the San Francisco Gateway Project or variant and future development during normal, dry, and multiple dry years.	LTS	No mitigation required.	NA
Impact UT-4: The San Francisco Gateway Project or variant would not generate solid waste in excess of state or local standards, or in excess of capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals, and would comply with applicable waste management and reduction statutes and regulations related to solid waste.	LTS	No mitigation required.	NA
Impact C-UT-1: The San Francisco Gateway Project or variant, in combination with cumulative projects, would result in less-than-significant cumulative impacts on utilities and service systems.	LTS	No mitigation required.	NA

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Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
INITIAL STUDY SECTION E.13, PUBLIC SERVICES (SEE APPENDIX B)			
Impact PS-1: The San Francisco Gateway Project or variant would not result in an increase in demand for police protection, fire protection, schools, or other services to an extent that would require new or physically altered fire, police, school, or other public facilities, the construction of which could result in significant environmental impacts.	LTS	No mitigation required.	NA
Impact C-PS-1: The San Francisco Gateway Project or variant would have a less-than-significant cumulative impact on public services.	LTS	No mitigation required.	NA
INITIAL STUDY SECTION E.14, BIOLOGICAL RESOURCES (SEE APPENDIX B)			
Impact BI-1: The San Francisco Gateway Project or variant would not have a substantial adverse effect, either directly or indirectly through habitat modifications, on species or their habitat identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.	LTS	No mitigation required.	NA

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Impact BI-2: The San Francisco Gateway Project or variant would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	LTS	No mitigation required.	NA
Impact BI-3: The San Francisco Gateway Project or variant would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	NI	No mitigation required.	NA
Impact C-BI-1: The San Francisco Gateway Project or variant in combination with cumulative projects would not result in cumulative impacts to biological resources.	LTS	No mitigation required.	NA

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INITIAL STUDY SECTION E.15, GEOLOGY AND SOILS (SEE APPENDIX B)			
Impact GE-1: The San Francisco Gateway Project or variant would not directly or indirectly cause potential adverse effects related to the rupture of a known earthquake fault, strong seismic ground shaking, and seismic-related ground failure, including liquefaction, or landslides.	LTS	No mitigation required.	NA
Impact GE-2: Construction and operation of the San Francisco Gateway Project or variant would not result in substantial erosion or loss of topsoil.	LTS	No mitigation required.	NA
Impact GE-3: The project site is not located on a geologic unit or soil that is unstable, or that could become unstable as a result of the San Francisco Gateway Project or variant.	LTS	No mitigation required.	NA
Impact GE-4: The San Francisco Gateway Project or variant would not create substantial direct or indirect risks to life or property as a result of being located on expansive soil.	LTS	No mitigation required.	NA

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Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
Impact GE-5: The San Francisco Gateway Project or variant could directly or indirectly destroy a unique paleontological resource.	S	**Mitigation Measure M-GE-5: Inadvertent Discovery of Paleontological Resources** **Worker Environmental Awareness Training.** Prior to commencing construction, the project sponsor shall engage a paleontologist meeting the standards of the Society of Vertebrate Paleontology to conduct training for all onsite construction workers regarding paleontological resources and 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. In addition, the project sponsor (through a designated representative) shall inform construction personnel of the immediate stop work procedures and contact information to be followed if bones or other potential fossils are unearthed at the project site, and the laws and regulations protecting paleontological resources. As new workers arrive at the project site for ground-disturbing activities, they shall be trained by the construction supervisor. The paleontologist shall submit a letter confirming the timing of the worker training to the planning department. The letter shall confirm the project's location, the date of training, the location of the informational handout display, and the number of participants. The letter shall be transmitted to the planning department within five business days of conducting the training. **Discovery of Unanticipated Paleontological Resources.** In the event of the inadvertent discovery of a paleontological resource during construction, excavations within 25 feet of the find shall temporarily be halted until the discovery is examined by a qualified paleontologist (as defined by the Society of Vertebrate Paleontology). Work in the sensitive area shall resume only when deemed appropriate by the qualified paleontologist, in consultation with the planning department. The qualified paleontologist shall determine: (1) whether the discovery is scientifically significant; (2) the necessity for involving other agencies and stakeholders; (3) the significance of the resource; and (4) 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. The paleontological evaluation letter shall be submitted to the planning department for review within 30 days of the discovery.	LTSM

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Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
		If a paleontological resource is determined to be of scientific importance and there are no feasible avoidance measures, a paleontological mitigation program must be prepared by the qualified paleontologist engaged by the project sponsor. The mitigation program shall include measures to fully document and recover the resource and shall be approved by the planning department. Ground-disturbing activities in the project area shall resume and be monitored, as determined by the qualified paleontologist in collaboration with the planning department, 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 into an appropriate repository; and (4) preparation of a paleontological resources report at the conclusion of ground-disturbing activities. The report shall include dates of field work, results of monitoring, fossil identifications to the lowest possible taxonomic level, analysis of the fossil collection, a discussion of the scientific significance of the fossil collection, conclusions, locality forms, an itemized list of specimens, and a repository receipt from the curation facility. The project sponsor shall be responsible for the preparation and implementation of the mitigation program, in addition to any costs necessary to prepare and identify collected fossils, and for any curation fees charged by the paleontological repository. The mitigation program shall be submitted to the planning department for review within 10 business days of the discovery. The paleontology report shall be submitted to the planning department for review within 30 business days from conclusion of ground-disturbing activities, or as negotiated following consultation with the planning department.	
Impact C-GE-1: The San Francisco Gateway Project or variant, in combination with cumulative projects in the project site vicinity, would have less-than-significant cumulative impacts related to geology, soils, and seismicity.	LTS	No mitigation required.	NA

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Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
INITIAL STUDY SECTION E.16, HYDROLOGY AND WATER QUALITY (SEE APPENDIX B)			
Impact HY-1: The San Francisco Gateway Project or variant 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.	LTS	No mitigation required.	NA
Impact HY-2: The San Francisco Gateway Project or variant would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin or conflict with or obstruct implementation of a sustainable groundwater management plan.	LTS	No mitigation required.	NA

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Environmental Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance after Mitigation
Impact HY-3: The San Francisco Gateway Project or variant would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would result in substantial erosion or siltation 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.	LTS	No mitigation required.	NA
Impact C-HY-1: The San Francisco Gateway Project or variant, in combination with cumulative projects, would not result in cumulative impacts related to hydrology and water quality.	LTS	No mitigation required.	NA

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INITIAL STUDY SECTION E.17, HAZARDS AND HAZARDOUS MATERIALS (SEE APPENDIX B)			
Impact HZ-1: The San Francisco Gateway Project or variant would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials or create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	LTS	No mitigation required.	NA
Impact HZ-2: The San Francisco Gateway Project or variant would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.	LTS	No mitigation required.	NA
Impact C-HZ-1: The San Francisco Gateway Project or variant, in combination with cumulative projects, would not result in cumulative impacts related to hazards and hazardous materials.	LTS	No mitigation required.	NA
INITIAL STUDY SECTION E.18, MINERAL RESOURCES (SEE APPENDIX B)			
Not applicable because mineral resources are not present at the project site, and therefore, there are no impacts on this resource and no mitigation is required.			

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INITIAL STUDY SECTION E.19, ENERGY (SEE APPENDIX B)			
Impact EN-1: The San Francisco Gateway Project or variant would not result in a significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation; nor would it conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	LTS	No mitigation required.	NA
Impact C-EN-1: The San Francisco Gateway Project or variant, in combination with cumulative projects, would not result in a significant cumulative impact related to energy resources.	LTS	No mitigation required.	NA
INITIAL STUDY SECTION E.20, AGRICULTURE AND FORESTRY RESOURCES (SEE APPENDIX B)			
Not applicable because agriculture and forestry resources are not present at the project site, and therefore, there are no impacts on these resources and no mitigation is required.			
INITIAL STUDY SECTION E.21, WILDFIRE (SEE APPENDIX B)			
Not applicable because wildfire risks are not present at the project site, and therefore, there are no impacts related to wildfire and no mitigation is required.			

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S.4 Summary of Project Alternatives

CEQA Guidelines section 15126.6(a) states that an EIR must describe and evaluate a reasonable range of alternatives to a project that would feasibly attain most of the project's basic objectives but avoid or substantially lessen any identified significant adverse environmental effects of the project. An EIR is not required to consider every conceivable alternative to a project or alternatives that are infeasible. Rather, it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation.

Chapter 5, Alternatives, of this draft EIR presents alternatives to the proposed project and an evaluation of their potential impacts as required by CEQA. The discussion includes the methodology used to select alternatives to the proposed project for detailed CEQA analysis, with the intent of developing potentially feasible alternatives that could avoid or substantially lessen the significant impacts identified while still meeting most of the project's basic objectives. Based on this screening process, the following alternatives were selected for detailed analysis in this draft EIR:

- **No Project Alternative** assumes the project site would not be developed with either the proposed project or expanded streetscape variant, that approximately 75 percent of the site (336,000 gross square feet) would be occupied by parcel and last-mile delivery uses, and that the remaining space would be occupied by other PDR uses (e.g., wholesale and storage).
- **Code-Compliant Alternative** assumes the demolition of the existing four single-story PDR buildings on site and the construction of two new two-story buildings (plus active roof). The building height would be consistent with the existing 65-J height and bulk district. This alternative would include the same tenant use mix as the proposed project, but less space than analyzed for the proposed project.
- **Fleet Management Use Mix Alternative** assumes demolition of the existing four single-story PDR buildings onsite and construction of two new three-story buildings (plus active roof) in the same configuration used for the proposed project. This alternative would include less space for parcel delivery than the proposed project and would not include wholesale/storage, manufacturing and maker, or retail uses. Fleet management uses would occupy approximately the same amount of space as the parcel delivery uses.
- **Expanded Parcel Delivery Use Alternative** assumes demolition of the existing four single-story PDR buildings onsite and construction of two new three-story buildings (plus active roof) in the same configuration used for the proposed project. This alternative would provide space for only one PDR use, consisting of parcel delivery service, including last-mile delivery; no other PDR or retail space would be included in this alternative.

Summary descriptions of these four alternatives are presented in the following sections.

S.4.1 No Project Alternative

Under the No Project Alternative, the project site would not be developed with either the proposed project or expanded streetscape variant, as described in Chapter 2, Project Description, of the EIR. Instead, as shown in Table 5-1 (p. 5-7), the No Project Alternative assumes that approximately 75 percent of the existing building space on the site (336,000 gross square feet in three buildings) would be occupied by parcel and last-mile delivery uses. This is an increase over the existing conditions (i.e., no buildings were occupied by parcel delivery when the project's environmental review started in 2017; however, parcel delivery services have been operating in two buildings since 2020). The remaining space (112,000 gross square feet in the fourth existing building) would be occupied by other types of PDR uses (e.g., wholesale and storage uses). These uses and the space occupied by them reflect what would reasonably be expected to occur in the foreseeable future compared to the uses that existed onsite in 2017. The No Project Alternative would employ approximately 750 people—15 more employees than under baseline 2017 conditions, and 1,227 fewer employees than under the proposed project or expanded streetscape variant.

Under the No Project Alternative, the existing four single-story PDR buildings would not be demolished; other than tenant improvements (such as interior upgrades), no construction or site improvements—such as grading, excavation, or alterations to the height and massing of the buildings—would occur at the site. The No Project Alternative would not include sustainability features proposed under the project, such as a rooftop solar array; water- and energy-efficient designs; and electric vehicle charging infrastructure for trucks, transportation refrigeration units, or passenger vehicles, except as may be required through the building permitting process for tenant improvement applications in the future. The No Project Alternative would not include street, sidewalk, or streetscape improvements; bicycle parking; or a travel demand management (TDM) plan. This alternative is analyzed in the draft EIR because it is required by CEQA Guidelines section 15126.6(e); because it provides information on what would reasonably be expected to occur in the foreseeable future, including possible occupancy of existing buildings by new PDR tenants; and because it provides a basis for comparing how the existing setting would change with implementation of the proposed project or the other project alternatives, all of which include increasing the gross building area and the variations in the types of uses onsite.

S.4.2 Code-Compliant Alternative

The Code-Compliant Alternative would demolish the existing four single-story PDR buildings on site and construct two new two-story buildings. Each of the two buildings would have approximately the same ground floor shape as the proposed project and would have a similar orientation on the site. However, under the Code-Compliant Alternative, the buildings would not exceed the 65-J height and bulk district requirements (65 feet maximum height) and would only have two floors, plus active roof. As a result, there would be no planning code amendments for height district reclassification and associated zoning map amendments, and there would be no planning code amendments to adopt a Special Use District for the project site. A shorter construction schedule of 26 months (compared to 31 months for the proposed project or expanded streetscape variant) is anticipated for this alternative, given the reduced building height and square footage.

The combined building square footage of the Code-Compliant Alternative (1,363,000 square feet) is less than that under the proposed project (2,160,000 square feet). Similar to the proposed project, the Code-Compliant Alternative would provide space for several main types of PDR uses, as described in Chapter 2, Section 2.D.2, Proposed Project Uses (p. 2-20). These uses could consist of manufacturing and maker space; parcel delivery service, including last-mile delivery; and wholesale and storage. As shown in Table 5-1 (p. 5-7), although the building's overall square footage would be less than that of the proposed project, the allocation of the PDR uses would be proportional to the proposed project, with 3 percent consisting of manufacturing and maker space, 65 percent consisting of parcel delivery, and 32 percent consisting of wholesale/storage. The proportion of ground-floor retail would be the same as under the proposed project (0.5 percent of the gross building area; i.e., 5,000 square feet). The Code-Compliant Alternative would include sustainability features similar to those of the proposed project, such as water- and energy-efficient designs and electrical docking stations. The Code-Compliant Alternative would include a reduced rooftop solar array. Similar to the proposed project, the Code-Compliant Alternative would include street, sidewalk, or streetscape improvements; bicycle parking; and a similar TDM plan.

This alternative is analyzed in the draft EIR because it would reduce impacts related to noise, air quality, and wind hazards that would occur under the proposed project or expanded streetscape variant. Additionally, this alternative would aid decision makers in understanding the potential impacts related to the size and scale of the proposed project.

S.4.3 Fleet Management Use Mix Alternative

The Fleet Management Use Mix Alternative would demolish the existing four single-story PDR buildings on site and construct two new three-story buildings (plus active roof) in the same configuration used for the proposed project. The combined building square footage of the Fleet Management Use Mix Alternative (2,160,000 square feet) is the same as that of the proposed project. This alternative is different from the proposed project because it would include less space for parcel delivery (50 percent of the total PDR floor area, as shown in Table 5-1 [p. 5-7]) and eliminate the wholesale/storage space. The active PDR floor area would be divided equally between parcel delivery service, including last-mile delivery, and fleet management.[6] The Fleet Management Use Mix Alternative would not include ground-floor manufacturing and maker or retail spaces. The areas of the buildings identified for these uses in the proposed project (35,000 square feet of manufacturing and maker space and 8,400 square feet of retail) would instead be used for PDR support space to maximize the efficiency of each building's layout and internal circulation. The Fleet Management Use Mix Alternative would include sustainability features similar to those under the proposed project, such as water- and energy-efficient designs, electrical docking stations, and an active rooftop with a solar array, as well as the street, sidewalk, or streetscape improvements; bicycle parking; and a TDM plan.

This alternative is analyzed in the draft EIR because it would reduce air emissions from mobile sources, eliminate emissions from manufacturing and maker uses that would occur under the proposed project or expanded streetscape variant, and aid decision makers in understanding the potential impacts related to a different PDR tenant use mix than that analyzed for the proposed project.

S.4.4 Expanded Parcel Delivery Use Alternative

The Expanded Parcel Delivery Use Alternative would demolish the existing four single-story PDR buildings on site and construct two new three-story buildings (plus active roof) in the same configuration as the proposed project. The combined building square footage of the Expanded Parcel Delivery Use Alternative (2,160,000 square feet) is the same as that of the proposed project. Unlike the proposed project, this alternative would provide space for only one PDR use, consisting of parcel delivery service, including last-mile delivery, as shown in Table 5-1 (p. 5-7). The Expanded Parcel Delivery Use Alternative would not include ground-floor manufacturing and maker or retail spaces. The areas of the buildings identified for these uses in the proposed project (35,000 square feet of manufacturing and maker space and 8,400 square feet of retail) would instead be used for PDR support space to maximize the efficiency of each building's layout and internal circulation. The Expanded Parcel Delivery Use Alternative would include sustainability features similar to those used under the proposed project, such as water- and energy-efficient designs, electrical docking stations, and an active rooftop with a solar array, as well as street, sidewalk, or streetscape improvements; bicycle parking; and a TDM plan. This alternative is analyzed in the draft EIR because it would reduce air

[6] Fleet management uses allow private and public fleets to be staged and maintained. Uses could include private retail vehicle staging, private fleet staging and maintenance, and public fleet staging and maintenance. See Section 2.D in Chapter 2 for further discussion.

emissions from mobile sources, eliminate emissions from manufacturing and maker use that would occur under the proposed project or expanded streetscape variant, and aid decision makers in understanding the potential impacts related to a different PDR tenant use mix than that analyzed for the proposed project.

S.5 Comparison of the San Francisco Gateway Project and Alternatives

Table S-3 presents a comparison between the characteristics of the proposed project and those of the alternatives. Table S-4 (p. S-50) summarizes the ability of each of alternative to meet the objectives of the San Francisco Gateway Project. Table S-5 (p. S-52) summarizes and compares the potential significant environmental impacts of the proposed San Francisco Gateway Project and the alternatives; environmental impacts that are less than significant or no impact are not presented. Table S-5 includes significant noise and vibration and air quality impacts from the draft EIR, and significant cultural resources, tribal cultural resources, and wind impacts from the initial study.

S.6 Environmentally Superior Alternative

The CEQA Guidelines require the identification of an environmentally superior alternative to the proposed San Francisco Gateway Project (section 15126.6(e)). Based on the analysis and comparison of the impacts of the alternatives presented above, the No Project Alternative is determined to be the environmentally superior alternative. As shown in Table S-5 (p. S-52), the No Project Alternative would substantially lessen the severity of the less-than-significant impacts with mitigation of the proposed project due to its limited changes to the existing uses, buildings, and surrounding public realm space.

CEQA Guidelines section 15126.6(e)(2) provides that if the “no project” alternative is the environmentally superior alternative, the EIR should also identify an environmentally superior alternative among the other alternatives. As presented in Chapter 5, Alternatives, of this draft EIR and summarized in Table S-5 (p. S-52), the Fleet Management Use Mix Alternative would offer a substantial reduction in air pollutant emissions, particularly of NO_X, and health risks compared to the proposed project. Under the Fleet Management Use Mix Alternative, NO_X emissions would not exceed the Bay Area Air Quality Management District’s significance thresholds, and no mitigation measures would be required. In addition, this alternative would meet all of the proposed project objectives, but some to a lesser extent compared to the proposed project. Therefore, the Fleet Management Use Mix Alternative would be the environmentally superior alternative.

Table S-3 Comparison of Proposed Project and Project Alternatives

Building Characteristics	Proposed Project	No Project Alternative	Code-Compliant Alternative	Fleet Management Use Mix Alternative	Expanded Parcel Delivery Use Alternative
Number of Buildings	2	4	2	2	2
Stories	3 (plus active roof) [1]	1	2 (plus active roof) [1]	3 (plus active roof) [1]	3 (plus active roof) [1]
Height	97 feet (115 feet maximum, including rooftop appurtenances)	32 feet	65 feet (75 feet maximum, including rooftop appurtenances)	97 feet (115 feet maximum, including rooftop appurtenances)	97 feet (115 feet maximum, including rooftop appurtenances)
Proposed Uses	**Area (gross square feet)**	**Area (gross square feet)**	**Area (gross square feet)**	**Area (gross square feet)**	**Area (gross square feet)**
Total Building Square Footages	**2,160,000**	**448,000**	**1,363,000**	**2,160,000**	**2,160,000**
PDR Uses and Percent of Total PDR Space	1,166,800	448,000	733,538	1,131,800	1,131,800
Manufacturing and Maker Space[2]	35,000 (3%)	NA	22,006 (3%)	NA	NA
Parcel Delivery	759,400 (65%)	336,000 (75%)	476,800 (65%)	567,200 (50%)	1,131,800 (100%)
Wholesale/Storage	372,400 (32%)	112,000 (25%)	234,732 (32%)	NA	NA
Fleet Management[3]	NA	NA	NA	564,600 (50%)	NA
PDR Support Spaces (Logistics Yard and Vehicle Circulation)	441,300	72,409 (unenclosed)	207,898	484,700	484,700
Parking	543,500	42,737 (unenclosed)	416,564	543,500	543,500
Retail	8,400	NA	5,000	NA	NA

Building Characteristics	Proposed Project	No Project Alternative	Code-Compliant Alternative	Fleet Management Use Mix Alternative	Expanded Parcel Delivery Use Alternative
Additional Information					
Vehicle Parking Spaces	1,166	170	547	1,166	1,166
Bicycle Parking Spaces[4]	100 Class I 12 Class II	NA	48 Class I 6 Class II	95 Class I 4 Class II	95 Class I 4 Class II
Net New Employees[5]	1,242	15	508	1,161	1,161
Street and Sidewalk Improvements and Transportation Demand Management Plan	Yes	No	Yes	Yes	Yes
New Docks	Yes	No	Yes, but with reduced capacity	Yes	Yes
Generators	Yes (two 400 kV generators)	No	Yes (two 400 kV generators)	Yes (two 400 kV generators)	Yes (two 400 kV generators)

Source: Prologis, L.P. 2022

Notes:

1. The top level (Level 4) for the proposed project, the Fleet Management Use Mix Alternative, and the Expanded Parcel Delivery Use Alternative consists of elevator and stair access structures, solar array, and a screened, open-air, multipurpose deck for parking and/or material and vehicle staging (see Figure 2.D-8, p. 2-19 for further description). The top level (Level 3) of the Code-Compliant Alternative consists of a small portion of enclosed space, solar array, and a screened, open-air, multipurpose deck for parking and/or material and vehicle staging.
2. Manufacturing and Maker Space: This use is defined as a light industrial use that provides for the fabrication or production of goods, by hand or machinery, for distribution to retailers, wholesalers, or the public. Makers are often characterized by their production and custom activities that usually involve individual or special design, handiwork, and/or design-related innovation and experimentation. Examples of this light industrial use include food and beverage processing, apparel and other garment products, furniture and fixtures, printing (including three-dimensional printing), prototyping, and publishing. This use is defined in Chapter 2, Project Description.
3. Fleet Management: This use would allow private and public fleets to be staged and maintained. Uses would include private retail vehicle staging, private fleet staging and maintenance, and public fleet staging and maintenance. Private retailers would store and maintain vehicles to be sold or rented. The private vehicles would be mostly parked, and the space would be used as storage; light maintenance and washing would be associated with this use. Private fleet staging and maintenance would involve storage and potential light maintenance of shuttles servicing specific institutions, businesses, and/or independent shuttle services. Public fleet staging and maintenance would include the storage and maintenance of buses, trolleys, and/or shuttles for a public transportation agency, such as the San Francisco Municipal Transportation Agency or San Francisco Paratransit. This use is defined in Chapter 2, Project Description.
4. Class I bicycle parking spaces are spaces in secure, weather-protected facilities intended for use as long-term, overnight, and workday bicycle storage by dwelling unit residents, nonresidential occupants, and employees. Class II bicycle parking spaces are bike racks in publicly accessible, highly visible locations and are intended for transient or short-term use by visitors, guests, and patrons to the building or use. Class II bike racks allow the bicycle frame and one wheel to be locked to the rack (with one U-shaped lock), and provide support to bicycles without damage to the wheels, frame, or components (planning code section 155.1).
5. As calculated in the initial study (Appendix B), there were 735 existing employees prior to commencing the interim use of the project site in 2021; the project would result in a total of 1,980 (rounded), or a net increase of 1,242 employees relative to pre-2021 conditions. These calculations assume one employee per 597 gross square feet of PDR space and one employee per 370 gross square feet retail space. This employment density is based on a May 2019 report prepared to update the city's nexus fees: Keyser Marston Associates, Jobs Housing Nexus Analysis, San Francisco, May 2019, *https://commissions.sfplanning.org/cpcpackets/2019-011975PCA.pdf*, accessed January 26, 2020, and April 4, 2023.

No public open space is required or proposed for the project.

All numbers are rounded approximations.

No public open space is required or proposed for the project.

All numbers are rounded approximations.

kV = kilovolt

NA= not applicable

PDR = production, distribution, and repair

Table S-4 Summary of Ability of Alternatives to Meet Project Objectives

Objectives[1]	Proposed Project	No Project Alternative	Code-Compliant Alternative	Fleet Management Use Mix Alternative	Expanded Parcel Delivery Use Alternative
Underlying Objective: The project sponsor's underlying objective is to develop a modern, flexible, and durable PDR facility for a diverse and evolving range of uses in a central urban environment.	Yes	No	Yes	Partially	Partially
Objective 1: Advance progress toward the City's long-standing goals to preserve, upgrade, and expand PDR space, including those reflected in the General Plan, Bayview Hunters Point Area Plan, Five-Point Plan for PDR (2012), Make to Manufacture Advanced Manufacturing Playbook (2016), Proposition X (2016), and Economic Recovery Task Force Report (2020).	Yes	No	Yes	Yes	Yes
Objective 2: Replace functionally outdated PDR space on the project site with first- and best-in-class facilities and replenish the supply of PDR space in the City that has been displaced by other development.	Yes	No	Yes	Yes	Yes
Objective 3: Redevelop underutilized property to make efficient use of existing utilities, circulation, and complementary uses in the surrounding PDR-2 zoning district.	Yes	No	Yes	Yes	Yes
Objective 4: Use innovative design at a size and scale that accommodates a range of large and small PDR uses, and can adapt over time to different industries and market needs, including anticipated growing demand for parcel delivery and/or last-mile delivery services, in an economically feasible way.	Yes	No	Partially	Partially	Partially
Objective 5: Site PDR uses in a dense infill setting to create employment near housing and reduce vehicle miles traveled for potential distribution uses by locating such uses in San Francisco proximate to multiple freeways, rather than traditional suburban locations.	Yes	Yes	Yes	Yes	Yes

Objectives[1]	Proposed Project	No Project Alternative	Code-Compliant Alternative	Fleet Management Use Mix Alternative	Expanded Parcel Delivery Use Alternative
Objective 6: Provide a positive fiscal impact by creating jobs at a variety of experience levels, including career-building and advancement opportunities, enhancing property values, generating property taxes, and introducing workers who will support direct and indirect local business growth in the Bayview.	Yes	No	Partially	Yes	Yes
Objective 7: Boost resiliency in the local supply chain and disaster response capabilities by providing large-scale, adaptable facilities that can be rapidly mobilized in a central location.	Yes	No	Yes	Yes	Yes
Objective 8: Using carbon-efficient construction techniques, develop a project with infrastructure that facilitates carbon-efficient vehicle fleets and operations as cost-effective technology becomes available.	Yes	No	Partially	Yes	Yes
Objective 9: Create a safe and compelling streetscape, consistent with Better Streets standards, with green infrastructure and active ground floors, accessible by multiple modes of transportation, including bicycles and pedestrians.	Yes	No	Yes	Yes	Yes

Source: Compiled by AECOM, 2023.

1. Terms used to describe an alternative's ability to meet project objectives:
   Yes = alternative would substantially meet the project objective
   No = alternative would not substantially meet the project objective
   Partially = alternative would meet the project objective to a limited extent; not as substantially as those alternatives with a "yes"

No public open space is required or proposed for the project.

All numbers are rounded approximations.

PDR = production, distribution, and repair

Table S-5 Comparison of Significant Impacts of the San Francisco Gateway Project to Impacts of the Alternatives

Environmental Impacts	San Francisco Gateway Project	No Project Alternative	Code-Compliant Alternative	Fleet Management Use Mix Alternative	Expanded Parcel Delivery Use Alternative
EIR TOPICS					
NOISE AND VIBRATION					
Impact NO-3: Operation of the San Francisco Gateway Project or variant would result in the generation of a substantial temporary or permanent increase in ambient noise levels in the project area in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	Less than significant with mitigation (LTSM)	Less than the proposed project (LTS)	Similar to the proposed project (LTSM)	Similar to the proposed project (LTSM)	Similar to the proposed project (LTSM)
AIR QUALITY					
Impact AQ-1: The San Francisco Gateway Project or variant could conflict with or obstruct implementation of the 2017 Clean Air Plan.	Less than significant with mitigation (LTSM)	Less than the proposed project (LTS)	Less than the proposed project (LTSM)	Less than the proposed project (LTS)	Similar to the proposed project (LTSM)
Impact AQ-3: The San Francisco Gateway Project or variant would result in operational activities that could result in a cumulatively considerable net increase in any criteria air pollutant for which the project region is in nonattainment status under an applicable federal, state, or regional ambient air quality standard.	Less than significant with mitigation (LTSM)	Less than the proposed project (LTS)	Less than the proposed project (LTSM) **M-AQ-3h and M-AQ-3i would not apply*	Less than the proposed project (LTS)	Similar to the proposed project (LTSM) **All Air Quality Mitigation Measures would apply*
INITIAL STUDY TOPICS (see Appendix B)					
CULTURAL RESOURCES					
Impact CR-2: The San Francisco Gateway Project or variant could cause a substantial adverse change in the significance of an archeological resource pursuant to section 15064.5.	Less than significant with mitigation (LTSM)	No impact (NI)	Similar to the proposed project (LTSM)	Similar to the proposed project (LTSM)	Similar to the proposed project (LTSM)

Environmental Impacts	San Francisco Gateway Project	No Project Alternative	Code-Compliant Alternative	Fleet Management Use Mix Alternative	Expanded Parcel Delivery Use Alternative
Impact CR-3: The San Francisco Gateway Project or variant could disturb human remains including those interred outside of formal cemeteries.	Less than significant with mitigation (LTSM)	No impact (NI)	Similar to the proposed project (LTSM)	Similar to the proposed project (LTSM)	Similar to the proposed project (LTSM)
Impact C-CR-1: The San Francisco Gateway Project or variant, in combination with cumulative projects, could result in cumulative cultural resource impacts.	Less than significant with mitigation (LTSM)	No impact (NI)	Similar to the proposed project (LTSM)	Similar to the proposed project (LTSM)	Similar to the proposed project (LTSM)
TRIBAL CULTURAL RESOURCES					
Impact TCR-1: The San Francisco Gateway Project or variant could result in 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 (LTSM)	No impact (NI)	Similar to the proposed project (LTSM)	Similar to the proposed project (LTSM)	Similar to the proposed project (LTSM)
Impact C-TCR-1: The San Francisco Gateway Project or variant, in combination with cumulative projects, could result in cumulative cultural resource impacts.	Less than significant with mitigation (LTSM)	No impact (NI)	Similar to the proposed project (LTSM)	Similar to the proposed project (LTSM)	Similar to the proposed project (LTSM)
WIND					
Impact WI-1: The San Francisco Gateway Project or variant would create wind hazards in publicly accessible areas of substantial pedestrian use.	Less than significant with mitigation (LTSM)	No impact (NI)	Less than the proposed project (LTSM)	Similar to the proposed project (LTSM)	Similar to the proposed project (LTSM)
Impact C-WI-1: The San Francisco Gateway Project or variant, in combination with cumulative projects in the project site vicinity, could result in cumulative wind impacts.	Less than significant with mitigation (LTSM)	No impact (NI)	Less than the proposed project (LTSM)	Similar to the proposed project (LTSM)	Similar to the proposed project (LTSM)

IMPACT CODES:

NA = Not Applicable
NI = No impact
LTS = Less-than-significant or negligible impact; no mitigation required
S = Significant
SU = Significant and unavoidable adverse impact, no feasible mitigation
LTSM = Less than significant impact, after mitigation
SUM = Significant and unavoidable adverse impact, after mitigation

S.7 Areas of Known Controversy and Issues to Be Resolved

Potential areas controversy and issues to be resolved for the proposed project, as expressed by agencies and community members, are listed below with the section(s) of the draft EIR where each topic is addressed:

- Use of local roadways by transportation network companies, residents, employees, and visitors to the site (Section 3.B, Transportation and Circulation, and Appendix C, Transportation Supporting Information)
- Pedestrian and bicycle access during construction (Section 3.B, Transportation and Circulation)
- Pedestrian safety and conflicts with project-generated traffic (Section 3.B, Transportation and Circulation)
- Noise impacts during construction and operation (Section 3.C, Noise and Vibration)
- Consistency with the Bay Area Air Quality Management District's 2017 Clean Air Plan measures (Section 3.D, Air Quality)
- Cumulative air quality emissions (Section 3.D, Air Quality)
- Cumulative health impacts resulting from toxic air contaminants (TACs) and fine particulate matter ($PM_{2.5}$) emissions (Section 3.D, Air Quality)
- Cumulative impacts from environmental, health, and socioeconomic indicators (Section 3.A.4, Approach to Analysis, particularly "Approach to Socioeconomic Effects" [p. 3.A-6]; Section 3.A.5, Historic and Existing Context of San Francisco Bayview Hunters Point Neighborhood [p. 3.A-6]; Section 3.B, Transportation and Circulation; Section 3.C, Noise and Vibration; Section 3.D, Air Quality; and Appendix B, Initial Study)
- Environmental justice and civil rights effects, addressed to the extent that such effects are considered significant effects on the environment in accordance with CEQA Guidelines sections 15064(e), 15126.2(a), and 15131(a) (Section 3.A.4, Approach to Analysis, particularly "Approach to Socioeconomic Effects" [p. 3.A-6]; Section 3.A.5, Historic and Existing Context of San Francisco Bayview Hunters Point Neighborhood [p. 3.A-6]; Section 3.B, Transportation and Circulation; Section 3.C, Noise and Vibration; Section 3.D, Air Quality; and Appendix B, Initial Study)

CHAPTER 1
INTRODUCTION

1.A Purpose of the EIR

The CEQA requires that state, regional, and local government agencies consider the environmental effects of projects over which they have discretionary authority before taking action on those projects (Public Resources Code [PRC] section 21000 et seq.). An EIR is an informational document used by a lead agency (in this case, the City and County of San Francisco [city]) when considering approval of a project. The purpose of an EIR is not to recommend either approval or denial of a project, but in accordance with the CEQA Guidelines (section 15064[f][1]) to disclose the potential environmental impacts of a project to public agency decision makers and the general public; identify possible ways to minimize the significant effects; and describe reasonable alternatives to the proposed project that could feasibly attain most of the basic objectives of the proposed project while substantially lessening or avoiding any of the significant environmental impacts. Public agencies are required to consider the information presented in the EIR when determining whether to approve a project.

This EIR for the proposed project has been prepared in accordance with, and complies with, all criteria, standards, and procedures of CEQA, as amended (PRC section 21000 et seq.) and state CEQA Guidelines (California Code of Regulations, Title 14, section 15000 et seq.). This EIR has been prepared by the planning department as the lead agency under CEQA (section 21067 of CEQA and sections 15367 and 15050 through 15053 of the state CEQA Guidelines).

1.B Project Summary

The project site is at 749 Toland Street and 2000 McKinnon Avenue and consists of Assessor's Block 5284A, Lot 008; and Block 5287, Lot 002. There are four structures totaling approximately 448,000 square feet of PDR space. The project and expanded streetscape variant propose demolition of the existing structures and development of two new buildings, totaling 2,160,000 gross square feet, which provide PDR space, logistics yard, vehicular systems, and ground-floor retail spaces. Chapter 2, Project Description, contains a comprehensive project description.

1.C Environmental Review Process

The planning department, serving as lead agency responsible for administering the environmental review on behalf of the city, determined that an EIR must be prepared to evaluate potentially significant effects that could result from implementation of the proposed project or expanded streetscape variant. Based on the analysis in the initial study (see Appendix B, Initial Study), the proposed project and expanded streetscape variant would not result in significant impacts to the following resource topics: land use and planning, population and housing, greenhouse gas emissions, shadow, recreation, utilities and service systems, public services, biological resources, hydrology and water quality, hazards and hazardous materials, mineral resources, energy, agricultural and forest resources, and wildfire. The initial study also found that with implementation of the mitigation measures identified in the initial study, the proposed project and expanded streetscape variant would not result in significant impacts to the following resources topics: cultural resources, tribal cultural resources, wind, and paleontological resources. Finally, the initial study found that the proposed project and expanded streetscape variant could result in significant or potentially significant impacts to transportation and circulation, noise and vibration, and air quality. These resource areas require further analysis and are therefore discussed in this draft EIR.

The environmental review process for a focused EIR includes the following steps: publication of a notice of preparation (NOP) of an EIR and notice of availability of an initial study and public scoping; publication of a draft EIR for public review and comment; preparation and publication of responses to public and agency comments on the draft EIR; and certification of the final EIR. The EIR process provides an opportunity for the public to review and comment on the proposed project's potential environmental effects and for decision-makers to consider the environmental analysis provided in the EIR before making a determination to approve, disapprove, or modify a proposed project; these steps are described in further detail in the following sections.

1.C.1 Notice of Preparation of an Environmental Impact Report/Notice of Availability of an Initial Study and Public Scoping

Consistent with the requirements of CEQA Guidelines sections 15063 and 15082, the planning department has made a good-faith effort during the preparation of the draft EIR to contact all responsible and trustee agencies; organizations and persons who may have an interest in the proposed project; and all applicable government agencies, including the Governor's Office of Planning and Research, State Clearinghouse. This outreach effort included the circulation of a NOP and initial study on March 9, 2022, which began a 30-day comment period that ended on April 8, 2022. The NOP requested that agencies and interested parties comment on the scope and content of the environmental information to be included in the draft EIR. An initial study is a detailed analysis conducted by a lead agency to determine whether a project may have a significant effect on the environment and aids in determining what type of environmental document the lead agency is required to prepare. The department prepared an initial study for the proposed project, as well as the expanded streetscape variant; and analyzed the environmental topics included in the CEQA Guidelines Appendix G checklist. This detailed analysis determined which topics would be less than significant, which topics would have significant impacts that could be mitigated to less-than-significant levels, and which topics must be further evaluated in an EIR. The NOP and the initial study are included as appendices to this draft EIR (see Appendix A and Appendix B, respectively). The draft EIR includes the analysis presented in this report and the attached initial study.

The planning department mailed the notice of availability of the NOP and initial study to tenants and property owners within 300 feet of the project site and sent email notifications to neighborhood groups and individuals that requested project notifications from the planning department. In addition to English, the planning department translated the notice of availability into Chinese, Spanish, Filipino, and Vietnamese. The planning department mailed the notice of availability in all four languages to tenants and property owners within 300 feet of the project site, posted these notices on the planning department's environmental review webpage, and filed the notice with San Francisco County Clerk's office. The planning department also published a newspaper advertisement in the San Francisco Examiner on March 9, 2022, announcing the opportunity for public comment on the project and providing notification of the project's virtual public scoping meeting.

The planning department held a virtual public scoping meeting on March 30, 2022, at 6:00 p.m., with options for joining by phone (toll-free) or computer. The purpose of the scoping meeting was to inform the public about the proposed project, explain the environmental review process, and provide an opportunity for the public to make comments and express concerns related to the project's environmental issues. There were no comments provided at the public scoping meeting.

During the review and comment period, interested parties submitted comments to the planning department, as summarized in Table 1.C-1. In preparing this draft EIR, the planning department considered the comments made by the public and agencies that relate to environmental issues and are relevant under CEQA. Comments on the NOP that pertain to environmental issues related to potential physical environmental impacts of the proposed project are addressed and analyzed throughout this draft EIR or were previously addressed in the project's initial study (circulated with the NOP). Table 1.C-1 lists the commenter and indicates the section(s) of the initial study or draft EIR where each comment is addressed.

Table 1.C-1 Summary of Scoping Comments

Commenter	Summary of Comment	Draft EIR and/or Initial Study Section
	Agencies	
California Air Resources Board *(Robert Krieger, Branch Chief)*	• Prepare an HRA that accounts for all potential cumulative health impacts and cancer risks from operation and construction. • Model air pollutant emissions and consider recommended design measures if the proposed project would involve use of trucks and trailers equipped with TRUs. • Prepare the analysis using the latest OEHHA guidance, the air board's Hot Spots Analysis and Reporting Program, and the air board's latest 2021 Emission Factors model. • Evaluate the existing baseline (present conditions), future baseline (full buildout year, without the proposed project), and future year with the proposed project as part of the HRA.	• Section 3.D, Air Quality • Appendix F, Air Quality Supporting Information
Bay Area Air Quality Management District (*Gregg Nudd, Deputy Air Pollution Control Officer*)	• Use a conservative significance threshold to evaluate impacts because the Bayview Hunters Point community is currently cumulatively impacted with air pollution, which makes additional air pollution a potentially significant localized impact. • Evaluate cumulative health risk impacts of TACs and $PM_{2.5}$ emissions on sensitive receptors. • Evaluate all feasible onsite and offsite mitigation measures to minimize air quality and greenhouse gas emissions impacts. • Consider and evaluate example emission reduction measures. • Evaluate the proposed project's consistency with the air district's 2017 Clean Air Plan measures. • Consider tools and resources provided by the air district to assist lead agencies. • Acknowledge that certain aspects of the proposed project may require a permit from the air district.	• Chapter 2.0, Project Description • Section 3.D, Air Quality • Appendix F, Air Quality Supporting Information
California Department of Transportation (*Mark Leong, District Branch Chief*)	• Reduce post-project surface runoff in accordance with the City and County of San Francisco's stormwater management requirements and design guidelines. Caltrans will review plans, reports, and calculations demonstrating that runoff is being reduced. • Evaluate utilities impacts in Caltrans rights-of-way and confirm continued access for providers. • Discuss the role and responsibilities of the lead agency in implementing mitigation measures. • Confirm that Americans with Disabilities Act compliance is met for any Caltrans facilities affected by the proposed project.	• Chapter 1.0, Introduction • Chapter 2.0, Project Description • Section 3.B, Transportation and Circulation • Appendix B, Initial Study, Section E.16, Hydrology and Water Quality • Appendix B, Initial Study, Section E.12, Utilities and Service Systems

Commenter	Summary of Comment	Draft EIR and/or Initial Study Section
	• Maintain bicycle and pedestrian access during construction. • Acknowledge that an encroachment permit is required for work in Caltrans rights-of-way.	
Native American Heritage Commission (*Cody Campagne, Cultural Resources Analyst*)	• Follow Assembly Bill 52 and Senate Bill 18 tribal consultation procedures. • Consult with tribes as early as possible. • Consider example mitigation measures to avoid or minimize significant adverse impacts to tribal cultural resources, if feasible.	• **Appendix B,** Initial Study, **Section E.3,** Cultural Resources • **Appendix B,** Initial Study, **Section E.4,** Tribal Cultural Resources
	Organizations	
Bayview Hunters Point Environmental Justice Response Task Force *(Bradley Angel)*	• Request a 30-day extension of the NOP comment period and ask the planning department to provide a presentation to the Bayview Hunters Point Environmental Justice Response Task Force.[1] • Initial study and project description are vague and lack sufficient detail. • Consider all cumulative impacts from multiple pollution sources and other environmental, health, and socioeconomic indicators. • Proposed project would have unavoidable air quality impacts. • Consider environmental justice and civil rights impacts of the proposed project. • Conduct meaningful civic engagement.	• **Chapter 1.0,** Introduction • **Chapter 2.0,** Project Description • **Section 3.A,** Environmental Setting, Impacts, and Mitigation Measures • **Section 3.D,** Air Quality • **Appendix B,** Initial Study • **Appendix F,** Air Quality Supporting Information
The SF Market *(Michael Janis, General Manager)*	• Address potential impacts on SF Market resulting from truck and other vehicle movements generated by activities associated with construction and operations of the proposed project. • Study pedestrian safety and pedestrian conflicts with traffic generated by the proposed project in the EIR. • Require a transportation demand management plan and collaboration with SF Market in its preparation.	• **Chapter 2,** Project Description • **Section 3.B,** Transportation and Circulation
United Food and Commercial Workers Union Local 5 and International Brotherhood of Teamsters Joint Council 7 *(Mark R. Wolfe & Associates)*	• Identify any prospective tenants or occupants of the proposed project, including a description of their business operation; and note whether tenants may include manufacturing, distribution, repair, warehousing, or other uses not permitted under the current zoning classification.[2] • Identify the number and type of diesel trucks expected to travel to and from the site (EMFAC vehicle class with fleet percent diesel) and the frequency of travel on an average daily and peak-hour basis. • Identify the number of top-mounted refrigeration units anticipated to be included among this number, with estimates of diesel engine idle times. • Identify the daily and peak-hour trip generation rates for each expected occupant/user of the site.	• **Chapter 2,** Project Description • **Section 3.B,** Transportation and Circulation • **Section 3.C,** Noise and Vibration • **Section 3.D,** Air Quality • **Appendix B,** Initial Study, **Section E.2,** Population and Housing • **Appendix D,** Transportation Supporting Information • **Appendix F,** Air Quality Supporting Information

Commenter	Summary of Comment	Draft EIR and/or Initial Study Section
	• Identify the number, type, and engine classification of all construction equipment and construction vehicles expected, including expected duration of operation for each. • Identify expected truck travel/ delivery routes and clearly identify the streets that will be used by parcel delivery/last-mile vehicles. • Provide an estimate of the existing ambient health risks, reflected as the number of excess cancers per one million individuals, at the nearest residential receptor locations—which appear to be on Oakdale Avenue to the south.	
United Food and Commercial Workers Union Local 5 and International Brotherhood of Teamsters Joint Council 7 *(Mark R. Wolfe & Associates)* (Cont'd)	• Study existing ambient noise levels at the closest residential receptor location, with an analysis of noise impacts from both construction of the proposed project and its operational phase. • Analyze effects on the potential displacement of opportunities for housing development, including affordable housing in the Bayview neighborhood.[3]	
	Individuals	
Sue Hestor	• Address traffic disruption from cars driven by residents, transportation network companies, and parcel delivery services.	Section 3.B, Transportation and Circulation
Dennis Hong	• Provide a hard copy of the initial study to the commenter.	N/A; hard copy provided on March 31, 2022

Notes:

1 In response to this request, planning department staff presented the scoping meeting presentation to the Bayview Hunters Point Environmental Justice Task Force on April 20, 2022. Additionally, the planning department accepted the Task Force's April 21, 2022, comments on the NOP and initial study; these comments are summarized in this table.

2 The project sponsor has not identified any prospective tenants that would occupy the proposed project. However, Chapter 2 provides the reader with a description of the main types of PDR uses that could occur on the site under the proposed project, defines these uses, and provides examples of each use. Chapter 2 also presents a tenant use mix that is analyzed in this draft EIR and reflects the types of tenants that are likely to occur based on the project sponsor's familiarity with leasing trends for PDR facilities in San Francisco and the Bay Area and that represent reasonably conservative assumptions about possible tenants' environmental impacts.

3 Residential uses, including senior housing and group housing, are not permitted in PDR zoned districts.

air district = Bay Area Air Quality Management District
Caltrans = California Department of Transportation
air board = California Air Resources Board
EIR = environmental impact report
HRA = health risk assessment
NOP = notice of preparation
OEHHA = Office of Environmental Health Hazard Assessment
PDR = production, distribution, and repair
$PM_{2.5}$ = particular matter equal to or less than 2.5 microns in diameter
TAC = Toxic Air Contaminant
TRU = Transport Refrigeration Unit

1.C.2 Draft EIR Public Review and Opportunities for Public Participation

The CEQA Guidelines and San Francisco Administrative Code chapter 31 encourage public participation in the planning and environmental review processes. The city will provide opportunities for the public to present comments and concerns regarding this EIR and its CEQA process. These opportunities will occur during the public review and comment period as well as at a public hearing before the San Francisco Planning Commission (planning commission).

The draft EIR is available for public review and comment on the planning department's "Environmental Review Documents" web page (https://sfplanning.org/environmental-review-documents). A USB or paper copy of the draft EIR will be mailed upon request. Please contact the EIR Coordinator, Elizabeth White, at CPC.SFGatewayProject@sfgov.org or 628.652.7557 to make a request.

The public review period for the draft EIR is from August 3, 2023, through September 18, 2023. The planning commission will hold a public hearing during the 47-day public review and comment period to solicit public comment on the information presented in this draft EIR. The planning commission public hearing will be held on September 7, 2023, beginning at 1 p.m. or later. Members of the public may attend this hearing in person at San Francisco City Hall or participate remotely using videoconferencing technology. Additional information may be found on the planning department's website at https://sfplanning.org/hearings-cpc-grid.

In addition, governmental agencies, interested organizations, and other members of the public are invited to submit written comments on the adequacy and accuracy of the draft EIR during the public review period. Written public comments may be submitted by mail to:

San Francisco Planning Department
Attention: Elizabeth White, Environmental Coordinator
49 Van Ness Avenue, Suite 1400
San Francisco, CA 94103

Or by email to:

CPC.SFGatewayProject@sfgov.org

Comments are most helpful when they address the environmental analysis itself or suggest specific alternatives and/or additional measures to mitigate the significant environmental impacts of the proposed project.

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

1.C.3 Responses to Comments Document and Final EIR

Following the close of the public review and comment period, the planning department will prepare and publish a document entitled "Responses to Comments on the draft EIR." This document will contain copies of all written, email, and recorded verbal comments received on the draft EIR, as well as the planning department's written responses to substantive comments and any necessary revisions to the draft EIR. This responses to comments document, together with the draft EIR, will constitute the final EIR.

Not less than 10 days prior to the planning commission hearing to consider certification of the final EIR, the final EIR will be made available to the public and any board(s), commission(s) or department(s) that will carry out or approve the proposed project. The planning commission, in a noticed public meeting, will consider the documents and will certify the final EIR, provided it (1) was completed in compliance with CEQA; (2) was presented to the planning commission, which reviewed and considered the information contained in the final EIR prior to approving the proposed project; and (3) reflects the lead agency's independent judgment and analysis.

CEQA requires agencies to neither approve nor implement a project unless the project's significant environmental impacts have been reduced to a less-than-significant level, thereby essentially eliminating, avoiding, or substantially lessening the potentially significant impacts of the proposed project, except when certain findings are made. If an agency approves a project that would result in the occurrence of significant adverse impacts that cannot feasibly be mitigated to less-than-significant levels (that is, significant and unavoidable impacts), the agency must state the reasons for its action in writing; demonstrate that mitigation is infeasible, based on the EIR or other information in the record; and adopt a Statement of Overriding Considerations explaining in writing the specific economic, social, or other considerations that it believes would make those significant effects acceptable.

1.C.4 Mitigation Monitoring and Reporting Program

At the time of project approval, CEQA and the CEQA Guidelines require agencies to adopt a mitigation monitoring and reporting program and to make that program a condition of project approval, to mitigate or avoid significant impacts on the environment (CEQA section 21081.6; CEQA Guidelines section 15097). This draft EIR identifies and presents mitigation measures that would form the basis of such a mitigation monitoring and reporting program. In addition, mitigation measures that were recommended in the initial study to reduce the environmental impacts of the proposed project will be included in the mitigation monitoring and reporting program.

1.D Scope of the EIR

1.D.1 Topics Addressed in this EIR

Pursuant to CEQA Guidelines section 15143, a lead agency may focus an EIR's discussion on specific issue areas where significant impacts on the environment may occur: "[e]ffects dismissed in an Initial Study as clearly insignificant and unlikely to occur need not be discussed further in the EIR unless the Lead Agency subsequently receives information inconsistent with the finding in the Initial Study. A copy of the Initial Study may be attached to the EIR to provide the basis for limiting the impacts discussed." The initial study for the proposed project is included in Appendix B of this draft EIR. As discussed above, the initial study was published with the NOP and circulated for a 30-day public review period.

Pursuant to CEQA Guidelines section 15063(c)(3), and based on its review of existing information and the initial study completed for the proposed project, the city determined that the proposed project would have significant or potentially significant impacts in the following resource areas that require further analysis and are therefore discussed in this draft EIR:

- Transportation and Circulation
- Noise and Vibration
- Air Quality

The environmental analysis for these topics is presented in Chapter 3 of this draft EIR.

1.D.2 Topics Addressed in the Initial Study

For all the issues listed below, the information and analysis presented in the initial study provides substantial evidence for the conclusions that 1) CEQA standards triggering preparation of further environmental review do not exist for these issues; and 2) impacts under these topics would be less than significant, or less than significant with incorporation of appropriate mitigation measures identified in the initial study. Topics addressed in the project's Initial Study are listed below by environmental topic, in accordance with San Francisco Administrative Code chapter 31, which directs the planning department to identify the environmental effects of a project, using as its base the environmental checklist form set forth in the CEQA Guidelines, Appendix G, as modified by the department. These topics are, however, analyzed in the initial study for full disclosure of the environmental determination, and the analysis is included in Appendix B of this draft EIR.

- Land Use and Planning
- Population and Housing
- Cultural Resources
- Tribal Cultural Resources
- Greenhouse Gas Emissions
- Wind
- Shadow
- Recreation
- Utilities and Service Systems
- Public Services
- Biological Resources
- Geology and Soils
- Hydrology and Water Quality
- Hazards and Hazardous Materials
- Mineral Resources
- Energy
- Agricultural and Forestry Resources
- Wildfire

1.E Organization of the Draft EIR

This draft EIR is divided into the following chapters and appendices:

- **Summary.** This chapter summarizes the draft EIR by providing a concise overview of the proposed project and expanded streetscape variant, including the project description and requisite approvals; the environmental impacts that would result from implementation of the proposed project and expanded streetscape variant; mitigation measures identified to reduce or avoid these impacts; alternatives to the proposed project; and areas of controversy and issues to be resolved.

- **Chapter 1, Introduction.** This chapter includes a discussion of the purpose of this EIR; the environmental review process; the comments received on the scope of the draft EIR; opportunities for public participation in the environmental review process; and the organization of the draft EIR.

- **Chapter 2, Project Description.** This chapter presents a detailed discussion of the location, setting, and characteristics of the project site; the project objectives; the project features and features of the expanded streetscape variant; and environmental review requirements.

- **Chapter 3, Environmental Setting, Impacts, and Mitigation Measures.** This chapter describes the existing environmental setting and regulatory framework, as well as the direct, indirect, and cumulative impacts of the proposed project and expanded streetscape variant. Mitigation measures are identified, where feasible, to minimize significant environmental effects of the proposed project and expanded streetscape variant. Each environmental topic is discussed in a separate section of this chapter.

- **Chapter 4, Other CEQA Considerations.** This chapter describes the growth-inducing impacts of the proposed project and the expanded streetscape variant, the significant and unavoidable environmental impacts of each, and the significant irreversible environmental changes that would result from implementation of the project or expanded streetscape variant.

- **Chapter 5, Alternatives.** This chapter describes a reasonable range of alternatives to the proposed project and expanded streetscape variant; evaluates the extent to which those alternatives could substantially lessen the significant impacts of the proposed project or expanded streetscape variant while attaining most of its objectives; and compares the effects of the alternatives to those of the proposed project and expanded streetscape variant. This section also identifies the environmentally superior alternative, as required by CEQA.

- **Chapter 6, Report Preparers.** This chapter presents the persons involved in preparing this document.

- **Appendices.** Appendices include:
  - Appendix A, Notice of Preparation of an Environmental Impact Report and Comments Received
  - Appendix B, Initial Study
  - Appendix C, Project Sponsor-Prepared Project Description Supporting Information
  - Appendix D, Transportation Supporting Information
  - Appendix E, San Francisco Gateway Noise Technical Report
  - Appendix F, Air Quality Supporting Information

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CHAPTER 2
PROJECT DESCRIPTION

2.A Introduction

The project sponsor, Prologis, L.P., proposes to redevelop two parcels in a core industrial area of the city. The proposed project would construct two new multi-story PDR[7] buildings. The project site is in the Bayview neighborhood. The site consists of two parcels that combine for a total gross site area of approximately 743,800 square feet (17.1 gross total acres), including Selby Street between Kirkwood and McKinnon avenues and portions of the other surrounding streets. Four one-story, metal clad buildings currently occupy approximately 448,000 gross square feet[8] of the project site. The existing warehouse buildings were built by the U.S. military circa 1943, and were transferred to private ownership sometime in the 1970s. Since then, the project site has contained a PDR complex. When the project's environmental analysis began in 2017, onsite uses included automotive storage, fleet management, general storage, food-related storage, temporary storage, and vacant spaces. Beginning in August 2020, parcel delivery service now occupies two buildings at the project site. One of the buildings is used for vehicle staging, and the other is used for warehousing of goods and loading of delivery vehicles.

The project sponsor proposes to demolish the four existing buildings on the project site and build a flexible PDR space that could accommodate an evolving mix of users or tenants for a 100-year period or longer by constructing two three-story buildings (plus active roof): buildings A and B. Each building would be approximately 97 feet tall from curb level to the highest point of the active roof level. Roof projections on each building would be limited to the stair and elevator rooftop penthouse, which would provide access and a solar array that would also screen the roof while generating electricity for onsite use. Including these elements, the maximum building height would be approximately 115 feet. The two new buildings would total approximately 2,160,000 gross square feet. This would result in 1,712,000 gross square feet of net new PDR and PDR support space on site. See Table 2.D-1 (p. 2-11) for more information on project characteristics. The proposed buildings would exceed what is allowed in the 65-J height and bulk district in which the project site is located and would require approval of a height and bulk district map amendment. The project sponsor would seek approval of an ordinance to allow proposed modifications to the existing height and bulk district and to establish a new special use district designation modifying the PDR-2 zoning.

Each building would include a combination of enclosed and partially enclosed spaces, with a multi-level vehicular system (comprising staging, circulation, and logistic yard areas) serving each level. In both buildings, all three levels of the PDR space would have direct vehicular access via a one-way ramp system for vehicles as large as tractor trailers. The roof level would provide a solar array and a screened, open-air multipurpose deck that could be used for parking and/or material and vehicle staging. The proposed project would construct new sidewalks along the site's perimeter and would create seven new curb cuts for access to each new building. The new sidewalks would be designed in accordance with San Francisco's Better Streets Plan standards for industrial roads.

[7] PDR use is a grouping of uses that includes, but is not limited to all industrial and agricultural uses, ambulance services, animal hospital, automotive service station, automotive repair, automotive wash, arts activities, business services, cat boarding, catering service, commercial storage, kennel, motor vehicle tow service, livery stable, parcel delivery service, public utilities yard, storage yard, trade office, trade shop, wholesale sales, and wholesale storage.

[8] Square footages presented for the existing and proposed uses are approximate.

Given that there are no identified tenants at this time, the draft EIR describes and analyzes a mix of PDR uses that are likely to occur based on the project sponsor's familiarity with leasing trends for PDR facilities in San Francisco and the Bay Area. These PDR uses include manufacturing and maker space;[9] parcel delivery service, including last-mile delivery;[10] and wholesale and storage space. In addition, a combined total of approximately 8,400 gross square feet of ground-floor retail space is analyzed in buildings A and B. See Table 2.D-2 (p. 2-26) for more detailed information on the San Francisco Gateway Project's analyzed tenant use mix. For the purpose of this EIR, the term "proposed project" means the construction and operation of the San Francisco Gateway facility, the operation of which is based on the analyzed tenant use mix, and related streetscape improvements. See Section 2.D.6 (p. 2-25) and Table 2.D-2 (p. 2-26) for further discussion of the analyzed tenant use mix. This draft EIR also analyzes an expanded streetscape variant that would include improvements from the center line of each adjacent street outward to the property line of the adjacent lots.

2.B Project Sponsor Objectives

Project objectives define the project's intent, explain the project's underlying purpose, and facilitate the formation of project alternatives evaluated in this draft EIR. The project sponsor's underlying objective is to develop a modern, flexible, and durable PDR facility for a diverse and evolving range of uses in a central urban environment. In creating such a project, the project sponsor's more specific objectives are to:

- Advance progress toward the City's long-standing goals to preserve, upgrade, and expand PDR space, including those reflected in the General Plan,[11] Bayview Hunters Point Area Plan,[12] Five-Point Plan for PDR (2012),[13] Make to Manufacture Advanced Manufacturing Playbook (2016),[14] Proposition X (2016),[15] and Economic Recovery Task Force Report (2020).[16]

- Replace functionally outdated PDR space on the project site with first- and best-in-class facilities and replenish the supply of PDR space in the City that has been displaced by other development.

- Redevelop underutilized property to make efficient use of existing utilities, circulation, and complementary uses in the surrounding PDR-2 zoning district.

- Use innovative design at a size and scale that accommodates a range of large and small PDR uses, and can adapt over time to different industries and market needs, including anticipated growing demand for parcel delivery and/or last-mile delivery services, in an economically feasible way.

- Site PDR uses in a dense infill setting to create employment near housing and reduce vehicle miles traveled for potential distribution uses by locating such uses in San Francisco proximate to multiple freeways, rather than traditional suburban locations.

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[9] Manufacturing and maker space is defined as a light industrial use that provides for the fabrication or production of goods, by hand or machinery, for distribution to retailers, wholesalers, or the public.

[10] Last-mile delivery is defined as the movement of goods from a transportation hub to the final delivery destination (i.e., typically a personal residence or business).

[11] San Francisco Planning Department, *San Francisco General Plan*, https://generalplan.sfplanning.org/.

[12] San Francisco Planning Department, *Bayview Hunters Point Area Plan*, https://generalplan.sfplanning.org/Bayview_Hunters_Point.htm.

[13] San Francisco Office of Economic and Workforce Development (2012), Five-Point Plan for PDR, https://sfmayor.org/article/mayor-lee-supervisor-cohen-celebrate-completion-first-phase-wholesale-produce-market].

[14] The San Francisco Mayor's Office of Civic Innovation, the San Francisco Office of Economic and Workforce Development and SFMade, *Make to Manufacture, Advanced Manufacturing Playbook*, 2016), https://sfmade.org/wp-content/uploads/Make_to_Manufacture.pdf.

[15] San Francisco Planning Department, *Proposition X*, 2016, https://sfplanning.org/sites/default/files/documents/legis/code-summaries/60698.pdf.

[16] The City and County of San Francisco, *Economic Recovery Task Force Report,* 2020, https://www.onesanfrancisco.org/sites/default/files/inline-files/FNL_70_EconomicRecoveryTaskForceReport_1020_ENG_Screen.pdf.

- Provide a positive fiscal impact by creating jobs at a variety of experience levels, including career-building and advancement opportunities, enhancing property values, generating property taxes, and introducing workers that will support direct and indirect local business growth in the Bayview.
- Boost resiliency in the local supply chain and disaster response capabilities by providing large-scale, adaptable facilities that can be rapidly mobilized in a central location.
- Using carbon-efficient construction techniques, develop a project with infrastructure that facilitates carbon-efficient vehicle fleets and operations as cost-effective technology becomes available.
- Create a safe and compelling streetscape, consistent with Better Streets standards, with green infrastructure and active ground floors, accessible by multiple modes of transportation, including bicycles and pedestrians.

2.C Project Location and Site Characteristics

As shown in Figure 2.C-1, the approximately 743,800-gross-square-foot (17.1 gross total acres), rectangular project site is in the Bayview neighborhood of San Francisco, California. The street addresses of the existing buildings are 749 Toland Street and 2000 McKinnon Avenue. The project site consists of assessor's block 5284A, lot 008, and block 5287, lot 002, which are occupied by four structures totaling approximately 448,000 square feet of PDR space, as well as portions of the surrounding streets and Selby Street. The project site is relatively flat and rectangular. As shown in Figure 2.C-2 and Figure 2.C-3 (pp. 2-5 and 2-6), the project site is fully developed, is covered in impermeable surfaces, and contains a small amount of vegetation.

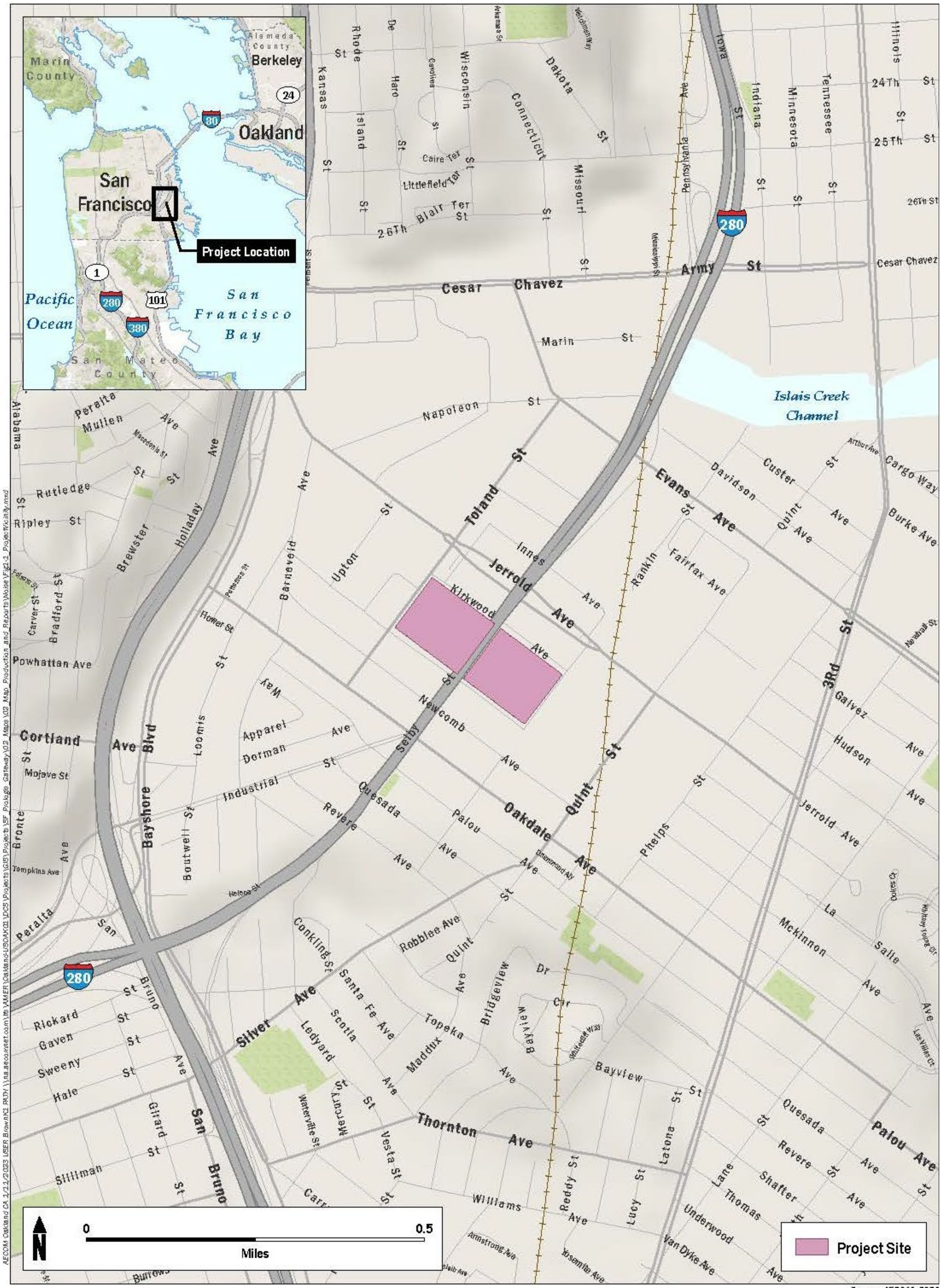
The project site is bounded by Kirkwood Avenue to the north, Rankin Street to the east, McKinnon Avenue to the south, and Toland Street to the west. An elevated portion of Interstate 280 (I-280) bisects the project site, running in a north-south direction above the existing Selby Street right-of-way; the uppermost roadbed deck is approximately 55 feet above-grade. The project site parcels owned by the project sponsor include portions of the surrounding streets and Selby Street.

2.C.1 Existing Land Uses

The project site is developed and is currently covered by buildings or paved and gravel surfaces. The existing buildings are constructed of metal siding over a wood column and truss structure. There are no sidewalks surrounding the project site, and the site does not contain any *curb cuts*,[17] but vehicle access is designated at four access points. The entire site is fenced in and level with the surrounding road base. Additionally, the project site does not contain any street trees, only a small amount of vegetation and no open space. An aerial California Department of Transportation (Caltrans) easement for I-280 is adjacent to both lots; the existing easement would be maintained.

[17] A "curb cut" is an opening in the curb created to allow a smooth, slightly sloped transition from the adjoining street to the sidewalk to facilitate movement and accessibility by vehicles, strollers, and pedestrians.

Figure 2.C-1 Project Location



Source: AECOM 2021

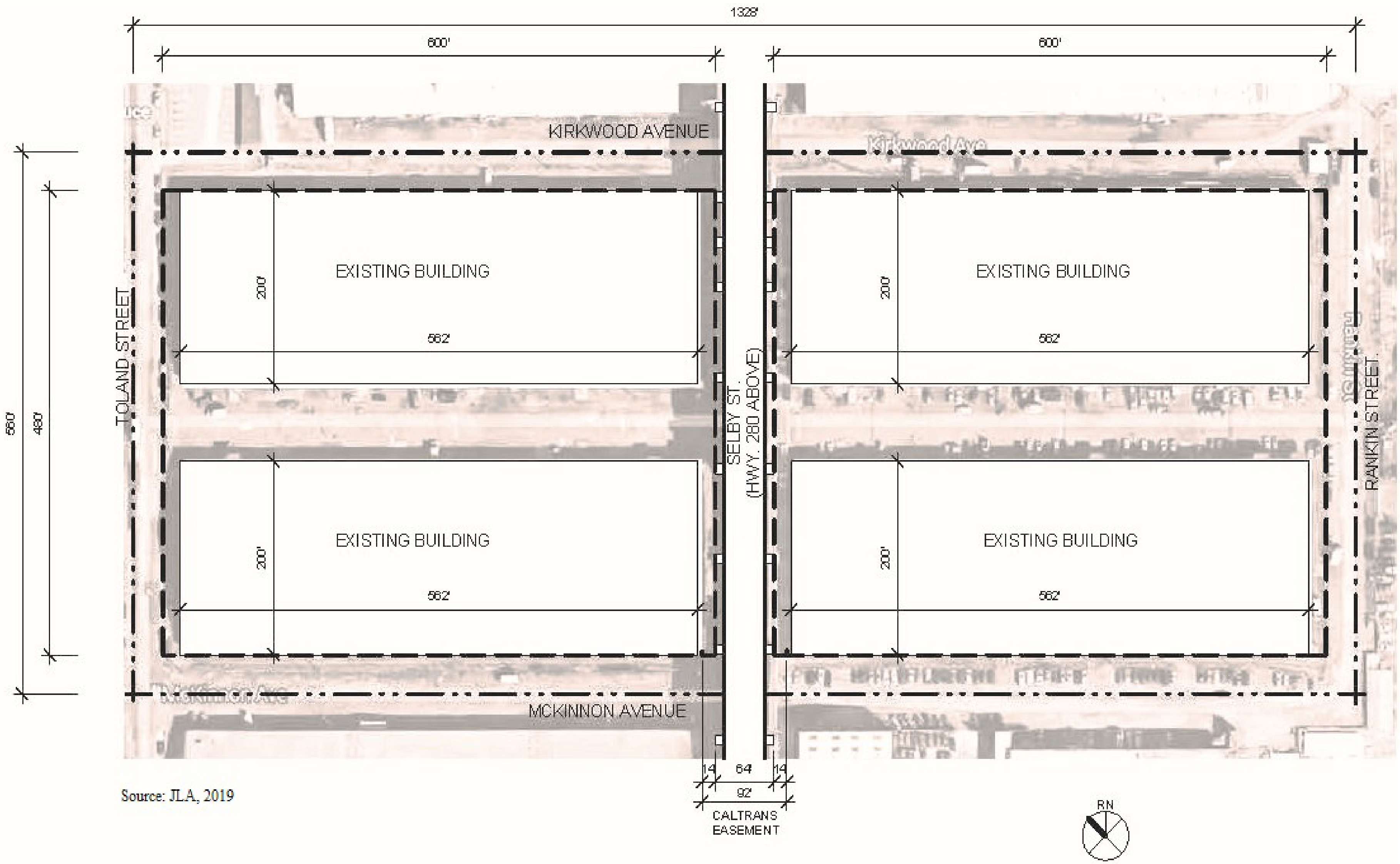
Figure 2.C-2 Aerial View of Project Vicinity

Legend

Project Site:
749 Toland Street and 2000 McKinnon Avenue

Source: JLA, 2017

Figure 2.C-3 Existing Site Plan



Source: JLA, 2019

The project setting sections of the draft EIR and technical analyses reflect the uses at the project site when the environmental evaluation process began in 2017; Table 2.C-1 lists the uses that existed at the project site in 2017. These uses included automotive storage, fleet management, general storage, food-related storage, temporary storage, and vacant spaces. In August 2020, the project sponsor submitted building permit applications for an interim use on the project site.[18] The interim use is a parcel delivery service focusing on last-mile e-commerce delivery, and it occupies one-half of the site (the two buildings west of I-280). One of the two buildings is used for vehicle staging, and the other is used for warehousing of goods and loading of delivery vehicles. This use is temporary in nature and would ultimately be replaced by the proposed project, if it were to be approved.

Table 2.C-1 Project Site Uses (2017 Conditions)

Use	Area (square feet)[1]
Automotive storage and fleet management	141,400
General storage (for contractors, supply companies, etc.)	184,400
Food-related storage and wholesale (multiple tenants)	77,100
Temporary storage	35,700
Vacant	9,400
Total	**448,000**

Source: Prologis, L.P., 2019

Note:

1 Project site uses (2017 conditions) have been rounded to the nearest 100 square feet.

2.C.2 Land Use and Zoning

The project site is in the PDR-2 zoning district in the Bayview Hunters Point Area Plan. San Francisco Planning Code (planning code) section 210.3 states that the intent of the PDR-2 zoning district is to "encourage the introduction, intensification, and protection of a wide range of light and contemporary industrial activities," including industrial activities in enclosed structures, in partially enclosed structures, and in open areas that "may require trucking activities multiple times per day, including trucks with up to 18 wheels or more, and occurring at any time of the day or night."

The project site is in the 65-J height and bulk district (65 feet maximum height). The permitted floor area ratio[19] in the PDR-2 zone is 5:1. The existing floor area ratio of the project site is approximately 0.8:1.

2.C.3 Existing Parking, Circulation, and Loading

The project site currently has two approximately 600-foot-long by 80-foot-wide areas that are used for a truck court and parking. Adjacent to the project site, two sections of Toland Street and two sections of Rankin Street, each approximately 200 feet long, are not striped and do not have signed parking areas. These areas are presumed to be parallel on-street parking spaces. Adjacent to the site, two sections of

18 San Francisco Building Department Permit #202008272769 (Building 417 shell) and San Francisco Building Department #202008272770 (Building 418 shell).

19 "Floor area ratio" is the gross floor area of a building or buildings on a zoning plot, divided by the area of the zoning plot. The floor area ratio is calculated to assist in determining whether the mass and scale of a project is compatible with the surrounding neighborhood. For the purpose of this calculation, rights-of-way have not been included in the total gross site area, and the open roof area has not been included in the gross floor area of the building.

Kirkwood Avenue and one section of McKinnon Avenue, each approximately 600 feet long, are also not striped, do not have signed parking areas, and are presumed to be parallel on-street parking spaces. Total on-street parking capacity along the project site perimeter is estimated to be approximately 250 to 310 standard vehicles (approximately 50,000 square feet).[20]

The project site is served by one San Francisco Municipal Railway (Muni) light rail line (approximately four blocks to the east) and four bus lines. Transit stops in the project vicinity include stops for Muni bus lines 23-Monterey, 24-Divisadero, and 9-San Bruno, and San Mateo County Transit District bus line 292. The 23-Monterey Muni line operates immediately adjacent to the project site, with the closest stop at the corner of Toland Street and Oakdale Avenue, and the other bus lines operate within approximately four blocks of the site.[21] The Third Street light rail line lies approximately 2,000 feet east of the project site; the closest stops are Kirkwood/La Salle, Hudson/Innes, and Oakdale/Palou. The closest Bay Area Rapid Transit (BART) station is the 24th Street Mission Station, approximately 1.5 miles to the northwest. The Glen Park BART Station is approximately 2.5 miles to the southwest. The 22nd Street Caltrain Station is approximately 1.5 miles to the northeast.

United States Highway 101 (U.S. 101) and I-280 are the major regional roadways that serve the project site (Figure 2.C-4). Access to the project site is predominantly from Toland Street, from either the north or south. Toland Street provides connections to both Evans and Jerrold avenues north of the project site, and to Oakdale Avenue south of the site. These three main east-west connecting streets provide further connections to key city streets, and to the highway interchanges of U.S. 101 and I-280, both north and south of the project site.

Many occupants of the existing buildings use portions of the surrounding streets for both parking and movement of vehicles. The existing truck court and parking area serve as the primary vehicular staging area. This area provides space for loading and parking, both of which are organized in an informal manner. Additionally, Selby Street (below I-280) provides mid-site connectivity under the overpass.

Pedestrians use the surrounding streets and the truck court to access specific tenants of the current buildings. Bicycle circulation uses the same facilities as pedestrians and other vehicles. Offsite pedestrian circulation is limited. Bicycle circulation is also limited; the closest formal *class III bicycle lane*[22] is on Evans Avenue, five blocks to the north, and the closest *class II bicycle lane*[23] is on Oakdale Avenue, two blocks to the south. Connections to these two sets of bike lanes are provided via Toland Street.

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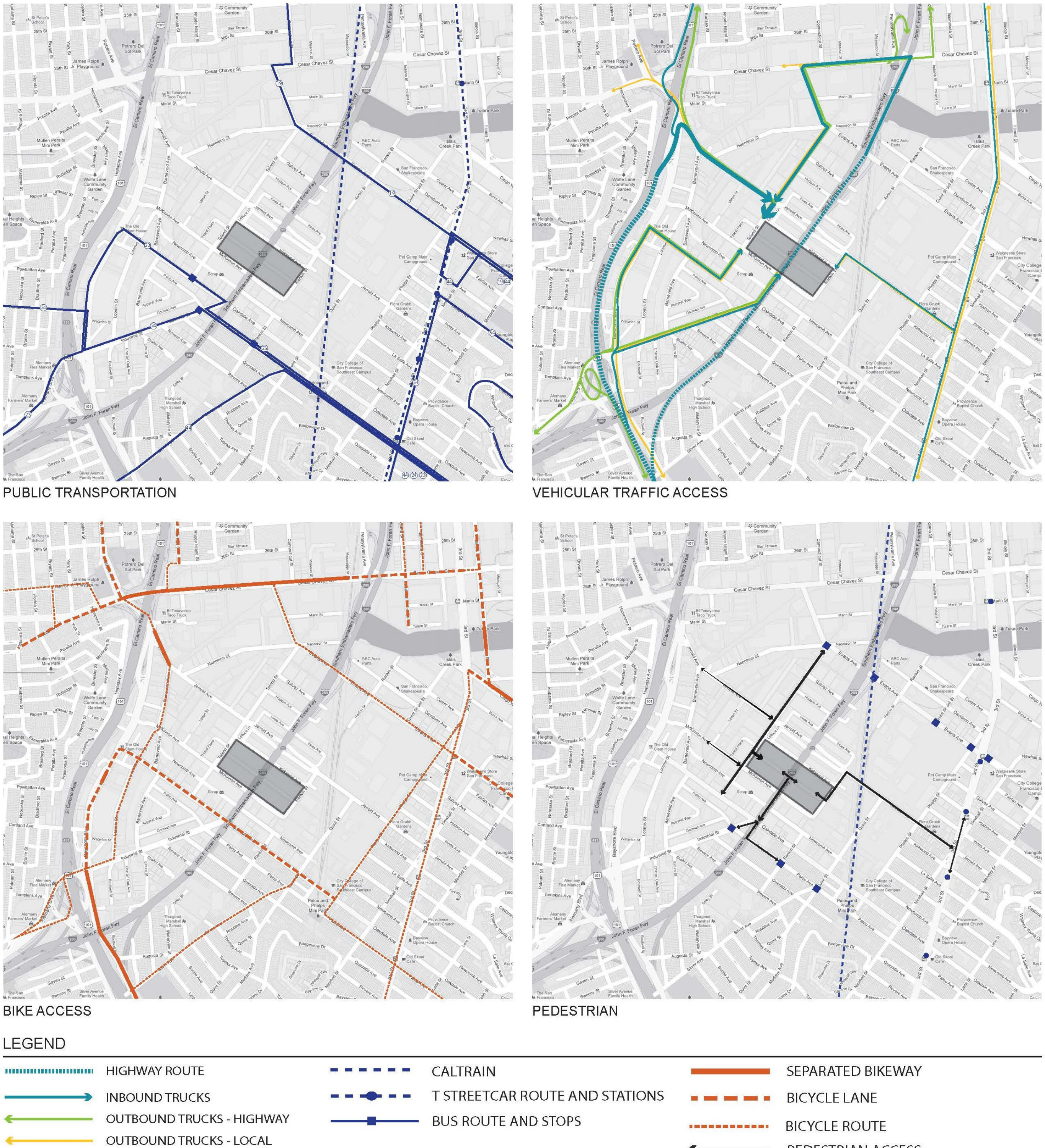
20 There are currently no posted limitations to street parking along the project site perimeter.

21 As part of the Palou Avenue Streetscape Improvement Project, the 23-Monterey Muni line was rerouted three blocks south, from Jerrold Avenue to Palou Avenue. Construction of this project was completed in spring 2020. See https://www.sfpublicworks.org/sites/default/files/Palou%20Avenue%20factsheet.pdf.

22 Class III bicycle lanes are signed bicycle routes that allow bicycles to share the travel lane with vehicles.

23 Class II bicycle lanes are bicycle lanes striped in the paved areas of roadways, and are established for the preferential use of bicycles.

Figure 2.C-4 Existing Access



Source: JLA, 2021

2.D Proposed Project

The proposed project would construct two new multi-story PDR buildings that would provide new PDR space in the industrial area of the Bayview neighborhood of San Francisco. Table 2.D-1 provides a summary of the proposed project's characteristics.

2.D.1 Proposed Project Characteristics and Site Plan

The proposed project would demolish the existing four single-story PDR buildings onsite and would construct two new three-story buildings (plus active roof), totaling approximately 2,160,000 gross square feet. Each building would have a maximum height of approximately 97 feet (115 feet with rooftop appurtenances included).[24] As depicted in Figure 2.D-1 (p. 2-12), the proposed building west of I-280 at 749 Toland Street is "building A," and the proposed building east of I-280 at 2000 McKinnon Street is "building B." As shown in Figure 2.D-1, buildings A and B would be approximately the same size, shape, and dimensions, and would be oriented similarly on site. Each of these two buildings would include a one-way ramp system designed to provide full-service, upper-level truck access and PDR spaces for its tenants. The proposed buildings would be taller than 65 feet; therefore, approval of a height and bulk district map amendment would be required for the proposed project. The proposed project would seek approval of an ordinance to allow proposed modifications to the existing height and bulk district and to establish a new special use district designation modifying the PDR-2 zoning.

Both building A and building B would include three levels of PDR space with direct access to vehicle circulation, logistics yards, and rooftop parking, vehicle staging, and storage. In addition, 8,400 gross square feet of ground floor retail space and 35,000 gross square feet of ground-floor maker space[25] would be included in the two buildings. The active roof would be a screened, open-air, multipurpose deck that could be used for materials staging and vehicle staging for box trucks, vans, and personal vehicles. Solar panels would be installed above the parking areas on the roof. Figure 2.D-2 through Figure 2.D-8 (pp. 2-13 through 2-19) provide additional information and a visual representation of the typical building levels. Specifically, floor plans for the proposed project are provided in Figure 2.D-3, Figure 2.D-5, and Figure 2.D-7 (pp. 2-14, 2-16, and 2-18).

As described above, the project site does not have any existing sidewalks or curb cuts. The proposed project would construct new sidewalks along the site's perimeter, including Selby Street, and would create seven new curb cuts for access to each new building. The new sidewalks would be designed in accordance with San Francisco's Better Streets Plan standards for industrial roads.

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[24] Pursuant to section 260(b)(1)(B) of the planning code, the mechanical and elevator penthouses are exempt from the planning code's height limits. However, these features are considered in the context of environmental review.

[25] The analyzed tenant use mix assumes all the maker and manufacturing space would be on the ground floor (i.e., level 1). However, this use could also be on levels 2 and 3 in the future. A description of maker space is presented in Section 2.D.2 (p. 2-20) and Figure 2.D-9 (p. 2-21)

Table 2.D-1 Project Characteristics

	Building A	Building B	Project Total
Site Characteristics			
Gross Site Area[1]	371,900 square feet (8.55 acres)	371,900 square feet (8.55 acres)	743,800 square feet (17.1 acres)
Length	560 feet by 660 feet	560 feet by 660 feet	Each lot: 560 feet by 660 feet
Building Characteristics			
Number of Buildings	1	1	2
Stories (plus active roof)[2]	4	4	4
Height	97 feet (115 feet maximum including rooftop appurtenances)		
Use	PDR (and other permitted) Uses		
Proposed Building	**Area (gross square feet)**	**Area (gross square feet)**	**Area (gross square feet)**
PDR (and other permitted) Uses	583,400	583,400	1,166,800
PDR Support Spaces			
Logistics Yard[3]	72,900	72,900	145,800
Vehicle Circulation[4]	147,750	147,750	295,500
Parking[5]	271,750	271,750	543,500
Retail	4,200	4,200	8,400
Total	**1,080,000**	**1,080,000**	**2,160,000**
Vehicle Parking Spaces	583	583	1,166
Vehicle Loading Spaces	36	36	72
Bicycle Parking Spaces[6]	56	56	112

Source: Prologis, L.P., 2022

Notes:

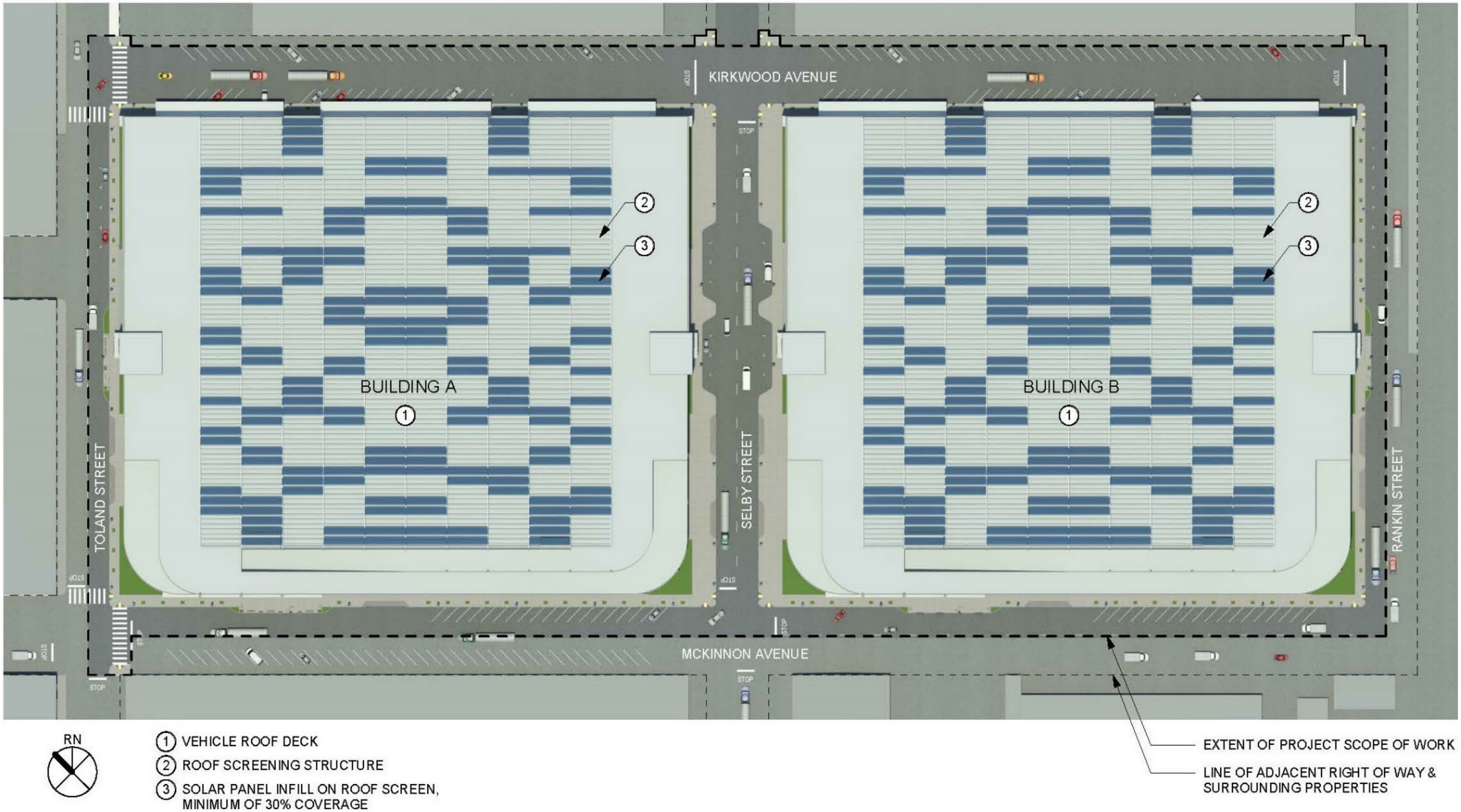
1. Total gross site area includes portions of the rights-of-way of the surrounding streets and Selby Street.
2. Fourth story is an active roof that consists of elevator and stair access structures, solar array, and a screened, open-air multi-purpose deck for parking and/or material and vehicle staging (see Figure 2.D-8, p. 2-19 for more details).
3. Logistics Yard includes space for vehicle maneuvering, staging, storage, and goods transfer.
4. Vehicle Circulation includes interior ramps and drive aisles.
5. Parking area includes 27,950 sf/building on the ground level and 243,800 sf/building on the roof level.
6. Bicycle parking: 100 *class I bicycle parking* spaces and 12 *class II bicycle parking* spaces. Class I bicycle parking spaces are spaces are in secure, weather-protected facilities intended for use as long-term, overnight, and workday bicycle storage by dwelling unit residents, nonresidential occupants, and employees. Class II bicycle parking spaces are bike racks in publicly accessible, highly visible locations and are intended for transient or short-term use by visitors, guests, and patrons to the building or use. Class II bike racks allow the bicycle frame and one wheel to be locked to the rack (with one U-shaped lock), and provide support to bicycles without damage to the wheels, frame, or components (planning code section 155.1).

No public open space is required or proposed for the project.

All numbers are rounded approximations.

PDR = production, distribution, and repair

Figure 2.D-1 Site Plan for the Proposed Project

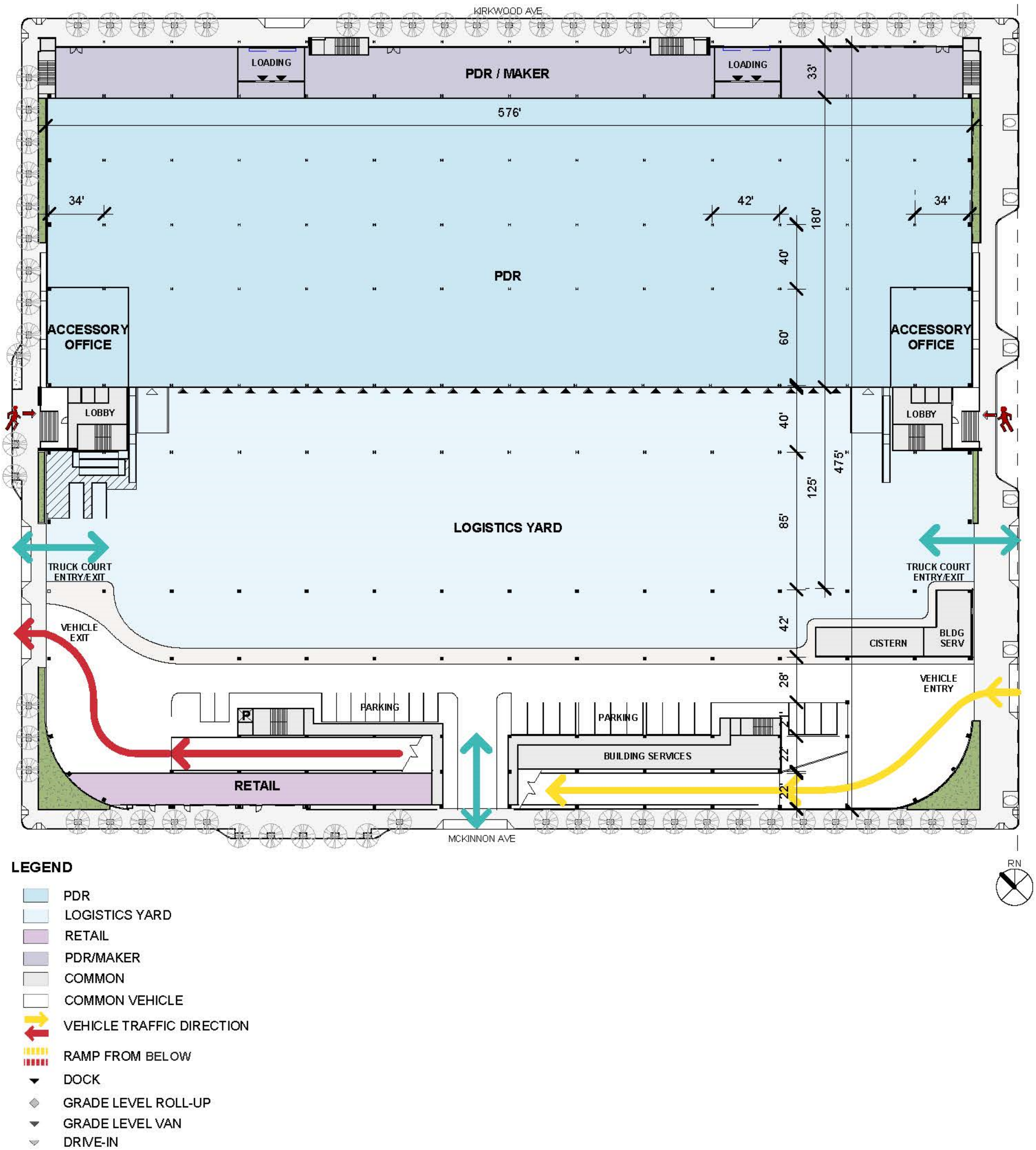


Source: JLA, 2022

Figure 2.D-2 Proposed Project – Three-Dimensional Illustration of Proposed Project (from Toland Street and McKinnon Avenue Looking East)

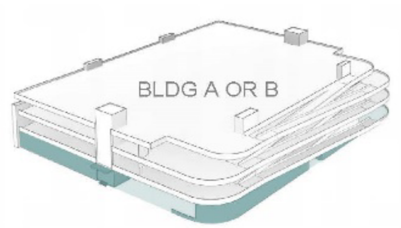
Source: JLA, 2021

Figure 2.D-3 Proposed Project Floor Plan – Level 1 (Buildings A and B)

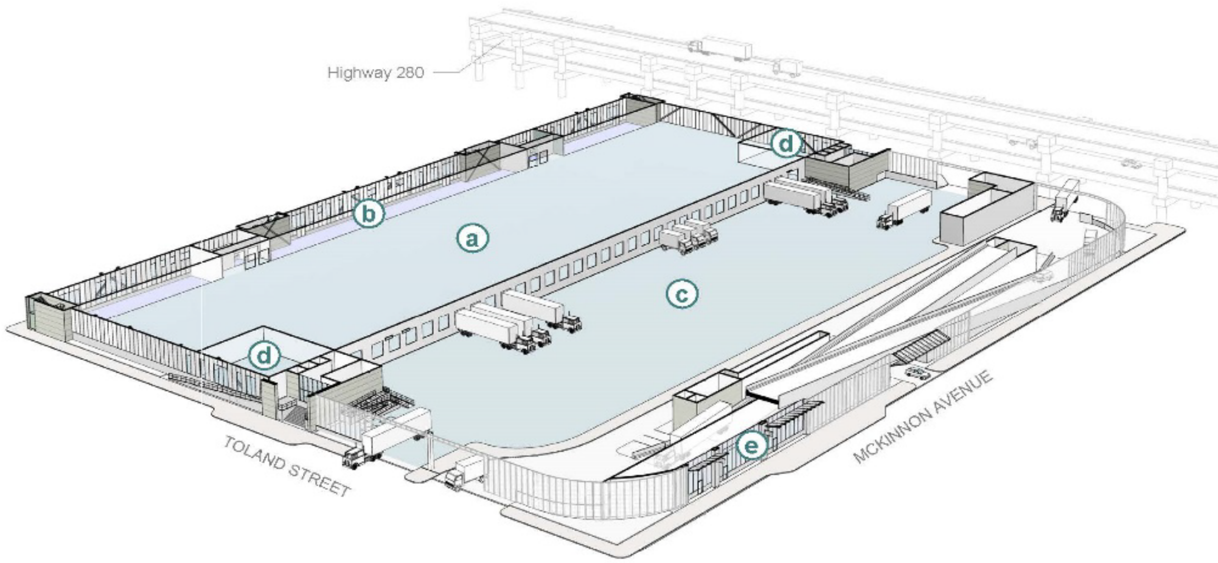


Source: JLA, 2022

Figure 2.D-4 Level 1 Description (Buildings A and B)



This level features dock-high warehouse space to serve a variety of PDR uses and street-oriented maker and retail spaces to activate the surrounding streetscape. Separate ramp access to and from the upper levels provides access to bring vehicles into the project staging areas.



(a) PDR
Dock-high space. 180' deep with a 24' clear height.

(b) PDR/Maker Space

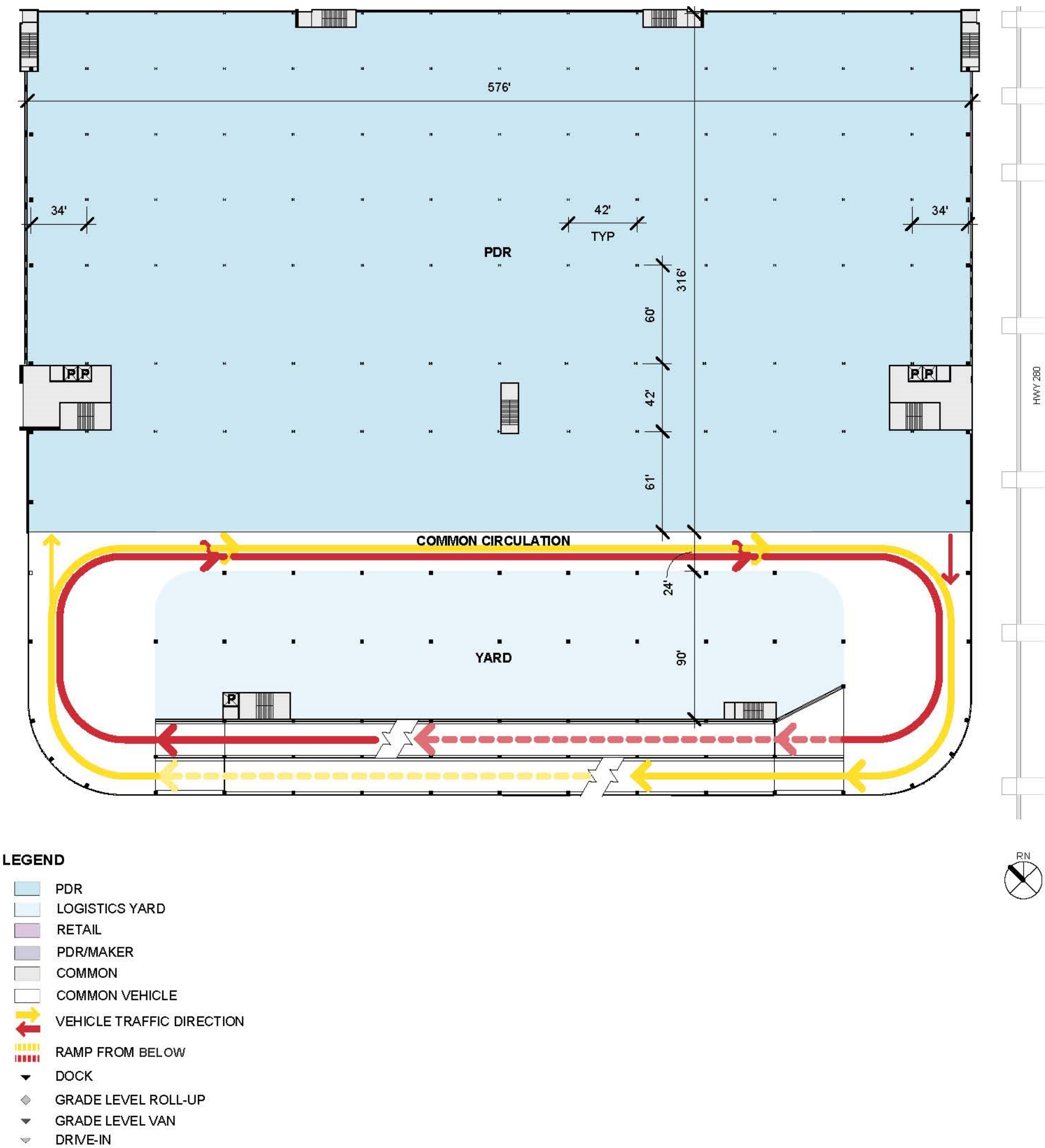
(c) Logistics Yard
A yard provides room for vehicle staging and space for flexible logistics support activities including fleet staging, storage, and goods transfer.

(d) Accessory Office
Flexible space to support PDR operations.

(e) Retail
Provide amenities (eg. cafe).

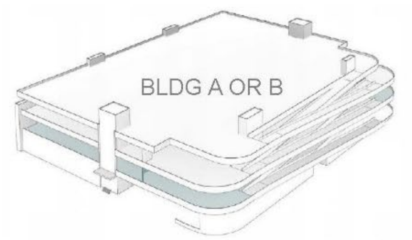
Source: JLA, 2022

Figure 2.D-5 Proposed Project Floor Plan – Levels 2 and 3 (Buildings A and B)+

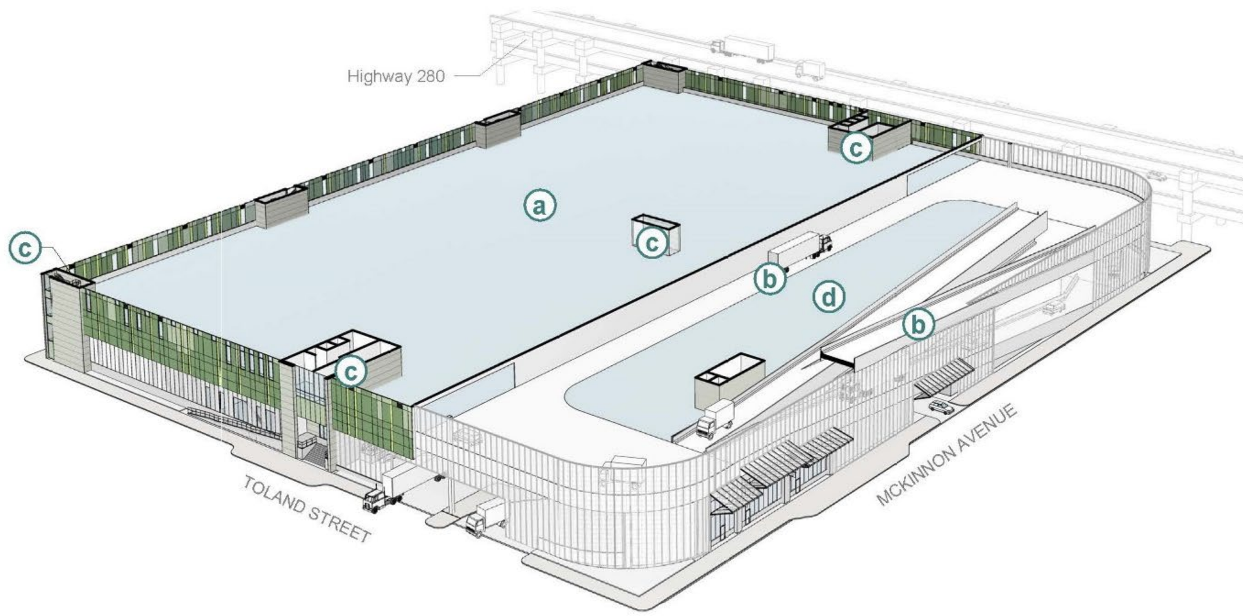


Source: JLA, 2022

Figure 2.D-6 Levels 2 and 3 Description (Buildings A and B)



This level features multi-functional space which supports a wide variety of PDR type users. This level is served by a ramp that accommodates vehicles including trucks, buses and smaller vehicles.



a PDR
22'-24' high clear space at this level.

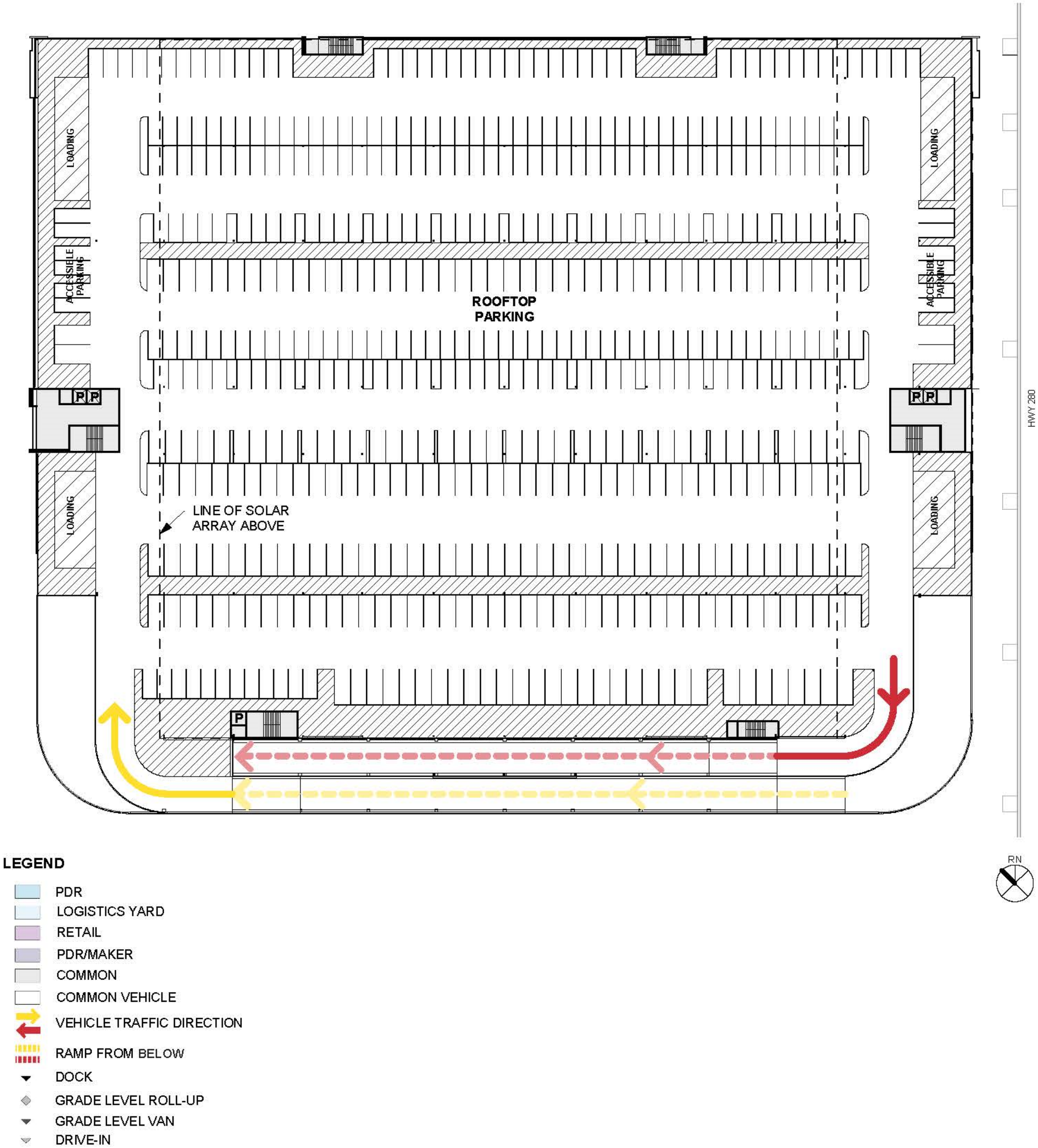
b Common Vehicle Circulation
Scissor ramp and bypass lane provide one-way circulation up and down throughout building.

c Elevators & Stairs
Common circulation cores connect all levels.

d Logistics Yard
Provides space for flexible logistics support activities including fleet staging, storage and goods transfer.

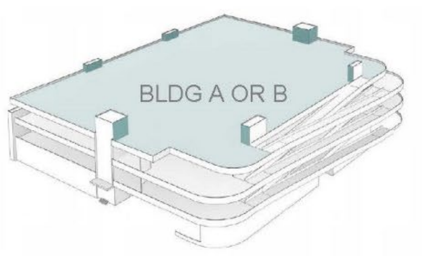
Source: JLA, 2022

Figure 2.D-7 Proposed Project Roof Plan – Level 4 (Buildings A and B)

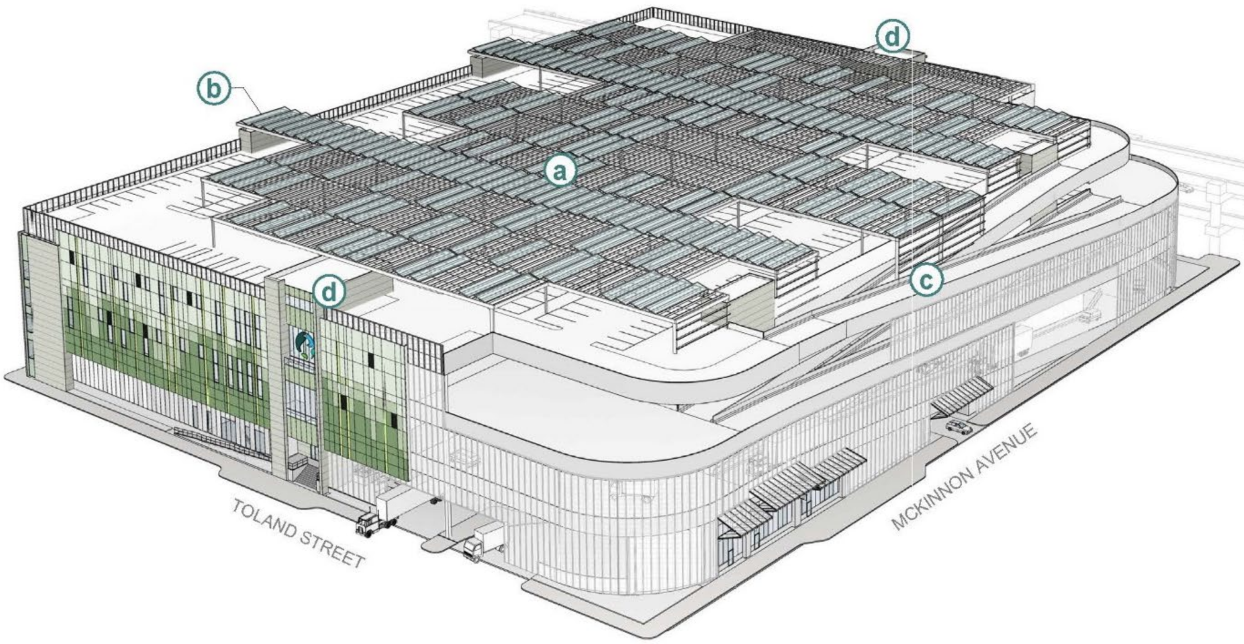


Source: JLA, 2022

Figure 2.D-8 **Level 4 Roof Description (Buildings A and B)**



This level features a screened, open air, multi-purpose deck that can be used for materials staging, vehicle staging for box trucks, vans, and personal vehicles. Additional screening is provided by a solar array. Ramps provide access to this level for vehicles as large as a 24' box truck.



a Vehicle Deck
Layout for staging box trucks and vans, and accessory automobile parking.

b Solar Array
Roof is screened by a solar array, which will generate electricity for vehicle charging.

c Ramps up to Roof
Scissor ramp provides one-way traffic access to and from roof.

d Elevators & Stairs
Provide common circulation to all levels.

Source: JLA, 2022

2.D.2 Proposed Project Uses

As described in Section 2.D.1 (p. 2-10), the project sponsor proposes to build a flexible PDR space that could accommodate an evolving mix of users or tenants for a 100-year period or longer. Figure 2.D-9 presents a matrix with use types that could occupy the San Francisco Gateway facility. The proposed project includes PDR (and other permitted uses in the PDR-2 zoning district) and retail uses, as further described below. The project sponsor has proposed a special use district that would retain all the primary uses discussed below as principally permitted uses, as well as other principally permitted uses in the PDR-2 zoning district; increase the maximum size of non-accessory retail uses per lot from 5,000 square feet to 8,500 square feet of retail space district-wide; and clarify and modify the maximum allowable vehicle parking ratios. The final special use district would be put forward to decision makers for consideration at the time of the project's approval hearing.

It is anticipated that the special use district would also allow for the specific assortment of PDR tenants to change over time in response to economic and technological conditions. Specifically, the special use district would establish a consistency review process to ensure that future permits are consistent with the project's development agreement; the planning code; the project's conditions of approval, including the mitigation measures adopted as part of the project's approval; and this EIR.

MANUFACTURING AND MAKER SPACE

The proposed project would include approximately 17,500 square feet of manufacturing and maker space on the ground floor of each building, or 35,000 square feet total, and may include additional manufacturing and maker space on the second and/or third floors. This use is defined as a light industrial use that provides for the fabrication or production of goods by hand or machinery for distribution to retailers, wholesalers, or the public. Makers are often characterized by their production and custom activities that usually involve individual or special design, handiwork, and/or design-related innovation and experimentation. Examples of this light industrial use include food and beverage processing, apparel and other garment products, furniture and fixtures, printing (including three-dimensional printing), prototyping, and publishing. Manufacturing and maker space tenants would require approximately 2,000 to 20,000 square feet of space per tenant, depending on the needs and size of the company. Accessory retail may be associated with this use. Receiving and shipping vehicles for this use type can range from personal vehicles to pickup trucks, box trucks, and vans, and from cutaway buses to semitrucks (74-foot maximum length). Primary working hours would vary by tenant. Heating, ventilation, and air conditioning (HVAC) and venting requirements would also vary by tenant. The operating hours when most activities occur would vary, but would typically be from 4 a.m. to 6 p.m., and would ultimately depend on the tenant.

PARCEL DELIVERY AND LAST-MILE DELIVERY

This use is defined as a nonretail automotive use limited to facilities for the unloading, sorting, and reloading of merchandise for deliveries. This use includes both staging of delivery trucks and vans, and the use of small-scale, personal-type vehicles for last-mile deliveries. Examples of regional delivery services include UPS, FedEx, and OnTrac. Last-mile delivery services include services such as Amazon Prime, Google Express, and Good Eggs. Parcel delivery and last-mile delivery tenants would require more space for their operations than maker and manufacturing tenants, at approximately 20,000 to 400,000-plus square feet per tenant. No accessory retail would be necessary for this use. Receiving and shipping vehicles for this use type can range from personal vehicles to pickup trucks, box trucks, and vans, and from cutaway buses to semitrucks (74-foot maximum length). HVAC would be required only for accessory office space, active vehicle

Figure 2.D-9 Production, Distribution, Repair, and Related Uses

USE TYPES		A MAKER + MANUFACTURING			B LABORATORY	C PARCEL DELIVERY		D WHOLESALE + STORAGE			E PRIVATE RETAIL VEHICLE STAGING + MAINTENANCE		F PRIVATE FLEET STORAGE, STAGING + MAINTENANCE	G PUBLIC FLEET STAGING + MAINTENANCE
OVERVIEW	description	A light industrial use that provides for the fabrication or production of goods, by hand or machinery, for distribution to retailers, wholesalers, or public			A non-retail use centered around scientific research & innovation	Light industrial use typified by activities relating to the unloading, sorting, and reloading of merchandise for deliveries		A use typified by activities relating to providing goods or commodities for resale or business use, including both the storage and sales areas necessary for these types of businesses.			Storage of vehicles to be sold/rented and light maintenance for private vehicles that are operated by a single entity		Storage and potential light maintenance for shuttles servicing specific institutions, businesses, and/or independent shuttle service businesses	Storage and maintenance for buses, trolleys, and/or shuttles for a public transportation agency
	probable tenant type	A1 **PDR incubator, craft, small assembly**	A2 **food + beverage**	A3 **advanced manufacturing large assembly**	B1 **scientific testing + development lab**	C1 **parcel hub**	C2 **last mile**	D1 **construction supplies - wholesale**	D2 **food + beverage - wholesale & distribution**	D3 **freight forward + storage**	E1 **vehicle dealer**	E2 **vehicle rental agency**	F1 **private company fleet**	G1 **public fleet management**
	business examples	*Bryr Clogs Rickshaw Bags*	*Recchiuti*	*PCH Lime Lab*	*Applied Materials*	*FedEx, On-Track, UPS*	*Amazon Prime, Good Eggs*	*Russel Sigler*	*Chef's Warehouse*	*Geodis*	*Royal Motors, SF Toyota*	*Uhaul, Hertz*	*Google, Academy of Art University, Lyft, Bauer, UCSF*	*Muni Buses, SF Paratransit*
FACILITY	typical area (sf)	2,000-5,000 per maker within 20,000 incubator	5,000 - 20,000		10,000 - 40,000	20,000 - 200,000	40,000 - 200,000	20,000 - 100,000			35,000 - 100,000	35,000 - 100,000	30,000 - 100,000	400,000 - 1,200,000
	clear height (ft)	12' - 20'			12' - 20'	20' - 30'		24' - 30'			10' - 14'		10' - 20'	15' - 20'
OPERATIONS	employee ratio	3 per 1000 sf			5 per 1,000 sf	1.5 per 1000 sf		0.7 per 1000 sf	0.5 per 1000 sf	0.7 per 1000 sf	0.3 per 1000 sf		0.5 per 1000 sf	0.7 per 1000 sf
	office ratio	15 - 25%			15 - 25%	10 - 15%		5 - 10%	10 - 25%	5 -10%	5 - 10%		5 - 10%	10-15%
	typical normal hours	6:00am - 6:00pm swing shift possible	4:00am - 4:00pm swing shift possible	8:00am - 6:00pm	8:00am - 6:00pm	4:00am - 4:00pm swing shift possible		6:00am - 4:00pm	12:00am -4:00 pm	6:00am - 6:00pm	7:00am - 7:00pm		5:00am - 10:00pm	5:00am - 12:00 midnight
	accessory retail	preferred		possible	no	no		no			no		no	no
	venting required	code min + equipment needs	code min + vertical venting + hood exhaust	code min + equipment needs	code min + equipment needs	code min		code min	code min + additional venting if processing	code min	code min + maintenance specific ventilation requirements		code min + maintenance specific ventilation requirements	code req'd ventilation will vary per use requirements
	HVAC required	preferred, not required	climate controlled + hood exhaust + refrigeration	preferred, not required	required throughout	required in office only		required in office only	climate controlled + hood exhaust + refrigeration	required in office only	required in office only		required in office only	required in office only
TRANSPORTATION	receiving vehicle	personal vehicle/semi truck			box truck or van/semi truck	personal vehicle/box truck or van/semi truck		semi truck			personal vehicle/box truck or van		personal vehicle/box truck or van/bus	box truck or van/bus/articulated bus
	shipping vehicle	personal vehicle / semi truck	semi truck		box truck or van/semi truck	personal vehicle/box truck or van		box truck or van			-	-	-	-
	capacity	1 : 1,500			1:1,000	1 : 1,500		1 : 2,000	1 : 1,500	1 : 2,000	150 - 300 vehicles	60 - 300 vehicles	20 - 100 vehicles	200 - 400 vehicles
	mainte-nance req'd	-			-	-		-			light maintenance & employee support spaces required fuel & wash preferred		light maintenance & employee support spaces required fuel & wash preferred	full maintenance & employee support spaces required fuel & wash required
	loading req'd	drive-in doors / dock high beneficial			drive to doors / freight elevator	dock high, internal vehicle access		dock high roll up doors			-		-	-

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areas would be ventilated, and other specialized ventilation equipment would not be required. Primary operating hours would typically be from 4 a.m. to 6 p.m., but would ultimately depend on the tenant.

WHOLESALE AND STORAGE

This use is characterized by activities that relate to providing goods or commodities for resale or business use and includes both the storage and sales areas necessary for these types of businesses. The use also includes the storage (in an enclosed building) of goods without an associated wholesale or retail component. Examples include building material suppliers, food-related wholesale businesses, and import- or export-related storage. Wholesale and storage tenants would typically occupy a space of approximately 20,000 to 100,000 square feet per tenant. No accessory retail would be necessary for this use. This use typically requires a semitruck (74-foot-maximum length) for receiving materials and a pickup truck/box truck/van/cutaway bus for shipping goods. HVAC and venting requirements would vary by tenant. The operating hours would typically be from 12 a.m. to 6 p.m., but could vary by each tenant type.

FLEET MANAGEMENT

This use would allow private and public fleets to be staged and maintained. Uses would range from private retail vehicle staging, to private fleet staging and maintenance, to public fleet staging and maintenance. Private retailers would store and maintain vehicles to be sold or rented. The private vehicles would be mostly parked, and the space would be used as storage; light maintenance and washing would be associated with this use. The tenant for this type of use would most likely be a vehicle dealership or vehicle rental agency, such as local retail car dealerships like U-Haul or Hertz. These tenants could require approximately 35,000 to 100,000 square feet per tenant, and the spaces would typically hold 60 to 300 vehicles, depending on vehicle type and size. Operating hours when most activities occur would typically be from 5 a.m. to 12 a.m., but would ultimately depend on the tenant.

Private fleet staging and maintenance would involve storage and potential light maintenance of shuttles servicing specific institutions, businesses, and/or independent shuttle services. The tenant could include private company fleets; examples of this tenant type could include companies such as Google, Academy of Art University, Bauer, and the University of San Francisco or similar tenants. These tenants could require approximately 30,000 to 100,000 square feet per tenant to accommodate approximately 20 to 100 vehicles. No accessory retail would be necessary for this use. The operating hours when most activities occur would typically be from 5 a.m. to 10 p.m., but would ultimately depend on the tenant.

Public fleet staging and maintenance would include the storage and maintenance of buses, trolleys, and/or shuttles for a public transportation agency, such as the San Francisco Municipal Transportation Agency (SFMTA) or San Francisco Paratransit. These tenants would require approximately 400,000 to 1,200,000 square feet to accommodate 200 to 400 vehicles. No accessory retail would be necessary for this use. The operating hours when most activities occur would typically be from 5 a.m. to 12 a.m. but would ultimately depend on the tenant.

NON-PDR USES

In addition to these PDR uses, other types of uses permitted in the PDR-2 zoning district, such as laboratory (non-life sciences) and retail, may occur in the proposed project. These uses are described below.

Laboratory

The proposed project could support laboratory uses focused on engineering, development, support, quality assurance, and quality control, which are principally permitted in the PDR-2 zoning district. The proposed project would not include chemical testing, or life sciences laboratory uses such as biological research or animal testing (which are not permitted in the PDR-2 zoning district). Laboratory tenants would require approximately 10,000 to 40,000 square feet of space per tenant, depending on the needs and size of the company. Receiving and shipping vehicles for this use type can range from pickup trucks/box trucks/vans/cutaway buses to semitrucks (74-foot maximum length). HVAC and venting would be required throughout the space. Primary operating hours would typically be from 8 a.m. to 6 p.m., but would ultimately depend on the tenant.

Retail

The proposed project would include approximately 4,200 gross square feet of ground floor retail space in each PDR building, resulting in a total of 8,400 gross square feet. (The proposed special use district would authorize a total of up to 8,500 gross square feet of retail use district-wide, to accommodate minor potential changes in building layout.) The retail space would provide amenities and services to the employees at the project site, and potentially workers in the surrounding area. Retail uses would include amenities such as a cafe, convenience store, or sandwich shop. Loading operations for the retail space would occur in the parking area on the ground floor. Primary hours would vary by tenant, but would likely be 7 a.m. to 7 p.m.

2.D.3 Peak Times of Daily Activity in the Proposed Project

An average of up to approximately 1,980 employees would be onsite on a typical day. Although different types of uses would have varying hours and peak periods, the combined uses by tenants in the buildings would result in two peak periods when the highest number of employees would be on site at one time, as compared to the rest of the day. These two peak periods would include the hours from 7 to 9 a.m. and from 4 to 6 p.m., with the evening peak being the highest.

2.D.4 Mechanical Equipment

The proposed project would require a variety of mechanical system components that would perform specific functions. These systems would be designed to comply with the San Francisco Building Code and Leadership in Energy and Environmental Design (LEED) requirements. Mechanical ventilation in the vehicle circulation area (including ramps) and logistics yard would be provided as necessary to augment the natural ventilation of these unenclosed areas. Mechanical and natural ventilation would be provided to ventilate all enclosed storage areas. Buildings A and B would provide a base level of mechanical systems for each tenant; the project sponsor would facilitate the installation of additional systems as required to support specific tenant-related activities agreed on during the leasing process. Many tenants for which the project is being designed are anticipated to require minimal additional mechanical systems.

Buildings A and B would each have one generator to accommodate the life safety needs of building tenants. The maximum capacity of each generator would be 400 kilovolt-ampere. All tenant leases would require all yard equipment to be electric.

HVAC would be provided for accessory office space and/or tenant spaces with specific process requirements. The accessory office space is limited to one-third or less of the PDR space, per section 204.3 of the planning code. Because of their size, the HVAC systems would likely be inside the space to be conditioned and on the rooftop. Alternatively, some of the potential tenants would have specific HVAC requirements for their operations. Additional HVAC equipment for potential PDR uses could include mechanical ventilation for production hoods used during food and beverage production; HVAC equipment for laboratory spaces; refrigeration systems to support goods requiring storage at specific temperatures; and ventilation systems related to the production and/or repair of specific goods (e.g., woodworking, upholstery, furniture repair).

2.D.5 Key Operational Equipment

Many PDR uses depend on a variety of equipment associated with the movement of goods. Goods movement can occur either inside a specific tenant's space (e.g., between storage and fabrication areas) or in the PDR facility. Because of the size of many PDR facilities, these travel distances can be lengthy (over 500 feet) and can require connecting process-related space. Therefore, much of the associated equipment is mechanized.

In addition to moving goods and supplies over long horizontal distances, many PDR businesses take advantage of cubic volume. This is accomplished using a combination of high-bay racking systems and the equipment necessary to lift goods to targeted heights. The specific high-bay racking system and the movement of equipment are based on the products being stored and moved on pallets or being palletized.[26]

2.D.6 Analyzed Tenant Use Mix

As described above, the project sponsor proposes to build a flexible PDR space that can accommodate an evolving mix of users or tenants for a 100-year period or longer. Given that there are no identified tenants at this time, the draft EIR describes and analyzes a mix of PDR uses that are likely to occur based on the project sponsor's familiarity with leasing trends for PDR facilities in San Francisco and the Bay Area and that represent reasonably conservative assumptions about possible tenants' environmental impacts. The term "proposed project" means the construction and operation of the San Francisco Gateway facility, the operation of which is based on the analyzed tenant use mix, and the related streetscape improvements. The analyzed tenant use mix for the purpose of the project's environmental review is identified in Table 2.D-2.

While fleet management and laboratory uses are allowed in both the existing PDR-2 zoning and proposed SUD, and are discussed above, these are not uses specifically included in the San Francisco Gateway Project's analyzed tenant use mix. However, the special use district would establish a consistency review process to ensure that permits are consistent with the project's development agreement; the planning code; the project's conditions of approval, including the mitigation measures adopted as part of the project's approval; and this EIR. If the uses are not consistent, further analysis may be required pursuant to CEQA.

[26] To "palletize" means to place, stack, or transport (goods) on a pallet or pallets.

Table 2.D-2 San Francisco Gateway Project Analyzed Tenant Use Mix

Uses below are a combination of areas in buildings A and B					
Uses	**Level 1**	**Level 2**	**Level 3**	**Roof**	**Project Total**
PDR Uses					
Light Manufacturing/Maker	35,000	0	0	0	35,000
Parcel Delivery/Last Mile	0	381,000	369,600	8,800	759,400
Wholesale and Storage	372,400	0	0	0	372,400
PDR Support Spaces					
Logistics Yard	0	72,400	73,400	0	145,800
Vehicle/Pedestrian Circulation	69,700	112,800	95,400	17,600	295,500
Parking	55,900	0	0	487,600	543,500
Retail	8,400	0	0	0	8,400
Total					**2,160,000**

Source: Prologis, L.P. 2019

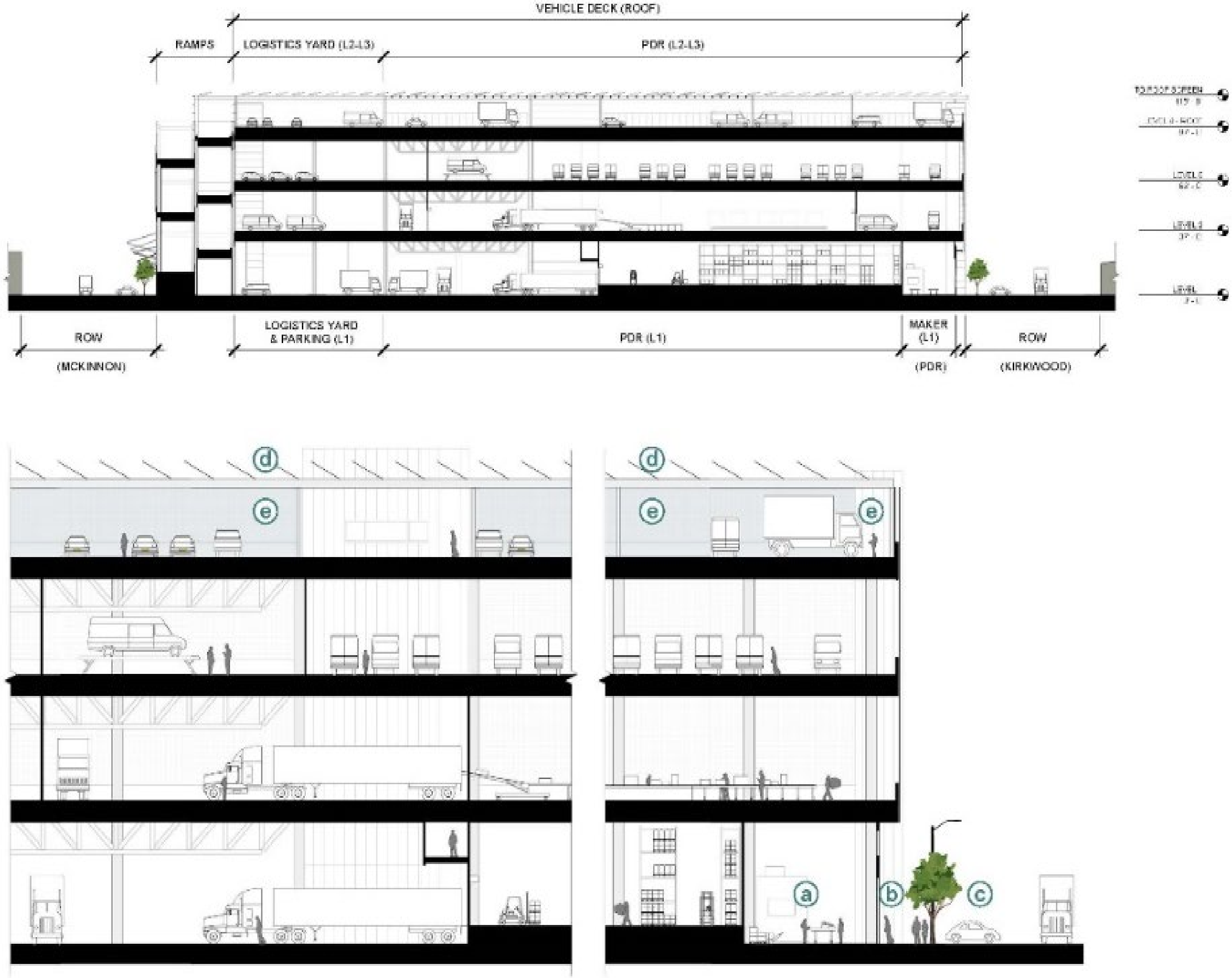
Notes:

PDR = production, distribution, and repair

2.D.7 Sections and Elevations

Sections and elevations are included on Figure 2.D-10 through Figure 2.D-12 (pp. 2-27 through 2-29).

Figure 2.D-10 Proposed Project – Building Sections



a Maker space

b Streetfront entry with signage for Maker space

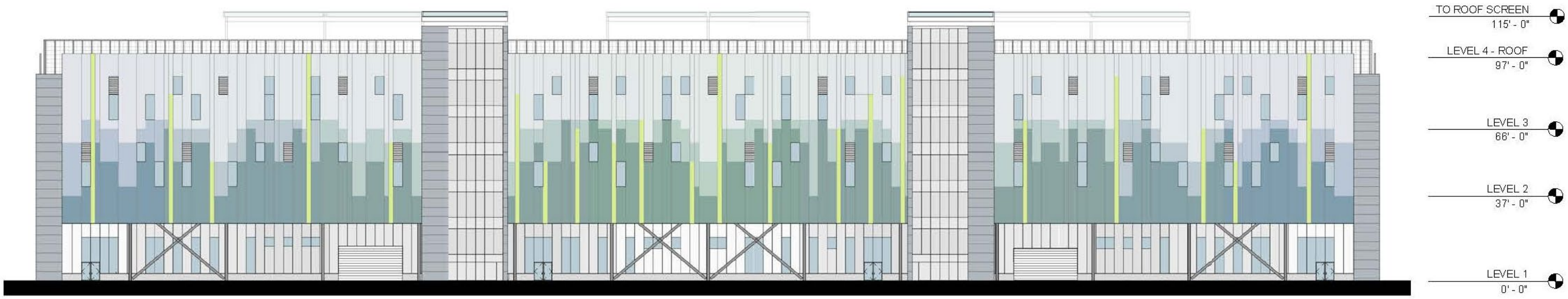
c Streetscape with 45° back-in parking

d Solar array to power building and fleet

e Vertical screening element

Source: JLA, 2022

Figure 2.D-11 Proposed Project – Elevations (North and South)



Kirkwood Avenue Elevation *(single building, similar for both buildings)*

McKinnon Avenue Elevation *(single building, similar for both buildings)*

Source: JLA, 2022

Figure 2.D-12 Proposed Project – Elevations (East and West)

Selby Street Elevation *(similar for both buildings)*

Rankin Street Elevation *(Toland Street similar)*

Source: JLA, 2022

2.D.8 Proposed Parking, Loading, and Circulation

ON-STREET VEHICLE PARKING AND LOADING ZONES

The proposed project would include the following on-street commercial vehicle and passenger loading zones adjacent to the project site:

- On Kirkwood Avenue, a 100-foot-long commercial vehicle loading zone would be directly west of Selby Street and a 100-foot-long commercial vehicle loading zone would be directly west of Rankin Street.
- On McKinnon Avenue, a 20-foot-long commercial vehicle loading space would be east of Toland Street and a 20-foot-long commercial loading space would be east of Selby Street.
- On Toland Street, a 40-foot-long passenger loading/unloading zone would be directly north of the proposed bulb-out.
- On Rankin Street, a 40-foot-long passenger loading/unloading zone would be directly north of the proposed bulb-out.

The proposed project would stripe 217 vehicle parking spaces on streets adjacent to the project site, as follows:

- On Kirkwood Avenue, 39 diagonal parking spaces would be provided on the northern side of the street between Toland and Selby streets, and 41 diagonal parking spaces would be provided between Selby and Rankin streets (80 total spaces on the north side); 20 diagonal and one parallel parking spaces would be provided on the southern side of the street adjacent to the project site between Toland and Selby streets, and 22 diagonal and one parallel parking spaces would be provided between Selby and Rankin streets (44 total spaces on the southern side), for a total of 124 spaces on Kirkwood Avenue.
- On McKinnon Avenue adjacent to the project site, 19 diagonal parking spaces would be provided on the northern side of the street between Toland and Selby streets, and 18 diagonal parking spaces would be provided between Selby and Rankin streets, for a total of 37 parking spaces on the northern side of McKinnon Avenue. In addition, 39 diagonal parking spaces would be provided on the southern side of the street between Toland and Selby streets, for a total of 76 vehicle parking spaces on McKinnon Avenue.
- On Toland Street between Kirkwood and McKinnon avenues, four parallel parking spaces would be provided on the eastern side of the street adjacent to the project site.
- On Selby Street between Kirkwood and McKinnon avenues, four parallel parking spaces would be provided on the western side of the street adjacent to the project site and four parallel parking spaces would be provided on the eastern side of the street adjacent to the project site, for a total of eight spaces on Selby Street.
- On Rankin Street between Kirkwood and McKinnon avenues, five parallel parking spaces would be provided on the western side of the street adjacent to the project site.

OFF-STREET PARKING AND LOADING

The proposed project would include approximately 543,500 gross square feet of parking. Seven new proposed curb cuts per building (14 total) along the project site's perimeter would allow ingress and egress to and from the buildings. Approximately 1,166 parking spaces for standard automobiles would be provided, and each building would include 36 loading dock doors at level 1 with additional tenant-specific loading on the upper levels.

BICYCLE PARKING

The proposed project would provide 112 bicycle parking spaces in total: 100 class 1 and 12 class 2 spaces. The 100 class 1 bicycle parking spaces would be provided at ground level in buildings A and B, adjacent to the corner lobbies and retail areas of each building. Each building would provide approximately 50 class 1 spaces. The 12 class 2 bicycle parking spaces would be provided along the edges of the project site at pedestrian access points and near the building entrances, outside the corner lobbies and retail areas.

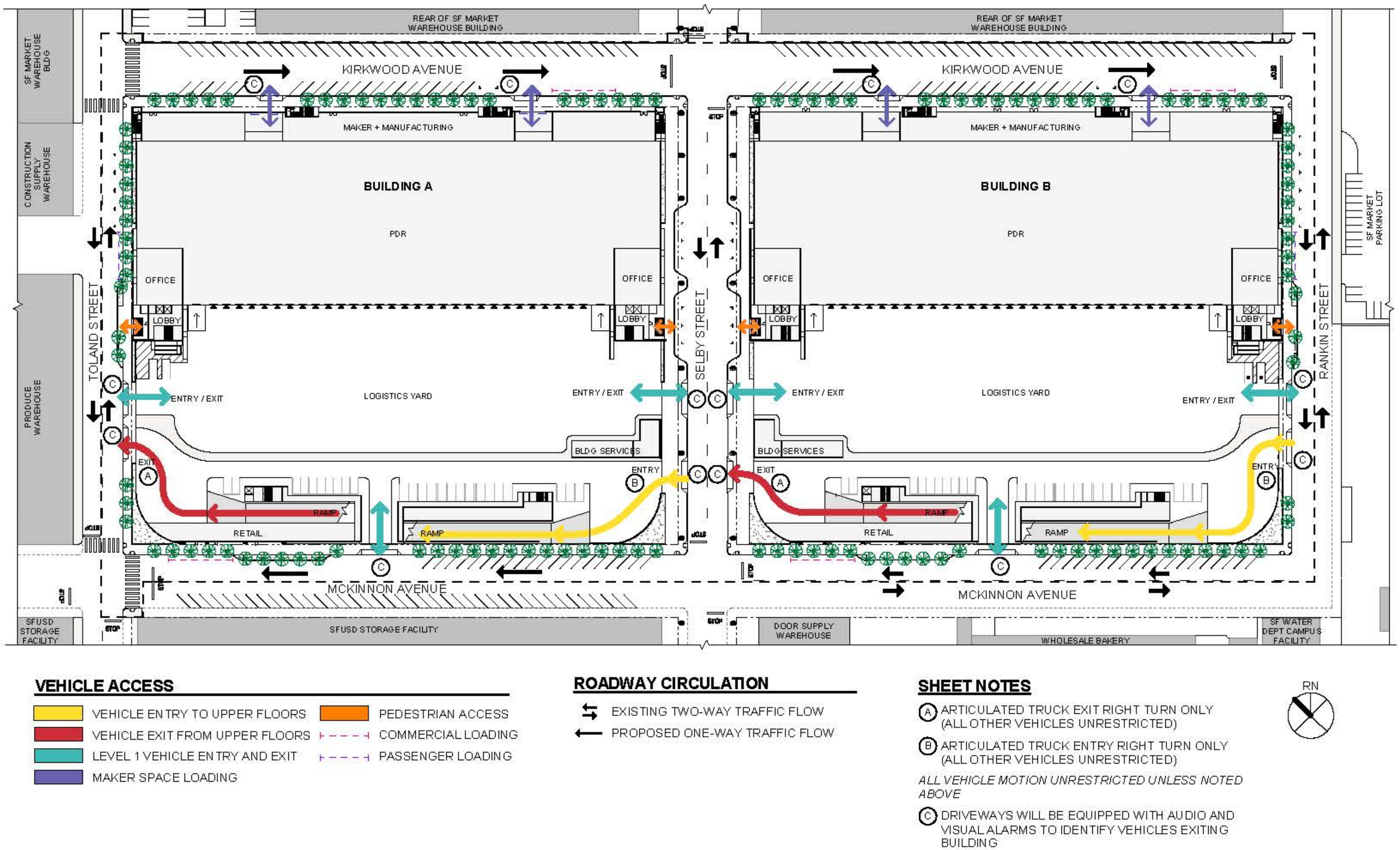
VEHICULAR ACCESS AND CIRCULATION

Vehicular access to the project site and circulation around its perimeter would be altered from existing conditions. Existing access for vehicles, pedestrians, bicyclists, and people on public transportation is shown in Figure 2.C-4 (p. 2-9). Figure 2.D-13 illustrates the proposed roadway modifications adjacent to the project site. Proposed vehicle access and circulation is shown in Section 3.B, Transportation and Circulation (see Figures 3.B-4, Inbound Vehicle Trip Paths [p. 3.B-30], and 3.B-5, Outbound Vehicle Trip Paths [p. 3.B-31]).

The project proposes extending Kirkwood Avenue from Milton I. Ross Lane to Toland Street to create a new T intersection of Toland Street/Kirkwood Avenue, and converting Kirkwood Avenue from a two-way street to a single-lane, eastbound, one-way street. The eastbound approach of Kirkwood Avenue to the intersection of Rankin Street/Kirkwood Avenue would be reconfigured. The existing hydrant would be relocated, the barrier across Kirkwood Avenue would be removed, and the eastbound approach of Kirkwood Avenue at Rankin Street would be controlled with a STOP sign. The project also proposes converting McKinnon Avenue between Toland and Selby streets from a two-way street to a single-lane, westbound, one-way street. As discussed below in Section 2.F, Required Approvals (p. 2-41), modifications to the roadway directions and lane configurations on the streets surrounding the project site would require approval by the SFMTA. Large vehicles (such as tractor trailers) traveling to and from the upper levels of both buildings would be restricted to right turns only to enter and exit the buildings, resulting in a clockwise circulation pattern around both buildings.

To access building A, vehicles traveling to the ground level would have two points of entry and exit: one on Toland Street and one on Selby Street. There would be no restrictions for vehicles entering and exiting the ground level (i.e., vehicles using these points of entry and exit could turn left or right). Vehicles traveling to the upper floors (via ramps) of building A would enter the site from Selby Street and exit at Toland Street. Although large trucks would be restricted to right-turn entry and exit, all smaller vehicle turning would be unrestricted.

Figure 2.D-13 Proposed Roadway Modifications Surrounding the Project Site



Source: JLA, 2022

To access building B, vehicles traveling to the ground level would have two points of entry and exit: one on Rankin Street and one on Selby Street. There would be no turning restrictions for vehicles entering and exiting the ground level. Vehicles traveling to the upper floors (via ramps) of building B would enter the site from Rankin Street and exit at Selby Street. Although large trucks would be restricted to right-turn entry and exit, all smaller vehicle turning would be unrestricted. Project driveways would be equipped with supplementary devices, such as mirrors, and would have audible and/or visual warning systems to alert people walking by when vehicles exit the project site.

PEDESTRIAN ACCESS AND CIRCULATION

Adjacent to the project site, the proposed project would construct new 10-foot-wide sidewalks on Rankin and Toland streets, and new 12-foot-wide sidewalks on McKinnon and Kirkwood avenues. On Selby Street, the buildings on either side would be set back 14 feet from the property line; the sidewalk widths would range between 10 and 24 feet, with a narrower sidewalk where on-street parking is provided. The new sidewalks would meet or exceed the sidewalk width of 10 feet recommended in the Better Streets Plan for industrial streets, and would include Americans with Disabilities Act-accessible curb ramps at corners.

Pedestrian access to and from the project site would be primarily along Toland and Rankin streets. Secondary points of pedestrian access would be provided along Selby Street (Figure 2.D-13, p. 2-32).

Pedestrians would enter building A from adjacent streets through one of two ground-level lobbies: one on Toland Street, and a second point of entry on Selby Street, both at mid-block. These lobbies would provide access to passenger elevators and stairs that would provide access to all levels of building A.

Pedestrian circulation at building B would be similar to pedestrian circulation at building A, except that the entry points to the main lobbies would differ. The pedestrian lobbies would be mid-block along Rankin Street and a secondary point of entry mid-block on Selby Street.

2.D.9 Transportation Demand Management Plan

The findings for San Francisco Planning Code section 169 related to TDM plans state: “For projects that use Development Agreements and may not be required to comply fully with the requirements of Section 169, it is the San Francisco Board of Supervisors’ (board of supervisors’) strong preference that Development Agreements should include similar provisions that meet the goals of the TDM Program.” The project sponsor expects to meet the goals of the TDM program by implementing a combination of the following TDM measures:

- **Bicycle Parking (TDM Measure ACTIVE-2):** Bicycle parking would be provided for PDR and retail uses. The number of spaces provided for PDR and retail uses would comply with the planning code.
- **Showers and Lockers (TDM Measure ACTIVE-3):** Showers and clothes lockers would be provided with class I bicycle parking spaces. The number of showers and clothes lockers would meet planning code requirements.
- **Multi-Modal Wayfinding Signage (TDM Measure INFO-1):** In buildings A and B, multi-modal wayfinding signage would be provided that is comprehensive and specifically tailored to convey information to users about the various transportation services and TDM-related infrastructure in the vicinity.

2.D.10 Streetscape Improvements and Street Trees

The proposed project would be required to comply with the city's Better Streets Plan (planning code, section 138.1).[27] Therefore, a streetscape plan would be submitted to the planning department. On-street parking would also be provided in accordance with the Better Streets Plan; proposed on-street parking would consist of reverse-angle and parallel parking stalls.

Pursuant to the Better Streets Plan, the proposed project would provide streetscape improvements to the streets immediately adjacent to the project site (Figure 2.D-13, p. 2-32). The project area is classified as an industrial street type under this plan, and would require new sidewalks, street trees, stormwater control measures, and accessible curb ramps. There are currently no sidewalks adjacent to the project site. Pursuant to public works code section 806(d), the proposed project would be required to provide 216 street trees along the project's 4,300 linear feet of street frontages, or to pay the appropriate in-lieu fees. Due to project and site constraints (e.g., curb cuts, I-280 overpass, line-of-sight restrictions, and location of site utilities), the project sponsor would plant approximately 124 street trees and pay the corresponding in-lieu fee for the remaining required trees that cannot be accommodated on site.[28] These 124 street trees would be consistent with the Better Streets Plan, and subject to the review and approval by the department of public works, Bureau of Urban Forestry. The nine street trees on the eastern sidewalk of Toland Street along the northern half of the building (from the building A entrance to Kirkwood Street) would serve as wind mitigation measures, based on the wind impact analysis conducted for the proposed project and described in the initial study (see Appendix B, Initial Study, Section E.9, Wind); they would be approximately 25-foot-tall evergreen street trees with a 15-foot-diameter canopy.[29]

The streetscape improvements to Toland Street would involve constructing a new 10-foot-wide sidewalk with street trees. An approximately 6-foot-wide, mid-block *bulb-out*[30] with planters and street trees would be constructed along the main pedestrian entrance. This portion of the sidewalk would be 16 feet wide. The project would provide an improved vehicular travel lane. In addition, two approximately 34-foot-wide driveways would be added along Toland Street to provide vehicular access onto the site. This portion of Toland Street would be resurfaced.

Along Kirkwood Avenue, a new 12-foot-wide sidewalk would be constructed, and street trees would be installed adjacent to the project site. Each building would provide two 24-foot-wide curb cuts to access the PDR and/or maker space loading areas. The project would provide an improved vehicular travel lane and a curb and gutter system on the northern side of Kirkwood Avenue. The full width of Kirkwood Avenue along the project limits would be resurfaced.

Along Rankin Street, new 10-foot-wide sidewalks with street trees would be installed. An approximately 6-foot-wide, mid-block bulb-out with planters and street trees would be constructed along the main pedestrian entrance. This portion of sidewalk would be 16 feet wide. The project would provide an improved

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[27] San Francisco Planning Department, *San Francisco Better Streets Plan* (2010), http://www.sf-planning.org/ftp/BetterStreets/proposals.htm#Final_Plan (also available in hard copy at the San Francisco Public Library), accessed February 10, 2018.

[28] San Francisco Planning Department, Greenhouse Gas Analysis: Compliance Checklist for the San Francisco Gateway Project (749 Toland Street and 2000 McKinnon Avenue, December 19, 2019. This document (and all documents cited in this initial study, unless otherwise noted) is available for review on the San Francisco Property Information Map, which can be accessed at http://sfplanninggis.org/PIM/?. Individual files can be viewed by clicking on the Planning Applications link, clicking on the "More Details" link under the project's environmental case number (2015-012491ENV), and clicking on the "Related Documents" link.

[29] BMT, San Francisco Gateway Project Final Wind Microclimate Study, June 23, 2020.

[30] Bulb-outs extend the sidewalk into the parking lane to narrow the roadway and provide additional pedestrian space at key locations; they can be used at corners and mid-block.

vehicular travel lane and up to five striped parallel. In addition, one approximately 34-foot-wide driveway and one approximately 50-foot-wide driveway would be added along Rankin Street to provide site access. This portion of Rankin Street would be resurfaced.

Along McKinnon Avenue, a new 12-foot-wide sidewalk would be constructed, and street trees would be installed adjacent to the project site. Two approximately 6-foot-wide, mid-block bulb-outs with planters and street trees would be installed adjacent to each building's retail space. These two portions of the sidewalk would be 18 feet wide. Each building would provide a 40-foot-wide curb cut to provide site access. The project would provide an improved vehicular travel lane, and the portions of McKinnon Avenue that extend from the centerline of the right-of-way and the site would be resurfaced.

2.D.11 Sustainability

The proposed project has been designed to be sustainable and resilient by providing flexible PDR space that could accommodate an evolving mix of tenants or users for a 100-year period or longer. Additionally, the project would seek LEED Gold certification or higher. Buildings A and B would be designed to contain sustainability features such as a rooftop screen containing a solar array. This array would be sized to meet the San Francisco Better Roof Ordinance requirements and would generate electricity that could be used to offset the electrical use of the building, and/or the electric vehicles housed and/or visiting the site. In addition, all docking stations would be designed to support electric plug-in of trucks to reduce idling time during loading and unloading of trucks serving future land uses on site, thereby further minimizing onsite idling and resultant fuel use. Additional features to achieve LEED Gold certification would include the use of sustainable building materials, water- and energy-efficient mechanisms in the building design, bicycle facilities to encourage alternate modes of transportation, and indoor air quality measures to ensure tenant safety.

2.D.12 Foundation and Excavation

The proposed project's foundation design is expected to be concrete spread footings and/or grade beams on improved and engineered soil, with excavation for the foundations likely to extend 10 feet below existing grade. Typical foundation excavation is expected to extend to 7 feet below-grade, with elevator pits and utility trenching extending to 10 feet below existing grade.

Ground improvements, such as stone columns, drill displacement columns,[31] *geopiers*,[32] soil-cement mixing, or other similar methods, would provide vertical support through the existing soils to strengthen the undocumented fill that underlies the project site. Using drill rigs, approximately 7,000 vibratory replacement stone columns or drill displacement columns would be extended 25 feet deep, and approximately 900 auger cast piles would be extended 60 feet deep to support the buildings on site. The proposed project would not require pile-driving activities. Approximately 140,600 cubic yards of soil would be excavated for the proposed project.[33] Of this total, approximately 42,600 cubic yards would be improved and reused, and the remaining 98,000 cubic yards would be exported off site. Ground improvements, such as extended piles,

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31 Drill displacement columns (or controlled low-strength material columns) are formed in displaced soil cavities and displace liquefiable and compressible soil with cemented controlled low-strength material. Controlled low-strength material column ground improvement can mitigate liquefaction and settlement of heavy foundations and slabs. Controlled low-strength material columns are ideal for sensitive project sites such as those near critical structures that require low noise and no vibration construction methods.

32 "Geopier" is an engineering term used to refer to stiff rock columns drilled deep into the earth's surface, down to a hard nonyielding depth. They are used to support a building foundation and reinforce the soil when the existing ground is unstable, wet, or unsuitable for building construction.

33 The proposed project would entail excavation of 140,600 cubic yards of soil. This total includes 134,000 cubic yards of soil on site, and 6,600 cubic yards of soil for street improvements.

stone columns, drill displacement columns, geopiers, soil-cement mixing, or other similar methods, would provide vertical support through the existing soils to strengthen the undocumented fill that underlies the project site. The proposed project would import approximately 2,000 cubic yards of soil to the site. At least four underground storage tanks were historically present on the project site along Selby Street, and one additional underground storage tank may have been present near the site's easternmost corner.[34] Although the number of underground storage tanks present on site is not known, the project sponsor would coordinate with the San Francisco Department of Public Health and comply with all permit requirements under the city's Hazardous Materials and Waste Program, which may result in the need for soil excavation and remediation activities. The total soil excavation volume (140,600 cubic yards) and the total volume of exported soil off site (98,000 cubic yards) included in the estimates above accounts for potential excavation, export, and remediation activities.

Because of the presence of shallow groundwater 3 to 6 feet below ground surface, temporary dewatering and shoring of utility trenches is anticipated to be required in some areas of the site.[35]

2.D.13 Construction Schedule and Phasing

This section describes the construction activities for the proposed project. Construction is anticipated to occur over a total of approximately 31 months. The construction of each building would take approximately 27 months; however, the start of construction for building A would be approximately 4 months before the start of construction for building B, resulting in a total construction duration of approximately 31 months. As described in Table 2.D-3, construction would include demolition and site preparation, grading and ground improvements, building construction, building envelope and interior buildout, sitework, and startup and commissioning.[36] Construction work would typically occur five to six workdays per week for eight hours per day. Nighttime construction activities are anticipated to occur during specific phases of building construction—specifically, the building envelope and interior buildout phase, and the sitework phase. Nighttime construction activities, as defined by article 29 of the San Francisco Police Code, are construction activities occurring between 8 p.m. and 7 a.m. The project sponsor would be required to obtain a permit from the San Francisco Public Works or the Department of Building Inspection (building department) to extend construction activities beyond the allowable construction hours (7 a.m. to 8 p.m.). The total number of temporary/short-term workers during the approximate 31-month duration of construction is anticipated to range from approximately 2,500 to 3,000.

[34] Iris Environmental, Phase I and Phase II Environmental Site Assessments, LaSalle Industrial Park, 749 Toland Street and 2000 and 1050 McKinnon Avenue, San Francisco, California, Prepared for Prologis, L.P., January 6, 2015, pp. v and 3.

[35] Cornerstone Earth Group, *Preliminary Geotechnical Investigation, LaSalle Industrial Park, San Francisco*, April 22, 2015 (hereinafter referred to as "geotechnical investigation").

[36] In the final stages of construction, the project would undergo commissioning of building systems to ensure that they are complete and functioning properly as designed. In addition to the standard building commissioning, LEED components would undergo fundamental commissioning and verification.

Table 2.D-3 Construction Phasing

Construction Phase	Duration (weeks)
Demolition and Site Preparation	8
Grading and Ground Improvements	16
Building Construction	61
Building Envelope and Interior Buildout	60
Sitework	25
Startup and Commissioning	7
Total	**31 months[1]**

Source: JLA, 2021

Note:

1 Construction duration would total 31 months, which would include several months of overlapping phases, primarily during Building Construction, Building Envelope, and Interior Buildout, and Sitework. In addition, the start of construction for building A would be approximately 4 months before the start of construction for building B.

On June 7, 2021, the project sponsor submitted a priority processing application under Planning Director's Bulletin No. 2, committing the project to use the lowest diesel emitting off-road equipment (Tier 4 interim or final) for the duration of construction.[37,38] On June 15, 2021, the planning department approved this application.[39]

Approximately 400 to 500 workers are expected to travel to the site daily at any given time during peak construction periods. Carpooling and use of public transportation would be encouraged. It is anticipated that construction parking would be on site on Selby Street, which would be temporarily closed during construction, and on surrounding city streets.

Potential construction access for truck haul routes are indicated on Figure 2.D-14. A traffic control plan established by the construction contractor would be necessary during construction to complete the streetscape improvements in the public right-of-way, along with other features. Additionally, use of the right-of-way may be necessary during demolition; soil off-hauling; deliveries of steel, precast concrete, and concrete; and other construction phases.

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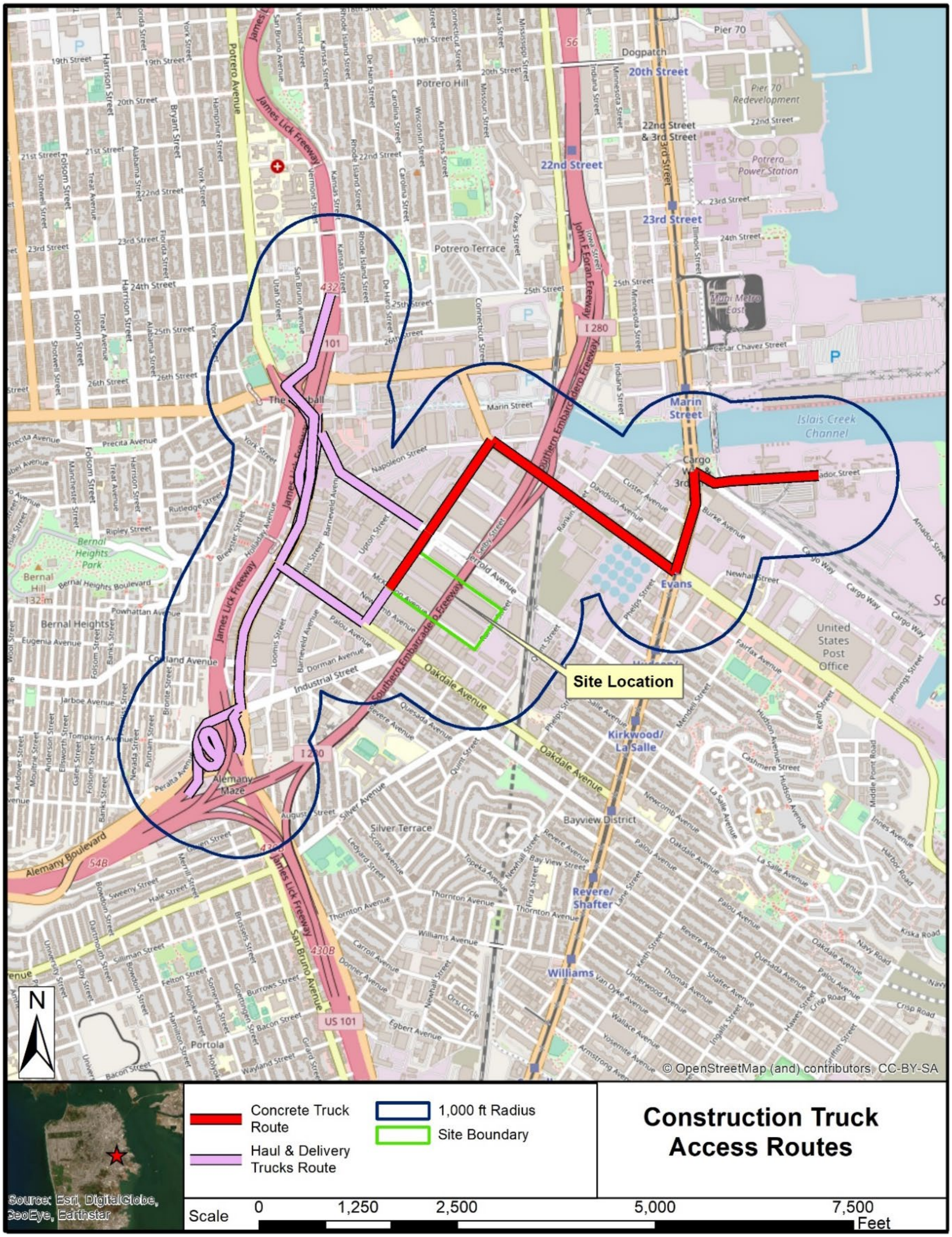
37 Prologis, *Application for Priority Application Processing for Director's Bulletin No. 2,* June 7, 2021.

38 Prologis, *Priority Application Processing for Clean Construction Projects, Supplemental Application for Type 3 Priority Projects for Director's Bulletin No. 2,* June 7, 2021.

39 San Francisco Planning Department, *Signed Application for Priority Application Processing for Director's Bulletin No. 2,* June 15, 2021.

Figure 2.D-14 Primary or Proposed Construction Truck Access Routes



Source: Compiled by AECOM, 2022

2.E Expanded Streetscape Variant

An expanded streetscape variant is analyzed in this EIR and would include the same land uses and site plan as the proposed project, but would improve the remainder of adjacent public rights-of-way to Better Streets standards. As shown in Figure 2.E-1, the expanded streetscape variant would include improvements from the center line of each adjacent street outward to the property line of the adjacent lots. These improvements would include new roadway surfaces, curb cuts, sidewalks, street trees, and other amenities. These improvements are studied to provide environmental clearance in the event the improvements are carried out by the project sponsor or other parties in the future.

Along Toland Street, between Kirkwood and McKinnon avenues, the expanded streetscape variant would include resurfacing the western (southbound) side of the street. It would include extending the existing 10-foot sidewalk and planting approximately 13 street trees from the Kirkwood intersection to the McKinnon intersection. New curb ramps would be provided at both sides of the Toland Place intersection. Curb ramps and crosswalks would be provided at the southern and western sides of the Toland Street and McKinnon Avenue intersection. Five curb cuts of varying widths (24 to 40 feet) would be provided to maintain existing building access points.

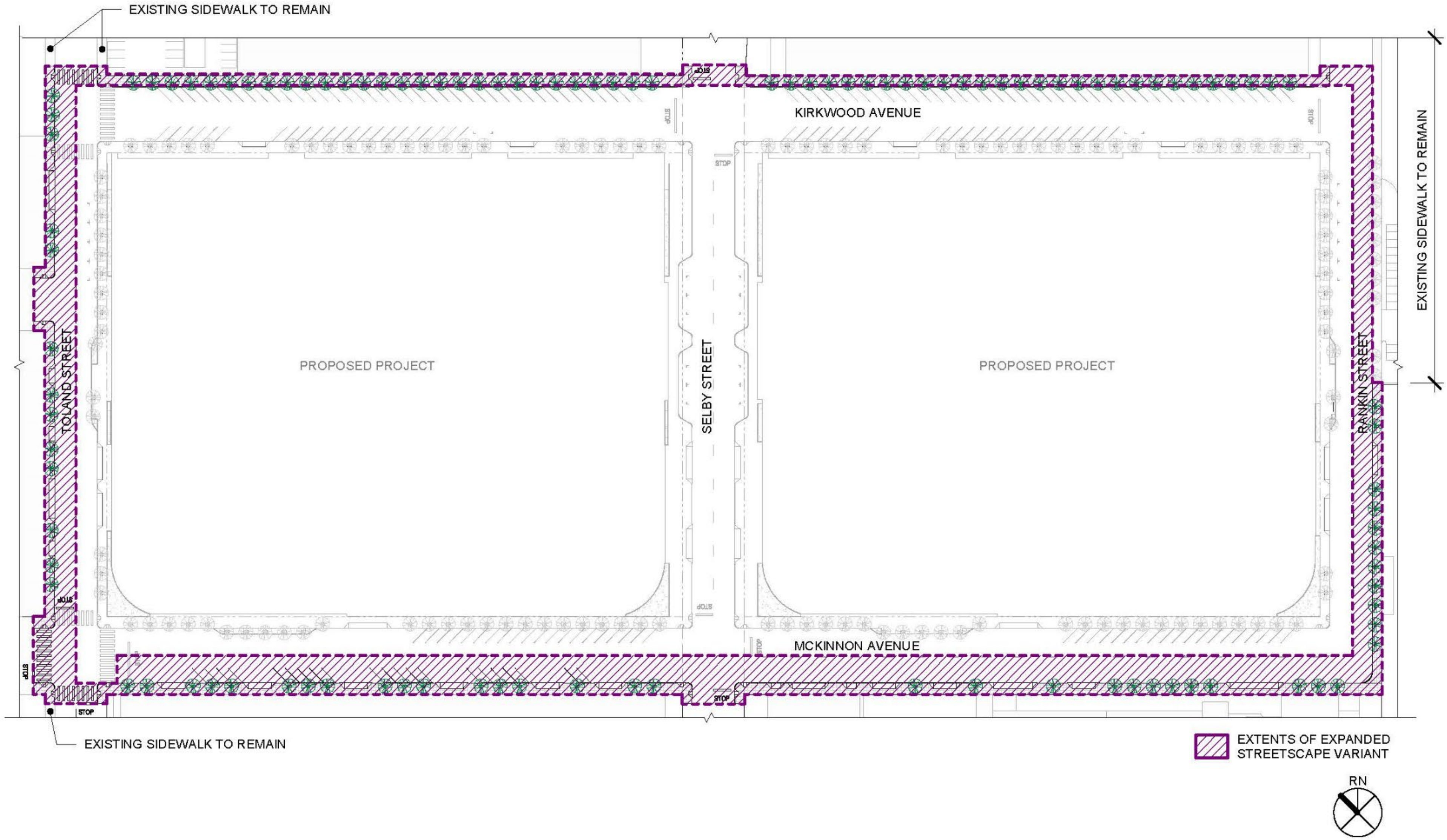
Along Kirkwood Avenue, between Toland and Rankin streets, the expanded streetscape variant would include building a 12-foot sidewalk, and planting approximately 55 street trees on the northern side of the street.

Along Rankin Street, between Kirkwood and McKinnon avenues, the eastern (northbound) side of the street would be resurfaced. A 10-foot sidewalk with approximately 11 street trees and curb and gutter would connect the existing sidewalk at 901 Rankin Street to McKinnon Avenue. One approximately 30-foot-wide curb cut would be added to maintain existing access to the 1900 Newcomb Avenue site.

Along McKinnon Avenue, between Selby and Toland streets, the expanded streetscape variant would include resurfacing the southern side of the street, installing a new curb and gutter, providing approximately 16 back-in diagonal parking spaces, and building a 12-foot sidewalk with approximately 17 street trees. Six approximately 24-foot-wide curb cuts would be added to maintain existing access to properties on the southern side of McKinnon Avenue. Curb ramps would be included on the southwestern and southeastern corners of the intersection with Selby Street. On McKinnon Avenue, between Selby and Rankin streets, the expanded streetscape variant would include resurfacing the southern side of the street, installing a new curb and gutter, and building a 12-foot sidewalk with approximately 12 street trees. Eight curb cuts of varying widths (10 to 50 feet) would be added to maintain existing access to properties on the southern side of McKinnon Avenue.

The maximum depth of ground disturbance associated with the streetscape improvements would be no more than 3 feet. Less than 100,000 square feet of surface area would be disturbed as part of the expanded streetscape variant.

Figure 2.E-1 Expanded Streetscape Variant



Source: JLA, 2023

2.F Required Approvals

Certification of the final EIR by the planning commission, which would be appealable to the board of supervisors, is required before any discretionary approvals or permits can be issued for the proposed project. The following is a preliminary list of anticipated approvals for the proposed project. The list would apply to the proposed project and the expanded streetscape variant, and is subject to change.

2.F.1 Actions by the San Francisco Planning Commission

- Recommendation to the board of supervisors to approve the planning code and zoning map amendments for height district reclassification and to adopt a new special use district
- Approval of a Planned Unit Development-Conditional Use Authorization in accordance with planning code sections 303 and 304 to permit a large-scale development on a site larger than one-half acre
- Recommendation to the board of supervisors to approve a development agreement
- Adoption of findings under the California Environmental Quality Act
- Recommendation to the board of supervisors to adopt amendments to the San Francisco General Plan (general plan) (if determined to be required)

2.F.2 Actions by the San Francisco Zoning Administrator

- Approval of a TDM plan (if required[40])

2.F.3 Actions by the San Francisco Board of Supervisors

- Adoption of findings under the California Environmental Quality Act
- Approval of planning code and zoning map amendments for height district reclassification and to adopt a new special use district
- Approval of the development agreement

2.F.4 Actions by Other City Departments

- *San Francisco Planning Department and San Francisco Department of Building Inspection* – Approval of the site permit and addenda thereto
- *San Francisco Department of Building Inspection* – Approval of demolition, grading, and building permits for the demolition of the existing buildings, and construction of the new building and night noise permit for work performed outside the normal 7 a.m. to 8 p.m. construction hours
- *San Francisco Department of Public Works* – Approval of street tree application, approval of temporary use permits during construction and permanent streetscape improvements, a permit to plant street trees, and a partial waiver from Public Works Code section 806(d) to provide 92 fewer street trees than

[40] The San Francisco Gateway Project's Development Agreement may establish alternative TDM requirements that would not require approval by the Zoning Administrator. However, the Development Agreement would require approval by the San Francisco Board of Supervisors.

required, approval of an overwide driveway permit, and night noise permit for work performed outside the normal 7 a.m. to 8 p.m. construction hours

- *San Francisco Municipal Transportation Agency* – Approval of temporary use permits during construction, permanent curb modifications, and modifications to the roadway directions and lane configurations on the streets surrounding the project site
- *San Francisco Department of the Environment* – Approval of a Demolition Debris Recovery Plan
- *San Francisco Public Utilities Commission* – Approval of any changes to sewer laterals; approval of a modified Stormwater Control Plan; approval of an erosion sediment control plan before the start of construction, compliance with post-construction stormwater design guidelines, including a stormwater control plan, new curb and gutter system, cistern design, and groundwater dewatering wells per San Francisco Health Code article 12B (joint approval with the San Francisco Department of Public Health)
- *San Francisco Department of Public Health* – If applicable, approval of a hazardous materials release plan and inventory program pursuant to San Francisco Health Code articles 21 and 21A; approval of a dust control plan pursuant to San Francisco Building Code section 106 and San Francisco Health Code article 22B; approval of a site mitigation plan and soil mitigation plan in compliance with San Francisco Health Code article 22A (the Maher Ordinance), and review and approval of groundwater dewatering wells (joint approval with the San Francisco Public Utilities Commission [SFPUC])

2.F.5 Actions by Other Agencies

- *Bay Area Air Quality Management District* – Issuance of permits for the installation and operation of emergency generators; approval that the project complies with the air board's asbestos airborne toxic control measure related to naturally occurring asbestos (if applicable, the preparation and approval of an asbestos dust mitigation plan may be required); and certification to the building department that all asbestos-containing building materials have been removed and properly disposed in accordance with the law before demolition of the existing buildings; additionally, approval of permits for installation, operation, and testing of individual air pollution sources associated with tenant-specific activities, as required by air district rules and regulations
- *Caltrans* – Coordination, review, and issuance of a Caltrans standard encroachment permit

CHAPTER 3
ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

3.A Introduction to the Environmental Analysis

This chapter includes an overview of the approach to analysis, provides an historic context as well as key environmental and socioeconomic indicators to illustrate how past actions shaped and continue to shape the physical environmental conditions that people in Bayview Hunters Point may experience, and provides an overview of the existing and cumulative environmental setting. This chapter also describes more detailed existing conditions in the project vicinity for each environmental resource discussed in this EIR and analyzes the physical environmental effects of implementing the proposed project or expanded streetscape variant described in Chapter 2, Project Description. This chapter describes the environmental and regulatory framework for topics evaluated under CEQA; assesses project impacts and cumulative impacts; and identifies feasible mitigation measures that would reduce or avoid environmental impacts determined to be significant.

3.A.1 CEQA Standards of Adequacy

CEQA Guidelines section 15151 describes standards for the preparation of an adequate EIR. Specifically, the standards under section 15151 state:

- An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information that enables them to make a decision that intelligently takes into account environmental consequences.
- An evaluation of the environmental impacts of a project need not be exhaustive; rather, the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible.
- Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts.

In practice, the preceding points indicate that EIR preparers should use a reasonable, professionally accepted methodology to assess impacts. This approach sometimes requires making reasonable assumptions using the best information available. In some cases, when information is limited, this draft EIR employs a “reasonable worst-case analysis” to identify the largest expected potential change from existing baseline conditions that the proposed project or expanded streetscape variant may create. This approach thus identifies the most-severe impact that could occur, providing a conservative analysis of potential environmental impacts.

The following sections provide an overview to the background and approach for the impact assessments that follow.

3.A.2 Scope and Organization of this Chapter

The resource topic areas addressed in this chapter of the draft EIR are listed below (along with the abbreviations used when naming impact statements and mitigation measures for each resource topic):

- Section 3.B, Transportation and Circulation (TR)
- Section 3.C, Noise and Vibration (NO)
- Section 3.D, Air Quality (AQ)

Each of these resource topics is discussed first by presenting its setting (i.e., a description of physical characteristics applicable to the resource topic) that describes conditions as they exist without the proposed project. The physical environmental impacts of the proposed project are then identified by comparing the existing conditions with the changes to those conditions that are anticipated to result from construction and operational activities associated with the proposed project. Impacts for each resource topic are evaluated based on specific "study areas" dictated by the characteristics of the resource being evaluated, as well as the type, magnitude, and location of potential environmental effects. The discussion of each resource topic is organized as follows.

- **Introduction.** This subsection provides a brief description of the overall contents of the section, a cross-reference to other related resource topics, and a summary of comments received on the NOP and initial study that relate to that resource topic.
- **Environmental Setting.** This subsection presents a description of the existing physical environmental conditions in the project area with respect to each resource topic.
- **Regulatory Framework.** This subsection provides an overview of statutory and regulatory considerations that are applicable to the specific resource topic.
- **Impacts and Mitigation Measures.** As described in more detail below, this subsection identifies the significance criteria specific to that resource topic and describes the approach to the analysis. The Impacts and Mitigation Measures subsection is further subdivided to discuss the following topics.
  - **Significance Criteria.** The discussion under this heading lists the criteria—specific to each resource topic—used to identify and determine significant environmental effects of the proposed project and expanded streetscape variant. Under CEQA, a significant effect is defined as a substantial or potentially substantial adverse change in the environment. The guidelines implementing CEQA direct that this determination be based on scientific and factual data, including the entire record for the project, and not on argument, speculation, or unsubstantiated evidence. The significance criteria used in this draft EIR are based on planning department guidance used to assess the severity of environmental impacts of the proposed project, and on CEQA Guidelines Appendix G, using the procedures set forth in San Francisco Administrative Code chapter 31.10.
  - **Approach to Analysis.** The discussion under this heading describes the general approach and methodology used to apply the significance thresholds in evaluating the impacts of the proposed project and expanded streetscape variant. The methodology for applying significance criteria provides the basis for the impact analysis, which could be either qualitative or quantitative, depending on the specific impact. The methodology identifies the applicable regulatory guidelines, thresholds, standards, or accepted professional practices or protocols to be used to assess construction, operational, and cumulative impacts.
  - **Impact Evaluation.** The discussion under this heading evaluates the potential for the proposed project or expanded streetscape variant to result in significant adverse effects on the existing physical environment. The proposed project's impacts are presented as individually numbered impact statements (shown in boldface type) that address each significance criterion. Thus, Impact TR-1 would be the first impact in the Transportation and Circulation section and discusses the effects of the proposed project in response to the first significance criterion. The impact statement concludes with a significance determination (see descriptions below in Section 3.A.3, Significance Determinations).

Following each impact statement is a discussion that provides the analysis and rationale for the significance determination.

If the impact analysis concludes that an impact is significant, feasible mitigation measure(s) are presented immediately following the impact analysis. CEQA Guidelines section 15126.4 directs preparers of an EIR to describe feasible measures that could minimize significant adverse impacts. Mitigation measures are developed to avoid, minimize, rectify, reduce, eliminate, or compensate for an impact resulting from project implementation. CEQA Guidelines section 15041 grants authority to the lead agency to require feasible changes in any or all activities involved in a project to substantially lessen or avoid significant effects on the environment.

Feasible mitigation measures have been included in this chapter for specific environmental impacts, where applicable. The measures are indented and are numbered to correspond to the number of the impact analysis. For example, Mitigation Measure M-AQ-1a would be the first mitigation measure identified to address Impact AQ-1; Mitigation Measure M-AQ-1b would be a second mitigation measure identified for that impact; and so forth.

- **Cumulative Impacts.** The discussion under this heading considers the combined impacts of the proposed project or the expanded streetscape variant and other closely related projects. A further description of cumulative impacts and other related projects is provided later in Section 3.A.4, Approach to Analysis (p. 3.A-4); and Section 3.A.6, Overview of Existing and Cumulative Environmental Setting (p. 3.A-15).

3.A.3 Significance Determinations

For each impact statement and analysis, the impact evaluation provides a conclusion of the impact's significance. The significance of an impact is designated according to the following definitions.

- **No Impact (NI).** This determination applies if there is no potential for impacts, or if the environmental resource does not occur in the project area or the area of potential effects.
- **Less-than-Significant Impact (LTS).** This determination applies if the impact does not exceed the defined significance criteria or would be eliminated or reduced to a less-than-significant level through compliance with existing local, state, and federal laws and regulations. No mitigation is required for impacts determined to be less than significant.
- **Less-than-Significant Impact with Mitigation (LTSM).** This determination applies if implementation of the proposed project or expanded streetscape variant would or could result in a significant adverse effect, exceeding the defined significance criteria, but feasible mitigation is available that would reduce the impact to a less-than-significant level.
- **Significant and Unavoidable with Mitigation (SUM).** This determination applies if implementation of the proposed project or expanded streetscape variant would result in a significant adverse effect that exceeds the defined significance criteria and—although the impact can be reduced through compliance with existing local, state, and federal laws and regulations, and/or implementation of feasible mitigation—the residual impact would still exceed the defined significance criteria. Thus, even with implementation of feasible mitigation, the impact would be significant and therefore unavoidable.
- **Significant and Unavoidable Impact (SU).** This determination applies if implementation of the proposed project or expanded streetscape variant would result in a significant adverse effect that

exceeds the defined significance criteria, and there are no feasible mitigation measures. Therefore, the impact would be significant and unavoidable.

3.A.4 Approach to Analysis

This section describes the approach to baseline conditions and the project analysis, defines a cumulative impact, describes the approach to the cumulative impact analysis, and discusses the degree to which socioeconomic conditions are considered under CEQA.

APPROACH TO BASELINE CONDITIONS

The environmental setting constitutes the baseline physical conditions (existing conditions) by which potential impacts of the proposed project are assessed for significance. CEQA Guidelines section 15360 defines the environment (or the setting) as "the physical conditions which exist within the area which will be affected by a proposed project." In accordance with CEQA Guidelines section 15125(a)(1), where existing conditions change or fluctuate over time, and where necessary to provide the most accurate picture practically possible of the project's impacts, a lead agency may define existing conditions by referencing historic conditions or conditions expected when the project becomes operational, or both, that are supported with substantial evidence. The project setting sections of this draft EIR and supporting technical studies (provided as Appendices C through F), reflect conditions at the project site when the environmental review process began in 2017.[41] As of August 2020, the project sponsor submitted building permit applications for an interim use on the project site.[42] The environmental analyses of this draft EIR, including the initial study and supporting technical studies, consider the changes that result from the construction and operation of the proposed project and the expanded streetscape variant in comparison to the uses at the project site prior to the operation of the interim use.

The uses at the project site in 2017 were less intensive (i.e., would result in fewer vehicle trips and less air and noise emissions) than the interim use of parcel delivery service on the site (as of August 2020). Analyzing the change in the environment from the uses that occupied the site in 2017 to the proposed uses is considered conservative, or worst-case, because the interim use is more intense than the 2017 uses. Therefore, the increment of change between the uses that occupied the site in 2017 and the proposed project is greater than the increment of change between interim (2020) conditions and the proposed project. Thus, evaluating the change between the uses existing in 2017 and the uses that could exist with the proposed project would result in a greater physical change in the environment than if the analysis was based on the change in conditions between the 2020 conditions and the proposed project.

APPROACH TO PROJECT ANALYSIS

As described in Chapter 2, Project Description, the project sponsor proposes to build a flexible PDR space that can accommodate an evolving mix of users for a 100-year period or longer. Given that there are no identified tenants at this time, the draft EIR describes and analyzes a mix of PDR uses that are likely to occur based on the project sponsor's familiarity with leasing trends for PDR facilities in San Francisco and the Bay Area and that represent possible tenants whose environmental impacts would be reasonably conservative (see Table 2.D-2, p. 2-26). For example, it is good practice to err on the side of overestimating vehicle trips (and corresponding air quality and noise impacts) associated with possible tenants to ensure impacts are identified and adequately mitigated, as appropriate. As described in Chapter 2, the project is proposing a special use district

[41] The project setting sections of the initial study also reflect conditions at the project site when the environmental review process began in 2017.
[42] San Francisco Building Department Permit #202008272769 (Building 417 shell) and San Francisco Building Department #202008272770 (Building 418 shell)

for the project site. The special use district would establish a consistency review process to ensure that tenant improvement permits are consistent with the project's development agreement; the planning code; the project's conditions of approval, including the mitigation measures adopted as part of the project's approval; and this draft EIR.

APPROACH TO CUMULATIVE ANALYSIS

Defining Cumulative Impacts

CEQA requires an evaluation of a proposed project's potential contributions to cumulative impacts, in addition to proposed project-specific impacts. Cumulative impacts, as defined in CEQA Guidelines section 15355, refer to two or more individual effects that, when taken together, are "considerable" or that compound or increase other environmental impacts. A cumulative impact from several projects is the change in the environment that would result from the incremental impact of the project when added to the impact of other closely related past, present, or reasonably foreseeable future projects. Pertinent guidance for cumulative impact analysis is provided in CEQA Guidelines section 15130.

- An EIR shall discuss cumulative impacts of a project when the project's incremental effect is "cumulatively considerable" (i.e., the incremental effects of an individual project are considerable when viewed in connection with the effects of past, current, and probable future projects causing related impacts, including those outside the control of the agency, if necessary).
- An EIR should not discuss impacts that do not result in part from the project evaluated in the EIR.
- A project's contribution is less than cumulatively considerable, and thus not significant, if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact.
- The discussion of impact severity and likelihood of occurrence need not be as detailed as for effects attributable to the project alone.
- The focus of analysis should be on the cumulative impact to which the identified other projects contribute, rather than on attributes of the other projects that do not contribute to the cumulative impact.
- An EIR must determine whether a cumulative impact exists, and only then whether an individual project's contribution to a cumulative impact is considerable. This means that the project's proportional share is deemed to be adverse in conjunction with other similar projects that may combine to result in physical impacts.

The cumulative impact analysis for each individual resource topic is described in the corresponding resource sections of this chapter, immediately following the description of the project-specific impacts and mitigation measures. The cumulative impact statements are denoted with the letter "C," for cumulative, in the naming convention. Thus, Impact C-TR-1 refers to the first cumulative impact statement in the transportation and circulation assessment of the proposed project and expanded streetscape variant.

Approach to 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 past, present, and reasonably foreseeable future 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 draft EIR employ both a list-based approach and projections from the general plan or other related planning documents, as appropriate for the specific resource topic being analyzed.

The following factors were used to determine an appropriate level for cumulative analysis in this draft EIR:

- **Similar Environmental Impacts.** A relevant project contributes to effects on resources that are also affected by the proposed project or expanded streetscape variant. A relevant future project is defined as one that is "reasonably foreseeable," such as a proposed project for which an application has been filed with the approving agency or for which funding has been approved.
- **Geographic Scope and Location.** A relevant project is one located in the geographic area within which effects could combine. The geographic scope varies on a resource-by-resource basis. For example, because health risk impacts from exposure to air pollutants are generally localized, the cumulative context for health risk analysis is the project site and vicinity within 1,000 feet of the project site or the maximally exposed receptor. In contrast, the geographic scope for evaluating cumulative effects on regional air quality consists of the affected air basin (i.e., the San Francisco Bay Area Air Basin).
- **Timing and Duration of Implementation.** Effects associated with activities for a relevant project (e.g., short-term construction or demolition or long-term operations) would most likely coincide with the related effects of the proposed project or expanded streetscape variant.

APPROACH TO SOCIOECONOMIC EFFECTS

Socioeconomic effects are not, in themselves, considered physical environmental impacts under CEQA. Rather, pursuant to CEQA Guidelines section 15064, an EIR reviews the effects of a project that are related to a physical change to the environment. A significant effect on the environment, in turn, is one that results in a substantial or potentially substantial adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.[43] However, an economic or social change by itself shall not be considered a significant effect on the environment. Therefore, evidence of social or economic effects that do not contribute to or are not caused by physical impacts on the environment are not substantial evidence of a significant effect on the environment.[44]

3.A.5 Historic and Existing Context of San Francisco's Bayview Hunters Point Neighborhood

This section provides an historic context as well as key environmental and socioeconomic indicators to illustrate how past actions shaped and continue to shape the physical environmental conditions that people in Bayview Hunters Point may experience. In San Francisco, as in many other cities, low-income households and people of color are more likely to live in neighborhoods with environmental hazards, such as toxic groundwater, polluting industrial activities, congested freeways, and hazardous and solid waste facilities. In

[43] Section 15382 of the CEQA Guidelines. https://casetext.com/regulation/california-code-of-regulations/title-14-natural-resources/division-6-resourcesagency/chapter-3-guidelines-for-implementation-of-the-california-environmental-quality-act/article-20-definitions/section-15382-significant-effect-onthe-environment. Accessed July 13, 2023.

[44] Section 15064(f)(6) of the CEQA Guidelines. https://casetext.com/regulation/california-code-of-regulations/title-14-natural-resources/division-6- resources-agency/chapter-3-guidelines-for-implementation-of-the-california-environmental-quality-act/article-5-preliminary-review-of-projects-andconduct-of-initial-study/section-15064-determining-the-significance-of-the-environmental-effects-caused-by-a-project. Accessed July 13, 2023.

large part, this is the direct result of racial covenants, redlining, urban renewal, and other discriminatory programs that have historically restricted where people of color may live.[45]

This section describes the historical and existing context, as well as the existing economic, social and demographic conditions at the project site and in the vicinity of the project site. The overview provided in this section is supplemented by the environmental and cumulative setting provided below in Section 3.A-15, Overview of Existing and Cumulative Environmental Setting (p. 3.A-15), and in each resource topic subsection (e.g., transportation setting).

The Bayview Hunters Point neighborhood has been occupied by people of diverse ethnic and socioeconomic backgrounds throughout its history. The shore areas near present day India Basin and Candlestick Point were first settled thousands of years ago by members of the Ohlone tribe; this area remained their home until the land was colonized by the Spanish. Following California statehood in 1850, it was subdivided and sold off to American and European settlers.[46] Between 1860 and 1910, Bayview Hunters Point was one of the city's most ethnically varied neighborhoods, with British merchants and landowner-farmers, and Scandinavian and German boat builders occupying India Basin; Italian and German home-builders and ranchers in central Bayview; Chinese fishermen and shrimp camps along the India Basin shoreline near Hunters Point in the 1870s; Italian, Maltese, and Portuguese truck farmers[47] in the Bayview from the 1890s; and French tannery workers and Mexican and southwestern vaqueros in Butchertown since 1900.[48]

The industrial roots of Bayview Hunters Point began with the San Francisco Dry Dock, which was constructed in 1866. Industrial intensification took place over time, culminating with the U.S. Navy's purchase of the dry dock in 1940. This period saw the neighborhood's population boom; between 1940 and 1970, a solid, growing middle-class community spread across the neighborhood.

With the growth of the shipbuilding industry in World War II, thousands of Black workers settled the area to work at the Hunters Point Naval Shipyard. The shipyard was a major shipbuilding and repair center for the Pacific and the driving contributor to the neighborhood's economic livelihood, employing nearly 18,500 people at its peak.[49] Following the end of World War II, white families began to leave the neighborhood while the Black population continued to grow, spurred by government and nongovernmental actions such as redlining. Redlining gave marginalized communities no choice where they could live and contributed to the financial and racial barriers that restricted Blacks to the Hunters Point neighborhood. Policy actions across the United States in the 1950s introduced an era of redevelopment of urban neighborhoods to remove blight; in San Francisco, this effort was specifically directed at the traditionally African American Fillmore/Western Addition districts. The effect was the displacement of many Black families and their migration to the Bayview Hunters Point neighborhood.[50]

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45 San Francisco Planning Department. Housing Element 2022 Update. January 2023, https://sfplanning.s3.amazonaws.com/archives/sfhousingelement.org/files/Housing_Element_2022_Update.pdf. Accessed July 12, 2023

46 Kelley & VerPlanck, Bayview-Hunters Point Area B Survey, Historic Context Statement, February 11, 2010, https://www.sanfranciscohistory.com/BVHP_Context.pdf.

47 Truck farming is a horticultural practice of growing crops for shipment to distant markets.

48 Kelley & VerPlanck, Bayview-Hunters Point Area B Survey, Historic Context Statement, February 11, 2010, https://www.sanfranciscohistory.com/BVHP_Context.pdf.

49 A Day's Work: Hunters Point Shipyard Workers, 1940-1945 - FoundSF. Lemke-Santangelo, Gretchen and Charles Wollenberg, A Day's Work: Hunters Point Shipyard Workers, 1940-1945 Historical Essay, https://www.foundsf.org/index.php?title=A_Day%27s_Work:_Hunters_Point_Shipyard_Workers,_1940-1945.

50 Kelley & VerPlanck, Bayview-Hunters Point Area B Survey, Historic Context Statement, February 11, 2010, https://www.sanfranciscohistory.com/BVHP_Context.pdf.

During this period, the mission of the Naval shipyard transitioned to nuclear research, and the National Radiological Defense Laboratory that was established at the site in the latter part of the 1940s was the only laboratory in the country working on atomic defense issues. The closure of the Hunters Point Naval Shipyard in 1974 resulted in significant job loss in the area, with the commercial and retail opportunities impacted further due to the decommissioning of the Naval base in 1991.[51] The U.S. Navy permanently closed the nearly 900-acre shipyard in 1994, leaving behind a number of health and environmental hazards associated with its industrial and research activities. To identify and monitor cleanup activities, the U.S. Navy divided the former naval shipyard into several areas. Two sites were identified as requiring "no further action" (i.e., no further action is needed to protect public health), following the U.S. Navy's investigations. As a result, a 500-acre parcel was transferred to the San Francisco Redevelopment Agency (now the Office of Community Investment and Infrastructure) in 2004.[52] Redevelopment of this site is currently underway, with new planned housing; commercial and retail uses; and recreation, open space, and community facilities.

A portion of the Hunters Point Naval Shipyard, approximately 3 miles from the proposed San Francisco Gateway project site, is designated as an environmental "superfund" site that requires extensive remediation by the U.S. Navy. The U.S. Navy is responsible for environmental remediation of the site. The U.S. Navy's clean-up is overseen by the United States Environmental Protection Agency, the California Department of Toxic Substances Control, and the Regional Water Quality Control Board. Once the remediation is complete, the U.S. Navy will transfer the property to San Francisco.[53] In 2018, employees working as a contractor to the U.S. Navy were alleged to have misrepresented and falsified data regarding the presence of radiological materials on the Hunters Point Shipyard site.[54] This allegation erodes trust from some communities in the Hunters Point Naval Shipyard remediation process.[55]

In 1995, the planning department amended the General Plan to include the Bayview Hunters Point Area Plan; this plan is intended as a tool to guide future development in the area.[56] The neighborhood's history of residential and industrial development occurred prior to environmental regulations and modern land use controls, leaving issues of environmental health and land use conflicts. Key goals for the plan, formulated with citizen input, include creating the necessary land use and market conditions to enable the neighborhood to thrive economically, using housing growth to attract businesses, and resolving conflicts between adjacent industrial and residential areas. Since the 1990s, the planning department has also established a series of area plans and land use regulations that limit core PDR zoning to the Bayview Hunters Point area of the city; additionally, the only areas of the city zoned for light or heavy manufacturing are either in the southeastern portion of the city or along the waterfront and controlled by the Port of San Francisco.

The overall Bayview Hunters Point neighborhood is zoned for a mixture of residential, PDR, industrial, commercial, and public uses; however, the project site and adjacent areas are all zoned PDR-2 (core PDR),

[51] Bayview Historical Society, Preservation of Place, 2021, *https://bayview-hunterspoint.org/bvhp-history*.
[52] United States Environmental Protection Agency, Hunters Point Naval Shipyard Cleanup Activities, n.d., *https://cumulis.epa.gov/supercpad/SiteProfiles/index.cfm?fuseaction=second.cleanup&id=0902722*.
[53] San Francisco Office of Community Investment and Infrastructure , Hunters Point Shipyard Phase 2 Candlestick Point, Office of Community Investment and Infrastructure, sfocii.org.
[54] United States Department of Justice, Office of Public Affairs, United States Joins Lawsuits Against Tetra Tech EC Inc. Alleging False Claims in Connection With Shipyard Cleanup, *https://www.justice.gov/opa/pr/united-states-joins-lawsuits-against-tetra-tech-ec-inc-alleging-false-claims-connection*.
[55] San Francisco Planning Department, Memorandum, Environmental Justice Informational Analysis for the Housing Element 2022 Update, Case No. 2019-016230CWP, December 7, 2022, *https://sfplanning.s3.amazonaws.com/archives/sfhousingelement.org/files/ExhibitC.pdf*.
[56] San Francisco, San Francisco General Plan – Bayview Hunters Point Area Plan, amended July 12, 2011 (originally adopted in 1995), *https://generalplan.sfplanning.org/Bayview_Hunters_Point.htm*.

under which residential uses are not permitted. Although Bayview Hunters Point began as a heavy industrial area, with a portion of the neighborhood known as “Butchertown,” and continued with steel manufacturing, ship repair, junk yards, and auto wrecking, the current distribution of employment by category (managerial professional, services, etc.) is diverse and not predominantly blue- or white-collar. There is a relatively high rate of homeownership in Bayview Hunters Point; owner-occupied housing units account for 53 percent of the residential properties in the neighborhood, compared to 38 percent for San Francisco as a whole. Although homeownership is high, unsheltered individuals[57] are a visible presence in this neighborhood, as in many San Francisco neighborhoods. Unsheltered persons have been observed within one to two blocks of the San Francisco Gateway Project site. Recent data from the Department of Homelessness and Supportive Housing from 2019-2022 indicate that some areas of the Bayview neighborhood have had large decreases in unsheltered individuals due to increased outreach and shelter efforts.[58]

As of the 2020 U.S. census, the neighborhood is more diverse demographically, has a lower median income, and has a higher linguistic isolation[59] rate than San Francisco as a whole as shown in Table 3.A-1 (U.S. Census Bureau/American Community Survey 5-Year Estimates, 2020).[60] Ethnic demographics in the neighborhood have shifted over time. As shown in Table 3.A-1, the current African American population comprises 26 percent of the neighborhood’s total population, a decrease from historic figures. The African American population was reported to comprise 73 percent of the neighborhood’s total population in 1980.[61] In Bayview Hunters Point, 47 percent of residents reported their educational attainment as high school or less, compared to 23 percent for San Francisco as a whole. Furthermore, 19 percent of the neighborhood residents reported attaining a college degree, compared to 35 percent for San Francisco as a whole. Additionally, there is a 15 percent linguistic isolation rate in the neighborhood, meaning that 15 percent of households reported limited English proficiency; San Francisco’s overall linguistic isolation rate is 10 percent. With respect to income, median household income for the neighborhood is $68,397, which is slightly more than half of San Francisco’s median household income of $119,186. Additionally, the poverty rate of Bayview Hunters Point is 16 percent, compared to San Francisco’s poverty rate of 10 percent.

In addition to the socioeconomic profile data presented in Table 3.A-1, the California Office of Environmental Health Hazard Assessment’s CalEnviroScreen 4.0[62] identifies California communities that are disproportionately burdened by multiple sources of pollution. This tool combines pollution burden and population characteristics to derive a “score” (from 0 to 100) for census tracts that can then be compared across the state. More specifically, CalEnviroScreen 4.0 statistically assesses 21 indicators to characterize pollution burden and population. Examples of pollution burden data include ozone, diesel particulate matter, hazardous waste, and traffic impacts; examples of population characteristics data include asthma, cardiovascular disease, poverty, and unemployment. See Figure 3.A-1 (p. 3.A-11) for the CalEnviroScreen 4.0 results for the city. The project site is in an area considered to be “High Pollution, Low Population,” meaning that it has a high level of pollution burden, but residential use is limited; this is consistent with the site’s PDR-2 zoning, in which residential use is not permitted.

57 Unsheltered individuals are defined as people living in vehicles, tents, or on the sidewalk.

58 San Francisco Chronicle, “Map shows in detail S.F. areas where homelessness has increased or decreased the most,” December 15, 2022, *https://www.sfchronicle.com/sf/article/Maps-show-the-detailed-S-F-areas-where-17655467.php*.

59 The U.S. Census Bureau states that a household is linguistically isolated if all adults (defined as persons age 14 or older for the purpose of the Census) speak a language other than English, and none speak English “very well.”

60 Latino can apply to any race.

61 San Francisco Planning, Bayview Hunters Point Area Plan, 2010, *https://generalplan.sfplanning.org/Bayview_Hunters_Point.htm*.

62 California Office of Environmental Health Hazard Assessment (OEHHA), CalEnviroScreen 4.0 Mapping Tool, 2021, *https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40*.

Table 3.A-1 Demographics of Bayview Hunters Point Compared to San Francisco as a Whole

Category	Attribute	Bayview Hunters Point	San Francisco
Population	Total Population	38,480	874,784
Race/Ethnicity	Asian	39%	34%
Race/Ethnicity	Black/African American	26%	5%
Race/Ethnicity	White	13%	45%
Race/Ethnicity	Native American Indian	0%	0%
Race/Ethnicity	Native Hawaiian/Pacific Islander	2%	0%
Race/Ethnicity	Other/Two or More Races	20%	15%
Race/Ethnicity	% Latino (of Any Race)	23%	15%
Educational Attainment	High School or Less	47%	23%
Educational Attainment	Some College/Associate Degree	26%	18%
Educational Attainment	College Degree	19%	35%
Educational Attainment	Graduate/Professional Degree	8%	24%
Linguistic Isolation[1]	% of All Households	15%	10%
Housing	Owner Occupied	53%	38%
Housing	Renter Occupied	47%	62%
Income	Median Household Income[2]	$68,397.13	$119,186.66
Income	Median Family Income[3]	$72,559.81	$138,866.94
Income	Per Capita Income	$31,164.96	$66,360.32
Income	Percent in Poverty	16%	10%
Employment	Unemployment Rate	8%	5%

Source: U.S. Census Bureau/American Community Survey 2020 5-Year Estimates. Data compiled by AECOM 2022.

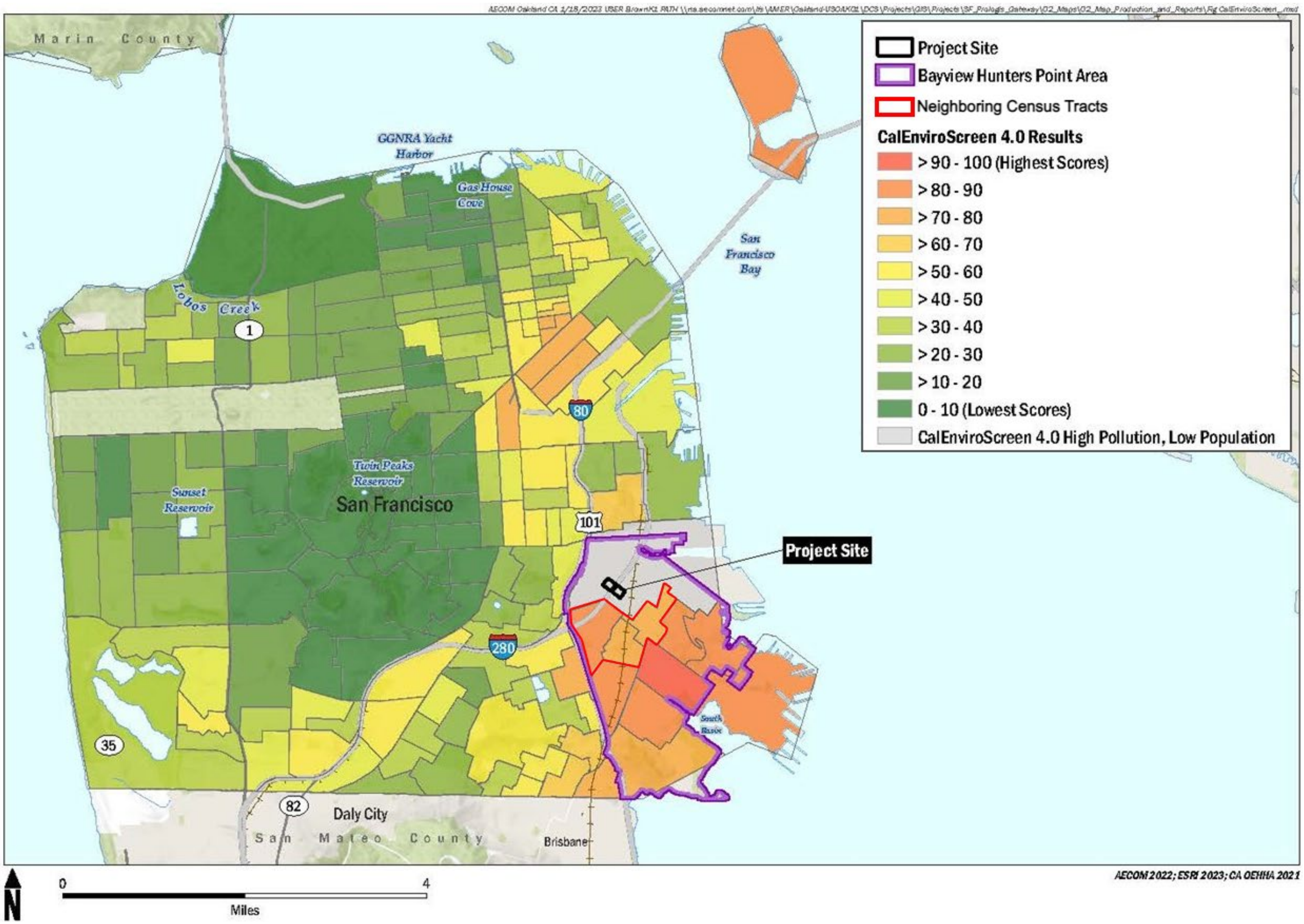
Notes:

1 Linguistic Isolation: the percentage of households where all adults (age 14 or older) speak a language other than English, and none speak English "very well."

2 Median Household Income: This includes the income of the householder and all other individuals 15 years old and older in the household, whether they are related to the householder or not. Because many households consist of only one person, average household income is usually less than average family income. Median income, which applies to both household and family income in this context, divides income distribution into two halves. Median income is interpolated based on the distribution of the total number of households and families, including those with no income.

3 Median Family Income: Family income is the sum of all incomes of members 15 years old and older who are related to the householder.

Figure 3.A-1 CalEnviroScreen 4.0 Results for San Francisco



As described above, CalEnviroScreen uses environmental, health, and socioeconomic information to produce scores for every census tract in the state. Although the project site does not receive an EnviroScreen score due to its low population, the project site is adjacent to census tracts that experience some of the highest pollution burden in the city, as well as the state. Census tract 6075023001 is two blocks away from the McKinnon Avenue site and would be representative of the environmental conditions of the project site. This area is burdened by high pollutant exposures and environmental effects, such as diesel particulate matter, lead-based materials (such as paint) used in housing, hazardous waste, and impaired waters. Census tract 6075023001, which is adjacent to the intersection of US 101 and I-280, has a CalEnviroScreen diesel particulate matter percentile[63] of 99, which is the highest possible in the state.

The socioeconomic stressors of the adjacent populations and these health conditions render populations in the project area more vulnerable to the impacts of pollution.[64] For example, Table 3.A-2 presents the rates of hospitalizations and emergency room visits due to asthma and chronic obstructive pulmonary disease (COPD) per 10,000 in the Bayview Hunters Point area (reported as zip code 94124) compared to the city as a whole.[65] Zip code 94124 has an asthma-related emergency room visit rate of 93.4 and an asthma-related hospitalization rate of 23.29. The 94124 zip code also has a COPD-related emergency room visit rate of 45.08 and a COPD-related hospitalization rate of 24.44. Based on available data, the project site zip code has some of the highest rates of asthma and COPD-related emergency room visits and hospitalizations in the city. The asthma and COPD emergency room visitation rates have been categorized into high, medium, and low and are presented by zip code in Figure 3.A-2 and Figure 3.A-3 (p. 3.A-14), respectively, to illustrate the variation across the city. There are various federal, state, and local air quality regulations in place that seek to improve air quality conditions; these regulations are discussed in more detail in Section 3.D, Air Quality.

Table 3.A-2 Age-Adjusted Rates of Hospitalizations and Emergency Room Visits Due to Asthma per 10,000 in Zip Code for Bayview Hunters Point and in San Francisco (2012 – 2016)

Zip Code	Asthma Emergency Room Visit Rate	Asthma Hospitalization Rate	COPD Emergency Room Visit Rate	COPD Hospitalization Rate
94124 (Bayview Hunters Point/Project Site)	93.40	23.29	45.08	24.44
Citywide Average	34.86	5.71	18.55	10.32

Source: San Francisco Health Improvement Partnership (SFHIP), Asthma and Chronic Obstructive Pulmonary Disease, 2022.

Note:

COPD = chronic obstructive pulmonary disease

[63] In CalEnviroScreen, a percentile is a value below which a percentage of the reference population falls. For example, a census tract with a diesel particulate matter percentile of 99 has a higher rate of diesel particulate matter pollution than 99 percent of census tracts in California.

[64] California Office of Environmental Health and Hazard Assessment (OEHHA), CalEnviroScreen 4.0 Report, 2021, *https://oehha.ca.gov/media/downloads/calenviroscreen/report/calenviroscreen40reportf2021.pdf*.

[65] Emergency room visit and hospitalization rates measure the number of visits or admissions, not the number of residents who are hospitalized. Admission records may include multiple admissions by the same person.

Figure 3.A-2 Asthma Emergency Room Visitation Rates

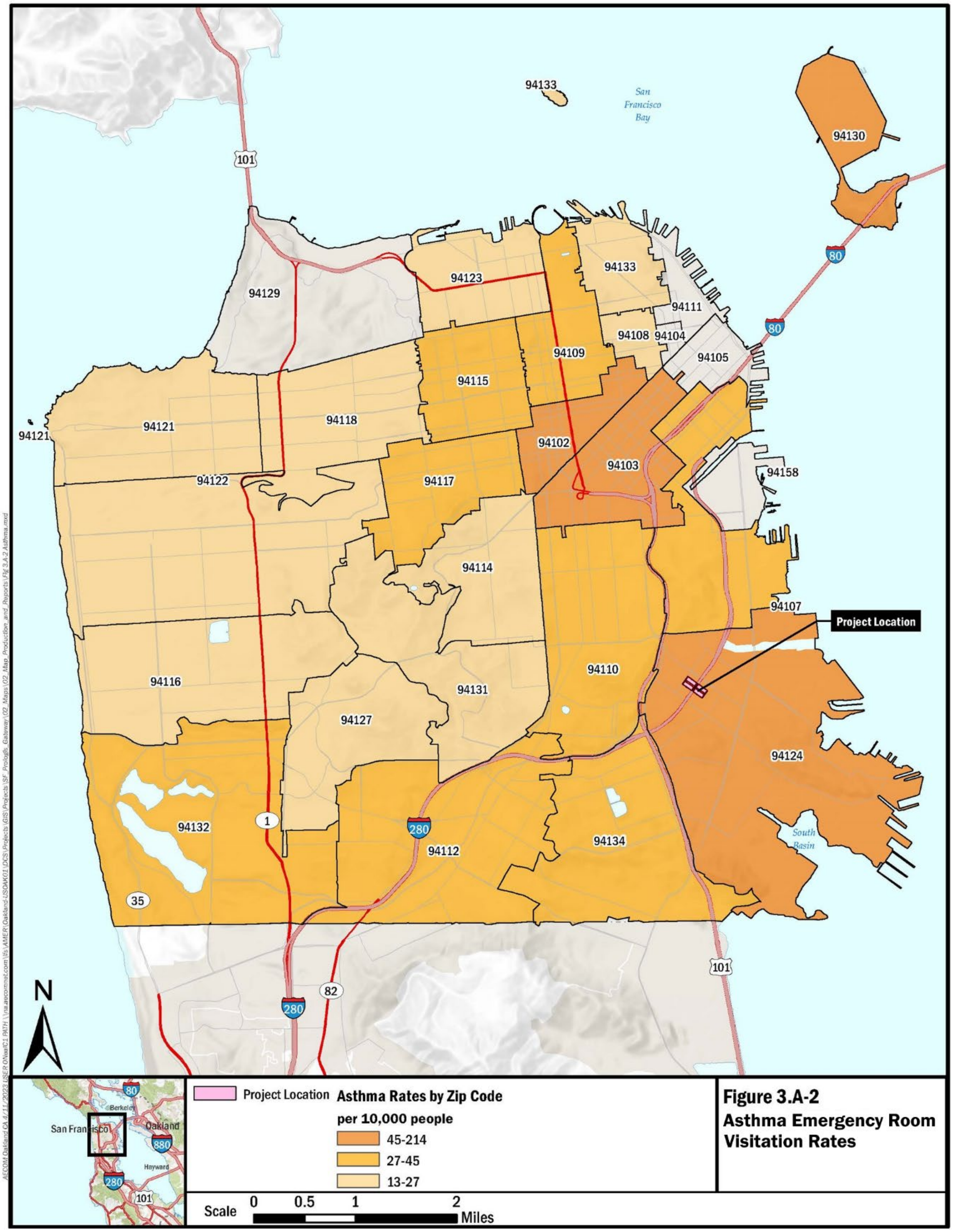
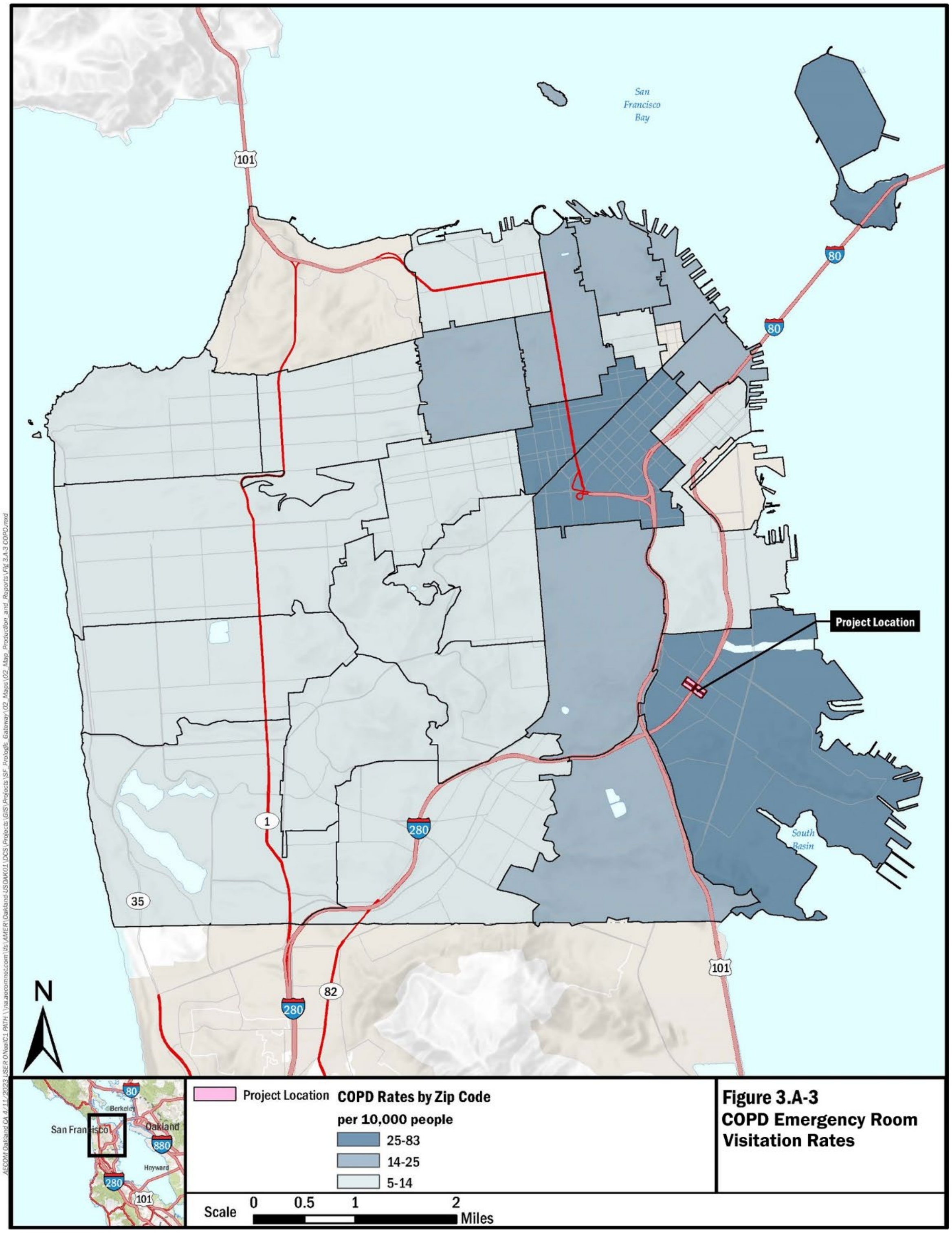


Figure 3.A-3 COPD Emergency Room Visitation Rates



Assembly Bill (AB) 617 was enacted in 2017 to reduce air pollution and preserve public health, with specific direction for local air districts to take measures to protect communities disproportionally impacted by air pollution. The Bayview Hunters Point/Southeast San Francisco Community was selected by the California Air Resources Board (air board) in February 2023 as an AB 617 community because of its air quality challenges, environmental justice grievances, and health inequities. In particular, this community is impaired by legacy pollution from the Naval Shipyard; dust and asbestos from ongoing large-scale redevelopment; odors and emissions from a wastewater treatment facility, diesel truck idling, and industrial rendering plants; and mobile source pollution burdens from the two busy freeways that traverse the community.[66] The Bay Area Air Quality Management District (air district) has partnered with the Bayview Hunters Point Community Advocates and the Marie Harrison Community Foundation to conduct a Community Emissions Reduction Plan process that will serve as a blueprint for improving air quality in Bayview Hunters Point and southeast San Francisco.[67]

3.A.6 Overview of Existing and Cumulative Environmental Setting

This section provides a brief overview of the existing and cumulative environmental setting. The overview is supplemented by the environmental and cumulative setting in each resource topic subsection (e.g., transportation setting).

Existing Environmental Setting

The project site is located in the Bayview Hunters Point neighborhood in the southeastern corner of the city along San Francisco Bay and encompasses approximately 4 square miles. The communities in this neighborhood include Hunters Point, India Basin, Bayview, Silver Terrace, Bret Harte, Islais Creek, and South Basin.

The project site is bounded by Kirkwood Avenue to the north, Rankin Street to the east, McKinnon Avenue to the south, and Toland Street to the west. The project site is in the Bayview neighborhood and falls within the area covered by the Bayview Hunters Point Area Plan in the general plan. Because of the area's industrial use and specific transportation-related features, the surrounding street network is made up of relatively large blocks and many discontinuous streets with unregulated parking. Surrounding transportation features that shape access to the project site include the Caltrain right-of-way and associated berm and track; the two-level, elevated portion of the I-280 Caltrans right-of-way; and a number of discontinuous and/or uniquely configured surrounding streets. Evans and Jerrold avenues (north of the project site) and Oakdale Avenue (south of the project site) are the only east-west streets that cross the Caltrain tracks in the project area. This condition limits the east-west connectivity of Kirkwood and McKinnon avenues and encourages the flow of traffic from the project site westward onto Toland Street.

The project site is rectangular and is currently occupied by four single-story PDR buildings totaling 448,000 gross square feet. The project site and vicinity are relatively flat. View corridors are limited to streets, from which the most prominent features are the elevated segment of I-280 (approximately 55 feet in height) that bisects the project site and the hills west of U.S. 101 (Bernal Heights), east of Third Street, and south of Palou Avenue. The project vicinity is currently developed with commercial and industrial uses, and features a

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[66] Bayview Hunters Point Community Advocates and Marie Harrison Community Foundation, September 21, 2020, Letter to Bay Area Air Quality Management District re AB 617 Community Self-Nomination Submittal for Bayview Hunters Point, https://www.baaqmd.gov/~/media/files/ab617-community-health/bayview-hunters-point/documents/bvhp-colead-community-self-nomination-letter-to-baaqmd-ocr-pdf.pdf?la=en&rev=a16bd7025d364ff097889af509ac08f1

[67] Bay Area Air Quality Management District website, https://www.baaqmd.gov/community-health/community-health-protection-program/bayview-hunters-point-community-emissions-reduction-plan

number of large warehouse-type structures along with some smaller, nonresidential buildings. Structures are one to three stories tall; are usually set close to the sidewalk or offset by paved parking areas, with little or no landscaping; and are constructed with steel frames and metal siding, a style similar to the existing buildings on the project site. The larger warehouse-type structures are generally windowless.

Two warehouses of the SF Market, each approximately 30 feet tall, are immediately adjacent to the project site on the northern side of Kirkwood Avenue to the east and west of Selby Street. Along the eastern side of Rankin Street, there are operations yards associated with the San Francisco Water Department and additional facilities of the SF Market. McKinnon Avenue, east of Selby Street, contains a variety of warehouse buildings that range in height from 20 feet to 30 feet. A warehouse building, with similar design to the buildings currently at the project site, is on McKinnon Avenue, west of Selby Street. There are two approximately 20- to 25-foot-tall warehouse buildings with multiple tenants along the western side of Toland Street, adjacent to Toland Place. North of these warehouses is a 35-foot-tall building occupied by the SF Market.

As part of their daily operations, PDR activities in these areas may produce noise, vibration, odor, and other emissions. Existing traffic from I-280 is a dominant noise source in the project vicinity. In general, the immediate vicinity of the project site is very noisy. New housing, large office developments, large-scale retail, and the heaviest industrial uses, such as incinerators, are not permitted in the PDR-2 district in which the site is located. Commercial and industrial uses are to the east toward the inlet for Islais Creek and San Francisco Bay. Residential uses primarily are to the north, west, and south of the PDR-2 use district, where the proposed project would be located. The nearest residential use is approximately 440 feet southwest of the project site. There are no schools within 0.25 mile of the site.

The project site is currently served by the Third Street Muni light rail line and four bus lines. Transit stops in the project vicinity include stops for Muni bus lines 23-Monterey, 24-Divisadero, and 9-San Bruno, and San Mateo County Transit District bus line 292. The 23-Monterey Muni line operates immediately adjacent to the project site, [68] with the closest stop at the corner of Toland Street and McKinnon Avenue, and the other bus lines operate within approximately four blocks of the site. The Third Street light rail line is approximately 0.4 mile east of the project site; the closest stops are Kirkwood/La Salle (0.6 mile southeast), Hudson/Innes (0.5 mile east), and Oakdale/Palou (0.7 mile southeast). The closest BART station is the 24th Street Mission station, approximately 1.5 miles to the northwest; the Glen Park BART station is approximately 2.5 miles to the southwest. The 22nd Street Caltrain Station is approximately 1.5 miles to the northeast.

Cumulative Environmental Setting

The cumulative environmental setting identifies projects within an approximately 0.25-mile radius of the project site. The overview provided in this section is supplemented by the environmental setting provided in each resource topic subsection (e.g., transportation setting). As discussed above in “Approach to Cumulative Analysis,” in Section 3.A.4, Approach to Analysis (p. 3.A-4), two approaches to a cumulative impact analysis are provided in the CEQA Guidelines section 15130(b)(1): a list-based approach and a projections-based approach. The analyses in this draft EIR employ both a list-based approach and projections from the general plan or other related planning documents, as appropriate for the specific resource topic being analyzed. For topics that employ a list-based approach, projects within 0.25 mile of the project site are most likely to be considered in the cumulative analysis. Additional projects may also be considered based on the cumulative analysis context for the environmental topic being analyzed. Each cumulative impact discussion describes the appropriate cumulative context for analysis. In addition, routine infrastructure repair, maintenance, and

[68] As part of the Palou Avenue Streetscape Improvement Project, the 23-Monterey Muni line was rerouted three blocks south, off Jerrold Avenue and onto Palou Avenue. Construction of this project was completed in spring 2020.

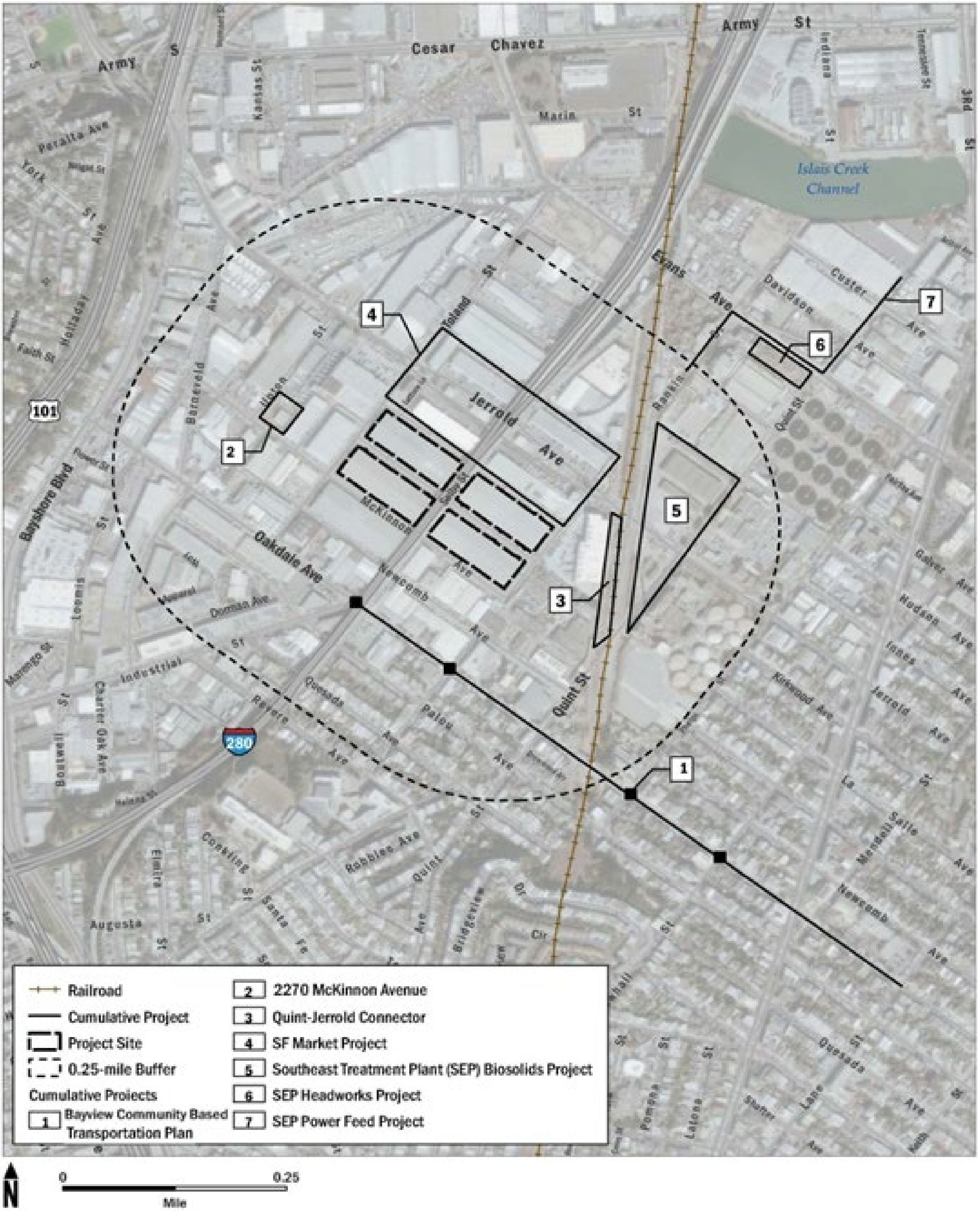
improvement projects (e.g., roadway repaving, water main replacements, and sewer upgrades) are ongoing throughout the city under existing conditions. It is anticipated that such projects will continue to be implemented through the construction and operation of the proposed project or expanded streetscape variant. Cumulative projects within an approximately 0.25-mile radius of the project site are discussed below and mapped in Figure 3.A-4.

- **Bayview Community-Based Transportation Plan:** This is a community-driven planning effort funded through a Caltrans Sustainable Planning Grant. SFMTA drafted this five-year investment plan for transportation infrastructure; the SFMTA Board of Directors approved it in February 2020. The Bayview Community-Based Transportation Plan seeks to improve physical mobility in the Bayview community by focusing on solutions based on the needs of existing residents and businesses in the neighborhood. Through this community plan, SFMTA proposes to implement a series of quick-build projects that improve pedestrian visibility and comfort at crossings and reduce vehicle speeds. Typical quick-build improvements include road diets (i.e., removing one or more travel lanes), paint, traffic delineators and street signs, parking and load adjustments, traffic signal timing, and transit boarding islands. At the time of the publication of the initial study in March 2022 and as of the publication of this draft EIR, Innes Avenue, Oakdale Avenue, and Phelps Street were locations proposed for quick-build improvements; however, only those on Oakdale Avenue are within the approximately 0.25-mile radius of the project site.

- **2270 McKinnon Avenue (Planning Department Case No. 2021-001639ENV):** This project would demolish the existing accessory building to construct an approximately 119,900-square-foot building containing 111,100 square feet of self-storage use. The new building would be four stories and approximately 40 feet in height.

- **Quint-Jerrold Connector (Planning Department Case No. 2013.0858E):** The proposed Quint-Jerrold Connector Road project would link Quint Street just north of Oakdale Avenue to Jerrold Avenue via a new road along the western side of the Caltrain tracks. This project would construct a new 950-foot-long roadway to provide access between existing Quint Street and Jerrold Avenue, which is now blocked by a Caltrain berm. The roadway would consist of two 13-foot-wide lanes (within a 50-foot-wide corridor), one northbound and one southbound. In addition, the project would construct or install several other elements along or beneath the length of the new roadway. Along the western side of the new roadway, the project would construct a new 5.5-foot-wide to 20-foot-wide sidewalk, depending on location; construct a new 27-foot-wide curb cut along the SF Market property; and install street trees and street lighting. Along the eastern side of the new roadway, the project would construct a new 6.5-foot-tall reinforced concrete retaining wall. A new intersection would be constructed at Jerrold Avenue that would allow for turns in all directions, accommodate trucks, and integrate with the SF Market's planned street reconfiguration. New sewer and water pipelines would be installed beneath the new roadway to provide onsite drainage and overall system reliability. The new road could also support a potential new Caltrain station at Oakdale Avenue.

Figure 3.A-4 Cumulative Projects near the Project Site (0.25 Mile)



Source: San Francisco Property Information Map; Compiled by AECOM

- **SF Market Project (Planning Department Case No. 2009.1153E):** The proposed project is a phased development plan to expand the existing SF Market on its current site and would reconfigure the roadways around the project site to improve site access and safety. This would entail redirecting Jerrold Avenue through-traffic around the Main Site onto Innes Avenue. The project would be constructed in various phases over an approximately 20-year period. The site is split into three subareas: the Main Site, the 901 Rankin Street site to the east, and the 2101 Jerrold Avenue site to the west. The maximum development scenario would demolish 12 of the 13 buildings on the site; it would construct four new warehouse structures on the Main Site and one new warehouse structure on the 901 Rankin Street site. No alterations are proposed at the 2101 Jerrold Avenue site. All warehouses would have accessory office space. The 901 Rankin Street site has been constructed and consists of PDR space and accessory office space. Of the four warehouse structures to be built on the Main Site, two would have rooftop parking. In addition, a small (approximately 4,000 square feet) Operations Center would be constructed on the Main Site. There would be a total of 440 parking spaces and 186 loading spaces.

- **San Francisco Public Utilities Commission Sewer System Improvement Projects in the Southeast Treatment Plant within approximately 0.25 mile of the Proposed Project**

  - **San Francisco Public Utilities Commission Southeast Treatment Plant Biosolids Digester Facility Project (Planning Department Case No. 2015-00644ENV):** The SFPUC Southeast Treatment Plant Biosolids Digester Facility Project would replace and relocate the solids treatment facilities with more efficient, modern technologies and facilities designed to produce Class A biosolids. Demolition activities began in fall 2019, and construction is anticipated through May 2026. Project construction will require a five-year closure of two blocks of Jerrold Avenue, starting at the Caltrain right-of-way and continuing up to the Southeast Treatment Plant entrance west of Phelps Street. It is possible that this project will continue to be under construction at the time the proposed project commences construction; therefore, this project is included as part of the proposed project's cumulative construction analysis.

  - **San Francisco Public Utilities Commission Southeast Treatment Plant Headworks Project (Planning Department Case No. 2015-006224ENV):** The SFPUC Southeast Treatment Plant Headworks Project is part of the Sewer System Improvement Program, a 20-year citywide program to upgrade aging sewer infrastructure projects to ensure a reliable and seismically safe system. The project is on the northwestern portion of the Southeast Treatment Plant at the location of the existing headworks facility, near the intersection of Rankin Street with Evans Avenue. The project would construct a new headworks facility, modify the Bruce Flynn Pump Station, and construct a new odor-control structure. The project would demolish the existing headworks facility and would construct a new 250-million-gallon-per-day, all-weather headworks wastewater treatment facility in its place. Construction began in 2018 and is scheduled for completion in September 2023, with substantial completion in August 2023. Construction staging would be located in the Southeast Plant; in parking and travel lanes of Evans Street (two travel lanes would be maintained); in a lot adjacent to the Bruce Flynn Pump Station; on Southeast Plant property along Phelps Street; and potentially offsite at the Pier 94 Backlands, Pier 94, and/or Pier 96. It is possible that this project will continue to be under construction at the time the proposed project commences construction; therefore, this project is included as part of the proposed project's cumulative construction analysis.

- **San Francisco Public Utilities Commission Southeast Treatment Plant Power Feed Project (Planning Department Case No. 2017-015855ENV):** The SFPUC Southeast Treatment Plant Power Feed Facility Project would upgrade the existing Southeast Treatment Plant electrical infrastructure from 9 to 12 megavolt-amperes. The proposed electrical building is at the Southeast Treatment Plant, at the corner of Evans Avenue and Phelps Street. The objective of the project is to increase reliability, redundancy, and capacity of the electrical system at Southeast Treatment Plant by upgrading the existing 12-kilovolt primary feed from the Hunters Point switchyard and obtaining a new 12-kilovolt feed from the Potrero switchyard to provide redundancy for Southeast Treatment Plant facilities. Project work consists of constructing a new two-story building over the existing switching station to house the new primary switchgear. In addition, aging substations would be replaced, and a new power monitoring and control system would be installed for additional reliability and efficiency.

- **San Francisco Housing Element 2022 Update:** On January 31, 2023, San Francisco adopted the 2022 Housing Element Update (update). The housing element update establishes goals, policies, and actions to address existing and future housing needs, including the regional housing targets allocated to San Francisco for the 2023–2031 cycle. The housing element update includes policies designed to improve housing affordability and advance racial and social equity. The policies and actions will guide development patterns and the allocation of resources to San Francisco neighborhoods. In general, the housing element update would shift an increased share of the city's future housing growth to transit corridors and low-density residential districts in well-resourced areas. Well-resourced areas are high- and highest-resource areas, which are neighborhoods identified by the State of California that provide strong economic, health, and educational outcomes for their residents. The housing element update does not include specific changes to existing land use controls (e.g., zoning) or approve any physical development (e.g., construction of housing or infrastructure). However, the housing element update would lead to future actions, such as planning code amendments to increase height limits along transit corridors and to modify density controls in low-density areas that are primarily located in the west and north sides of the city, and the approval of development projects consistent with the update.

- **Other Plans and Policies:**[69] This cumulative analysis also considers environmental, land use, and transportation plans and policies related to the growth and development of the nine-county San Francisco Bay Area. The regional plans and policies that are relevant to the cumulative analysis of the proposed project and expanded streetscape variant are discussed below:

  - The Association of Bay Area Governments/Metropolitan Transportation Commission Plan Bay Area 2050 is a state-mandated, integrated, long-range transportation and land use plan that establishes targeted growth areas and housing allocations, identifies priority transportation improvements, and sets forth directions and initiatives to reduce greenhouse gas emissions.

  - The Bay Area Air Quality Management District's 2017 Clean Air Plan – Spare the Air, Cool the Climate is a regional plan to protect public health and climate by reducing air pollution and greenhouse gas emissions and creating a vision for a year 2050 post-carbon economy.

[69] A comprehensive discussion of the proposed project's compatibility with adopted plans and policies is provided in the initial study (see Appendix B, p. 47).

3.B Transportation and Circulation

This section of the draft EIR describes existing transportation and circulation conditions in the study area and analyzes potential project-level and cumulative impacts on transportation and circulation during construction and operation of the proposed project or expanded streetscape variant. Transportation and circulation topics cover issues concerning people walking, bicycling, or driving, public transit, emergency access, vehicle miles traveled (VMT), and loading (i.e., loading and unloading of goods, services, and passengers). For each of these topics, this section includes environmental setting, regulatory framework, approach to analysis, environmental impacts, and mitigation measures when needed to address significant impacts. Information supporting this analysis of transportation impacts is included in Appendix D of this draft EIR.

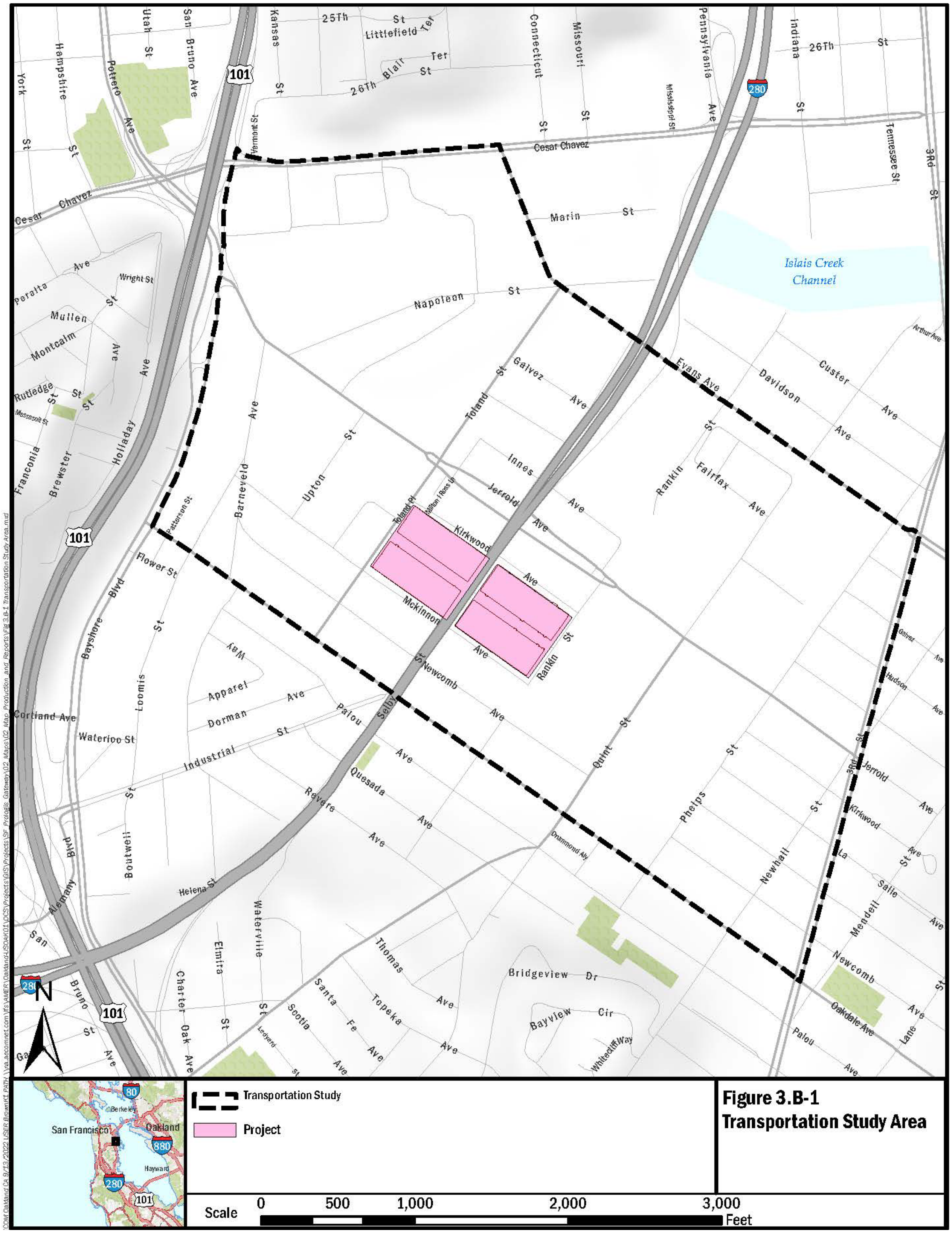
Issues identified in response to the NOP of an EIR and Notice of Public Scoping Meeting (see Appendix A) related to the proposed project's environmental impacts were considered in preparing this analysis. The planning department received comments related to transportation and circulation that focused on project travel demand; maintaining access for people walking and bicycling during project construction; impacts of project construction and operation on operations of the adjacent produce market to the north of the project site; impacts of parcel delivery services and for-hire vehicles on congestion in the city; and compliance with the Americans with Disabilities Act (ADA) for any affected Caltrans facilities (see Chapter 1, Introduction). These analyses are provided in Section 3.B.4, Project Impacts and Mitigation Measures (p. 3.B-42).

3.B.1 Environmental Setting

The transportation study area is the area near the project site where the project could affect transportation and circulation, generally bounded by Evans Avenue and Cesar Chavez Street to the north, Third Street to the east, Oakdale Avenue and Industrial Street to the south, and Bayshore Boulevard to the west (see Figure 3.B-1).

The planning department selected 2017 for the description of existing transportation conditions, because 2017 reflects conditions at the project site when the environmental review process began. Initial field observations were conducted to identify street configuration and conditions, traffic controls, vehicle movements, and pedestrian and bicycle facilities and circulation. Counts of vehicles and people walking and bicycling at intersections were performed on Thursday, June 7, 2018, and Tuesday, June 12, 2018; additional counts at selected locations were taken on Wednesday, November 17, 2021, to determine whether there were substantial changes from 2018 conditions. The 2021 counts reflect the change in vehicle travel routes due to the temporary closure of Jerrold Avenue between the Caltrain tracks and Phelps Street in January 2021 by SFMTA for construction activities at the SFPUC Southeast Treatment Plant; construction truck traffic traveling to and from the Southeast Treatment Plant site, primarily via Evans Avenue; and changes in travel patterns resulting from the COVID-19 pandemic. The counts revealed that there was a 50 percent decrease in east-west traffic volumes on Jerrold Avenue and a 10 to 30 percent decrease in north-south traffic volumes on Toland Street, and minor (5 percent) increases in east-west traffic on Evans and Oakdale avenues. In summary, vehicle traffic volumes collected close to the project site in 2021 were generally lower than those observed in 2018.

Figure 3.B-1 **Transportation Study Area**



REGIONAL AND LOCAL ROADWAYS

Regional Roadways

U.S. 101 and Interstate 80 (I-80) are the primary regional access routes serving San Francisco. U.S. 101 serves San Francisco and the Peninsula/South Bay; it also extends northward via the Golden Gate Bridge to the North Bay (see Figure 3.B-1, p. 3.B-2). In San Francisco, U.S. 101 is generally a north/south freeway, and portions of U.S. 101 follow Van Ness Avenue and Lombard Street west of Van Ness Avenue. In the vicinity of the project site, U.S. 101 has eight to ten travel lanes, with northbound and southbound on- and off-ramps at Cesar Chavez Street, at Silver Avenue, and at Industrial Street/Alemany Boulevard.

U.S. 101 connects with I-80 approximately 2 miles to the north of the project site. I-80 connects San Francisco to the East Bay via the San Francisco-Oakland Bay Bridge. In San Francisco, I-80 generally has eight lanes. U.S. 101 also has an interchange with Interstate 280 (I-280) approximately 1 mile southwest of the project site. I-280 provides regional access to and from San Francisco from the South Bay and Peninsula. In the project vicinity, I-280 is a six- to eight-lane facility, and the closest access is at Pennsylvania Street/Cesar Chavez Street (from the south), at Pennsylvania Street/25th Street (from the north and to the south), and at Indiana Street/25th Street to the north). An elevated portion of I-280 bisects the project site, above Selby Street.

Local Roadways

The transportation characteristics of the streets adjacent to the project site are described below, including their geographic extent and general plan, Better Streets Plan, Key Walking Street,[70] and Vision Zero High-Injury Network[71] designation. Table 3.B-1 summarizes this information for the streets adjacent to the project site, as well as other key roadways in the project vicinity. Table 3.B-1 presents the local roadway street name, direction (east–west or north–south), number of travel lanes, the street's designation in the general plan and the city's Vision Zero High Injury Network, if the street is a Key Walking Street, the street's classification in the Better Streets Plan, transit routes that use the street (if any), and bicycle facilities provided on the street (if any). Table 3.B-1 identifies that the Better Streets Plan classifies eight of the 12 local roadways in the transportation study area as industrial.

Jerrold Avenue

Jerrold Avenue is an east-west street with one travel lane each way, extending between Bayshore Boulevard and Mendell Street. A two-block segment of Jerrold Avenue also exists about a mile east of Mendell Avenue, between Earl and Coleman streets in Hunters Point. Jerrold Avenue is one of four east-west streets that cross the Caltrain tracks near the project site, the other three being Evans, Oakdale, and Palou avenues. Between Rankin and Toland streets, Jerrold Avenue bisects the produce market. Jerrold Avenue between Bayshore Boulevard and Quint Street is part of the Vision Zero High Injury Network.

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[70] As part of the city's WalkFirst project, the planning department determined the Key Walking Streets network. This map is intended to eventually update the general plan's transportation element. Key Walking Streets are characterized by street segments in proximity to significant generators of people walking such as schools, parks, tourist activities, and shopping districts. The WalkFirst project is a multi-agency effort to improve safety for people walking and walking conditions, encourage walking as a mode of transportation, and enhance connections for people walking to key destinations (https://default.sfplanning.org/Citywide/WalkFirst/phase3/WalkFirst_Key_ Walking_Streets.pdf, accessed August 3, 2022).

[71] Vision Zero is a city policy adopted in 2014. It aims to reduce traffic fatalities to zero by 2024 through engineering, education, and enforcement. Street segments that have a high number of fatalities and severe injuries have been designated as part of the Vision Zero High-Injury Network. The High-Injury Network map identifies streets where the most traffic safety investment should be focused to have the greatest impact in reducing fatalities and severe injuries. San Francisco Department of Public Health, Program on Health, Equity, and Sustainability, Vision Zero High-Injury Network: 2017 Update – A Methodology for San Francisco, California, https://sfgov.maps.arcgis.com/apps/webappviewer/index.html?id=fa37f1274b4446f1bdddd7bdf9e708ff, accessed August 3, 2022.

Table 3.B-1 Key Roadways in Project Vicinity

Street Name	Direction[1]	Number of Mixed-Traffic Lanes (typical)[2]	Number of Transit-Only Lanes (Typical)[2]	General Plan, Vision Zero High-Injury Network (HIN) Designations and Key Walking Street[3]	Better Streets Plan Classification	Transit Routes[4]	Bicycle Facilities (Typical)[5]
Bayshore Boulevard	N-S	2	0	Major Arterial, Secondary Transit St, HIN	Commercial Throughway	9, 9R, SamTrans 292 and 397	II/III/IV
Cesar Chavez Street	E-W	2	0	Major Arterial	Industrial	19	I/II/III/IV
Evans Avenue	E-W	2	0	Major Arterial, HIN	Industrial	19	III
Industrial Street	N-S	2	0	Secondary Arterial	Residential Throughway	24	III
Jerrold Avenue	E-W	1	0	HIN	Industrial	N/A	N/A
Kirkwood Avenue	E-W	1	0	N/A	Industrial	N/A	N/A
McKinnon Avenue	E-W	1	0	N/A	Industrial	N/A	N/A
Oakdale Avenue	E-W	1	0	Secondary Arterial	Residential Throughway	23	II
Rankin Street	N-S	1	0	N/A	Industrial	N/A	N/A
Selby Street	N-S	1	0	N/A	Industrial	N/A	N/A
Third Street	N-S	2	1	Major Arterial, Transit Important, Key Walking St, HIN	Commercial Throughway	T, 15, 54	N/A
Toland Street	N-S	1	0	N/A	Industrial	N/A	N/A

Source: Adavant Consulting/LCW Consulting, Transportation Information Map, 2022.

Notes:

1. E-W = east-west, N-S = north-south
2. Number of lanes per direction. Transit-only lanes include those in the center median of Third Street.
3. General plan street definitions of roadway classifications on streets in project vicinity: *Major arterials* are crosstown thoroughfares whose primary function is to link districts within the city, and to distribute traffic from and to the freeways. *Secondary arterials* are primarily intra-area routes of varying traffic capacity serving as collectors for the major arterials, and in some cases, supplemental to the major arterial system. *Transit important streets* are streets within the transit preferential street classification system that are a major arterial that provides high frequency of transit service, has high transit ridership, or includes surface rail.
4. Transit service includes bus routes and light rail lines that operate on streets but may not have stops.
5. Class I bicycle facilities are bicycle paths with exclusive rights-of-way for people bicycling or walking. Class II bicycle facilities are on-street bicycle lanes striped in the paved area of the roadway. Class III facilities are signed bicycle routes. Class IV facilities are on-street bicycle lanes that are protected from adjacent vehicular travel lanes by vertical separation such as curbs or soft-hit posts.

N/A = not applicable

As part of planned changes to the produce market, directly north of the project site,[72] Jerrold Avenue between Rankin and Toland streets will be vacated and closed to all traffic except authorized vehicles that require access to the produce market. Vehicular traffic not related to the produce market will be directed to parallel streets to the north or south on improved segments of Innes and Kirkwood avenues.

Kirkwood Avenue

Kirkwood Avenue is an east-west discontinuous street extending between Milton I. Ross Lane (about 130 feet east of Toland Street) and Coleman Street in Hunters Point Shipyard. Kirkwood Avenue runs along the northern side of the project site between Milton I. Ross Lane and Rankin Street, and does not connect with Toland Street. In the segment adjacent to the project site, Kirkwood Avenue is paved but in poor condition (e.g., cracked pavement, depressions, potholes), with abandoned old freight rail tracks present along portions of the roadway right-of-way. At the *T intersection*[73] of Rankin Street/Kirkwood Avenue, the Kirkwood Avenue approach to Rankin Street is partially blocked by a low, metal railing and a low-pressure fire hydrant on a raised median. Access to and from Kirkwood Avenue is provided via an approximately 25-foot-wide opening on the northern side of the street.

McKinnon Avenue

McKinnon Avenue is an east-west discontinuous street, with one travel lane each way, extending between Barneveld and Lane streets. McKinnon Avenue runs along the southern side of the project site between Toland and Rankin streets. In the project vicinity, McKinnon Avenue terminates at Rankin Street (i.e., west of the Caltrain tracks McKinnon Avenue extends between Barneveld and Rankin streets). Adjacent to the project site, McKinnon Avenue is paved but in poor condition, with abandoned old freight rail tracks present along portions of the roadway right-of-way.

Rankin Street

Rankin Street is a north-south discontinuous street, with one travel lane each way, extending between the Islais Creek Channel and Revere Avenue. Rankin Street runs along the eastern side of the project site between Kirkwood and McKinnon avenues. Near the project site, Rankin Street runs for a three-block segment between Innes and McKinnon avenues, and is paved but in poor condition.

Selby Street

Selby Street is a north-south discontinuous street under the elevated I-280 freeway between Evans and Revere avenues. Selby Street runs through the project site between Kirkwood and McKinnon avenues. In the vicinity of the project site, Selby Street is an unimproved paved roadway between McKinnon and Innes avenues, with chain-link fences across the street in some locations.

Toland Street

Toland Street is a north-south street with one travel lane each way, extending between Evans and Oakdale avenues. Toland Street runs along the western side of the project site between Kirkwood and McKinnon avenues. The general plan identifies Toland Street between Oakdale and Evans avenues as a freight traffic route. In general, the roadway pavement of Toland Street south of the new Traffic Company and Forensic

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[72] San Francisco Market (formerly San Francisco Wholesale Produce Market), Addendum 2 to Mitigated Negative Declaration, Case No. 2009.1153ENV-03, July 21, 2022, https://citypln-m-extnl.sfgov.org/SharedLinks.aspx?accesskey=19fcf155f022570a086659bd4f40621cae3e1d2670ff3d8fa550e92be4ba0837&VaultGUID=A4A7DACD-B0DC-4322-BD29-F6F07103C6E0, accessed January 15, 2023.

[73] A T intersection is an intersection where two roadways meet in a perpendicular manner and one roadway does not continue across the other road, forming a "T" shape.

Services Division facility is in poor condition, with abandoned old freight rail tracks present along portions of the roadway right-of-way.

Table 3.B-2 presents counts of vehicles, bicyclists, and pedestrians at study intersections adjacent to and near the project site. The counts were collected on Thursday, June 7, 2018, and Tuesday, June 12, 2018.

Table 3.B-2 Total Intersection Volumes of Vehicles, Bicyclists, and People Walking for Weekday A.M. and P.M. Peak Hours – Existing Conditions

Intersection	Vehicles[1]		Bicyclists[1]		People Walking[2]	
	AM	PM	AM	PM	AM	PM
Toland Street/Evans Ave/Napoleon Ave	1,416	1,475	22	17	23	23
Toland Street/Jerrold Avenue	969	787	16	22	43	32
Toland Street/McKinnon Avenue	432	388	11	15	25	24
Toland Street/Oakdale Avenue	1,043	1,069	11	14	12	12
Rankin Street/Kirkwood Avenue	144	107	3	12	44	19
Selby Street/Kirkwood Avenue	41	36	0	2	0	0

Source: Adavant Consulting/LCW Consulting, June 2018 (see Appendix D.1).

Notes:

1. Total vehicle and bicycle volumes at each approach to the intersection (i.e., northbound, southbound, eastbound, westbound, as applicable).
2. Total number of people crossing at the intersection.

As shown on Table 3.B-2, peak hour traffic volumes at the study intersections are highest at intersections with the primary east-west streets, including Oakdale, Jerrold, and Evans avenues. Peak hour traffic volumes adjacent to the project site are less than 500 vehicles per hour in both directions of travel.

WALKING CONDITIONS

This subsection describes the absence, discontinuity, or presence of facilities for people walking[74] in the transportation study area. It also identifies any potentially or observed existing hazardous conditions at locations where people walk, and describes the number of people walking at adjacent study intersections.

On streets adjacent to the project site, there are no sidewalks, curbs or gutters, and there are no ADA-compliant curb ramps, *crosswalks in the continental design*,[75] *yield lines*,[76] or *daylighting* measures.[77] In addition, there are no sidewalks on most streets in the vicinity of the project site, and many streets are discontinuous. For example, in the project vicinity, Rankin Street extends for three blocks (0.25 mile) between McKinnon and Innes avenues, while McKinnon Avenue extends for four blocks (0.45 mile) between

[74] People walking includes people with disabilities who may or may not require personal assistive mobility devices (e.g., wheelchairs, walkers, crutches, canes).

[75] Crosswalks with a continental design (i.e., parallel markings) are most visible to drivers. Use of a continental design for crosswalk markings also improves crosswalk detection for people with low vision and cognitive impairments.

[76] *Yield lines* are roadway surface markings, consisting of solid white triangles that point toward approaching vehicles. They extend across approach lanes to inform drivers as to where they should stop or yield when approaching an intersection. Yield lines enhance safety when a driver yields to a person walking in a crosswalk and drivers in the adjacent lane cannot see the person because of the stopped vehicle.

[77] *Daylighting* is the removal of vehicular parking near intersections and crosswalks (i.e., red zones) to improve sightline distance and visibility for people walking, bicycling, and driving.

Barneveld Avenue and Rankin Street. Because vehicles park in the sidewalk right-of-way, and truck loading activities at some locations occur at loading docks that are flush with the outside walls of the buildings (i.e., trucks park perpendicular to the buildings outside of the roadway right-of-way), people walking are subject to interference by trucks or other commercial vehicles. Jerrold Avenue, the primarily east-west access route in the vicinity of the project site, has sidewalks on both sides of the street west of Toland Street and east of Rankin Street.

As shown in Table 3.B-2 (p. 3.B-6), travel by walking is low during both the a.m. and p.m. peak hours. During the peak hour, there are fewer than 45 people walking per hour at intersections in the project vicinity. During daytime field surveys conducted in April 2018 and September 2021, parked vehicles were observed along the sidewalk right-of-way; however, no people were observed walking adjacent to the parked vehicles in the sidewalk right-of-way.

BICYCLING CONDITIONS

This subsection describes the facilities for people bicycling in the transportation study area, such as the presence, absence, or discontinuous nature of bicycle lanes, and identifies potential or observed existing hazardous conditions at locations where people bicycle. In addition, it describes the number of people bicycling in the project vicinity.

Figure 3.B-2 presents San Francisco's bicycle network in the project vicinity. Bicycle facilities are typically classified as class I, class II, class III, or class IV facilities.[78] *Class I bikeways* are bike paths with exclusive rights-of-way for use by people bicycling or walking. *Class II bikeways* are striped in the paved areas of roadways, and established for the preferential use of people bicycling in separated bicycle lanes. Separated bicycle lanes provide a striped, marked, and signed lane that is buffered from vehicular traffic. These facilities, which are on roadways, reserve 4 to 5 feet of space for bicycle traffic exclusively. *Class III bikeways* are signed bicycle routes that allow people bicycling to share travel lanes with vehicles, and may include a shared lane marking.[79] A *class IV bikeway* is an exclusive bicycle facility that is separated from vehicular traffic by a buffer zone, also referred to as a cycle track. The separation from vehicular traffic could be by grade separations, flexible posts, inflexible physical barriers, or on-street vehicular parking.

There are no bicycle facilities adjacent to the project site. As summarized in Table 3.B-1 (p. 3.B-4), Evans Avenue, Phelps Street, Third Street, Silver Avenue, Barneveld Avenue, and Loomis Street are designated class III bicycle routes (lane shared with vehicles). Evans Avenue and Third Street are on the Vision Zero High Injury Network.

Oakdale Avenue has class II bicycle lanes in both directions of travel between Bayshore Boulevard and Mendell Street. Bayshore Boulevard has a class II bicycle lane between Industrial and Oakdale avenues, and in the northbound direction between Cortland Avenue and Flower Street, the bicycle lane is a class IV protected facility. Bayshore Boulevard is on the Vision Zero High Injury Network for people bicycling and walking. The segment of Jerrold Avenue that connects Barneveld Avenue with Bayshore Boulevard has a protected bikeway (class IV facility) in the northbound direction and either a bicycle lane (class II facility) or signed bicycle route (class III facility) in the southbound direction.

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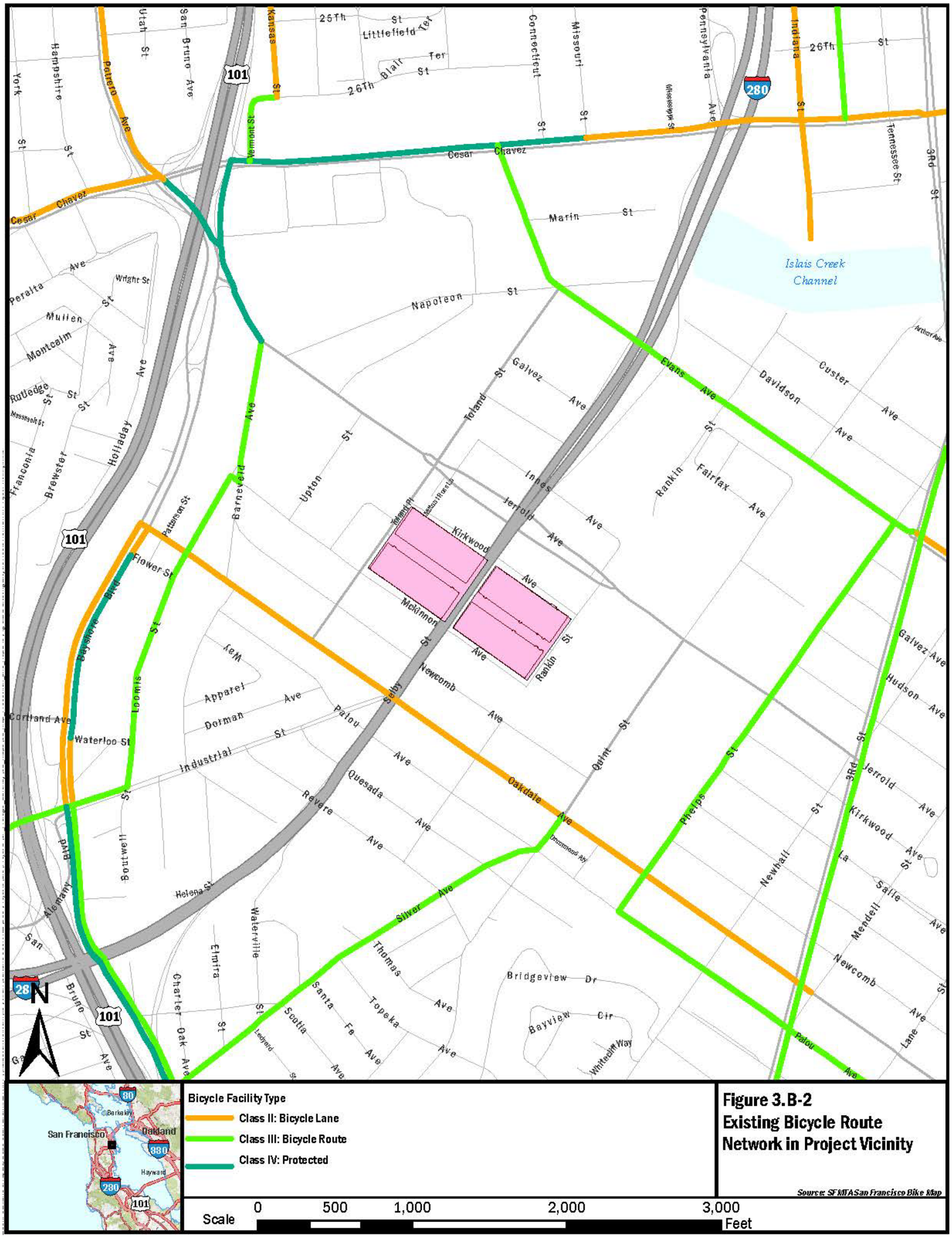
[78] California Streets and Highway Code section 890.4, https://codes.findlaw.com/ca/streets-and-highways-code/shc-sect-890-4.html, accessed August 4, 2022.

[79] Shared lane markings, or sharrows, are roadway pavement markings used to indicate a shared lane environment for bicycles and vehicles.

Figure 3.B-2 Existing Bicycle Route Network in Project Vicinity



Cesar Chavez Street has a protected bikeway (class IV facility) between Mississippi and Kansas streets, and generally either a class II bicycle lane or class III shared route to the east and west of the protected section. There is an off-street bike path (class I facility) in both directions on Cesar Chavez Street under the U.S. 101 structure, and in the eastbound direction between Mississippi and Iowa streets (i.e., under the I-280 structure).

Streets adjacent to and nearby the project site are generally flat, with minimal changes in grade; however, many streets are in poor condition (i.e., broken pavement, freight rail tracks, potholes). As shown in Table 3.B-2 (p. 3.B-6), bicycle travel in the area is low during both the a.m. and p.m. peak hours (i.e., fewer than 25 bicyclists per hour at the study intersections). During field surveys conducted in April 2018 and September 2021, no bicyclists were observed riding on streets adjacent to the project site.

There are no on-street bicycle racks on streets adjacent to the project site. The nearest bike-share stations are east of the project site on Oakdale Avenue at Phelps Street; on McKinnon Avenue at Third Street; and on Jerrold Avenue at Third Street.

PUBLIC TRANSIT CONDITIONS

This subsection describes the local and regional public transit service in the transportation study area, including geographic extent, scheduled frequency, and transit stop proximity to the project area.

Local transit service within the city limits is provided by the Muni, the transit division of the SFMTA. Muni bus routes and light rail lines can be used for access to regional transit operators. Bay Area Rapid Transit (BART), Alameda-Contra Costa Transit District (AC Transit), and ferries provide regional transit service to and from the East Bay; Golden Gate Transit buses and ferries provide service to and from the North Bay; and Caltrain, San Mateo County Transit District (SamTrans), and BART provide service to and from the Peninsula and the South Bay. Water Emergency Transportation Authority (WETA) ferries provide service from the Ferry Building between San Francisco and Alameda counties, as well as between San Francisco and Oakland, and San Francisco and Vallejo.

Figure 3.B-3 presents the existing transit network serving the transportation study area, and identifies the nearest stops for local bus routes and light rail lines. There are no public transit routes currently operating on streets adjacent to the project site. In 2017, the 23 Monterey bus route traveled on Toland Street between Oakdale and Jerrold avenues (i.e., adjacent to the project site), on Jerrold Avenue between Toland and Phelps streets, and on Phelps Street between Jerrold and Palou avenues. However, in February 2020, the SFMTA permanently rerouted the 23 Monterey in the vicinity of the project site to Oakdale Avenue, Industrial Street, and Palou Avenue.[80] The current alignment of the 23 Monterey route follows the planned service improvements identified for this route in the Muni Forward program.[81] The existing plus project and cumulative impact assessment assumes this permanent reroute of the 23 Monterey bus route.

Table 3.B-3 (p. 3.B-11) presents information for each Muni route that operates in the transportation study area, including service frequencies for the a.m. and p.m. peak periods, general hours of operation, and neighborhoods served.

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80 SFMTA, https://www.sfmta.com/travel-updates/permanent-muni-service-changes-starting-saturday-february-22-2020#23, accessed July 18, 2022.

81 SFMTA Muni Forward/Transit Effectiveness Project (TEP) Environmental Review Process, https://sfplanning.org/project/muni-forward-transit-effectiveness-project-tep-environmental-review-process, accessed August 4, 2022.

Figure 3.B-3 Existing Public Transit Network in Project Vicinity

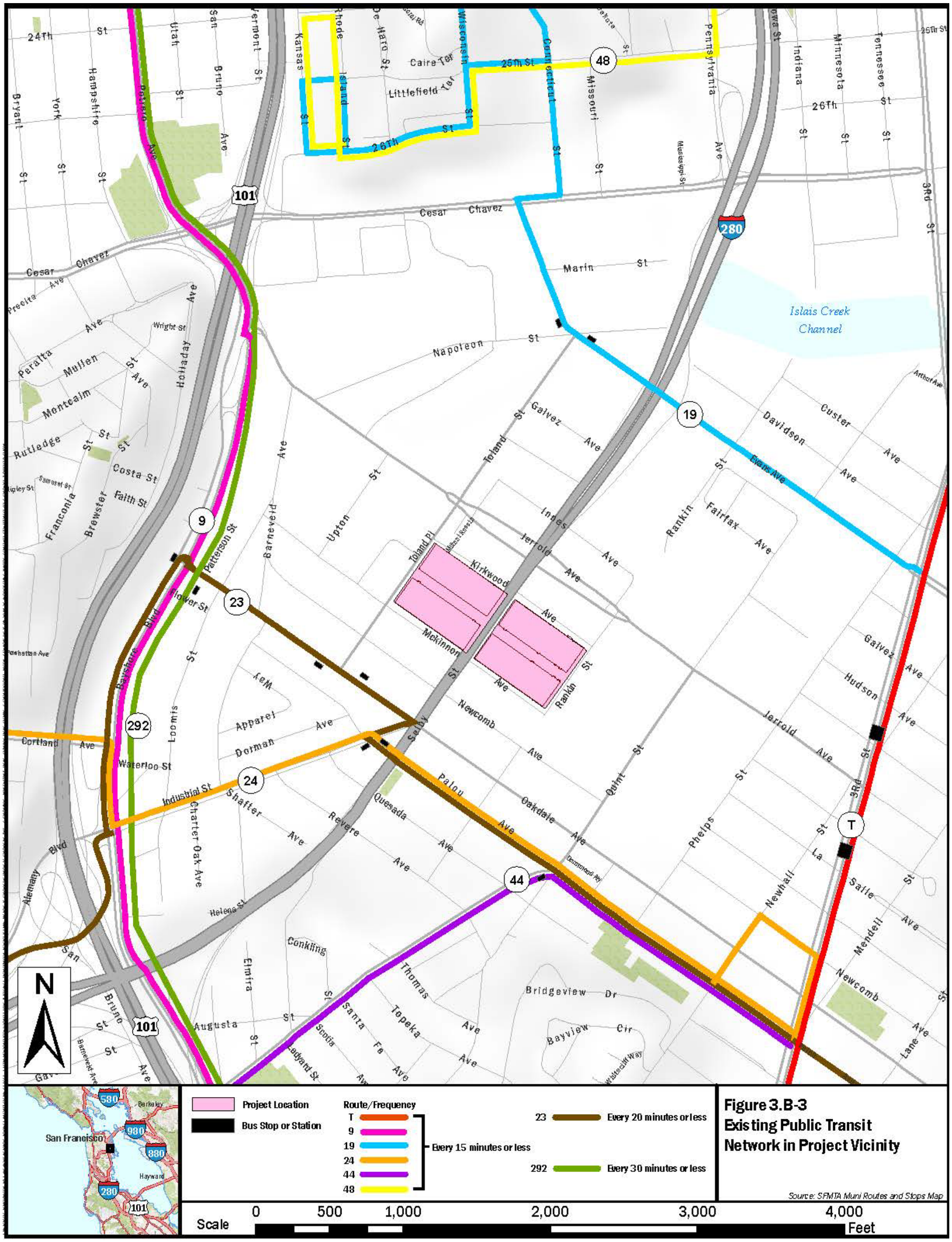

Table 3.B-3 Existing Transit Routes in the Project Vicinity

Bus Route/ Light Rail Line	Weekday Peak Period Service Frequencies (in Minutes)		General Hours of Operation	Neighborhoods Served
	A.M.	P.M.		
9 San Bruno	10	10	5 a.m. – 12 midnight	Bayview/Hunters Point, Bernal Heights, Chinatown, Crocker Amazon, Downtown/Civic Center, Excelsior, Financial District, Mission, Potrero Hill, South of Market, Visitacion Valley, Western Addition
9R San Bruno Rapid	12	12	7 a.m. – 6 p.m.	Bayview/Hunters Point, Bernal Heights, Chinatown, Downtown/Civic Center, Excelsior, Financial District, Mission, Potrero Hill, South of Market, Visitacion Valley, Western Addition
19 Polk	15	15	5 a.m. – 10 p.m.	Bayview/Hunters Point, Bernal Heights, Downtown/ Civic Center, Marina, Mission, Nob Hill, North Beach, Pacific Heights, Potrero Hill, Russian Hill, South of Market, Western Addition
23 Monterey	20	20	6 a.m. – 10 p.m.	Bayview/Hunters Point, Bernal Heights, Diamond Heights, Excelsior, Glen Park, Lakeshore, Outer Mission, Parkside, West of Twin Peaks
24 Divisadero	10	10	24 hours	Bayview/Hunters Point, Bernal Heights, Castro/Upper Market, Excelsior, Glen Park, Noe Valley, Pacific Heights, Western Addition, Haight Ashbury
44 O’Shaughnessy	12	12	24 hours	Bayview/Hunters Point, Bernal Heights, Diamond Heights, Excelsior, Glen Park, Golden Gate Park, Inner Richmond, Inner Sunset, Outer Mission, Presidio, Presidio Heights, Twin Peaks, West of Twin Peaks
54 Felton	20	20	5 a.m. – 10 p.m.	Bayview/Hunters Point, Crocker Amazon, Excelsior, Lakeshore, Ocean View, Outer Mission, Visitacion Valley, West of Twin Peaks
T Third Light Rail (K/T)	9	15	6 a.m. – 12 midnight	Bayview/Hunters Point, Castro/Upper Market, Chinatown, Downtown/Civic Center, Financial District, Lakeshore, Mission, Noe Valley, Ocean View, Outer Mission, Parkside, Potrero Hill, South of Market, Twin Peaks, Visitacion Valley, West of Twin Peaks, Western Addition

Source: 4867-5185-6716.3, https://www.sfmta.com/getting-around/Muni/routes-stops; Adavant Consulting/LCW Consulting, 2022.

From the project site, access to regional transit service providers is via Muni. BART service at the BART/Muni Civic Center station can be reached via the 19 Polk bus route (closest stop on Evans Avenue, about four blocks [0.4 mile] north of the project site), or at the Embarcadero station via the T Third light rail line (nearby stations are on Third Street at Kirkwood/La Salle and at Oakdale/Palou, about five blocks [0.6 mile] east of the project site). Caltrain service can be accessed at its terminal at Fourth and Townsend streets via the T Third light rail line. In addition, Golden Gate Transit, WETA, and SamTrans primarily serve downtown, and can also be reached via the T Third light rail line. SamTrans bus routes 292 and 397 (express overnight only) also run along Bayshore Boulevard with three stops on Bayshore Boulevard between Industrial Street and Jerrold Avenue. SamTrans bus routes drop off passengers in the northbound direction and pick up passengers in the southbound direction.

During field surveys conducted in April 2018 and September 2021, no conditions that would result in potentially hazardous conditions for buses and light rail operating within the transportation study area (i.e., conditions in which vehicles could potentially collide with a transit vehicle) were observed.

EMERGENCY ACCESS CONDITIONS

This subsection describes the closest emergency access facilities to the project site. In addition, any observed delays to emergency access operators adjacent to the project site are described.

The nearest fire stations to the project site are Station 9 at 2245 Jerrold Avenue between Napoleon and Upton streets (about 0.3 mile northwest of the project site), Station 25 at 3305 Third Street north of Cargo Way (about 0.7 mile northeast of the project site), and Station 17 at 1295 Shafter Avenue at Ingalls Street (about 1.25 miles southeast of the project site). The new Station 49 serves as the fire department's ambulance deployment facility and is at 2241 Jerrold Avenue near Station 9. The project site is in the Bayview police station service area (station at 201 Williams Avenue, about 1 mile south of the project site).

Emergency vehicles can access the project site from each direction, via Rankin Street from the north, Selby Street from the south, McKinnon Avenue from the west, and Toland Street from the north and south. Kirkwood Avenue, adjacent to the project site, does not currently connect with Toland Street, and emergency access to this segment is via Rankin or Selby streets. As described above, the western leg of the intersection of Rankin Street/Kirkwood Avenue (i.e., the Kirkwood Avenue approach) is partially blocked by a railing and a low-pressure fire hydrant on a raised median, and access to and from Kirkwood Avenue is provided at the northern end of Kirkwood Avenue via an approximately 25-foot-wide opening on the northern side of the street.

During field surveys of the project site conducted in April 2018 and September 2021, observations did not identify any emergency vehicles traveling in the vicinity of the project site, or conditions other than those described above that would impede emergency service providers (e.g., physical barriers that could restrict emergency vehicle access, inadequate turning radii at intersections). Jerrold Avenue between Rankin and Phelps streets is temporarily closed to through traffic as part of construction of infrastructure upgrades at the SFPUC Southeast Treatment Plant, and east-west vehicular access in the transportation study area is via Oakdale Avenue, Evans Avenue, and Cesar Chavez Street.

VEHICLE MILES TRAVELED

VMT per person (or per capita) is a measurement of the distance that a resident, employee, or visitor drives.[82] In general, higher VMT is associated with higher air pollution, including greenhouse gas (GHG) emissions, and energy consumption. Many interdependent factors affect the distance a person drives. In particular, the built environment affects how many places a person can reach, considering distance, time, and cost, and the availability of different ways of travel (e.g., driving a private vehicle, taking public transit, bicycling, walking). Typically, low-density developments at great distances from other land uses in areas with few options for ways of travel other than personal vehicles provide less accessibility to places than a location with high density, a mix of land uses, and numerous ways of travel. Therefore, low-density development typically generates more VMT compared to a similarly sized development in an urban area.

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[82] Additional information on vehicle miles traveled available at https://sfplanning.org/transportation-sustainability-program#align, accessed February 11, 2022.

Given the aforementioned travel behavior factors, on average, people living or working in San Francisco have lower levels of VMT per capita than people living or working elsewhere in the nine-county San Francisco Bay Area region. In addition, on average, people living or working in some areas of San Francisco have lower levels of VMT per person than people living or working elsewhere in San Francisco. The city analyzes VMT per capita geographically through transportation analysis zones (TAZs or zones)[83] and uses the San Francisco County Transportation Authority's travel demand forecasting model (SF-CHAMP) travel demand model to estimate existing and future typical daily VMT per capita for residential, office, and retail land uses in the transportation analysis zones in the city. "Project Travel Demand Methodology and Results" in Section 3.B.3 (p. 3.B-21) provides a description of the SF-CHAMP model and its use in the transportation analysis, including variations to the use of the model.[84]

Table 3.B-4 provides a summary of the average daily VMT per capita citywide for existing conditions, as estimated with the SF-CHAMP model; separate values are reported for residential, work, and retail travel. In addition, Table 3.B-4 presents the Bay Area regional average for each land use/trip purpose. In TAZs 485 and 488, in which the project site is located, people drive substantially less than in the region as a whole, as demonstrated by the fact that the current average daily VMT per capita values for the various trip types are substantially lower than the averages for the nine-county San Francisco Bay Area.

Table 3.B-4 Existing Average Daily VMT per Capita by Land Use

Bay Area/Transportation Analysis Zone	Land Use		
	Residential	Office (PDR)	Retail
Bay Area Regional Average	18.6	25.7	14.9
Zone 485[1]	9.3	21.1	9.6
Zone 488[2]	9.1	21.7	10.1
Both Zones Combined[3]	9.2	21.4	9.9

Source: SF-CHAMP, Adavant Consulting/LCW Consulting (see Appendix D.2).

Notes:

1. Zone 485 is bounded by Jerrold Avenue to the north, Selby Street to the east, Oakdale Avenue to the south, and Bayshore Boulevard to the west.
2. Zone 488 is bounded by Jerrold Avenue to the north, Phelps Street to the east, Oakdale Avenue to the south, and Selby Street to the west.
3. The average daily VMT per capita for the combination of zones 485 and 488 is a weighted average, which is calculated by multiplying the VMT per capita for each zone (obtained from the SF-CHAMP model outputs) by the corresponding number of residents, workers, or size of retail; adding the two together; and then dividing that sum by the total number of residents or workers, or size of retail.

PDR = production, distribution, and repair
VMT = vehicle miles traveled

FREIGHT AND PASSENGER LOADING CONDITIONS

This subsection describes the absence, discontinuity, or presence of features related to commercial and passenger loading activities in the project vicinity. The description includes the location of commercial and

[83] Planners use these zones as part of transportation planning models for transportation analyses and other planning purposes. The zones vary in size from single city blocks in the downtown core to multiple blocks in outer neighborhoods, or even larger in historically industrial areas such as the Hunters Point Shipyard area.

[84] Travel demand methodology and VMT results are presented in the *749 Toland Street and 2000 McKinnon Avenue Project – Estimation of Project Travel Demand, Final Technical Memorandum,* December 2021 (see Appendix D.2).

passenger loading facilities, and identifies any potential or observed hazardous conditions or delays to public transit due to loading activities.

Freight Loading

Freight loading activities for the existing land uses on the project site occur in the site. The project site is currently fenced, and gated access is provided primarily via Selby Street. Each structure on either side of Selby Street has a 600-foot-long and 80-foot-wide area that is used for truck staging and parking. There are no marked on-street commercial vehicle loading spaces[85] or passenger loading zones adjacent to the project site.

Freight loading activities in the vicinity of the project site generally occur in the business sites. In many instances, loading docks are flush with the outside walls of the buildings, and trucks park perpendicular to the buildings outside of the roadway right-of-way (e.g., along portions of McKinnon and Jerrold avenues). During daytime field surveys conducted in April 2018 and September 2021, trucks were observed using onsite docks, while others were also observed parked parallel to the loading docks. No conflicts between loading operations and people walking or bicycling (e.g., double parking or parking in the sidewalk right-of-way) were observed during field observations.

Passenger Loading

Passenger loading/unloading zones (i.e., white zones) provide a place to load and unload passengers for adjacent businesses and residences. These zones are intended for safe and efficient passenger drop-off and pickup, and require permit renewal biennially. Passenger loading and unloading is also permitted in commercial loading spaces if it is active loading/unloading and does not exceed three minutes.

The are no passenger loading/unloading zones adjacent to the project site or in the project vicinity. During field surveys of the project site and vicinity conducted in April 2018 and September 2021, no passenger loading/unloading activities were observed.

PARKING CONDITIONS

In implementing Appendix G of the CEQA Guidelines, which no longer includes parking in and of itself as a checklist question, the San Francisco Planning Department considers the change in parking supply and demand in the context of the criterion of whether the project would "conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities."

The planning department's transportation impact analysis guidelines[86] include screening criteria for projects that would not result in a substantial parking deficit. The proposed project site is in the department's map-based screening area. Pursuant to the planning department's parking analysis screening criteria checklist, the proposed project would not result in a substantial parking deficit, and therefore would not result in secondary effects related to potentially hazardous conditions, or interfere with accessibility for people

[85] On-street commercial vehicle loading spaces are provided to allow commercial vehicles, typically trucks and service vehicles, to park along the curb and unload or load goods. These spaces are frequently used by building service vehicles, contractors, and delivery vehicles at buildings without off-street facilities. Passenger loading/unloading zones (i.e., white zones) provide a place to load and unload passengers for adjacent businesses and residences. These are intended for quick passenger drop-off and pickup.

[86] San Francisco Planning Department, Transportation Impact Analysis Guidelines, October 2019. https://sfplanning.org/project/transportation-impact-analysis-guidelines-environmental-review-update, accessed June 30, 2022. The project site is in transportation analysis zones 485 and 488, which are in the planning department's map-based screening area. See Appendix D.6.

walking, bicycling, or inadequate access for emergency vehicles, or substantial delay to public transit. Therefore, the transportation impact analysis does not consider the adequacy of parking in determining the significance of project impacts under CEQA. Parking is not discussed further in this draft EIR.

3.B.2 Regulatory Framework

The following summarizes relevant state, regional, and local agency transportation regulations to the project. In addition, the following summarizes relevant transportation plans and policies. No federal regulations, plans, or policies are relevant to the proposed project.

STATE

CEQA Section 21099(b)(1) (Senate Bill 743)

CEQA section 21099(b)(1) requires the Office of Planning and Research to develop revisions to the CEQA Guidelines that establish criteria for determining the significance of the transportation impacts of projects that "promote the reduction of GHG emissions, the development of multimodal transportation networks, and a diversity of land uses." CEQA section 21099(b)(2) states that, on certification of the revised guidelines for determining transportation impacts, pursuant to section 21099(b)(1), automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment under CEQA.

After a five-year public process, the California Natural Resources Agency amended the CEQA Guidelines in 2018, and added section 15064.3, Determining the Significance of Transportation Impacts, and amended Appendix G, Environmental Checklist Form, to remove automobile delay as a measure to determine a project's significance on the environment, and to instead require (in most circumstances) analysis of a project's impact on VMT.

Caltrans Responsibilities

Caltrans manages interregional transportation, including management and construction of the California highway system. In addition, Caltrans is responsible for permitting and regulating the use of state roadways.

Caltrans construction practices require temporary traffic control planning "during any time the normal function of a roadway is suspended."[87] Caltrans also requires that permits be obtained for transportation of oversized loads, and transportation of certain materials, and for construction-related traffic disturbance. Project-related construction and maintenance vehicles would use state roadways as access routes for construction workers, and some project construction activities would occur in a state highway right-of-way (i.e., I-280 over Selby Street); therefore, Caltrans encroachment permits would be required. In addition, the project sponsor or its contractor would acquire permits from Caltrans to allow oversized vehicles (by weight, height, length, or width) needed to transfer certain construction equipment (e.g., cranes) to the project site via state highways.

REGIONAL

Plan Bay Area

Plan Bay Area 2050 is a state-mandated, integrated long-range transportation and land use plan. As required by Senate Bill 375, all metropolitan regions in California must complete a Sustainable Communities Strategy

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[87] Caltrans, *California Manual on Uniform Traffic Control Devices*, 2014 Edition, Revision 5 (March 20), https://dot.ca.gov/programs/safety-programs/camutcd.

as part of a Regional Transportation Plan. This strategy integrates transportation, land use, and housing to meet GHG reduction targets set by the air board. The plan meets those requirements. In addition, the plan sets a roadmap for future transportation investments, and identifies what it would take to accommodate expected growth. The plan neither funds specific transportation projects nor changes local land use policies.

In the Bay Area, the Metropolitan Transportation Commission and the Association of Bay Area Governments adopted the latest plan in fall 2021. To meet the GHG reduction targets, the plan identifies priority development areas [88] and priority production areas.[89] The agencies estimate approximately 72 percent of the household growth and 48 percent of the job growth in the Bay Area will occur in priority development areas between 2015 and 2050. The proposed project is in San Francisco's sole priority production area.

LOCAL

Transit First Policy

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

Vision Zero

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

San Francisco General Plan

The transportation element of the San Francisco General Plan is composed of objectives and policies that relate to the nine aspects of the citywide transportation system: General, Regional Transportation, Congestion Management, Vehicle Circulation, Transit, Pedestrian, Bicycles, Citywide Parking, and Goods Management. The transportation element references San Francisco's Transit First Policy in its introduction, and contains the objectives and policies that are directly pertinent to consideration of the proposed project, including objectives related to prioritizing sustainable modes of travel, promoting freight delivery/pickup traffic as necessary for the economic vitality of San Francisco and the region, and designing streets for walking, bicycling, and public transit.

The San Francisco General Plan also includes the Bayview Hunters Point Area Plan, which provides objectives and policies to guide industrial and residential development, to improve streets to encourage truck traffic away from neighborhood residential and commercial areas, and to improve the transportation network for all ways of travel.

[88] Priority development areas are places near public transit that are planned for new homes, jobs, and community amenities.

[89] Priority production areas are clusters of industrial business that are prioritized for economic development investments and protection from competing land uses. These districts are already well served by the region's goods movement network.

San Francisco Regulations for Working in San Francisco Streets

The San Francisco Regulations for Working in San Francisco Streets (SFMTA blue book) contains regulations that are prepared and regularly updated by the SFMTA, under the authority derived from the San Francisco Transportation Code. The SFMTA blue book serves as a guide for all city agencies (San Francisco Public Works [public works], SFMTA, SFPUC, the Port of San Francisco, etc.), utility crews, private contractors, and others who conduct construction-related activities (e.g., excavation, staging of materials or equipment) in San Francisco's public rights-of-way.[90, 91] The SFMTA blue book establishes rules and guidance so that work can be done safely and with the least possible interference with people walking and bicycling, transit, and vehicular traffic. It also contains relevant general information, contact information, and procedures related to working in the public right-of-way when it is controlled by agencies other than SFMTA.

Prior to construction of development projects, construction contractor(s) would be required to meet with public works and SFMTA staff members to develop and review the project's construction plans in preparation for obtaining relevant construction permits. This may include reviewing truck routing plans for the disposal of excavated materials, material delivery and storage, as well as staging for construction vehicles. If SFMTA determines that a construction project impacts transit routing or alters the flow of vehicle, bicycle, or pedestrian traffic, a logistics plan would be required so that SFMTA permit staff can confirm what permits from SFMTA or public works are required for the project.

Should the project's construction activities not comply with regulations in the SFMTA blue book or the traffic routing specifications in a city contract, or when two or more contractors work at a time on any one block,[92] the contractor would be required to apply for a special traffic permit from SFMTA prior to the commencement of onsite work. Some examples of circumstances when special traffic permits are required include, but are not limited to, closing a street or an alley, closing a sidewalk, closing or detouring a bicycle route, moving a bus zone outside the limits of the project, inability to provide the required number of lanes, and/or construction work occurring within one block of an existing construction site.

As part of its review for special traffic permits, SFMTA, in coordination with public works, may include necessary measures in the special traffic permit to ensure the safety and accessibility of people walking, bicycling, and driving, and public transit operations at or near the project site. In addition, as part of the permitting process, public works also reviews proposed construction activities so that they comply with all applicable requirements under the ADA.

If a special traffic permit is required, the project contractor may not commence construction activities until the permit is issued. A special traffic permit is issued for no more than 30 calendar days, after which the contractor is required to renew to perform further construction activities. SFMTA may refuse to issue, extend, or revoke a special traffic permit, depending on transportation network conditions at or near the project site. Penalties may be assessed for violating the terms of a special traffic permit and/or the regulations described in the SFMTA blue book, or failing to obtain a special traffic permit when one is

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[90] San Francisco Municipal Transportation Agency, *Regulations for Working in San Francisco Streets, 8th Edition*, January 2012, https://www.sfmta.com/sites/default/files/reports-and-documents/2020/06/blue_book_8th_edition_6-23-20.pdf, accessed February 2021.

[91] San Francisco Transportation Code, https://codelibrary.amlegal.com/codes/san_francisco/latest/sf_transportation/0-0-0-2, accessed February 2021.

[92] San Francisco Municipal Transportation Agency, *Regulations for Working in San Francisco Streets, 8th Edition*, section 3.5, January 2012, https://www.sfmta.com/sites/default/files/reports-and-documents/2020/06/blue_book_8th_edition_6-23-20.pdf, accessed February 2021.

required. Additional penalty fees or six months in jail or both may be applied for the fourth and subsequent violations in a 12-month period.[93]

In addition to the regulations presented in the manual, all traffic control, warning, and guidance devices must conform to the California Manual on Uniform Traffic Control Devices.[94] Furthermore, contractors are responsible for complying with all applicable city, state, and federal codes, rules and regulations. The party responsible for setting up traffic controls during construction is responsible if such controls do not meet the guidance and requirements established by this manual and any applicable state requirements.

Public Works Code Construction Work Requirements

The San Francisco Public Works Code section 724 requires that a property owner obtain a street space occupancy permit from public works for occupying any part of the fronting street or sidewalk for any purpose, including building construction operations. Section 724 also establishes requirements for the temporary occupation of the public-right-of way, including, but not limited to, clearances for traffic-signal equipment, notice to all impacted fronting property owners, pedestrian clearances, construction worker parking plans in certain use districts, debris management, and clearances for fire department equipment. Section 724 also requires that the property owner provide lights, barriers, barricades, signs, cones, and other devices to ensure pedestrian and traffic safety.

Public works code section 2.4.20 addresses permits to excavate. For a permit for major work or excavation that would affect the public right-of-way[95] that is 30 consecutive calendar days or longer, contractors are required to submit for public works review a contractor parking plan, including a proposal to reduce parking demand in the project site vicinity.

San Francisco Public Works order no. 167, 840[96] identifies requirements related to the placement of various types of barricades at construction sites, such as A-frames, barrier caution tapes, fencing, and barricades around crosswalks. These requirements are intended to protect pedestrians near construction sites consistent with all local, state, and federal codes, including the ADA and the California Building Code, title 24.

Transportation Sustainability Fee

The planning code requires certain new development projects to pay a fee, based on the size of the development, to the city (section 411A). The fee offsets a portion of the development project's impacts on the transportation system. The city may use the fee only for specific programs, consisting of transit capital maintenance, local and regional transit service expansion and reliability, complete streets, and program administration.

Transportation Demand Management Program

The planning code requires certain new development projects to incorporate "design features, incentives, and tools" intended to reduce VMT (section 169). Development projects must choose measures from a menu of options to develop an overall TDM plan. Some options in the menu overlap with requirements elsewhere

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[93] Ibid.
[94] California Manual on Uniform Traffic Control Devices (MUTCD) Rev 5, 2014, https://dot.ca.gov/programs/safety-programs/camutcd, assessed February 2021.
[95] The public works code section 2.4.4 defines "major work" as any reasonably foreseeable excavation that will affect the public right-of-way for more than 15 consecutive calendar days.
[96] San Francisco Public Works, Guidelines for the Placement of Barricades at Construction Sites (Order No. 167,840), 2008, http://sfpublicworks.org/sites/default/files/Guidelines_for_Placement_of_Barricades_0.pdf, accessed November 8, 2021.

in the planning code (e.g., bicycle parking, car-share parking). Each development project's TDM plan requires routine monitoring and reporting to the planning department to demonstrate compliance.

Better Streets Plan, Policy, and Requirements

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

Off-Street Loading

The planning code requires certain new development projects to include off-street freight loading spaces (section 152.1). The planning code requirements for freight loading spaces depend on the size of the development project. The planning code requires certain dimensions of the spaces, and allows for substituted service vehicle spaces (section 154[b]).

3.B.3 Impact Assessment Methodology

This section lists the thresholds that were used to conclude whether an impact would be significant and describes the methods used to determine the impacts that could occur with implementation of the proposed project and expanded streetscape variant.

SIGNIFICANCE CRITERIA

San Francisco Administrative Code chapter 31 directs the planning department to identify the environmental effects of a project using as its base the environmental checklist form set forth in the CEQA Guidelines, Appendix G, as modified by the planning department. As it relates to transportation and circulation, the checklist asks whether the project would:

- Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities
- Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses
- Result in inadequate emergency access

The planning department uses the significance criteria presented below to facilitate the transportation analysis and address the CEQA Guidelines Appendix G checklist. The planning department separates the significance criteria into construction and operation.

Construction

Construction of a project would have a significant effect on the environment if it would require a substantially extended duration or intense activity; and the effects would create potentially hazardous conditions for people walking, bicycling, or driving, or public transit operations; or interfere with accessibility for people walking or bicycling or substantially delay public transit.

Operation

The operational impact analysis addresses the following five significance criteria. A project would have a significant effect if it would:

- Create potentially hazardous conditions for people walking, bicycling, or driving, or public transit operations
- Interfere with accessibility of people walking or bicycling to and from the project site, and adjoining areas, or result in inadequate emergency access
- Substantially delay public transit
- Cause substantial additional VMT 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
- Result in a loading deficit, and the secondary effects would create potentially hazardous conditions for people walking, bicycling, or driving, or substantially delay public transit

APPROACH TO ANALYSIS

Methodology and Thresholds of Significance

The following summarizes the methodology for the travel demand and VMT analysis for the proposed project. In addition, the following summarizes the methodology for analyzing, and any thresholds of significance for determining, transportation impacts of the proposed project under existing plus project and cumulative conditions. The travel demand and impact analysis methodologies use the data and guidance in the planning department's Transportation Impact Analysis Guidelines (SF transportation guidelines). If the methodology differs from that in the SF transportation guidelines, the differences are summarized. The travel demand for the expanded streetscape variant would be the same as for the proposed project.

Analysis Periods

In San Francisco, the weekday p.m. peak period is typically the period when the most overall travel happens, and is the standard period of analysis. The p.m. peak hour is defined as the 60-minute period with the highest traffic volume between 4 p.m. and 6 p.m. In general, because both residential and commercial development generate a greater travel demand during the p.m. peak hour than during the a.m. peak hour in terms of person trips by the various ways of travel and vehicle trips, the transportation impact analysis is based on the p.m. peak hour. However, because a.m. and p.m. peak hour traffic volumes and localized congestion in the project vicinity are similar during the morning and evening periods, project travel demand was also calculated for a.m. peak hour conditions (i.e., the 60-minute period with the highest traffic volume between 7 a.m. and 9 a.m.). The quantitative analysis of the proposed project on VMT is conducted for average daily conditions. Lastly, for loading, the methodology uses the 11 a.m. to 2 p.m. period to assess commercial vehicle/freight loading demand, and 5 p.m. to 8 p.m. period to assess passenger vehicle loading demand.

The analysis of the proposed project was conducted for existing-plus-project and 2050 cumulative conditions. The existing-plus-project condition assesses the near-term impacts of the proposed project, while the 2050 cumulative condition assesses the long-term impacts of the proposed project, in combination with other cumulative projects. The year 2050 was selected as the future analysis year because it is the latest year for which VMT information is available from the San Francisco Transportation Authority's SF-CHAMP model.[97]

The transportation impact analysis analyzes the proposed project relative to the existing conditions, primarily from 2017 and 2050 cumulative conditions. The project setting reflects conditions at the project site when the environmental review evaluation process began in 2017. Since August 2020, a parcel delivery service use, focusing on last-mile e-commerce delivery, occupies the two existing buildings west of I-280 as an interim use. This use is temporary in nature and would ultimately be replaced by the proposed project. The travel demand and impact analysis analyze the changes that result from the proposed project compared to conditions at the project site prior to operation of the interim uses.[98]

Project Travel Demand Methodology and Results

Travel demand refers to new *person trips*[99] by additional residents, employees, and visitors using the various ways of travel (e.g., by transit, walking, bicycling, vehicle) that would be generated by the proposed project's PDR and retail development. The memorandum containing the detailed methodology and information used to estimate the project travel demand is included in Appendix D.2 of this draft EIR.[100] This section summarizes the information and analysis contained in the travel demand memorandum, specifically:

- Travel demand associated with the current uses at the project site.
- Estimates of daily, as well as a.m. and p.m., peak hour project-generated person trips by the various ways of travel, as well as the project-generated vehicle trips by vehicle type during the same periods.
- Classification of daily and a.m. and p.m. peak hour project-generated vehicles by type of vehicle (e.g., automobiles, vans, single-unit trucks, tractor-trailer trucks).
- Estimate of the freight and passenger loading demand generated by the ground-floor light manufacturing and retail uses and the average and peak demand for on-street vehicle loading spaces.
- Estimate of the project-generated VMT for the proposed uses, based on the analyzed tenant use mix.

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[97] The SF-CHAMP model is an activity-based type travel demand forecasting model that is updated regularly to represent existing and future trip generation and travel characteristics in San Francisco. The model uses a synthetic population, which is a set of individual actors that represent the Bay Area's actual population, who make simulated travel decision for a complete day. The SF-CHAMP model divides San Francisco into 981 zones. For each zone, the SF-CHAMP model estimates the travel demand based on the zone population (i.e., residents in housing units) and employment assumptions. The model predicts person travel for a full day (a typical weekday) based on population and the total number and location of housing units and jobs, which is then allocated to different periods throughout the day using time-of-day sub-models. The SF-CHAMP model predicts vehicle trips and person trips by way of travel: auto, transit, walking and bicycle, and taxi/transportation network company (TNC) trips. The model determines vehicle trips by applying an average vehicle occupancy to person trips by auto. The vehicle and transit trips are assigned to paths along roadway and transit network, respectively, producing forecasts of vehicular traffic on regional freeways, major arterials, and the local roadways, and forecasts of transit riders on local and regional transit services. The model considers the available roadway and transit route capacity, origin-destination of demand, travel speeds, access to transit, and costs such as tolls, transit fares, and parking costs, when assigning future travel demand to the roadway and transit network.

[98] Analyzing the change in the environment from the uses that occupied the site in 2017 to the proposed use, as defined by the analyzed tenant use mix is appropriate because it reflects the uses in place at the time the analysis began and because CEQA allows for use of historic conditions when existing conditions change over time (CEQA Guidelines section 15125). Assuming a less intense use for the project setting results in a greater increase in net-new travel demand and potential impact than if more intense uses were used for the environmental setting.

[99] A *person trip* is a trip made by one person by any means of transportation (vehicle, transit, walking, bicycling, etc.).

[100] Technical Memorandum – 749 Toland Street and 2000 McKinnon Avenue Project – Estimation of Project Travel Demand, December 2021. See Appendix D.2.

Existing Site Trips

The project site contains approximately 448,000 square feet of space occupied by multiple PDR uses. In 2017,[101] these uses included automotive storage and fleet management uses (144,000 gross square feet), general storage for contractors, supply companies, etc. (184,400 gross square feet), multi-tenant food-related storage and wholesale (77,100 gross square feet), temporary storage (35,700 gross square feet), and vacant spaces (9,400 gross square feet). The entire site is fenced, and major vehicular access points are on Toland and Selby streets; some building tenants have direct gated access onto the street.

The following summarizes the travel demand associated with existing uses at the project site, based on person and vehicle counts conducted during a three-day period from Wednesday, June 13 through Friday, June 15, 2018. Detailed count data are included in Appendix D.1 of this draft EIR. The daily and peak hour travel demand used in the transportation analysis is as follows:

- On a daily basis, there were 718 total vehicles entering and exiting the project site, mostly via Selby Street (358 inbound and 360 outbound), of which 56 percent were automobiles, 24 percent were large vans or similar vehicles, 18 percent were single-unit trucks, and 2 percent were tractor-trailer trucks. In addition, there were 38 daily trips by walking to and from the site, and no trips by bicycle were observed.
- During the 7 a.m. to 9 a.m. morning peak period, the greatest number of trips entering and exiting the site in a 60--minute period occurred between 7:15 a.m. and 8:15 a.m. (40 automobiles, 27 large vans, and 21 single-unit trucks, and 5 people walking), which represents 12 percent of the daily total counts of vehicles and people walking.
- During the 4 p.m. to 6 p.m. evening peak period, the greatest number of trips entering and exiting the site in a 60-minute period occurred between 4:15 p.m. and 5:15 p.m. for vehicles (28 automobiles, 10 large vans, six single-unit trucks, and two tractor-trailer trucks), and 4:45 p.m. and 5:45 p.m. for people walking (three people walking), which represents 6 percent of the daily total vehicle count, and 9 percent of the daily total count of people walking.

Proposed Project Trips

As presented in Chapter 2, Project Description, the proposed project would expand the existing 448,000 square feet of PDR space to about 2.16 million square feet of PDR and retail uses. The travel demand analysis was conducted for a mix of PDR uses that are likely to occur based on the project sponsor's familiarity with leasing trends for PDR facilities in San Francisco and the Bay Area and that represent reasonably conservative assumptions about possible tenants' environmental impacts (see Table 2.D-2, [p. 2-26]). This analyzed tenant use mix includes a total of 1,341,900 gross square feet of PDR uses in the two buildings, with approximately 35,000 gross square feet on the ground floor allocated to maker and light manufacturing space. In the upper floors, there would be about 875,600 gross square feet allocated to parcel and last-mile delivery, and approximately 431,300 gross square feet allocated to wholesale/storage space.[102] The use mix would also provide 8,400 gross square feet of ground-floor retail space. The travel demand analysis assumed that the retail uses would include, in equal proportions, café/quick service restaurant and general retail uses. The project also includes approximately 809,700 gross square feet allocated to vertical circulation, general vehicle circulation, and accessory parking, which are also excluded for trip generation. A

[101] This existing site section describes conditions at the project site when the environmental evaluation process began in 2017.

[102] For parcel and last-mile delivery and wholesale/storage uses, the building areas allocated to truck staging, maneuvering, and loading/unloading operations, which represent approximately half of their areas, were excluded from the gross square feet used in the travel demand analysis. These activities typically take place in open air areas and were not included as part of the gross square footage used to estimate trip generation rates from field counts. A more detailed explanation can be found in the technical memorandum 749 Toland Street and 2000 McKinnon Avenue Project – Estimation of Project Travel Demand, Adavant Consulting/LCW Consulting, December 10, 2021. See Appendix D.2.

detailed breakdown of gross square feet by proposed use/activity is included in Appendix D.2 of this draft EIR.

Consistent with the SF transportation guidelines, the project trip generation was disaggregated by employee (i.e., commuter) trips and visitor trips (i.e., non-commuter trips such as trips made by visitors, delivery vehicles, customers). Because the types of PDR activities that are anticipated to occur at the project site generate a higher-than-typical proportion of delivery and service vehicle trips than other commercial uses (e.g., office, retail), a travel demand analysis specific to the proposed project was developed that accounts for the different travel characteristics (e.g., origins and destinations, way of travel) of those trips, as well as the different vehicle types (vans, single-unit trucks, tractor-trailer trucks).

The travel demand methodology consists of four steps: 1) trip generation, 2) common destinations, 3) ways people travel, and 4) assignment. The following paragraphs summarize each of these steps.

Step 1. Trip Generation. Trip generation refers to the number of estimated trips people would make to and from the project, regardless of the way they travel (see step 3 below). The following applies person trip generation rates, accounting for the size and type of land use, to estimate the number of project person trips.

As discussed above, the analyzed tenant use mix for the proposed project includes various PDR uses that cover a range of different types of activities with different travel demand characteristics. Total person trip generation was calculated for each type of PDR use (i.e., maker and manufacturing, parcel delivery and last-mile delivery, and wholesale and storage), as well as retail uses (i.e., general retail and café/quick service restaurant). Trip generation rates for the retail uses were based on the SF transportation guidelines trip generation information, while the travel demand for the PDR uses was based on trip generation rates developed from vehicle and pedestrian counts and observations conducted for this study, which are provided in Appendix D.2 of this draft EIR. Specifically for the PDR uses:

- For the maker and manufacturing use, the SF transportation guidelines daily and p.m. peak hour trip generation rates were applied to the proposed project. The a.m. peak hour rate was calculated based on the ratio of a.m. to p.m. peak hour trip generation rates available from the Institute of Transportation Engineers.[103]
- For the parcel delivery and last-mile delivery use, field-calculated vehicle trip generation rates from OnTrac and Amazon facilities in South San Francisco were applied to the proposed project. Vehicle trip rates were converted into person-trip rates by applying an average vehicle occupancy for commuter trips, and rounding up to account for other activities that may not have occurred at the surveyed site.
- For the wholesale and storage use, daily and a.m. peak hour trip generation rates were based on information presented in the San Francisco Wholesale Produce Market expansion project study.[104]
- For the general retail and café/quick service restaurant uses, trip generation rates were obtained from the SF transportation guidelines. Consistent with previous studies of visitor trips conducted in San Francisco, to account for linked visitor trips to retail and restaurant uses, a trip reduction factor was applied to non-work (visitor) trips to the general retail and café/quick service restaurant uses to account for customers who are already in the immediate vicinity of the project site.

[103] Institute of Transportation Engineers, Trip Generation Report, 10th Edition; Washington DC, 2017.
[104] San Francisco Wholesale Produce Market Retention and Expansion Project, Case No. 2009.1153E, Transportation Study Final Report, Adavant Consulting, March 23, 2011.

Because the proposed project would replace active uses at the site, net new trip generation resulting from the proposed project was determined by subtracting the trips associated with the existing uses from the proposed project's calculated trip generation.

- The number of trips associated with the existing uses at the site was determined from counts of people and vehicles entering and exiting the buildings in June 2018, prior to the replacement of the fleet management uses (i.e., 2018 uses) with interim parcel and last-mile delivery uses in 2020. The proposed project's impact is based on the change in the number of trips from existing conditions. As explained above, when the project analysis began in 2017, the project site was occupied partially with wholesale and storage uses; however, an interim parcel delivery/last-mile delivery use replaced those tenants in 2020. This interim use generates more trips than the prior wholesale and storage occupants. Consequently, the project impacts, or the net change from existing conditions, would vary depending on whether the wholesale and storage uses or the parcel delivery/last-mile delivery use is considered to be the baseline condition by which to measure project impacts. Project impacts would result in a greater net increase over wholesale and storage uses than over parcel delivery/last-mile use. Therefore, for purposes of this EIR, this transportation analysis uses the 2017 conditions to conservatively estimate impacts of the proposed project, consistent with CEQA Guidelines section 15125.

Table 3.B-5 summarizes the weekday daily, a.m., and p.m. peak hour person trips by proposed project land uses. The proposed project would generate a total of 8,948 net-new person trips on a daily basis, 653 net-new person trips during the weekday a.m. peak hour, and 798 net-new person trips during the weekday p.m. peak hour. As shown in Table 3.B-5, the majority of the net-new daily, a.m. peak hour, and p.m. peak hour person trips would be generated by the parcel delivery and last-mile delivery uses.

Table 3.B-5 Proposed Project Net-New Person Trip Generation by Land Use

Land Use	Land Use Intensity (Gross Square Feet)[1]	Daily Person Trips[2]	A.M. Peak Hour Person Trips	P.M. Peak Hour Person Trips
Maker and Manufacturing	35,000	278	**32**	34
Parcel Delivery and Last Mile Delivery	364,715	5,362	**376**	536
Wholesale and Storage	209,575	2,514	**176**	88
General Retail[3]	4,200	448	**12**	41
Café/Quick Service Restaurant[4]	4,200	1,064	**145**	143
Total Proposed Project[5]		**9,666**	**741**	**842**
Existing Site[6]		**718**	**88**	**44**
Total Net-New Trips[5]		**8,948**	**653**	**798**

Source: Adavant Consulting/LCW Consulting, 2021 (see Appendix D.2).

Notes:

1. The parcel delivery and last-mile delivery, and wholesale and storage gross square footage, excludes the areas dedicated to vehicle staging vehicle maneuvering, and loading/unloading operations because these activities do not generate travel demand and were therefore not included as part of the gross square footage used to estimate trip generation rates from field counts. See Appendix D.2.
2. Person trips by all ways of travel.
3. The general retail trip generation assumes that approximately one-third of all visitor trips would be made by customers who are already at the project site or in the area (a linked visitor reduction factor of 33 percent).
4. The café/quick service restaurant trip generation assumes that approximately two-thirds of all visitor trips would be made by customers that are already at the project site or in the area (a linked visitor reduction factor of 66 percent).
5. Totals may not sum due to rounding.
6. Based on daily vehicle counts by vehicle type conducted on June 13, 14, and 15, 2018. Counts included people walking and vehicle trips (vehicle trips assume an auto occupancy of one person per vehicle).

Step 2. Common Destinations. Common destinations, also known as trip distribution, refers to the estimated number of trips people would take between the project site and another place (e.g., another neighborhood) in either the inbound to the project site or outbound from the project site direction. The commuter and non-commuter person trips estimated in step 1 were distributed to various points of trip origin or destination for each land use, and account for the geographic location of the project site. Specifically, the trip origins and destinations were allocated to the four San Francisco quadrants (northeast, northwest, southeast, and southwest), and the East Bay, North Bay, and South Bay/Peninsula, plus those originated or destined outside of the nine-county San Francisco Bay Area. Table 3.B-6 presents the estimated percentage of daily project person trips between the project site, and the common destinations by land use type. Overall, about 68 percent of the trips for all the proposed land uses combined would be in San Francisco, with the largest proportion of trips (about 36 percent) occurring in the southeastern quadrant of the city, which includes the project site. These trip distribution patterns were used, as later described in step 4, as the basis for assigning project-generated vehicle trips to the local street and highway network.

Table 3.B-6 Proposed Project Person Trip Distribution Patterns by Land Use

Land Use Type	Maker and Manufacturing/Parcel and Last Mile Delivery/Wholesale and Storage		General Retail/Quick Service Restaurant		All Daily Person Trips
	Employees (Commuter Trips)	Visitors/Non-Commuter Trips	Employees (Commuter Trips)	Visitors/Non-Commuter Trips	
San Francisco					
Northeast Quadrant	8.3%	13.0%	31.7%	**12.8%**	**12.0%**
Northwest Quadrant	10.6%	14.0%	9.7%	**11.6%**	**12.2%**
Southeast Quadrant	23.9%	44.0%	41.9%	**41.2%**	**35.6%**
Southwest Quadrant	7.9%	7.0%	1.2%	**16.5%**	**8.2%**
All San Francisco[1]	**50.7%**	**78.0%**	**84.5%**	**82.1%**	**68.0%**
East Bay	14.3%	9.0%	1.1%	**4.6%**	**10.2%**
North Bay	5.6%	1.0%	1.7%	**1.0%**	**2.9%**
Peninsula/South Bay	26.9%	9.0%	12.7%	**12.3%**	**16.6%**
Outside of Bay Area	2.5%	3.0%	0.0%	**0.0%**	**2.3%**
Total[1]	**100%**	**100%**	**100%**	**100%**	**100%**

Source: Adavant Consulting/LCW Consulting, 2021 (see Appendix D.2).

Notes:

1. Totals may not sum due to rounding.

Step 3. Ways People Travel. Ways people travel, also known as mode split or travel mode, refers to the estimated way or method people travel (e.g., walking, bicycling). Based on the origin and destination identified in step 2, the person trips estimated in step 1 were distributed among the various ways of travel to determine the number of trips made by auto, transit, and other modes. The SF transportation guidelines identify different ratios for ways of travel and average vehicle occupancy for commuter and non-commuter trips, which are different for each of the four city quadrants and the rest of the Bay Area, so that factors that influence travel behavior such as transit accessibility, walkability, and roadway and transit infrastructure for that area are considered in the analysis. For example, work (i.e., commuter) trips originating in or destined to the northeastern quadrant exhibit the highest transit usage in the city, while those to or from the southeastern or southwestern quadrants have the lowest.

The "auto" mode includes persons traveling by private auto and carpool, as well as commercial vehicle traffic (i.e., pickup trucks, vans, and trucks) generated by the project, plus persons traveling by taxi and for-hire vehicles (e.g., Uber or Lyft). The "transit" mode includes individuals traveling by local and regional public transit, while the "other" mode includes people walking, bicycling, and traveling by motorcycle.

Table 3.B-7 provides the estimated percentage of project-generated person trips by different ways of travel for commuter and non-commuter trips. Overall, on a typical weekday, more than 85 percent of the project-generated person trips would occur by auto, 9 to 11 percent by transit, and 2.5 to 6 percent by other modes.

Table 3.B-7 Proposed Project Ways of Travel by Land Use

Trip Type/Way of Travel	Maker and Manufacturing/ Parcel and Last Mile Delivery/ Wholesale and Storage[1]	General Retail/Café/Quick Service Restaurant[1]	All Daily Person Trips[1]
Commuters/Employees			
Auto[2]	89.9%	**55.0%**	**86.4%**
Transit	10.1%	**20.0%**	**11.1%**
Other[3]	0.0%	**25.0%**	**2.5%**
All Ways of Travel	**100%**	**100%**	**100%**
Non-Commuters/Visitors			
Auto	90.6%	**64.2%**	**85.3%**
Transit	9.4%	**6.3%**	**8.8%**
Other	0.0%	**29.5%**	**5.9%**
All Ways of Travel	**100%**	**100%**	**100%**

Source: Adavant Consulting/LCW Consulting, 2021 (see Appendix D.2).

Notes:

1. Totals may not sum due to rounding.
2. Auto way of travel includes persons traveling by private automobile, carpool, and for-hire vehicles (e.g., Uber, Lyft), as well as commercial vehicles.
3. Other way of travel includes trips by people walking, bicycling, and riding motorcycles.

Table 3.B-8 summarizes the weekday daily and a.m. and p.m. peak hours person trips by way of travel for the proposed project, and also provides the estimated number of vehicle trips. The number of vehicle trips generated by the project were estimated by dividing the person trips by auto by the average vehicle occupancy to account for more than one individual traveling in a vehicle when carpooling or traveling by taxi or for-hire vehicle.

As shown in Table 3.B-8, after subtracting the existing trips traveling to and from the project site, the proposed project would generate 648 net-new person trips and 431 net-new vehicle trips during the a.m. peak hour, and 795 net-new person trips and 571 net-new vehicle trips during the p.m. peak hour. The proposed project would generate 23 percent more person-trips and 32 percent more vehicle trips during the p.m. peak hour than during the a.m. peak hour. The majority of the new trips would be generated by the parcel delivery and last-mile delivery uses.

Table 3.B-8 Proposed Project Net-New Trip Generation by Way of Travel and Land Use

Analysis Period/Land Use Type	Person Trips by Way of Travel[1]				Total Vehicle Trips
	Auto[2]	Transit	Other[3]	Total	
Daily					
Maker and manufacturing	250	28	0	**278**	**222**
Parcel delivery and last-mile delivery	4,838	524	0	**5,362**	**4,568**
Wholesale and storage	2,270	244	0	**2,514**	**1,406**
General Retail	280	40	128	**448**	**158**
Café/Quick Service Restaurant	652	112	300	**1,064**	**372**
Total Project Trips	**8,290**	**948**	**428**	**9,666**	**6,726**
Total Existing Site[4]				**756**	**718**
Net-new Trips				**8,910**	**6,008**
A.M. Peak Hour					
Maker and manufacturing	29	3	0	**32**	**25**
Parcel delivery and last-mile delivery	339	37	0	**376**	**322**
Wholesale and storage	159	17	0	**176**	**117**
General Retail	7	2	3	**12**	**4**
Café/Quick Service Restaurant	89	15	41	**145**	**51**
Total Project Trips	**623**	**74**	**44**	**741**	**519**
Total Existing Site[4]				**93**	**88**
Net-new Trips				**648**	**431**
P.M. Peak Hour					
Maker and manufacturing	31	3	0	**34**	**27**
Parcel delivery and last-mile delivery	485	51	0	**536**	**471**
Wholesale and storage	79	9	0	**88**	**53**
General Retail	25	4	12	**41**	**14**
Café/Quick Service Restaurant	88	15	40	**143**	**50**
Total Project Trips	**708**	**82**	**52**	**842**	**615**
Total Existing Site[4]				**47**	**44**
Net-new Trips				**795**	**571**

Source: Adavant Consulting/LCW Consulting, 2021 (see Appendix D.2).

Notes:

1. Totals may not sum due to rounding.
2. Auto person trips represent trips by private automobile, carpool, and for-hire vehicles (e.g., Uber, Lyft), as well as commercial vehicles.
3. Other way of travel includes trips by people walking, bicycling, and riding motorcycles.
4. Existing site based on field counts collected in June 2018.

Table 3.B-9 summarizes the project-generated inbound and outbound vehicle and transit trips for the a.m. and p.m. peak hours by place of origin. The table also includes the inbound and outbound vehicle trips for the a.m. and p.m. peak hours for the existing facility, and presents the net-new vehicle trips generated by the proposed project land uses. The origins/destinations and direction of travel were used in step four of the travel demand analysis.

Table 3.B-9 Proposed Project Net-New A.M. and P.M. Peak Hour Vehicle and Transit Trip Generation by Place of Origin/Destination and Direction

Way of Travel/Place of Trip Origin or Destination	A.M. Peak Hour			P.M. Peak Hour		
	Inbound	Outbound	Total[1]	Inbound	Outbound	Total[1]
Vehicle Trips						
SF Northeast Quadrant	37	16	**53**	32	**38**	**70**
SF Northwest Quadrant	44	18	**62**	36	**41**	**77**
SF Southeast Quadrant	120	57	**177**	114	**118**	**232**
SF Southwest Quadrant	31	13	**44**	24	**28**	**52**
East Bay	42	10	**52**	21	**37**	**58**
North Bay	16	2	**18**	3	**11**	**14**
Peninsula/South Bay	86	14	**100**	28	**67**	**95**
Outside Bay Area	9	4	**13**	8	**9**	**17**
Total Project Vehicle Trips	**385**	**134**	**519**	**266**	**349**	**615**
Existing Site Vehicle Trips[2]	**55**	**33**	**88**	**20**	**24**	**44**
Net-New Vehicle Trips	**330**	**101**	**431**	**246**	**325**	**571**
Transit Trips						
SF Northeast Quadrant	11	2	**13**	5	**10**	**15**
SF Northwest Quadrant	6	2	**8**	3	**6**	**9**
SF Southeast Quadrant	23	8	**31**	15	**20**	**35**
SF Southwest Quadrant	4	1	**5**	2	**3**	**5**
East Bay	8	2	**10**	5	**7**	**12**
North Bay	1	0	**1**	0	**0**	**0**
Peninsula/South Bay	4	0	**4**	1	**3**	**4**
Outside Bay Area	2	0	**2**	1	**1**	**2**
Total Project Transit Trips[3]	**59**	**15**	**74**	**32**	**50**	**82**

Source: Adavant Consulting/LCW Consulting, 2021 (see Appendix D.2).

Notes:

1. Totals may not sum due to rounding.
2. Based on counts conducted at the site in June 2018.
3. The number of transit trips generated by the existing uses at the project site is not known and was therefore not subtracted from the total transit trips generated by the proposed project. This results in a conservative estimate of the number of transit trips generated by the proposed project.

Step 4. Assignment. Assignment refers to assignment of project vehicle trips to adjacent streets, to loading zones, and driveways. The project-generated vehicle trips and directional distribution obtained in the previous steps were used as the basis for assigning vehicle trips to the local streets in the study area. Travel paths were developed based on the most direct routes according to the type of vehicle, number of travel lanes on streets, and knowledge of current travel patterns in the study area. It was assumed that the existing vehicle trips would generally be distributed in a pattern similar to those of the proposed project. Figure 3.B-4 and Figure 3.B-5 (p. 3.B-31) depict the paths for the proposed project inbound and outbound vehicle trips, respectively. As shown in the figures, travel paths to and from the site would be generally evenly split between north and south of the project site. Freeway access would likely be used when approaching the project site from the south due to the options available (i.e., U.S. 101 or I-280); and in general, less freeway congestion than for freeway access from the north. Arterial streets (Cesar Chavez Street, Potrero Avenue, and Third Street) would be used when approaching the site from the north and east.

Table 3.B-10 summarizes the project-generated traffic increases at key intersections for the a.m. and p.m. peak hours. Project traffic increases in the a.m. peak hour are between 35 and 291 vehicles per hour, and between 67 and 344 vehicles in the p.m. peak hour. The highest percent increase in traffic volumes from the proposed project would occur along Kirkwood Avenue in the immediate vicinity of the project site.

Table 3.B-10 Total Intersection Vehicle Volumes for Weekday A.M. and P.M. Peak Hours – Existing plus Project Conditions

Intersection	Existing		Project		Existing Plus Project	
	AM	PM	AM	PM	AM	PM
Toland Street/Evans Ave/Napoleon Ave	1,416	1,475	154	152	1,570	1,627
Toland Street/Jerrold Avenue	969	787	291	344	1,260	1,131
Toland Street/McKinnon Avenue	432	388	55	151	487	539
Toland Street/Oakdale Avenue	1,043	1,069	35	67	1,078	1,136
Rankin Street/Kirkwood Avenue	144	107	191	160	335	267
Selby Street/Kirkwood Avenue	41	36	132	113	173	149

Source: Adavant Consulting/LCW Consulting, June 2018 (see Appendix D.1 and Appendix D.2).
Note:
Total vehicle volumes at each approach to the intersection (i.e., northbound, southbound, eastbound, westbound, as applicable).

Figure 3.B-4 Inbound Vehicle Trip Paths

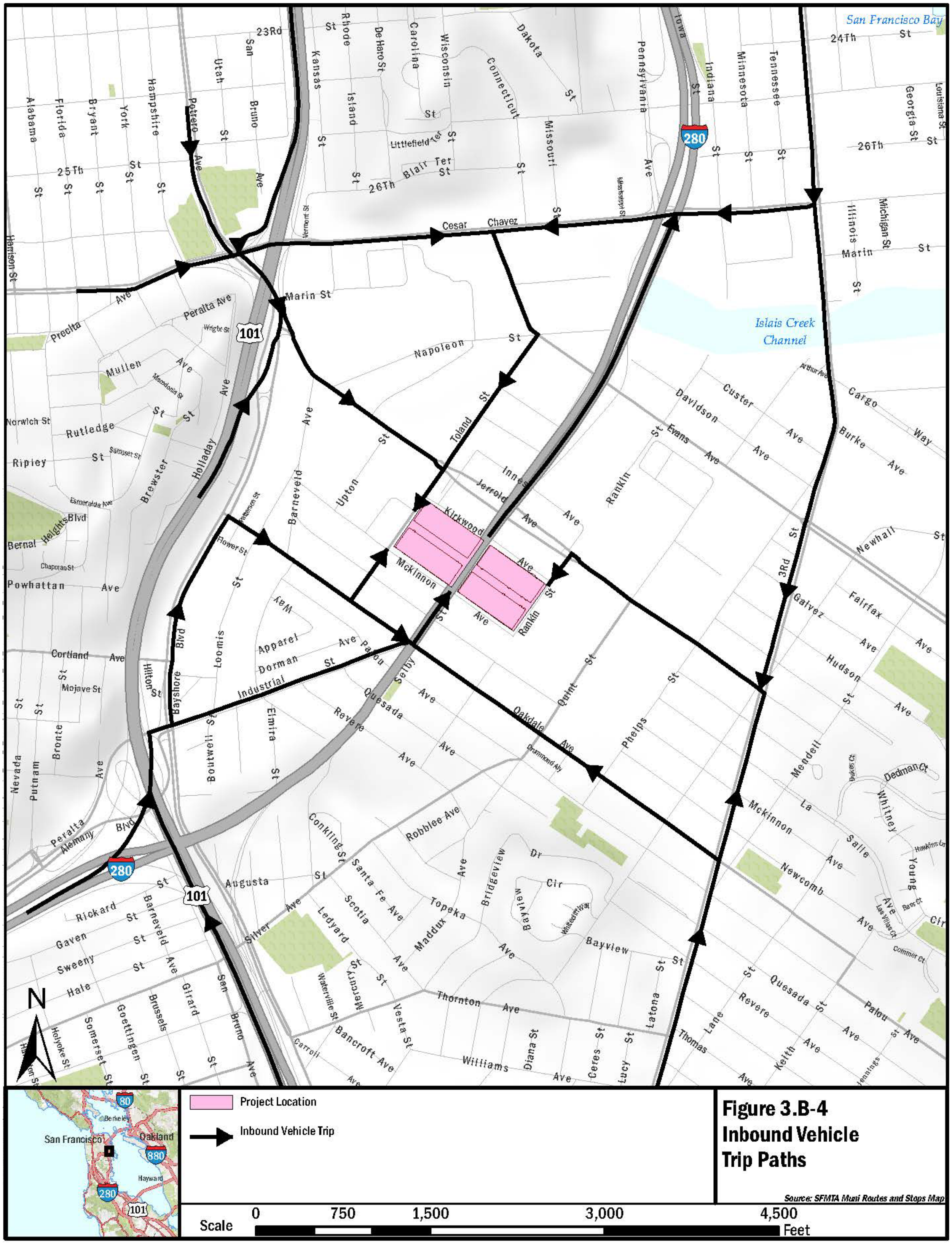
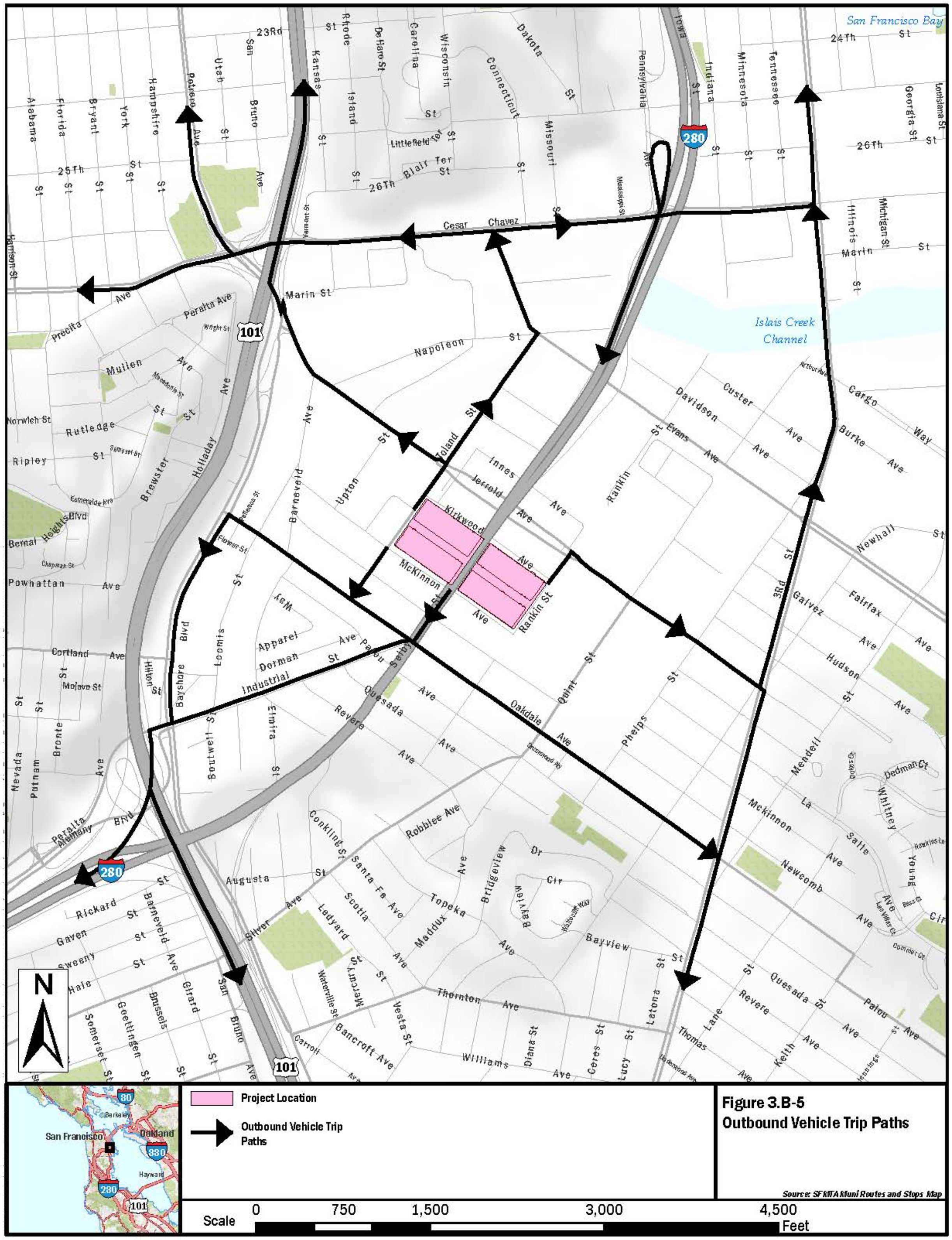


Figure 3.B-5 Outbound Vehicle Trip Paths



Commercial Vehicle Classification

Table 3.B-11 presents the number of total and net-new vehicle trips generated by the proposed project disaggregated by vehicle type for each land use on a daily basis, and for the a.m. and p.m. peak hours. The majority of the net-new vehicle trips generated by the proposed project would be by auto, with vans and trucks between 22 and 33 percent of net-new vehicle trips, as follows:

- On a daily basis, vans and trucks would represent about 22 percent of net-new vehicle trips, with the majority of the trips by vans. Single-unit and tractor-trailer truck combinations would represent 10 percent of the net-new trips (7 percent single unit truck, and 3 percent tractor trailer truck).
- During the a.m. peak hour, vans and trucks would represent 33 percent of net-new vehicle trips. The percentage of single-unit and tractor-trailer truck combinations would represent 9 percent of the net-new vehicle trips (6 percent single unit, and 3 percent tractor trailer trucks).
- During the p.m. peak hour, vans and trucks would represent about 22 percent of net-new vehicle trips. The percentage of single-unit and tractor-trailer truck combinations would represent 5 percent of the net-new vehicle trips (4 percent single unit, and 1 percent tractor trailer trucks).

Freight and Passenger Loading Space Demand

Loading space demand consists of the estimated number of loading spaces that would be occupied by project delivery, service, and passenger vehicle trips during the period of peak demand. Because the loading activities associated with the proposed parcel delivery and last-mile delivery and wholesale and storage components of the proposed project would occur entirely in the two buildings, no specific estimate of the number of truck loading spaces for these two uses was developed. Each level was designed to accommodate loading access and operations for the anticipated range of PDR uses in the site.

However, because the ground-floor maker and manufacturing and retail spaces would not be served by internal truck and service vehicle loading facilities (i.e., loading/unloading for these two ground floor uses would be accommodated at on-street commercial vehicle [yellow] loading zones that would be provided as part of the proposed project, and at onsite truck loading spaces accessed directly from Kirkwood Avenue), the freight loading space demand for these two uses was estimated quantitatively. The daily vehicle trips presented in Table 3.B-11 for the maker and manufacturing uses were used to determine the number of daily commercial vehicle trips generated by this use, and to estimate the peak number of on-street spaces required to accommodate for freight delivery and service vehicle demand. The SF transportation guidelines methodology, and truck generation rates were used to calculate the peak hour loading space demand for the general retail and the café and quick service restaurant uses. Table 3.B-12 (p. 3.B-34) presents the number of daily commercial vehicle by vehicle type (i.e., vans, single unit trucks, tractor trailers) and the associated loading space demand during the peak hour of loading activities (generally between 10 a.m. and 1 p.m.). The general retail and the café and quick service restaurant uses would generate a demand for one commercial vehicle loading space during the peak hour of loading activities, while the maker and manufacturing uses would generate a peak demand for two commercial vehicle loading spaces.

Table 3.B-11 Proposed Project Daily and A.M. and P.M. Peak Hour Vehicle-trips by Vehicle Type and Land Use

Analysis Period/Land Use Type	Vehicle Trips by Vehicle Type1				Total Vehicle Trips1
	Auto/ Pickups	Vans	Single Unit Trucks	Tractor Trailer Trucks	
Daily					
Maker and manufacturing	178	20	22	**2**	**222**
Parcel delivery and last mile delivery	3,354	802	292	**120**	**4,568**
Wholesale and storage	1,044	60	242	**60**	**1,406**
Retail/café/quick service restaurant	510	14	6	**0**	**530**
Total Project Vehicle Trips	**5,086**	**896**	**562**	**182**	**6,726**
Total Existing Site[2]	**400**	**154**	**150**	**14**	**718**
Net-new Vehicle Trips	**4,686**	**742**	**412**	**168**	**6,008**
Vehicle Type Percentage	*78%*	*12%*	*7%*	*3%*	*100%*
A.M. Peak Hour					
Maker and manufacturing	15	5	5	**0**	**25**
Parcel delivery and last mile delivery	162	122	32	**6**	**322**
Wholesale and storage	99	1	10	**7**	**117**
Retail/café/quick service restaurant	53	1	1	**0**	**55**
Total Project Vehicle Trips	**330**	**129**	**48**	**12**	**519**
Total Existing Site[2]	**40**	**27**	**21**	**0**	**88**
Net-new Vehicle Trips	**290**	**102**	**27**	**12**	**431**
Vehicle Type Percentage	*67%*	*24%*	*6%*	*3%*	*100%*
P.M. Peak Hour					
Maker and manufacturing	20	1	6	**0**	**27**
Parcel delivery and last mile delivery	347	102	18	**4**	**471**
Wholesale and storage	45	2	4	**2**	**53**
Retail/café/quick service restaurant	61	0	3	**0**	**64**
Total Project Vehicle Trips	**473**	**105**	**31**	**6**	**615**
Total Existing Site[2]	**28**	**10**	**6**	**2**	**46**
Net-new Vehicle Trips	**445**	**95**	**25**	**14**	**569**
Vehicle Type Percentage	*78%*	*17%*	*4%*	*1%*	*100%*

Source: Adavant Consulting/LCW Consulting, 2021 (see Appendix D.2).

Notes:

1. Totals may not sum due to rounding.
2. Existing site based on field counts collected in June 2018; the single-unit truck vehicle category includes 18 motorized cable cars as part of the existing vehicle storage uses (see Estimation of Project Travel Demand Technical Memorandum in Appendix D.2).

Table 3.B-12 Proposed Project On-Street Commercial Vehicle Loading Demand

Land Use Type	Number of Daily Commercial Vehicles[1]				Peak Hour Loading Space Demand[2]
	Vans	Single Unit Truck	Tractor Trailer Truck	Total	
Maker and Manufacturing	10	11	1	**22**	**1.9**
General Retail	1	0	0	**1**	**0.1**
Café/Quick Service Restaurant	6	3	0	**9**	**0.5**
Total	**17**	**14**	**1**	**32**	**2.5**

Source: Adavant Consulting/LCW Consulting, 2021 (see Appendix D.2).

Notes:

1. Number of daily commercial vehicles calculated by dividing total daily trips presented in Table 3.B-11 (p. 3.B-33) by two to account for two trips per vehicle (i.e., one inbound and one outbound).
2. Assumes nine hours of deliveries per day (8 a.m. – 5 p.m.)

An assessment of passenger loading demand associated with the proposed PDR land uses was not conducted, because the proposed industrial-oriented warehousing and storage, parcel delivery, and manufacturing land uses typically generate minimal passenger loading activities, and no such activities were observed during the various field visits to the site conducted as part of the data collection efforts. The proposed general retail use and the café and quick service restaurant uses would generate about one passenger loading instance during the p.m. peak hour, which corresponds to a demand for one space of passenger loading during any one minute of the peak 15 minutes of loading activities.

Project Vehicle Miles Traveled

The planning department's methodology to calculate the VMT relies on the SF-CHAMP as a tool to determine the total daily VMT values at each TAZ[105] in San Francisco. Separate calculations of VMT are performed for residential, office, and retail uses, each one of which is then divided by the applicable geographic household population, office jobs, or retail employment to calculate the VMT per capita.

The VMT analysis relies on the planning department's methodology and calculation for the retail land uses. For PDR uses, the planning department does not provide VMT values. When analyzing PDR uses as part of a mixed-use development project, the planning department uses the VMT values for office as a proxy for PDR, because the office use most closely represents the type of PDR uses generally found in mixed-use developments. In this case, given that the proposed project consists almost exclusively of PDR uses (compared to typically consisting of only a small portion in a large mixed-use development project) and due to its large size (i.e., more than 2 million gross square feet), an average daily VMT per capita was calculated specifically for the proposed project PDR uses, based on the project travel demand presented above. Both the project-specific VMT value and the VMT value for office uses were considered in the VMT analysis, as described below.

A slightly different per capita unit is used for the evaluation of the VMT generated by the PDR uses of the proposed project. Given that the number of employees can be approximated from the size and type of the proposed PDR land uses, a VMT per worker (employee) is used instead of the VMT per employment (job)

105 Transportation Analysis Zones (TAZs) are geographical areas used by planners as part of travel demand forecasting models for transportation analyses and other planning purposes. A TAZ can vary in size from a single city block in the downtown core, to multiple blocks in outer neighborhoods, or even larger zones in historically industrial areas such as the Hunters Point Shipyard area.

presented in the SF transportation guidelines.[106] The memorandum containing the detailed methodology and information used to calculate project-related VMT is included in Appendix D.2 of this draft EIR.

PDR Uses. As noted above, due to the large size and characteristics of the proposed PDR uses, a project-specific calculation of the average daily VMT per capita was conducted for this use. The calculation takes into account the type and intensity of the proposed land uses to estimate the VMT for project employees, visitors (including repairs and maintenance), and delivery and commercial vehicles. For transportation analysis purposes, VMT generated by project employees driving to or from work fall in the "commuter" category, while VMT generated by visitors, pickups and deliveries (including services, repairs, maintenance, etc.) fall under the "non-commuter" category.

- For commuter trips, the daily work VMT was calculated by multiplying the number of PDR-generated vehicle trips originating or destined for the four San Francisco superdistricts,[107] the East Bay, North Bay, South Bay and out of region by an average distance between the project site and the estimated *center of gravity*[108] for each of the eight zones.

- For estimating the non-commuter VMT, the number of new PDR-generated visitor and deliveries/pickup trips under each vehicle type category was multiplied by the average distance traveled on a typical day by each type of vehicle.

- For the parcel delivery and last-mile delivery use, a credit was used for the non-commuter VMT on the basis of analyses that examined the existing and expected demand for parcel delivery and last-mile distribution centers in the San Francisco Bay Area.[109] This analysis, which was reviewed and accepted by the planning department, documented projections of continued growth in last-mile delivery distribution centers in the near future to address the substantially unmet customer demand for last-mile deliveries in the San Francisco service area. Therefore, the proposed project's parcel and last-mile delivery uses would be able to accommodate existing and projected growth in the e-commerce market without inducing new vehicle trips between goods suppliers and the project site, or the project site and the final consumer.

- The VMT for the existing land uses at the project site was estimated based on daily vehicle counts by vehicle type conducted in June 2018. It was then subtracted from the project VMT to obtain the net new VMT generated by the proposed project. The same distribution and average distance for the various origins and destinations developed for the proposed PDR uses was applied to the total daily vehicle trips, to estimate the existing average daily VMT.

- The VMT per capita was calculated based on 1,955 PDR workers at the site on a typical day.[110]

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106 The average daily work VMT per employee rate was derived from the same SF-CHAMP model data used in the San Francisco Housing Element 2022 Update EIR for estimating work VMT per employment; the SF-CHAMP model output data was provided to the consultants by SFCTA in December 2022.

107 Superdistricts are transportation analysis zones established by the Metropolitan Transportation Commission that provide geographic subareas for planning purposes in San Francisco. A map showing the boundaries of the four planning superdistricts in San Francisco is provided in Appendix D.2.

108 For purposes of determining distances between the project site and other locations (TAZ, county, or region), the concept of center of gravity was used. The center of gravity represents the imaginary point where the total population of each TAZ, county, or region (e.g., East Bay, North Bay, or South Bay) is theoretically concentrated.

109 Prologis, Memorandum regarding E-commerce – Existing Demand and Future Trends in San Francisco and the Greater Bay Area, June 30, 2020. See Appendix C.

110 This employment density (597 gross square feet per employee for PDR use) is based on a May 2019 report prepared to update the city's nexus fees: Keyser Marston Associates, Jobs Housing Nexus Analysis, San Francisco, May 2019, Table III-2 on page 11.

Table 3.B-13 presents a summary of the daily VMT per worker for PDR uses for existing plus project conditions. Overall, the proposed PDR uses would generate about 36,715 VMT per day, and 18.8 average daily VMT per employee.

Table 3.B-13 Proposed Project Daily Vehicle Miles Traveled and Vehicle Miles Traveled per Capita for PDR Uses

Place of Trip Origin or Destination and Vehicle Type	Maker and Manufacture	Parcel and Last-Mile Delivery	Wholesale and Storage	Total Project PDR	Existing Use[1]	Total Net New
Daily Commuter Trip VMT[2]						
SF Northeast Quadrant	40	840	300	1,180	**75**	**1,105**
SF Northwest Quadrant	48	1,308	504	1,860	**126**	**1,734**
SF Southeast Quadrant	44	1,016	384	1,444	**96**	**1,348**
SF Southwest Quadrant	42	1,176	434	1,652	**108**	**1,544**
East Bay	337	8,134	3,029	11,500	**755**	**10,744**
North Bay	166	3,496	1,332	4,994	**332**	**4,662**
Peninsula/South Bay	518	13,217	4,967	18,702	**1,239**	**17,464**
Outside Bay Area	129	3,229	1,162	4,520	**290**	**4,230**
Total Daily Commuter VMT	**1,324**	**32,415**	**12,112**	**45,852**	**3,021**	**42,832**
Daily Non-Commuter Trip VMT[3]						
Automobiles	1,800	-9,105	4,840	-2,465	**4,000**	-6,465
Buses	0	0	0	0	**720**	-720
Vans	600	-6,015	1,800	-3,615	**4,610**	-8,225
Single Unit Trucks	880	-2,190	9,680	8,370	**5,293**	3,077
Tractor Trailer Trucks	220	900	6,600	7,720	**1,503**	6,217
Total Daily Non-Commuter VMT	**3,500**	**-16,410**	**22,920**	**10,010**	**16,127**	**-6,117**
Total Daily VMT for PDR Uses	**4,824**	**16,005**	**35,032**	**55,862**	**19,147**	**36,715**
Typical number of daily PDR workers						**1,955**
Average Daily VMT Per Capita[4]						**18.8**

Source: Adavant Consulting/LCW Consulting, 2021 (see Appendix D.2).

Notes:

1. Represents a subtraction of VMT generated by existing uses from VMT generated by the analyzed tenant use mix.
2. Consists of trips by workers.
3. Consists of visitor trips, service and maintenance trips, pickups and deliveries, etc.
4. VMT per capita is estimated by dividing the total daily VMT (36,715 miles) by the number of daily PDR workers (1,955 workers).

PDR = production, distribution, and repair
VMT = vehicle miles traveled

Retail Uses. The methodology described in the SF transportation guidelines was used to estimate the average daily retail VMT per capita for the retail component of the proposed project. For the two zones in which the project site is located (zones 485 and 488), this results in a combined average of 9.9 average daily retail VMT per capita for existing conditions, and 11.3 average daily retail VMT per capita for 2050 cumulative conditions.[111]

Construction Impact Analysis Methodology

The proposed project may result in construction-related transportation impacts; these impacts are analyzed in Impact TR-1. The construction impact analysis assesses if the proposed project would require a substantially extended construction duration or intense construction activity; and if so, the analysis assesses the effects of construction activities on people walking, bicycling, or driving; riding public transit; and on emergency vehicle operators. Potential short-term construction impacts on sidewalks, in bicycle lanes, and/or in travel lanes were assessed qualitatively based on preliminary project construction information.

Operational Impact Analysis Methodology

The impacts of the proposed project following completion of construction (operational impacts) are analyzed in Impacts TR-2 through TR-6. The following describes the methodology for analysis of operational impacts by significance criterion.

Potentially Hazardous Conditions

As used in this section, a "hazard" refers to a project vehicle potentially colliding with a person walking, bicycling, or driving, or a public transit vehicle that could cause serious or fatal physical injury, accounting for the aspects described below. Non-engineering aspects such as human error or non-compliance with laws, weather conditions, time-of-day, and other factors can affect whether a collision could occur. However, for purposes of CEQA, hazards refer to engineering aspects of a project (e.g., speed, turning movements, complex designs, distance between street crossings, sightlines) that may cause a greater risk of collisions that result in serious or fatal physical injury than a typical project. This analysis focuses on hazards that could reasonably stem from the proposed project, apart from collisions, that may result from aforementioned non-engineering aspects or the transportation system as a whole.

Therefore, the methodology addresses the potential for the proposed project to exacerbate an existing hazardous condition or create a new potentially hazardous condition to people walking, bicycling, or driving, or for public transit operations. The assessment considers factors such as the increase in the number and type of project-generated vehicles trips, design of the project driveways and other transportation features, and increases in the number of people walking and bicycling.

Accessibility

The methodology addresses the potential for the proposed project to interfere with the accessibility of people walking or bicycling, or result in inadequate emergency access. The methodology accounts for

[111] In the SF-CHAMP model, the transportation authority uses tour-based analysis for residential and office uses. A tour-based analysis examines the entire chain of trips over the course of a day, not just trips to and from a site. Tour-based analysis is appropriate in these cases because home and work are "anchor" locations that condition how people structure their travel, like where they might stop for coffee, or whether they choose to leave home by transit or in a car. For retail uses, the transportation authority uses trip-based analysis. A trip-based analysis counts VMT from individual trips to and from a site (as opposed to entire chain of trips). A trip-based approach is appropriate for retail sites, because retail trips are more easily substituted for another location or at another time in a person's schedule than home- and work-related trips. In other words, retail sites are more likely to be chosen for their proximity and convenience to work and home.

proposed project changes to the public right-of-way in relation to the presence of people walking and bicycling, or emergency service operator facilities.

Public Transit Delay

The planning department uses quantitative thresholds of significance and qualitative criteria to determine whether a project would substantially delay public transit. For individual Muni routes, if a project would result in transit delay greater than or equal to four minutes, then it might result in a significant impact.[112] For individual Muni routes with service headways[113] less than eight minutes, the planning department may use a one-half headway threshold. For example, for a bus route with a headway of six minutes, the threshold would be half of six minutes, or three minutes. Should a project result in transit delay of three minutes or more, then it might result in a significant impact. For individual surface routes operated by regional agencies, if a project would result in transit delay greater than one-half headway, then it might result in a significant impact. The planning department considers the following criteria for determining whether such delay exceeding thresholds would result in significant impacts due to a substantial number of people riding transit switching to riding in private or for-hire vehicles: transit service headways and ridership, origins and destinations of trips, availability of other transit and modes, and competitiveness with private vehicles.

For development projects, the SF transportation guidelines set forth a screening criterion for types of development projects that would typically not result in significant transit delay impacts.[114] This screening criterion was used as a starting point for assessing the proposed project's transit delay impacts. The proposed project would not meet the screening criterion; therefore, a more detailed qualitative assessment of impacts of the proposed project on transit operations was conducted. A qualitative assessment rather than a quantitative analysis of transit travel time changes was determined appropriate considering the location of the project site (i.e., within an industrial area of the city), level of travel activity by the various ways of travel, roadways used to access the project site, and proximity of transit routes to the project site.

The transit delay assessment qualitatively considered three quantitative factors associated with changes to transit travel times:

- Traffic Congestion Delay – Increases in vehicles slowing down transit vehicles and increasing transit travel times.
- Transit Reentry Delay – Delays to transit vehicles pulling out of a bus stop while waiting for gaps in adjacent street traffic. As traffic volumes on streets increase, reentering the flow of traffic becomes more difficult and transit vehicles experience increased delays.
- Passenger Boarding Delay – The additional amount of time a transit vehicle has to wait at a stop to pick up and drop off passengers.[115]

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[112] The threshold uses the adopted Transit-First Policy, City Charter section 8A.103, percent on-time performance service standard for Muni. The charter considers transit vehicles arriving more than four minutes beyond a published schedule time as late.

[113] A service headway is the number of minutes between buses or trains on a particular bus route or light rail line.

[114] San Francisco Planning Department, *Transportation Impact Analysis Guidelines*, http://default.sfplanning.org/publications_reports/TIA_Guidelines.pdf. Appendix I of the SF transportation guidelines describe the transit delay screening criteria.

[115] Per the SF transportation guidelines, the amount of time that a public transit vehicle must stop to pick up and drop off passengers (i.e., the transit vehicle dwell time) is correlated to the number of passengers boarding and alighting the vehicle. As general transit ridership grows, transit vehicles spend more time at stops while passengers enter and exit the vehicle, which increases travel times on a route or light rail line.

VMT Analysis

The methodology assesses the proposed project's potential VMT impacts, consistent with CEQA section 21099(b)(1), CEQA Guidelines section 15064.3, technical advisories prepared by the California Office of Planning and Research,[116, 117] and the SF transportation guidelines, as described below.

Under CEQA Guidelines section 15064.3(b)(4), a lead agency has the discretion to choose the most appropriate methodology to evaluate a project's VMT, including whether to express the change in absolute terms, per capita, per household, or any other measure. Furthermore, CEQA Guidelines section 15064.3(b)(3) allows lead agencies to analyze the project's VMT qualitatively if existing models or methods are not available to estimate the project's VMT.

Land Use Components. In analyzing impacts of a project that involves land uses other than retail, office, and residential uses, the Office of Planning and Research recommends that lead agencies consider the criteria described in CEQA section 21099(b)(1).[118] Although it typically evaluates VMT impacts from land use projects using a VMT efficiency metric, the planning department also analyzed the estimated VMT in relation to the three criteria outlined under CEQA section 21099(b)(1). These criteria promote: 1) the reduction of GHG emissions; 2) the development of multimodal transportation networks; and 3) a diversity of land uses.

Given that the proposed project is an atypical development project for VMT purposes,[119] analysis of the proposed project considered qualitative criteria addressing CEQA section 21099(b)(1), as well as a quantitative assessment of the proposed project's VMT per capita.

The analysis of VMT impacts compares the VMT per capita for conditions without and with implementation of the proposed project. A significant impact may occur if VMT per capita for the proposed project are equal to or greater than the following thresholds of significance:[120]

- For residential projects, the regional household VMT per capita minus 15 percent.
- For office projects, the regional VMT per employee minus 15 percent.
- For retail projects, the regional VMT per retail employee minus 15 percent.

The planning department uses VMT efficiency metrics (per capita or per employee) for thresholds of significance. VMT per capita reductions mean that individuals will, on average, travel less by automobile than previously, but because the population will continue to grow, it may not mean an overall reduction in the number of miles driven.

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116 California Office of Planning and Research, Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA, Implementing Senate Bill 743 (Steinberg, 2013), January 20, 2016, https://opr.ca.gov/docs/Revised_VMT_CEQA_Guidelines_Proposal_January_20_2016.pdf, accessed January 16, 2023.

117 California Office of Planning and Research, Technical Advisory on Evaluating Transportation Impacts in CEQA, December 2018, https://opr.ca.gov/docs/20180416-743_Technical_Advisory_4.16.18.pdf, accessed January 16, 2023.

118 Ibid.

119 Atypical here means the project is not one of the typical residential, office, or retail projects that have the greatest influence on VMT; and that the technical advisories prepared by the California Office of Planning and Research and SF transportation guidelines do not focus on this type of use. Furthermore, this PDR use contains a substantial amount of parcel and last-mile delivery uses.

120 San Francisco Planning Department, *Transportation Impact Analysis Guidelines*, https://default.sfplanning.org/publications_reports/TIA_Guidelines_Update_VMT_Memo.pdf. Appendix L of the SF transportation guidelines describes the vehicle miles traveled thresholds of significance.

The planning department uses a map-based screening criterion to identify types and locations of land use projects that would not exceed the above thresholds of significance based on the aforementioned SF-CHAMP modeling. The planning department uses that data and associated maps to determine whether a project site's location is below the VMT threshold of significance. The analysis of VMT impacts considers the weighted average daily VMT per capita for the two zones in which the project site is located for office (PDR) and retail uses for the map-based screening analysis. In addition, the analysis considers the project-specific VMT per capita for the proposed PDR uses, based on the travel demand analysis (see "Project Travel Demand Methodology and Results," earlier in this section).

Further, the planning department presumes residential, retail, and office projects, and projects that are a mix of these uses, proposed within one-half mile of an existing major transit stop (as defined by CEQA section 21099) or an existing stop along a high-quality transit corridor (as defined by CEQA section 21155) would not exceed these thresholds of significance (transit screening criterion). However, this presumption would not apply if the project would: (1) have a floor area ratio of less than 0.75; (2) include more parking for use by residents, customers, or employees of the project than required or allowed, without a conditional use; or (3) be inconsistent with the applicable Sustainable Communities Strategy.

Transportation Components. The planning department uses the following quantitative threshold of significance and screening criteria to determine whether transportation projects (e.g., infrastructure projects that affect the transportation network) may substantially induce additional automobile travel: 2,075,220 VMT per year. This threshold is based on the fair share VMT allocated to transportation projects required to achieve California's long-term GHG emissions reduction goal of 40 percent below 1990 levels by 2030. Although this is not a transportation project, it includes transportation components that affect the adjacent transportation network. These transportation components are described in Section 2.D.8, Proposed Parking, Loading, and Circulation (p. 2-30), and Section 2.D.10, Streetscape Improvements and Street Trees (p. 2-34), and include new and reconstructed sidewalks, sidewalk bulb-outs, reconfiguration of on-street vehicular parking, new traffic control (i.e., stop signs), crosswalks, new or relocated on-street commercial and/or passenger loading/unloading zones, and modified directions of travel lanes adjacent to the site.

The planning department uses a list of transportation components of a project that would not likely lead to a substantial or measurable increase in VMT, and would not exceed the quantitative threshold of significance. If the transportation features of a project fit within the general types of projects (including combinations of types) identified by the planning department as projects that do not generate trips and would not increase vehicle travel, then the planning department generally presumes that VMT impacts would be less than significant. Such transportation project components include active transportation, rightsizing, transit projects, and other minor transportation projects such as curb cuts, on-street loading zones, changes to on-street parking regulations, and bulb-outs identified in the SF transportation guidelines.[121]

Freight and Passenger Loading

The methodology assesses the potential for convenient off- and on-street loading facilities to meet the project's commercial freight and passenger loading demand during the average peak hour. For purposes of the loading assessment, convenient refers to facilities within 250 linear feet of the project site. If convenient onsite or on-street commercial yellow zones or white passenger zones would not meet the demand (i.e., the

[121] Ibid.

demand for loading spaces cannot be accommodated in the supply, and would therefore result in a loading deficit), then the methodology also addresses the potential for the proposed project to exacerbate a potentially hazardous baseline condition or create a new potentially hazardous condition for people walking, bicycling, or driving, or to substantially delay public transit.

Cumulative Impact Assessment

The discussion of cumulative transportation impacts assesses whether the proposed project, in combination with cumulative projects, would significantly affect the transportation network; and if so, whether the proposed project's contribution to the cumulative impact would be considerable. The following summarizes future year modeling and cumulative projects relevant to transportation topics. The construction and operational cumulative impact analysis uses the same methodology described above for existing plus project conditions.

2050 Modeling

The estimation of average daily VMT per capita used in the analysis of 2050 cumulative conditions is based on projected land use development and transportation network changes included in the San Francisco SF-CHAMP travel demand model, as described above.[122] The model is an activity-based travel demand model that the transportation authority calibrates to represent future transportation conditions in San Francisco, accounting for assumptions regarding cumulative infrastructure projects and employment and population growth. Inputs to the model include:

- Infrastructure projects listed in Plan Bay Area 2040
- Infrastructure projects listed in San Francisco's Countywide Transportation Plan, Capital Plan, or a San Francisco agency's (e.g., SFMTA) Capital Improvement Program and anticipated for completion by 2050
- Infrastructure, private development, or area plan projects actively undergoing environmental review, recently completed environmental review, or the planning department anticipates undertaking environmental review in the near future because they have received sufficient project definition; and
- Land use growth assumptions developed for the San Francisco Housing Element 2022 Update

2050 Cumulative Projects

The cumulative conditions analysis for transportation impacts other than VMT uses a list-based approach. The geographic context for the analysis of cumulative transportation impacts generally includes the sidewalks and roadways adjacent to the project site, and the local roadway and transit network within 0.25 mile of the project site. The discussion of cumulative transportation impacts assesses the degree to which the proposed project would affect the transportation network in combination with cumulative projects. The following describes the cumulative land development and transportation projects that the analysis uses to assess cumulative impacts.

The list of cumulative development projects within 0.25 mile of the project site that are considered in the transportation analysis is presented in in Section 3.A.6 (p. 3.A-15), and shown on Figure 3.A-4 (p. 3.A-18).

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[122] The analysis used the San Francisco Housing Element 2022 Update Model Run. Documentation, including input assumptions, is included in the San Francisco Housing Element 2022 Update Environmental Impact Report, Appendix G. https://citypln-m-extnl.sfgov.org/SharedLinks.aspx?accesskey=19f3981299a5cbe2e41d7239daa65ca4117a64ce14f31c962d8b94dae0cde6a5&VaultGUID=A4A7DACD-B0DC-4322-BD29-F6F07103C6E0, accessed January 9, 2023.

Cumulative land use development projects near the project site include the 2270 McKinnon Avenue Project and the San Francisco Market Project.[123] Other cumulative projects include various water treatment infrastructure projects at the SFPUC Southeast Treatment Plant. Transportation network projects include the Quint-Jerrold Connector Road project and new pedestrian crosswalks on Oakdale Avenue included in the Bayview Community Based Transportation Plan. In addition, as described above, the cumulative analysis assumes future development within the city through 2050 consistent with the San Francisco Housing Element 2022 Update.[124] The impact of construction of the proposed project, in combination with construction of other cumulative development, transportation, and infrastructure projects is presented in Impact C-TR-1, and the cumulative operational impact analysis is presented in Impact C-TR-2 through Impact C-TR-6.

3.B.4 Project Impacts and Mitigation Measures

This section describes the impact analysis related to transportation and circulation associated with the proposed project and expanded streetscape variant. Measures to mitigate significant impacts accompany the discussion of each identified significant impact.

Impact TR-1: Construction of the proposed project or project variant would require a substantially extended duration or intense activity due to construction, but the secondary effects of that construction would not 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. ***(Less than Significant)***

PROPOSED PROJECT

The SF transportation guidelines set forth screening criteria for types of construction activities that would not result in significant construction-related transportation effects based on project site context and construction duration and magnitude.[125] A proposed project only needs to meet one of the two criteria. The project site is in a context that does not warrant further analysis, as described below. Regardless, the analysis describes the proposed project's construction duration and intensity, and its relation to secondary transportation effects.

Context

The project site is in an industrial area of the city where roadways are in poor condition (e.g., broken pavement and potholes), there are generally no curbs or gutters, and the sidewalk network is generally incomplete or in poor condition. In addition, many of the streets are discontinuous (including Kirkwood Avenue, McKinnon Avenue, and Rankin Street adjacent to the project site), and there is no public transit service on streets near the project site. Therefore, the existing level of travel activity by all ways of travel adjacent to the project site and in the project vicinity in general is low, and primarily related to the existing industrial uses at the project site and in the immediate area. Thus, the proposed project meets this

[123] Addendum 2 to the Mitigated Negative Declaration, San Francisco Market (formerly San Francisco Wholesale Produce Market) – Case No. 2009.1153ENV, July 21, 2022, includes a footnote on page 17 (footnote 9). The footnote states that, with implementation of the proposed project (i.e., the San Francisco Gateway Project), Kirkwood Avenue between Rankin and Toland streets would change from two-way to one-way eastbound.

[124] The modeling conducted for the Housing Element 2022 Update EIR estimates a growth of five housing units and 748 jobs between 2020 and 2050 cumulative conditions in the two transportation zones that contain the project site.

[125] San Francisco Planning Department, *Transportation Impact Analysis Guidelines*, https://default.sfplanning.org/publications_reports/TIA_Guidelines_Update_VMT_Memo.pdf. Appendix N, Construction.

SF transportation guidelines screening criterion for not requiring a detailed construction analysis. Regardless, the analysis describes the next SF transportation guidelines screening criterion.

Construction Duration and Intensity

As presented in Chapter 2, Project Description (see Table 2.D-3, p. 2-37), there would be six partial or complete overlapping phases of construction. The construction of each of the two buildings that comprise the proposed project would take approximately 27 months and would be constructed in six overlapping phases. However, the start of construction of the second building would start four months after start of construction of the first building, which would result in an overall construction period of 31 months. According to the SF transportation guidelines, the duration is considered "extended" (i.e., more than 30 months); because it includes overlapping phases, the proposed project would not meet this screening criterion.[126]

Potentially Hazardous Conditions and Accessibility during Construction

Construction activities in San Francisco that have the potential to affect the transportation network are subject to the SFMTA blue book; public works code sections 724 (Temporary Occupancy of Street) and 2.4.20 (Action on Applications for Permits to Excavate); and public works order 167, 840 (Guidelines for Barricade Placement). In addition, as specified in the SFMTA blue book, traffic control, warning, and guidance devices must conform to the California Manual on Uniform Traffic Control Devices (CA MUTCD).[127] The SFMTA blue book, public works orders, and the CA MUTCD regulations establish traffic operations and management rules during construction for working safely and causing the least possible interference with people walking, bicycling, taking transit, and/or transit operations, as well as people driving near the construction area. In addition to the above requirements, the contractor would be responsible for complying with city, state, and federal codes, rules, and regulations that are applicable to construction activities. For example, because construction activities would occur in the I-280 right-of-way (a state facility), the proposed project would be subject to a Caltrans encroachment permit.[128] The project sponsor would coordinate with Caltrans and acquire such encroachment permits as needed.

If project construction activities are not able to comply with the requirements of the SFMTA blue book, the construction contractor must apply for a special traffic permit from the SFMTA. In this situation, SFMTA staff would establish project-specific conditions in the special traffic permit for safe travel in and around the project site. Examples of the types of work addressed through special traffic permits include sidewalk, alley, and street closures, temporary relocation of transit stops and/or routes, and closing or detouring a bicycle lane or route.

In general, construction activities would typically occur between 7 a.m. and 8 p.m. Nighttime and weekend construction activities may be required for some tasks (e.g., the pouring of concrete for the foundation mat would most likely occur during a continuous 24-hour period, and would extend through the overnight hours, or may occur on a Saturday).

During the construction period, there would be a flow of construction-related truck travel to and from the project site, which could result in temporarily lower capacities of local streets due to the slower movement

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[126] According to the SF transportation guidelines, a construction duration of 30 months or less is not considered to be an extended duration of construction.

[127] California Department of Transportation, *California Manual on Uniform Traffic Control Devices*, 2014 Edition, Revision 6 (March 2021), https://dot.ca.gov/programs/safety-programs/camutcd/camutcd-files, accessed October 26, 2021.

[128] An aerial Caltrans easement for I-280 runs along Selby Street through the project site (i.e., adjacent to both buildings).

and larger turning radii of trucks. The number of construction-related trucks (e.g., haul trucks associated with disposal of excavated materials, concrete deliveries, delivery trucks bringing materials and equipment to the work site) traveling to and from the site would vary depending on the phase and type of construction activity. Based on an analysis of the average number of daily trucks for the various construction phases, and their overlapping phases provided in Appendix D.3, the peak of construction activities would occur between months five and eight of construction when demolition of building B, grading for buildings A and B, foundations for buildings A and B, and structure of building A would partially or completely overlap. During this period, there would be an average of 120 to 135 construction trucks per day. The smallest numbers of average daily construction trucks would be between months 13 and 31 of construction, with fewer than 60 average daily trucks per day. Overall, for about 87 percent of the 31-month construction period, there would be fewer than 100 trucks per day traveling to and from the project site, and for 55 percent of the period, there would be fewer than 50 trucks per day.

In addition to construction trucks, project construction would result in a temporary increase in the number of workers traveling to and from the site daily. The largest numbers of construction workers at the site would occur between months 14 and 26 of construction, with an average of 420 construction workers at the site per day, while the smallest numbers of average daily construction workers would be during the first four months of construction, with an average of fewer than 60 construction workers per day (see Appendix D.3). Overall, for about 58 percent of the 31-month construction period, there would be fewer than 300 construction workers at the site per day, and for 19 percent of the period, there would be fewer than 100 construction workers per day. It is anticipated that most construction workers would drive and park in the project site and on adjacent streets, although some workers are expected to take transit. The addition of construction trucks and worker-related vehicle or transit trips would not substantially affect transportation conditions, because the impacts on the transportation network would be temporary and variable depending on construction activity.

Construction staging (e.g., staging of construction vehicles, staging of construction materials, and unloading of deliveries and loading of haul trucks) would occur in the building site, and in the adjacent roadway rights-of-way (i.e., the areas dedicated to sidewalks and parking lanes), for the duration of project construction. As described under existing conditions, there are no sidewalks adjacent to the project site, and the building site is fenced. On-street parking adjacent to the site would not be available for the duration of construction. Access to the construction site would primarily be via Toland Street, Jerrold Avenue, Oakdale Avenue, and Bayshore Boulevard, with Evans Avenue and Third Street also providing access to the construction site from various concrete supply companies on Amador Street (see Figure 2.D-14, p. 2-38).

Extended periods of travel lane closures on streets adjacent to the project site would not be required; therefore, project construction would not affect people driving or bicycling, or emergency vehicle access. If temporary travel lane or partial street closures are required for the repaving of streets adjacent to the project site, access for people bicycling, driving, and emergency vehicles would be maintained consistent with the requirements of the SFMTA blue book and related project-specific directives issued by the SFMTA.

There are no sidewalks or curbs and gutters adjacent to the project site, and the number of people walking adjacent to the project site are very few, and primarily related to workers walking between their parked vehicle and place of work. During the construction period, on-street parking adjacent to the project site would be temporarily restricted, and people walking would be directed to use the other side of the street (e.g., the western side of Toland Street, the eastern side of Rankin Street, and the southern side of McKinnon

Avenue). There are no bicycle facilities adjacent to the project site. Except for repaving activities on roadways adjacent to the project site, when temporary travel lane closure would be required, no travel lanes would be temporarily closed for an extended duration. Due to the low volumes of people walking and bicycling that could be affected, construction of the proposed project would not substantially interfere with accessibility, or create potentially hazardous conditions for people walking and bicycling in the area.

Consistent with the requirements of the SFMTA blue book, emergency access on all streets adjacent to the site would be maintained throughout construction, similar to existing conditions. Therefore, construction of the proposed project would not substantially interfere with emergency access.

Because construction of the proposed project would be conducted in compliance with city requirements so that construction work can be done with the least feasible interference to people walking, bicycling, or driving, including transit and emergency vehicles, the proposed project would not create potentially hazardous conditions or substantially interfere with accessibility.

Potential Transit Delays during Construction

There are no public transit routes adjacent to the project site or in the immediate vicinity of the project site; therefore, construction of the proposed project would not require temporary public transit detours or relocation of bus stops. Construction-related truck traffic would be routed to the south of the project site for travel between the project site and regional facilities (i.e., I-280, U.S. 101). Trucks making concrete deliveries to the project site from the concrete supply companies on the 400 to 500 blocks of Amador Street would travel on Toland Street, on Evans Avenue on which the 19 Polk bus route runs, and on Third Street where the T Third light rail line runs in a median right-of-way. The additional construction-related vehicles could result in temporary and localized congestion on these streets; however, the proposed project would not substantially increase vehicle congestion to the extent that significant delays to transit operations would occur.

Overall, construction activities would be temporary and phased, would not involve a substantially intense activity that would affect the transportation network, and would be conducted in accordance with city requirements. Therefore, construction of the proposed project would not 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. For these reasons, the construction-related transportation impacts of the proposed project would be ***less than significant***.

EXPANDED STREETSCAPE VARIANT

Construction activities for the expanded streetscape variant would be the same as described above for the proposed project, with the exception that there would be a minimal increase in construction truck trips and construction activities associated with resurfacing the additional half of the roadways, and constructing new curbs, gutters, and sidewalks across from the project site on Toland Street, Rankin Street, and McKinnon Avenue during the sitework phase of project construction (see Section 2.E, Expanded Streetscape Variant, p. 2-39, for the extent of roadway network changes under this variant).

For the same reasons discussed for the proposed project analysis, construction of the expanded streetscape variant would not create potentially hazardous conditions for people walking, bicycling, driving, or public transit; interfere with emergency access; or interfere with accessibility for people walking or bicycling; or substantially delay transit. Therefore, similar to the proposed project, construction-related transportation impacts of the expanded streetscape variant would be ***less than significant.***

Impact TR-2: Operation of the proposed project or project variant would not create potentially hazardous conditions for people walking, bicycling, or driving, or public transit operations. ***(Less than Significant)***

As described in Approach to Analysis, a "hazard" refers to a project-generated vehicle potentially colliding with a person walking, bicycling, or driving, or public transit vehicle that could cause serious or fatal physical injury, accounting for the aspects described below. Non-engineering aspects such as human error or non-compliance with laws, weather conditions, time-of-day, and other factors can affect whether a collision could occur. However, for purposes of CEQA, hazards refer to engineering aspects of a project (e.g., speed, turning movements, complex designs, distance between street crossings, sightlines) that may cause a greater risk of collisions that result in serious or fatal physical injury than might normally occur. This analysis focuses on roadway hazards that could reasonably stem from the proposed project, apart from collisions that may result from non-engineering aspects or the transportation system as a whole.

PROPOSED PROJECT

The project proposes a number of changes to the street network adjacent to the project site, as described in Section 2.D.8, Proposed Parking, Loading, and Circulation (p. 2-30), and Section 2.D.10, Streetscape Improvements and Street Trees (p. 2-34). These include changes to roadway direction and resurfacing of pavement, new intersection of Toland Street/Kirkwood Avenue, reconfiguring the intersection of Rankin Street/Kirkwood Avenue, new curbs and gutters, sidewalks, crosswalks, curb ramps, curb cuts/driveways, and on-street commercial vehicle and passenger loading zones adjacent to the project site. The design of the street network changes and project driveways would be consistent with the Better Streets Plan and Vision Zero Policies,[129] both of which focus on designing the transportation network to enhance safety for all ways of travel. The proposed project's changes to the streetscape and street network were reviewed by the city's Street Design Advisory Team.[130] Because the proposed project's PDR uses would generate a substantial number of trips by large trucks, including tractor trailers, which have a larger turning radius than most delivery vehicles, eight of the project driveways would exceed the 30-foot width limit established by public works.[131] The wider driveways would allow large articulated trucks to turn in and out of the facility head-first, on a single maneuver, without stopping or having to back up during the turn. The proposed installation of wider driveways would require the project sponsor to request a discretionary Overwide Driveway Permit from public works. The street network changes would require review by SFMTA's Transportation Advisory Staff Committee[132] and the fire department, along with other city agencies. The changes to the public right-of-way would also require subsequent approval processes, such as by public works and the SFMTA board, which would require any design changes necessary to be consistent with city policies and regulations. As a result of these permit and review processes, the proposed project would meet city standards and would not include any design features that would create potentially hazardous conditions.

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

[130] The city's Street Design Advisory Team includes representatives from public works, the SFMTA, the SFPUC, the fire department, and other agencies on an as-needed basis.

[131] San Francisco Department of Public Works Order 62,850 (Standard Requirements for Automobile Driveways) and Standard Plan 87,171 (Driveway Construction).

[132] The city's Transportation Advisory Staff Committee reviews changes to the roadway network, such as changes to travel direction, shared public ways, pedestrian-only streets, or removal of "pork chops" (i.e., small pedestrian islands that channelize turning vehicles at intersections) and excess right-of-way. The committee is chaired by the SFMTA, and includes the fire department and other city agencies.

The proposed project would add trips by people walking, bicycling, and driving. As shown on Table 3.B-8 (p. 3.B-27), during the a.m. peak hour, the proposed project would generate about 74 walk-to-transit trips and 44 trips by walking, bicycling, and other ways of travel. During the p.m. peak hour, the proposed project would generate about 82 walk-to-transit trips and 52 trips by walking, bicycling, and other ways of travel. In addition, the proposed project would generate 431 net-new vehicle trips during the a.m. peak hour, and 571 net-new vehicle trips during the p.m. peak hour. The net-new trips represent the new vehicle trips that would be added to the roadway network after accounting for the removal of existing uses on the project site (as of 2017) that would be required to implement the proposed project.

Walking and Bicycling. The street network changes would enhance the environment and safety for people walking and bicycling adjacent to the project site compared to existing conditions. Either 10-foot-wide or 12-foot-wide sidewalks would be constructed adjacent to the project site where none exist today. On the new sidewalks, street trees, street furniture (e.g., bicycle racks), and lighting would be placed in a manner that meets city standards and ADA requirements for maintaining unobstructed and wide paths of travel for people walking and wheelchair users. The intersections of Toland Street/Kirkwood Avenue and Toland Street/McKinnon Avenue would include striping of continental-type crosswalks to make people walking more visible to drivers and bicyclists, and make crosswalks more visible to people walking.

Pedestrian access to the site would be primarily on Toland and Rankin streets, with secondary access on Selby Street. The trips by walking would be accommodated on the sidewalks and in crosswalks at intersections without creating overcrowded conditions that could lead to potentially hazardous conditions. The vehicle turning movements into and out of the facility are not expected to create potentially hazardous conditions for people walking on Toland, Selby, or Rankin streets, because driveways would be designed consistent with city requirements. Drivers exiting the facility would have unobstructed sightlines and/or adequate sight distance to see approaching people walking or bicycling, and the travel speeds of vehicles turning into or out of the site would be low as drivers execute their turns. Driveways would be equipped with supplementary devices, such as mirrors, and would have audible and/or visual warning systems to alert people walking by when vehicles exit the project site. The sidewalk would be illuminated with new streetlights so that pedestrians are adequately visible.

The proposed project would include 100 class 1 bicycle parking spaces on the ground level adjacent to the corner lobbies and retail areas of each building (50 in each building). In addition, 12 class 2 bicycle parking spaces would be on the sidewalks near the building entrances, outside of the corner lobbies and retail areas.

Therefore, the new sidewalks, crosswalks, and resurfaced roadways adjacent to the project site would enhance conditions for people bicycling and walking compared to existing conditions and would not include any physical features that would obstruct travel by people walking or bicycling.

The on-street vehicle parking spaces adjacent to the project site would be reconfigured for back-in parking and would be striped. This configuration could increase the number of vehicles that could access the curbside compared to existing conditions, but the head-first exiting configuration for all vehicles would minimize conflicts between people driving and bicycling. The proposed project would accommodate loading activities in both on-street commercial and passenger loading zones (see Impact TR-3), and these on-street loading activities would not create potentially hazardous conditions for people walking or bicycling.

Driving and Public Transit. In general, the types of changes to the street network would comply with Better Streets Plan requirements, as described above, and would improve conditions for people driving (e.g., level paved roadways, lane markings, striped parking, and new streetlighting) compared to existing conditions.

The new driveways would be designed to accommodate the larger trucks associated with the warehousing and parcel delivery uses, and eight of them would be wider than the maximum standard driveway width (i.e., 30 feet) to safely accommodate trucks turning into and out of the site (see Appendix D.4 for truck turning radii at the project driveways and at adjacent intersections). Both inbound and outbound access by tractor trailers would be designated as right-turn-in and right-turn-out only to minimize vehicle-to-vehicle and vehicle-to-person conflicts. Furthermore, the reconfiguration of Kirkwood Avenue between Toland and Selby streets to be one-way eastbound, and McKinnon Avenue between Selby and Toland streets to be one-way westbound would allow for wider-than-typical travel lanes, which would allow the large vehicle turns to be completed in a single maneuver without encroaching onto an adjacent travel lane or into oncoming traffic. Additional curb management strategies such as daylighting (i.e., red zones) would be implemented at approaches to intersections to allow for greater sight distance.

New driveways/curb cuts and curbside commercial vehicle and passenger loading zones would be designed consistent with city requirements, and would not represent potentially hazardous conditions for transit or people driving.

The proposed project's street network changes would accommodate various vehicle types, including trucks, vans, and automobiles, and the proposed conceptual plans have undergone preliminary review by city agencies. Final design would be subject to approval by the SFMTA, public works, and the fire department so that the streets are designed consistent with city policies and design standards, including the Better Streets Plan, and do not result in potentially hazardous conditions for people driving or public transit operations.

As described in Table 3.B-8 (p. 3.B-27), the proposed project would generate additional vehicles (i.e., 431 net-new vehicles during the a.m. peak hour and 571 net-new vehicles during the p.m. peak hour). There is no public transit service on roadways adjacent to the project site, and the nearest Muni routes are a couple of blocks to the north and south of the project site. Therefore, the proposed project would not create potentially hazardous conditions for public transit operations.

In summary, the proposed project's changes to the street network would improve the transportation network adjacent to the project site compared to existing conditions, would conform with city design standards, and would undergo extensive review by city agencies. Therefore, for the above reasons, the proposed project would not create potentially hazardous conditions for people walking, bicycling, or driving, or for public transit operations, and the impacts of the proposed project on potentially hazardous conditions would be ***less than significant.***

EXPANDED STREETSCAPE VARIANT

The proposed land uses and street network changes for the expanded streetscape variant would be the same as for the proposed project. However, this variant would extend the streetscape changes such as roadway resurfacing and new curbs and gutters to the other side of all streets adjacent to the project site. Therefore, the impact assessment would be similar to the proposed project as described above.

For the reasons discussed above for the proposed project, construction of the expanded streetscape variant would not create potentially hazardous conditions for people walking, bicycling, or driving, or for public transit operations. Therefore, similar to the proposed project, impacts of the expanded streetscape variant would be *less than significant.*

Impact TR-3: Operation of the proposed project or project variant would not interfere with accessibility of people walking or bicycling to and from the project site and adjoining areas, or result in inadequate emergency access. *(Less than Significant)*

PROPOSED PROJECT

As discussed above and presented on Table 3.B-8 (p. 3.B-27), during the a.m. peak hour, the proposed project would generate about 431 net-new vehicle trips, and would add 74 transit trips, and 44 trips by walking, bicycling, and other ways of travel; during the p.m. peak hour, the proposed project would generate about 571 net -new vehicle trips, 82 transit trips, and 52 trips by walking, bicycling, and other ways of travel.

The proposed project would not involve any substantial changes to the street network that would interfere with walking or bicycling to and from the project site and adjacent areas, or result in inadequate emergency access. Instead, the proposed street network changes, including resurfacing of roadways, installation of new curbs and gutters, construction of new sidewalks, and placement of bulb-outs, would enhance the transportation network adjacent to the project site. The proposed project would be designed to be compliant with the ADA.

Walking and Bicycling. As described above in Impact TR-2, the proposed project would not generate activities or increase person and vehicle trips on any one street adjacent to the project site that would interfere with access or circulation for people walking or bicycling. The transportation features included as part of the proposed project (e.g., new sidewalks, marked crosswalks, and resurfaced level roadway pavement) would improve accessibility for people walking and bicycling adjacent to the project site, and therefore would not interfere with access or circulation for people walking or bicycling. The new sidewalks would include ADA ramps at all corners that would also enhance accessibility for people walking.

Overall, the proposed project would improve accessibility for people walking and bicycling to the site by constructing new sidewalks where none exist, and levelling and resurfacing the travel lanes adjacent to the project site. The proposed project’s activities that generate the greatest number of commercial vehicle trips (vans, single unit trucks, and tractor-trailer combinations) would be conducted in the site, and would not interfere with access or circulation for people walking or bicycling on streets adjacent to the site. Therefore, for the reasons discussed above, the proposed project would not interfere with accessibility for people walking or bicycling to and from the project site and adjoining areas.

Emergency Access. The proposed project would not introduce any design features or street network changes that would substantially change emergency vehicle travel adjacent to the project site. Emergency vehicle access routes to the project site would generally remain similar to existing conditions. As described in Section 2.D.8, Proposed Parking, Loading, and Circulation (p. 2-30), Kirkwood Avenue would be extended to Toland Street (it currently ends about 130 feet east of Toland Street), and the existing intersection of Rankin Street/Kirkwood Avenue would be reconfigured to remove the barrier across a portion of Kirkwood Avenue. Therefore, emergency vehicle access to Kirkwood Avenue adjacent to the project site would be improved, compared to existing conditions.

The proposed configuration of the streets adjacent to the project site would include travel lane widths that allow for maneuverability around stopped vehicles for emergency vehicles. The single travel lane on Kirkwood Avenue would be approximately 33 feet wide, the westbound travel lane on McKinnon Avenue between Toland and Selby streets would be approximately 37 feet wide, each of the two travel lanes on Selby Street would be approximately 22 feet wide, while the northbound and southbound travel lanes on Toland and Rankin streets would typically be approximately 22 feet wide, but 16 feet wide at the bulb-outs. Furthermore, the transportation features that affect the public street network would undergo more detailed design and review by multiple city agencies as part of the city's Transportation Advisory Staff Committee, including the fire and police departments, if applicable. Therefore, the proposed project would not result in inadequate emergency access.

For the above reasons, the proposed project would not interfere with accessibility of people walking or bicycling, or result in inadequate emergency access, and the proposed project's impacts related to accessibility would be ***less than significant***.

EXPANDED STREETSCAPE VARIANT

The expanded streetscape variant would extend the street network changes described above for the proposed project to the other side of Toland Street, Rankin Street, and McKinnon Avenue. These changes would include resurfacing the roadways and new curbs, gutters, and sidewalks, which would further increase accessibility for people walking and bicycling in the project site vicinity. Therefore, the impact assessment would be similar to the proposed project as described above.

For the reasons discussed above for the proposed project, the expanded streetscape variant would not interfere with accessibility of people walking or bicycling, or result in inadequate emergency access. Therefore, similar to the proposed project, impacts of the expanded streetscape variant related to accessibility would be ***less than significant.***

Impact TR-4: Operation of the proposed project or project variant would not substantially delay public transit. *(Less than Significant)*

PROPOSED PROJECT

There are no public transit routes currently operating on streets adjacent to the project site. As described under existing conditions above, the 23 Monterey bus route was permanently rerouted by the SFMTA in February 2020[133] due to the construction-related closure of Jerrold Avenue between the Caltrain tracks and Phelps Street for the ongoing SFPUC Southeast Treatment Plant construction activities, in combination with the planned route improvements identified in the Muni Forward program.

- **Prior Route:** Toland Street between Oakdale and Jerrold avenues, Jerrold Avenue between Toland and Phelps streets, and Phelps Street between Jerrold and Palou avenues
- **Current Route:** Oakdale Avenue between Toland and Industrial streets, Industrial Street between Oakdale and Palou avenues, and Palou Avenue between Industrial and Phelps streets (see Figure 3.B-3, p. 3.B-10).

[133] SFMTA, February 10, 2020 https://www.sfmta.com/blog/service-changes-coming-february-22

Therefore, the transit impact assessment of the proposed project does not assume operation of the 23 Monterey on Toland Street, Jerrold Avenue, or Phelps Street. None of the proposed project features would result in permanent relocation or removal of any existing bus service or stops; therefore, the proposed project would not change existing bus operations.

The SF transportation guidelines set forth a screening criterion for projects that would typically not result in significant public transit delay effects. As shown on Table 3.B-9 (p. 3.B-28), the proposed project would generate a net-new increase of 330 inbound and 101 outbound vehicle trips during the weekday a.m. peak hour (431 vehicle trips total), and 246 inbound and 325 outbound vehicle trips during the weekday p.m. peak hour (571 vehicle trips total), which is greater than the screening criterion of 300 vehicles during the peak hour. *Because t*he proposed project would not meet the screening criterion, a more detailed qualitative assessment of impacts of the proposed project on transit operations was conducted. The information considered in the transit assessment to determine potential increases to transit travel times that could result from traffic congestion delay, transit reentry delay, and passenger boarding delay is summarized in Appendix D.5.

- **Traffic Congestion Delay.** The proposed project's vehicle trips would not substantially delay nearby transit routes for the following reasons:
  - There are no public transit routes operating on streets adjacent to or in the immediate vicinity of the project site (Muni routes are, at a minimum, two blocks away).
  - Project vehicles would travel primarily on streets that do not contain public transit service, such as on Jerrold Avenue, Cesar Chavez Street (except for the one-block segment between Evans Avenue and Connecticut Street), and Toland Street. See Figure 3.B-4 (p. 3.B-30) and Figure 3.B-5 (p. 3.B-31) for primary vehicle access routes to and from the project site, respectively.
  - Project vehicles would be distributed among multiple streets to the north and south of the project site. Project vehicles would use Toland Street, Evans Avenue, Jerrold Avenue, and Cesar Chavez Street north of the project site; and Toland Street, Selby Street, Oakdale Avenue, and Industrial Street south of the project site.
  - Project vehicles would travel on streets further from the project site that have limited segments with transit, or would only travel on streets with transit for a short distance. Project vehicles and buses would both operate on Oakdale Avenue for about 0.4 mile (23 Monterey), on Industrial Street also for about 0.4 mile (24 Divisadero bus route), and on Evans Avenue for about 0.2 mile (19 Polk bus route). Because project vehicles would be dispersed among multiple streets, as described above, any additional delay associated with project vehicles on streets with transit would be minimal, and would not substantially delay bus operations.
  - The greatest number of project vehicles would travel on Bayshore Boulevard, where the Muni 9 San Bruno and 9R San Bruno Rapid bus routes run. Project vehicles would primarily travel on Bayshore Boulevard between Jerrold Avenue and the U.S. 101 ramps to the north, and between Oakdale Avenue and the U.S. 101 and I-280 ramps to the south. Project vehicles and buses would both operate on these segments for a short distance. Bayshore Boulevard is a major arterial with two travel lanes each way, center left-turn-only lanes, and synchronized traffic signals. The additional peak hour project vehicles (i.e., up to 190 peak hour vehicles total in both the northbound and southbound directions) over the short distance would not be considered a substantial increase,

relative to existing traffic volumes,[134] that would cause substantial traffic congestion. Therefore, any additional delay associated with project vehicles on Bayshore Boulevard would be minimal, and would not substantially delay bus operations.

- Project-generated vehicles would travel on Third Street where the T Third light rail line operates in a physically separated median, with the exception of the 0.5-mile segment between Kirkwood and Thomas avenues, where it runs in a mixed-traffic lane. The additional peak hour project vehicles (i.e., about 45 to 85 peak hour net new vehicles total near Oakdale Avenue in the northbound plus southbound directions, four of which would be trucks) would not be considered a substantial increase, relative to existing traffic volumes,[135] that would cause substantial traffic congestion or necessitate changes in signal timing that would affect the existing transit signal priority for the T Third light rail line.[136]

- SamTrans Route 292 is the nearest regional transit route. It operates on a 30-minute headway during the weekday peak period on Bayshore Boulevard with a single SamTrans bus stop each way. As described above for the Muni 9 San Bruno and 9R San Bruno Rapid routes, considering the multiple travel lanes each way, dedicated left-turn lanes, and traffic signal synchronization on Bayshore Boulevard, plus the single bus stop and relatively low service frequency, combined with the limited distance that project vehicles would travel on Bayshore Boulevard (i.e., primarily between the U.S. 101 ramps and either Oakdale or Jerrold avenues, less than 0.5 mile total); the transit travel times for the SamTrans Route 292 are not anticipated to increase under the proposed project to an extent that would exceed the planning department's threshold of significance for regional transit.

For these reasons, the proposed project would not result in substantial congestion that would delay local or regional transit routes.

- **Reentry Delay.** Under the proposed project, the expected increase in the number of vehicles on streets where local and regional transit operates would not substantially affect transit operations, or cause substantial traffic congestion or delay to public transit service. Bayshore Boulevard, Industrial Street, Evans Avenue, Cesar Chavez Street, and Third Street have two travel lanes each way, which allows for vehicles to change lanes to bypass transit vehicles pulling out of bus stops. In addition, due to the limited distances where both project vehicles and transit routes would operate, the number of bus stops potentially affected by project vehicles would be limited. For the 19 Polk bus route, there are two bus stops on Evans Avenue each way (i.e., between Toland Street and Cesar Chavez Street) and no bus stops on Cesar Chavez Street. For the 23 Monterey bus route, there are two bus stops on Oakdale Avenue in each direction. In addition, some bus stops in the project vicinity are pole stops, where buses stop in the travel lane to drop off and pick up passengers (e.g., on Oakdale Avenue at Toland Street), and therefore would not experience reentry delay. Therefore, the proposed project would not result in substantial reentry delay.

- **Passenger Boarding Delay**. Under the proposed project, both Muni and regional transit service providers such as SamTrans and BART would experience increases in ridership due to the proposed

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[134] On Bayshore Boulevard north of Jerrold Avenue, existing p.m. peak hour traffic volumes are about 2,900 vehicles per hour in the northbound direction and 1,200 vehicles per hour in the southbound direction. Source: Vehicle counts conducted in May 2015 for Biosolids Digester Facilities Project EIR, Case No. 2015-00644ENV, March 2018.

[135] On Third Street south of Evans Avenue, existing p.m. peak hour traffic volumes are about 600 vehicles per hour in the northbound direction and 400 vehicles per hour in the southbound direction. Source: Vehicle counts conducted in May 2015 for Biosolids Digester Facilities Project EIR, Case No. 2015-00644ENV, March 2018.

[136] Transit signal priority refers to special treatment for transit vehicles at signalized intersections. Transit signal priority generally uses technology to reduce dwell times at traffic signals for transit vehicles by holding green lights longer or shortening red lights for such vehicles.

project. However, as shown on Table 3.B-8 (p. 3.B-27), the number of new transit riders would be low; a total of 74 riders during the a.m. peak hour and 82 riders during the p.m. peak hour. These additional riders would not result in substantial passenger delay to any one route, because the riders would be spread among multiple bus routes and rail lines. Therefore, the proposed project would not result in substantial passenger boarding delay.

For the reasons described above, the proposed project would not substantially delay transit. Therefore, the transit impacts of the proposed project would be ***less than significant***.

EXPANDED STREETSCAPE VARIANT

Under the expanded streetscape variant, the number of vehicles and transit riders generated by the proposed land uses would be the same as for the proposed project; therefore, the transit impact assessment would remain the same as presented above for the proposed project. There are no transit routes traveling adjacent to the project site; therefore, the additional streetscape changes such as roadway resurfacing and new curbs and gutters on streets adjacent to the project site would not impact transit operations. Therefore, similar to the proposed project, transit impacts of the expanded streetscape variant would be ***less than significant.***

Impact TR-5: Operation of the proposed project or project variant would not cause substantial additional VMT or substantially induce automobile travel. *(Less than Significant)*

PROPOSED PROJECT

Vehicle Miles Traveled Per Capita

As described above in "VMT Analysis," the VMT methodology includes both qualitative and quantitative assessments of whether the proposed project would lead to a significant VMT impact. The VMT per capita assessment addresses the criteria outlined in CEQA section 21099(b)(1) and the city's quantitative thresholds of significance within the SF transportation guidelines to address whether the project would contribute considerably to the substantial additional VMT significance criteria.

CEQA Section 21099(b)(1) Criteria

As discussed below, the planning department determined that the proposed project would not be inconsistent with the three criteria outlined in CEQA section 21099(b)(1).

Reduction of Greenhouse Gas Emissions

The project would not be inconsistent with applicable GHG reduction goals, including the 2017 Clean Air Plan; Executive Orders S-3-05, B-30-15, and B-55-18 Senate Bill 32; Assembly Bill 32 (also known as the Global Warming Solutions Act); and San Francisco's GHG reduction goals, updated in July 2021 by ordinance 117-02. The applicable GHG reduction goals and the proposed project's less-than-significant GHG impact analysis is presented in the Initial Study for the proposed project (see Appendix B, Section E.8).[137]

By locating the proposed facility in San Francisco and thereby closer to the parcel delivery customers in the city (where demand already exists for parcel and last mile delivery service), the trip length for parcel delivery trips that currently originate from facilities outside San Francisco would be reduced. The shorter trip lengths could in turn lessen GHG emissions made by vehicles. This reduction in trip lengths and associated GHG

[137] San Francisco Planning Department, San Francisco Gateway Project Initial Study, Case No. 2015-012491ENV, pp. 85-101, March 9, 2022, https://citypln-m-extnl.sfgov.org/SharedLinks.aspx?accesskey=88d4e7c13d46afcfd960d7a79796a385506a286bd9fe2fce30e6f3bd346ff3b9&VaultGUID=A4A7DACD-B0DC-4322-BD29-F6F07103C6E0. Accessed January 16, 2023.

emissions is supported by analysis conducted by the project sponsor as industry experts; the planning department has reviewed the analysis and accepted it as substantial evidence of the demand for parcel delivery uses in the city and the change in trip lengths from the proposed project site, which is closer to the parcel delivery customers in the city compared to facilities outside San Francisco. The analysis examined the existing and expected demand for distribution centers in the San Francisco Bay Area, and documented projections of continued growth in last-mile delivery facilities in the near future to address the substantially unmet demand for these distribution centers within the San Francisco service area.[138] In this way, the proposed project would accommodate existing and projected growth in the e-commerce market, and would not induce new last-mile delivery trips. Additionally, this approach accounts for key criteria in siting urban e-commerce facilities (i.e., proximity to regional roadway network, limited natural/artificial barriers [e.g., bridges], appropriately sized sites, proximity to public transit, proximity to workforce), based on analysis provided by Langan Engineering (see Appendix C). Additional information regarding GHG emission reductions related to project siting is further described in Section 3.D, Air Quality (see Impact AQ-3, For Informational Purposes - Project Siting and Transportation Demand Management Measures, p. 3.D-59).

Development of Multimodal Transportation Networks

The proposed project would not be inconsistent with the development of multimodal transportation networks. Multimodal transportation networks are those consisting of people using a variety of ways of travel, such as walking, bicycling, public transit, and automobiles. The project would provide multimodal transportation network improvements, which would include new and reconstructed sidewalks, sidewalk bulb-outs, reconfiguration of on-street vehicular parking, new traffic control (i.e., stop signs), crosswalks, new or relocated on-street commercial and/or passenger loading/unloading zones, and modified direction of travel lanes adjacent to the site. The proposed project would not modify any existing city policies intended to promote multimodal transportation networks (e.g., Transit First). Thus, the project would not be inconsistent with the development of multimodal transportation networks.

Diversity of Land Uses

The proposed project would not be inconsistent with developing a diversity of land uses. The proposed project would not be inconsistent with the region's Sustainable Communities Strategy because the project site is in an area contemplated for development by Plan Bay Area 2050, the region's Sustainable Communities Strategy. The air board set a target for Plan Bay Area 2050 of 19 percent reduction in GHG emissions from cars and light trucks from 2005 emission levels by 2035. The Plan Bay Area 2050 EIR indicated that Plan Bay Area 2050 can achieve this target.[139] The project site is included in the Plan Bay Area 2050 Priority Production Areas[140] that support key industrial clusters on industrial land that is already well served by the region's roadway network. The approximately 240 -acre area is roughly bounded by Cesar Chavez Street to the north, Bayshore Boulevard to the west, Industrial Street/Oakdale Avenue/Evans Avenue to the south, and the bay to the east.[141] This is the only Priority Production Area designated in San Francisco.

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[138] Prologis, Memorandum regarding E-commerce – Existing Demand and Future Trends in San Francisco and the Greater Bay Area, June 30, 2020. See Appendix C.

[139] Metropolitan Transportation Commission, *Plan Bay Area 2050 Final Program EIR*, SCH #2020090519, October 2021, https://www.planbayarea.org/sites/default/files/documents/PBA_2050_Final_EIR.pdf, accessed January 16, 2021.

[140] Priority Production Areas (PPAs) are locally identified places for job growth in trades such as manufacturing, warehousing, and logistics. An area must be zoned for industrial use or have a predominantly industrial use to be a PPA.

[141] Metropolitan Transportation Commission and Association of Bay Area Governments, *Plan Bay Area Program Draft EIR*, June 2021, Figure 2.5, Growth Geography Designation by Type, p. 2-37.

Of the 4,000 acres of designated Priority Production Areas in the nine-county San Francisco Bay Area, most Priority Production Areas are near interstates in the East and South bays. Marin County has 0 acres designated and San Mateo County has 6 acres designated. Excluding the one that contains the project site, the closest Priority Production Areas are in Pacifica, about 9 miles southwest of the project site; and the Port of Oakland, about 10 miles northeast of the project site in Oakland.[142, 143]

The proposed project would also not be inconsistent with the general plan's Bayview Hunters Point Area Plan's land use policy of encouraging a wider variety of light industrial uses throughout the Bayview within PDR zoning districts, by more efficient use of industrial space, and by more attractive building design.[144]

SF Transportation Guidelines Screening Criterion

Table 3.B-14 presents existing average daily VMT per capita by land use for the San Francisco Bay Area and for zones 485 and 488, in which the project site is located (the project site is partially in both zones 485 and 488). In addition, as discussed in "Project Travel Demand Methodology and Results" in Section 3.B.3 (p. 3.B-21), average VMT per capita was calculated for the project-specific PDR uses (parcel delivery, wholesale and storage, fleet management, and light industrial/maker space), and is also presented in Table 3.B-14. This calculation of project-specific VMT for the PDR uses accounts for the different average travel distances of project vehicles, such as commuter autos, delivery vans and small trucks, and long-haul trucks.

As described in "Project Travel Demand Methodology and Results" in Section 3.B.3 (p. 3.B-21), the proposed project's parcel delivery and last-mile delivery use would accommodate unmet customer demand for last-mile deliveries in the San Francisco service area, and therefore would result in shorter distances traveled for parcel deliveries, and would not induce new last-mile delivery trips.

As presented in Table 3.B-14, the existing average daily VMT per capita for the PDR and retail land uses would be below the existing regional average daily VMT, and would be more than 15 percent below the existing regional average daily VMT per capita (i.e., the significance threshold):

- For PDR uses, considering the project-specific PDR uses (i.e., parcel delivery, wholesale and storage, fleet management, and light manufacturing/maker space uses), the average daily VMT per employee (18.8 average daily VMT per capita) would be 27 percent below the existing regional average daily VMT per employee (i.e., 25.7 average daily VMT per capita).
- In addition, the average daily work-related VMT per employee (21.4 average daily VMT per capita) would be 17 percent below the existing regional average daily VMT per employee (25.7 average daily VMT per capita) based on the weighted average of VMT per capita for the two zones in which the project is located.
- For retail uses, the average daily work-related VMT per capita (9.9 average daily VMT per capita) would be 34 percent below the existing regional average daily VMT per capita (14.9 average daily VMT per capita).

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142 Metropolitan Transportation Commission and Association of Bay Area Governments, Plan Bay Area 2050 Draft Program Environmental Impact Report, June 2021, Table 2-4, pp. 2-15 and 2-16, https://www.planbayarea.org/sites/default/files/documents/2021-06/2.0%20Project%20Description_DEIR.pdf, accessed March 30, 2023.

143 Metropolitan Transportation Commission and Association of Bay Area Governments, October 2021, Plan Bay Area Growth Geographies, https://mtc.maps.arcgis.com/apps/webappviewer/index.html?id=af347b881594468a94ea85a67e972679, accessed March 30, 2023.

144 San Francisco General Plan, Bayview Hunters Point Area Plan, Land Use Policy 1.5 https://generalplan.sfplanning.org/Bayview_Hunters_Point.htm, accessed January 16, 2023.

Table 3.B-14 Average Daily VMT per Capita by Land Use for Existing Conditions and Proposed Project

Land Use	Bay Area Regional Average[1]	Zones 485 and 488[2]	Proposed Project[3]
PDR[4,5]	25.7	21.4	18.8
Retail[6]	14.9	9.9	N/A

Source: SF-CHAMP, Adavant Consulting/LCW Consulting (see Appendix D.2).
Notes:
1. For existing conditions, 15 percent below the Bay Area regional average VMT per capita is 21.9 for office (PDR) uses, and 12.7 for retail uses.
2. Weighted average daily VMT per capita for transportation analysis zones 485 and 488 in which the project site is located. Zone 485 is bounded by Bayshore Boulevard, Jerrold Avenue, Selby Street, and Oakdale Avenue; and zone 488 is bounded by Selby Street, Jerrold Avenue, Phelps Street, and Oakdale Avenue.
3. Average total daily VMT per employee for commuter and non-commuter trips to and from the project site calculated for proposed PDR uses. See "Project Travel Demand Methodology and Results" in Section 3.B.3 (p. 3.B-21) for a description of how VMT was calculated for the project's PDR uses.
4. PDR use – The State Office of Planning and Research has not provided a proposed screening criteria and thresholds of significance for other types of land use beyond residential, retail and office. The planning department has designated the project's PDR land uses (parcel delivery, wholesale and storage, fleet management, light industrial/maker space) to be treated as office for screening and analysis.
5. PDR use – Bay Area Regional Average and weighted average of zones 485 and 488 are based on average daily work-related VMT per employee for office uses (which most closely reflects the proposed project activities), in accordance with the SF transportation guidelines. The VMT per capita was calculated from SF-CHAMP travel demand model output. See note c above for calculation of average daily VMT per capita for the proposed project-specific PDR uses.
6. Retail use – Bay Area Regional Average and weighted average of zones 485 and 488 is based on average daily work-related VMT per employee for retail uses, as calculated from SF-CHAMP travel demand model output.

N/A = not applicable

As presented above, the proposed project site is in an area of the city and within zones where the average daily VMT per capita is more than 15 percent below the regional VMT thresholds, and would include similar features to other developments in the area in terms of density and mix of uses. Therefore, the proposed project would not result in substantial additional VMT based on the VMT per capita thresholds.

In addition, as described in Section 2.D.9, Transportation Demand Management Plan (p. 2-33), the proposed project would be subject to TDM program requirements, which would further reduce VMT from the project.[145]

Induced Automobile Travel

With respect to induced automobile travel, the proposed project includes features that would alter the transportation network. As described in Section 3.B.3 in "Approach to Analysis," the city considers project transportation components in a VMT analysis (p. 3.B-40). The proposed project transportation components include new and reconstructed sidewalks, sidewalk bulb-outs, reconfiguration of on-street vehicular parking, new traffic control (i.e., stop sign), crosswalks, new or relocated on-street commercial and/or passenger loading/unloading zones, and modified direction of travel lanes adjacent to the site. These features fit with the general types of projects identified in the SF transportation guidelines that would not substantially induce automobile travel.[146]

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145 Planning code section 169 requires certain new development projects to incorporate design features, incentives, and tools to reduce VMT. Development projects must choose measures from a menu of options to develop an overall TDM plan. Some options overlap with requirements elsewhere in the planning code (e.g., bicycle parking, car-share parking). Each development project's TDM plan requires routine monitoring and reporting to the planning department to demonstrate compliance.

146 San Francisco Planning Department, *Executive Summary: Resolution Modifying Transportation Impact Analysis,* Appendix F, Attachment A, March 3, 2016.

Furthermore, as discussed in “Project Travel Demand Methodology and Results” in Section 3.B.3 (p. 3.B-21), the parcel/last-mile project land uses would serve unmet demand for parcel delivery services in San Francisco, and would not induce additional delivery vehicle travel.

Conclusion

As described above, the proposed project would not be inconsistent with the three criteria outlined in CEQA section 21099(b)(1); addressing reduction of GHG emissions, development of multimodal transportation networks, and diversity of land uses; nor the region’s Sustainable Communities Strategy. In addition, the proposed project meets the screening criterion used by the planning department in determining a development project’s potential VMT per capita impact. Additionally, the proposed project’s transportation components are consistent with general types of transportation project features that would not substantially induce automobile travel. For these reasons, the proposed project would not cause substantial VMT or induce automobile travel. Therefore, impacts of the proposed project related to VMT and induced automobile travel would be ***less than significant.***

EXPANDED STREETSCAPE VARIANT

Under the expanded streetscape variant, the proposed land uses would be the same as for the proposed project, while the transportation features would be very similar. In addition to the proposed project features described above, the project variant would extend roadway resurfacing, and add curbs and gutters and sidewalks to both sides of Toland Street, Rankin Street, and McKinnon Avenue. Therefore, the impact assessment would be the same as described above for the proposed project. Similar to the proposed project, impacts of the expanded streetscape variant related to VMT and induced automobile travel would be ***less than significant.***

Impact TR-6: Operation of the proposed project or project variant would not result in a loading deficit. ***(Less than Significant)***

PROPOSED PROJECT

For the proposed parcel delivery, wholesale and storage, and fleet management PDR uses under the proposed project, deliveries and other loading activities would occur on site in the buildings. Each building would include a combination of enclosed and partially enclosed spaces, with a multi-level vehicular system that provides staging, circulation, and logistics yard areas serving each level of the building. Each level was designed to accommodate loading access and operations for the anticipated range of PDR uses in the site.

For the proposed light manufacturing/maker PDR use and the retail uses that would be at street level (a total of 35,000 gross square feet of light manufacturing and maker space between the two buildings along Kirkwood Avenue, and a total of 8,400 gross square feet of retail space between the two buildings along McKinnon Avenue), the project proposes two 100-foot-long on-street commercial loading zones (which can accommodate up to four vehicles per zone for a total of eight vehicles) on Kirkwood Avenue adjacent to the project site; and two 20-foot-long on-street commercial loading spaces (which can accommodate one vehicle per space for a total of two vehicles) on McKinnon Avenue adjacent to the project site. Each building would have two on-street commercial vehicle loading zones (one each on Kirkwood and McKinnon avenues as shown on Figure 2.D-13, p. 2-32), which would be adjacent to the proposed ground-floor light manufacturing and maker space uses along Kirkwood Avenue, and the retail uses along McKinnon Avenue. The proposed project would also include two passenger loading zones, each of which would accommodate up to two vehicles: a 40-foot-long passenger loading zone on Toland Street, and a 40-foot-long passenger loading zone on Rankin Street. The passenger loading zones would be near each building's lobby and main office. The on-street commercial vehicle and passenger loading zones would be designed consistent with existing SFMTA and public works standards, as well as the Better Street Plan requirements, to provide for convenient access into the zones (e.g., length and width of loading spaces).

Freight Loading

As described above, the proposed project would provide onsite loading facilities to accommodate the loading activities associated with the proposed parcel delivery, wholesale and storage, and fleet management PDR uses, and allows for flexibility of staging, circulation, and logistics yard areas depending on the type of PDR use that would be in each level. The ramp system would be designed to accommodate tractor-trailer trucks (e.g., wider lanes and larger radius curves to account for the wider turning radii of trucks).

For the proposed parcel delivery, wholesale and storage, and fleet management PDR uses under the proposed project, deliveries and other loading activities would occur on site in the buildings. Each building would include a combination of enclosed and partially enclosed spaces, with a multi-level vehicular system that provides staging, circulation, and logistics yard areas serving each level of the building. Each level was designed to accommodate loading access and operations for the anticipated range of PDR uses in the site.

The proposed project's peak hour commercial loading demand of five spaces for the ground-floor light manufacturing/maker and retail uses would be accommodated in the two loading docks accessed via curb cuts on Kirkwood Avenue (one loading dock in each building with two truck loading spaces each, for a total of four vehicles); and in the on-street commercial loading zones on Kirkwood and McKinnon avenues (which can accommodate up to ten vehicles). Therefore, no commercial vehicle loading deficit would occur.

A dedicated trash/recycling/compost room would be provided on the ground floor of each building, and trash pickup for the parcel delivery, wholesale and storage, and fleet management PDR uses would occur in the building. For the proposed ground-floor light manufacturing/maker and retail uses, the individual tenants would transport the trash, recycling, and compost bins to either Kirkwood or McKinnon avenues for pickup. Given the small amount of ground-floor uses that would use the on-street commercial loading spaces, the short duration of collection activities, and the ability of trucks and other vehicles on Kirkwood and McKinnon avenues to maneuver around a collection vehicle stopped in the travel lane, the trash/recycling/compost collection is not expected to create potentially hazardous conditions for people walking, bicycling, or driving.

Passenger Loading

Considering the type of PDR uses anticipated to occur at the project site and the limited amount of retail uses, the proposed project is expected to generate a limited passenger loading demand of one space during any one minute of the peak 15 minutes of loading activity. The passenger loading demand is expected to be predominantly related to worker pickup and drop off. In addition, the zones may serve passenger loading demand for adjacent businesses (e.g., the produce market to the north and east of the project site). This passenger loading demand would be accommodated in the two passenger loading zones (one adjacent to each building), which combined would accommodate up to four vehicles. Therefore, passenger loading activities at the project site would not result in double parking in adjacent travel lanes.

Overall, the proposed onsite and on-street loading facilities for the proposed project would be adequate to accommodate the projected demand. Therefore, no secondary impact analysis is required. The impacts of the proposed project related to loading would be ***less than significant.***

EXPANDED STREETSCAPE VARIANT

The proposed land uses, freight and passenger loading demand, and proposed on-street commercial vehicle and passenger loading facilities for the expanded streetscape variant would be the same as for the proposed project. Similar to the proposed project, loading impacts under the expanded streetscape variant would be ***less than significant.***

3.B.5 Cumulative Impacts

The cumulative transportation impact assessment includes relevant nearby cumulative development, infrastructure, and transportation network projects. It also assumes cumulative growth through 2050 consistent with citywide land use projections developed for the San Francisco Housing Element 2022 Update. Cumulative development projects within an approximately 0.25-mile radius of the project site considered in the analysis are described in Section 3.A.6 (p. 3.A-15), and shown on Figure 3.A-4 (p. 3.A-18), and include the 2270 McKinnon Avenue project, the revised San Francisco Market project, SFPUC projects at the Southeast Treatment plant, the Quint-Jerrold Connector Road project, and the Bayview Community-Based Transportation Plan.

The discussion of cumulative transportation impacts assesses whether the proposed project, in combination with cumulative projects, would significantly affect the transportation network; and if so, whether the proposed project's contribution to the cumulative impact would be considerable. Impact C-TR-1 discusses the cumulative impact of construction of the proposed project, in combination with construction of other cumulative projects. Impacts C-TR-2 to C-TR-6 discuss the cumulative operational impact analysis of the proposed project, in combination with the operation of other cumulative projects.

Impact C-TR-1: The proposed project or project variant, in combination with cumulative projects, would not result in significant construction-related transportation impacts. ***(Less than Significant)***

In the project vicinity, construction of the cumulative projects identified above may overlap with each other and the proposed project during the proposed project's 31-month construction period. Like the proposed project, sponsors and construction managers of projects considered in the cumulative analysis would be required to coordinate with various city departments, such as the SFMTA and public works; comply with the SFMTA blue book regulations; and coordinate any temporary sidewalk and travel lane closures to develop plans that would address construction-related vehicle routing, traffic control, and pedestrian movements adjacent to the construction area.

Construction of the development project at 2270 McKinnon Avenue in 2023-2024 and the crosswalk projects along Oakdale Avenue included as part of the Bayview Community-Based Transportation Plan are approximately 0.25 mile from the project site, and about 0.20 mile from each other, and would not be of extended duration or intensity. Although construction of SFPUC projects at the Southeast Treatment Plant would continue through 2028 and would overlap with the proposed project, construction activities would occur in the SFPUC Southeast Treatment Plant or along Evans Avenue, and therefore would not overlap in location with the proposed project. Construction of the Quint-Jerrold Connector Road project is projected to start in winter 2023 and last a year, and may partially overlap with the proposed project. However, construction of the Quint-Jerrold Connector Road would not be of extended duration or intensity. Therefore, these cumulative projects would not combine with the proposed project or expanded streetscape variant to result in significant cumulative transportation-related construction impacts.

Construction of the revised San Francisco Market project, which is directly to the north of the project site and planned to be constructed over an extended duration of about 18 years (i.e., between 2023 and 2041, with closure of Jerrold Avenue between Rankin and Toland streets occurring in 2023), would partially overlap with construction of the proposed project for its 31-month construction period. The revised San Francisco Market project includes construction of four new buildings on either side of Jerrold Avenue between Rankin and Toland streets, and roadway network changes that would be constructed in phases over the 18-year construction period. Each of the two San Francisco Market buildings between Jerrold and Kirkwood avenues (i.e., directly to the north of the project site) would be constructed over a 16-month-period; the 1900 Kirkwood Avenue building would be constructed between 2024 and 2025, and the 2000 Kirkwood Avenue building would be constructed between 2040 and 2041.[147] Construction activities would be similar to the proposed project, and construction vehicles may share similar access routes. However, both projects are on streets that are not through streets, have low volumes of vehicles and people walking and bicycling, and no public transit service. During the peak period of construction of each individual building of the revised San Francisco Market project, there would be a maximum of 16 construction trucks and 24 construction workers traveling to and from the site per day. Therefore, simultaneous construction of the proposed project or expanded streetscape variant and the revised San Francisco Market project would not combine to result in significant cumulative transportation-related construction impacts.

Therefore, no significant cumulative construction-related transportation impacts would occur, and this impact would be ***less than significant***.

Impact C-TR-2: The proposed project or project variant, in combination with cumulative projects, would not create potentially hazardous conditions. *(Less than Significant)*

The 2270 McKinnon Street project, the SFPUC projects in the Southeast Treatment Plant, and most of the transportation projects in the Bayview Community-Based Transportation Plan are not in the immediate vicinity of the project site, and are not anticipated to result in substantial changes to traffic circulation or include design features that could lead to potentially hazardous conditions for people walking, bicycling, driving, or public transit operations. These projects would include construction of new sidewalks and crosswalks adjacent to the cumulative projects sites where none exist currently, and/or improvements to existing sidewalks consistent with Better Street Plan requirements.

In the project vicinity, cumulative transportation network changes planned as part of the Quint-Jerrold Connector Road project, crosswalk improvements along Oakdale Avenue as part of the Bayview Community-Based Transportation Plan, and street network changes proposed as part of the revised San Francisco Market project would all conform to public works and SFMTA design standards and the requirements of the Better Streets Plan, as well as the Transit-First Policy and Vision Zero, as applicable. The revised San Francisco Market project, directly north of the project site, would close Jerrold Avenue between Rankin and Toland streets to non-San Francisco Market traffic, would provide sidewalks, curbs, and other streetscape

[147] San Francisco Market Expansion and Reconstruction Update Addendum to the Transportation Impact Study – Case No. 2009.1153ENV, July 12, 2022, Table 7, page 18.

features on the northern side of Kirkwood Avenue, and on the new Innes Avenue and Innes Avenue Extension (Innes Avenue and Innes Avenue Extension would be constructed as a replacement to Jerrold Avenue for non-San Francisco Market east-west travel in the area). The cumulative transportation network projects would improve conditions for people walking and bicycling, and would not create hazardous conditions for people walking, bicycling, driving, or public transit operations.

Under cumulative conditions, trips by people walking, bicycling, or driving on the surrounding street network would increase due to the proposed project or expanded streetscape variant, other cumulative development projects, and projected growth elsewhere in the city and region. This would generally be expected to increase potential conflicts between people driving and people walking and bicycling, and public transit operations. However, cumulative projects and the proposed project or expanded streetscape variant would be designed consistent with city policies and design standards, including the Better Streets Plan, and therefore would not create potentially hazardous conditions. Therefore, no significant cumulative impacts related to potentially hazardous conditions would occur, and this impact would be ***less than significant***.

Impact C-TR-3: The proposed project or project variant, in combination with cumulative projects, would not interfere with accessibility. *(Less than Significant)*

Cumulative projects and projected citywide growth would contribute to increasing the number of people walking, bicycling, driving, or riding transit on streets near the project site. Cumulative development and transportation projects would enhance the transportation network for all ways of travel, and would promote accessibility for people walking and bicycling. The identified cumulative projects would conform to the requirements of the Better Streets Plan, Transit-First Policy, and Vision Zero, and therefore would adhere to planning principles that emphasize providing convenient connections and safe routes for people walking and bicycling.

The cumulative projects would enhance accessibility for people walking and bicycling in the vicinity of the project site. The 2270 McKinnon Avenue project, the revised San Francisco Market project, and the SFPUC Southeast Treatment Plant projects would construct new sidewalks adjacent to their sites, and would include intersection improvements such as crosswalks and traffic controls (e.g., stop signs). The Quint-Jerrold Connector Road project would reestablish a connection between Oakdale and Jerrold avenues along the western side of the Caltrain tracks. The roadway would include one travel lane each way, and a new sidewalk on the western side of the roadway. The connector roadway would enhance circulation for vehicular, bicycle, and pedestrian travel in the surrounding area, and would connect with the revised San Francisco Market project's reconfiguration of Rankin Street north of Jerrold Avenue and Innes Avenue at Rankin Street.

None of the cumulative projects would include features that would substantially affect vehicle circulation in the project vicinity or impede emergency access compared to existing conditions. As explained above, the Quint-Jerrold Connector Road would reestablish a north-south connection between Oakdale and Jerrold avenues, while the revised San Francisco Market project would close Jerrold Avenue between Rankin and Toland streets to non-San Francisco Market traffic, and construct Innes Avenue and Innes Avenue Extension as a replacement facility. Prior to finalizing the design and dimensions of any planned transportation network changes under city jurisdiction, the fire and police departments' staff would review and approve streetscape modifications, as required through the Transportation Advisory Staff Committee review process, so that emergency vehicle access is not impeded. This same review process would be applied to the proposed project, so that the proposed project or expanded streetscape variant would not interfere with emergency access.

Under cumulative conditions, there would be a projected increase in vehicles on the streets in the study area, primarily due to the revised San Francisco Market project and the proposed project or expanded streetscape variant. However, with the planned transportation network improvements that would be constructed as part of these projects and the Quint-Jerrold Connector Road project, the increases in vehicles would not impede travel or access for people walking or bicycling, or for emergency vehicles.

As a result, no significant cumulative impacts related to accessibility would occur, and this impact would be *less than significant*.

Impact C-TR-4: The proposed project or project variant, in combination with cumulative projects, would not substantially delay public transit. ***(Less than Significant)***

As described above, there are no bus routes operating adjacent to the project site. The 23 Monterey bus route operates on Palou Avenue (east of Industrial Street) and Oakdale Avenue (west of Industrial Street), approximately 0.15 to 0.20 mile south of the project site. In addition, the 24 Divisadero bus route travels on Industrial Street south of Palou Avenue, and on Palou Avenue east of Industrial Street, approximately 0.20 mile south of the project site. Under cumulative conditions, there are no projects that would substantially affect transit service or facilities near the project site; therefore, transit operations in the project vicinity would remain the same as under existing conditions. In addition, none of the cumulative projects include transportation features that could delay transit (e.g., roadway lane reductions on streets with transit routes).

The 2270 McKinnon Avenue project would not generate a substantial number of vehicle trips during the peak hours or redirect vehicles on adjacent streets with transit routes. The revised San Francisco Market project would expand and upgrade the existing produce market operations. Most new trips generated by the revised San Francisco Market project would occur between 8 p.m. and 7 a.m.[148] The revised San Francisco Market project would generate about 110 net-new vehicle trips during the a.m. peak hour,[149] and very few new vehicle trips during the p.m. peak hour. Therefore, the proposed project or expanded streetscape variant would not result in cumulative transit delay impacts in combination with the 2270 McKinnon Avenue and the revised San Francisco Market projects.

The infrastructure upgrades at the existing SFPUC Southeast Treatment Plant would not affect operations of the 19 Polk bus route on Evans Avenue adjacent to the treatment plant and would not delay transit on other streets. There would not be any public transit service on the Quint-Jerrold Connector Road. Furthermore, these projects are not expected to generate a substantial number of new vehicle or transit trips; therefore, these projects would not result in substantial transit delay. The crosswalk projects along Oakdale Avenue in the Bayview Community-Based Transportation Plan would not substantially delay the 23 Monterey bus route on Oakdale Avenue or substantially delay transit on other streets.

[148] San Francisco Wholesale Produce Market Retention and Expansion Project Transportation Study – Final Report, Adavant Consulting, Planning Department Case No. 2009.1153, March 2011, page 41.

[149] San Francisco Market Expansion and Reconstruction Update Addendum to the Transportation Impact Study – Case No. 2009.1153ENV, July 12, 2022, Table 11, page 25.

As discussed above, no significant cumulative transit delay impacts would occur. Therefore, cumulative transit delay impacts would be ***less than significant*.**

Impact C-TR-5: The proposed project or project variant, in combination with cumulative projects, would not cause substantial additional VMT or substantially induce automobile travel. *(Less than Significant)*

VMT by its nature is largely a cumulative impact. As discussed in Impact TR-5, the proposed project would not be inconsistent with the three criteria outlined in CEQA section 21099(b)(1) addressing reduction of GHG emissions, development of multimodal transportation networks, and diversity of land uses. The project site is included in the Plan Bay Area 2050 Priority Production Areas that support key industrial clusters on industrial land that is already well served by the region's roadway network. It is also within areas contemplated for development by Plan Bay Area 2050, the region's Sustainable Communities Strategy. With respect to reduction of GHG emissions, the Plan Bay Area 2050 EIR indicated that Plan Bay Area 2050 can achieve the air board's 19 percent GHG reduction target for emissions from cars and light trucks. In addition, the proposed project or expanded streetscape variant would not exceed the planning department's project-level quantitative thresholds of significance for VMT. The project's transportation features fit within the general types of projects identified in the SF transportation guidelines that would not combine with cumulative projects to substantially induce automobile travel.

Table 3.B-15 presents the 2050 cumulative average daily VMT per capita by land use for the San Francisco Bay Area and for zones 485 and 488, where the project site is located (the project site is partially in both zones 485 and 488). For office uses, which most closely represents the proposed project's activities, the projected 2050 average daily VMT per employee for the zones in which the proposed project or expanded streetscape variant is located is about 21 percent below the 2050 projected regional average daily VMT per employee; while for retail uses, the projected 2050 average daily VMT per employee is about 25 percent below the 2050 projected regional average (see Appendix D.6).

Therefore, no significant cumulative VMT impacts would occur, and cumulative impacts related to VMT would be ***less than significant***.

Table 3.B-15 Average Daily VMT per Capita by Land Use 2050 Cumulative Conditions

Land Use	Bay Area Regional Average[1]	Zones 485 and 488[2]
PDR [3,4,5]	23.9	18.8
Retail[6]	15.9	12.0

Source: SF-CHAMP, Adavant Consulting/LCW Consulting (see Appendix D.2).

Notes:

1. For 2050 cumulative conditions, 15 percent below the Bay Area regional average VMT per capita is 20.3 for office (PDR) uses, and 13.5 for retail uses.
2. Weighted average daily VMT per capita for transportation analysis zones 485 and 488 in which the project site is located. Zone 485 is bounded by Bayshore Boulevard, Jerrold Avenue, Selby Street, and Oakdale Avenue; and zone 488 is bounded by Selby Street, Jerrold Avenue, Phelps Street, and Oakdale Avenue.
3. Average total daily VMT per employee for commuter and noncommuter trips to and from the project site calculated for proposed PDR uses. See "Project Travel Demand Methodology and Results" in Section 3.B.3 for a description of how VMT was calculated for the project's PDR uses.
4. PDR use – The State Office of Planning and Research has not provided a proposed screening criteria and thresholds of significance for other types of land use beyond residential, retail, and office. The planning department has designated the project's PDR land uses (parcel delivery, wholesale and storage, fleet management, and light industrial/maker space) to be treated as office for screening and analysis.
5. PDR use – Bay Area Regional Average and weighted average of zones 485 and 488 are based on average daily work-related VMT per employee for office uses (which most closely reflects the proposed project activities), in accordance with the SF transportation guidelines. The VMT per capita was calculated from SF-CHAMP travel demand model output. See note 3 above for calculation of average daily VMT per capita for the proposed project-specific PDR uses.

6. Retail use – Bay Area Regional Average and weighted average of zones 485 and 488 is based on average daily work-related VMT per employee for retail uses, as calculated from SF-CHAMP travel demand model output.

N/A = not applicable

Impact C-TR-6: The proposed project or project variant, in combination with cumulative projects, would not result in significant cumulative loading impacts. ***(Less than Significant)***

As described in Impact TR-6, the loading demand of the proposed project or expanded streetscape variant's industrial-oriented warehousing and storage and parcel and last-mile delivery uses would be accommodated entirely in the two buildings. Therefore, these uses would not have the potential to combine with loading impacts of cumulative projects. However, loading activities for the ground-floor maker and manufacturing and retail space would occur at on-street commercial vehicle loading zones on Kirkwood and McKinnon avenues. Because the loading activities would occur on-street, the ground-floor maker and manufacturing and the retail uses could have the potential to combine with loading impacts of cumulative projects. Therefore, the cumulative analysis focuses on the ground-floor maker and manufacturing and retail loading demand.

The loading demand for the San Francisco Market project would occur entirely within the market site and would not combine with the proposed project or expanded streetscape variant's on-street loading activities on Kirkwood and McKinnon avenues. The 2270 McKinnon project (i.e., self-storage facility) would include four onsite and one on-street loading space on McKinnon Avenue adjacent to the site, between Upton Street and Toland Place (about 250 feet west of Toland Street), which would accommodate the loading demand associated with the proposed self-storage uses. Therefore, the loading activities of the 2270 McKinnon Street project would not combine with the proposed project or expanded streetscape variant's on-street loading activities. Furthermore, as described in Impact TR-6, the proposed project or expanded streetscape variant would have a loading demand of three loading spaces, which would be accommodated within the proposed ten on-street loading spaces; therefore, the proposed project or expanded streetscape variant would not result in a loading deficit.

The SFPUC infrastructure upgrade projects at the Southeast Treatment Plant, the Quint-Jerrold Connector Road project, and the crosswalk projects along Oakdale Avenue in the Bayview Community-Based Transportation Plan would not generate new loading demand or remove existing on-street commercial vehicle or passenger loading zones and would also not combine with the proposed project or expanded streetscape variant's loading activities.

No other cumulative development projects have been identified that would contribute to either commercial-vehicle or passenger loading demand adjacent to the project site or result in loading deficits. Therefore, no significant cumulative loading impacts would occur, and cumulative loading impacts would be *less than significant*.

3.C Noise and Vibration

This section describes the existing noise and vibration environment in the proposed project or expanded streetscape variant area, identifies the regulatory framework, evaluates the potential construction-related and operational noise and vibration impacts associated with implementation of the proposed project or expanded streetscape variant, and identifies mitigation measures to avoid or reduce potential adverse impacts. Noise and vibration topics consist of temporary or permanent increases in ambient noise levels, generation of excessive groundborne vibration or noise, and exposure to excessive noise levels from airport operations. Supporting detailed technical information is included in Appendix E, Noise Technical Report.

Issues identified in response to the NOP for this draft EIR and Notice of Public Scoping Meeting (see Appendix A) related to the proposed project and expanded streetscape variant's physical environmental impacts were considered in preparing this analysis. The planning department received comments related to noise that stated the draft EIR should include a study of existing ambient noise levels at the closest residential receptor location, and an analysis of construction-related and operational noise (see Chapter 1, Introduction). These analyses are provided in Section 3.C.4, Project Impacts and Mitigation Measures (p. 3.C-26).

3.C.1 Environmental Setting

SOUND FUNDAMENTALS

Sound is generally characterized by parameters that describe the rate of *oscillation* (frequency) of sound waves or the distance between successive troughs or crests in waves, and the pressure level or energy content of a given sound (amplitude). Sound pressure level has become the most common descriptor used to characterize the amplitude of a sound at a distance from a noise source, and the decibel (dB) scale is used to describe the received pressure level. Because the human ear is not equally sensitive to all sound frequencies, human response is factored into sound descriptions using a frequency filtering method called *A-weighting*, expressed as *dBA*. The dBA, or A-weighted decibel, refers to a scale of noise measurement that reflects the specific frequency sensitivities of the human ear. On this scale, the normal range of human hearing generally extends from about 0 dBA to about 140 dBA. Except in carefully controlled laboratory experiments, a change of only 1 dBA in sound level cannot generally be perceived by the human ear. Outside of the laboratory, a 3 dBA change is considered a barely perceptible difference, while a 5 dBA change is considered readily noticeable. A 10 dBA increase in the level of a continuous noise results in a perceived doubling of loudness.[150]

The decibel level of a sound decreases (or attenuates) exponentially as the distance from the source of that sound increases. For a point source, such as a stationary compressor or construction equipment, sound attenuates at a rate of 6 dB per doubling of distance. For a line source, such as free-flowing traffic on a freeway, sound attenuates at a rate of 3 dB per doubling of distance. Atmospheric conditions (e.g., wind, temperature gradients, humidity) can change how sound propagates over distance, and can affect the level of sound received at a given location. The degree to which the ground surface absorbs acoustical energy also affects sound propagation. Sound that travels over an acoustically absorptive surface, such as grass, attenuates at a greater rate than sound that travels over a hard surface, such as pavement. The increased attenuation is typically in the range of 1 to 2 dB per doubling of distance. When located near either the sound source or the

[150] California Department of Transportation, *Technical Noise Supplement (TeNS) to the Traffic Noise Analysis Protocol*, September 2013, pp. 2-44 to 2-45, *http://www.dot.ca.gov/env/noise/docs/tens-sep2013.pdf*, accessed August 8, 2022.

listener position, physical barriers (e.g., naturally occurring ridgelines or buildings, and other topography that blocks the line-of-sight between a source and receiver) also increase the attenuation of sound over distance.

NOISE DESCRIPTORS

Noise is generally defined as sound that is loud, disagreeable, unexpected, or unwanted. Variations in noise exposure over time are often expressed in terms of an equivalent continuous sound level (called L_{eq}) that represents the steady-state acoustical energy of a given measurement over a period of time (e.g., 1-hour). Alternatively, noise levels may be presented as statistical descriptions of what sound level is exceeded over some fraction (10, 50, or 90 percent) of a given observation period (e.g., L_{10}, L_{50}, L_{90}). The L_{90} sound pressure level metric is typically considered to be a conservative representation of the ambient noise exposure at a receiver location under most conditions.[151] L_{max} is the maximum, instantaneous noise level registered during a measurement period. Because people in residential areas are more sensitive to unwanted noise intrusion during the evening and at night, community noise descriptors such as the *Community Noise Equivalent Level* (CNEL) and *day/night noise level* (L_{dn}) use "penalties" to one or more of these sensitive periods. The CNEL descriptor applies a 5 dBA increase to evening noise levels (7 to 10 p.m.) and a 10 dBA increase to nighttime noise levels (10 p.m. to 7 a.m.) The L_{dn} descriptor is similar to CNEL, but does not apply the evening penalty between 7 p.m. and 10 p.m. In practice, L_{dn} and CNEL usually differ by less than 1 dBA at any given location from transportation noise sources.[152]

NOISE FROM MULTIPLE SOURCES

In urban environments, noise commonly occurs from multiple sources simultaneously. Because sound pressure levels, in decibels, are based on a logarithmic scale, they cannot be combined in a simple additive fashion. When a new noise source is added to an existing noise source, with both producing noise at the same level, the noise level value would not double, as would be the case when adding arithmetically. Decibel additions from multiple noise sources can be estimated when the noise levels from the simultaneously operating sources are known. If the difference between the two noise sources is 1 dBA or less, the resultant noise level will be 3 dBA greater than the source with the higher decibel value. If the difference between the two noise sources is 2 to 3 dBA, the resultant noise level will be 2 dBA greater than the source with the higher decibel value. If the difference between two noise sources is 4 to 10 dBA, the resultant noise level will be 1 dBA greater than the source with the higher decibel value. When the difference between two noise sources is 10 dBA or more, the source with the higher decibel value will dominate, and the resultant noise level will be roughly equal to the source with the higher decibel value.

HEALTH EFFECTS OF ENVIRONMENTAL NOISE

According to the World Health Organization (WHO), sleep disturbance can occur when continuous outdoor noise levels, such as noise generated by vehicle traffic, exceed 45 dBA L_{eq}, but this threshold may vary greatly depending on existing noise exposure and characteristics of the noise event(s).[153] Studies with a "moderate" or greater level of evidence suggest additional potential health effects of noise, such as annoyance (10 percent relative risk of incidence occurring at 53.3 dBA, CNEL, or a continuous L_{eq} of 46.9 dBA) and

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[151] City of San Francisco, San Francisco Police Code Article 29: Regulation of Noise Guidelines for Noise Control Ordinance Monitoring and Enforcement [Article 29 Guidelines], Department of Public Health, 2014.

[152] Caltrans, *Technical Noise Supplement (TeNS) to the Traffic Noise Analysis Protocol*, September 2013, p. 2-48, *http://www.dot.ca.gov/env/noise/docs/tens-sep2013.pdf*, accessed April 16, 2021.

[153] World Health Organization (WHO), Environmental Noise Guidelines for the European Region, 2018.

ischemic heart disease (5 percent relative risk of incidence occurring at an exposure of 59.3 dBA, CNEL, or a continuous L_{eq} of 52.9 dBA).[154]

Other potential health effects of noise identified by the WHO include decreased performance on complex cognitive tasks, such as reading, attention, problem-solving, and memorization; physiological effects, such as hypertension and heart disease (after many years of constant exposure, often by workers, to high noise levels); and hearing impairment (again, generally after long-term occupational exposure, or shorter-term exposure to very high noise levels, for example, exposure several times a year to a concert with noise levels at 100 dBA).

Vehicle traffic and continuous sources of mechanical noise can contribute to unhealthy ambient noise levels. Short-term noise events such as horn soundings, crashing of material being loaded or unloaded, car doors slamming, and sirens contribute very little to the overall 24-hour noise level but are capable of causing sleep disturbance and annoyance. The effect of noise on receptors depends on both time and context. For example, continuous noise from highway traffic can make conversation at a normal vocal effort difficult or impossible, while a short-term pass-by of a motorcycle with a modified exhaust during nighttime periods can disturb sleep.

Table 3.C-1 presents representative noise sources and their corresponding noise levels in dBA at varying distances from the noise sources.

Table 3.C-1 Representative Environmental Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	Rock band
Jet flyover at 1,000 feet		
	100	
Gas lawnmower at 3 feet		
	90	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	80	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawnmower, 100 feet	**70**	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	**60**	
		Large business office
Quiet urban daytime	**50**	Dishwasher in next room
Quiet urban nighttime	**40**	Theater, large conference room (background)
Quiet suburban nighttime		
	30	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	20	
		Broadcast/recording studio
	10	
	0	

Source: Caltrans 2013

[154] World Health Organization (WHO), Environmental Noise Guidelines for the European Region, 2018.

VIBRATION AND GROUNDBORNE NOISE

Vibration is an oscillatory motion through a solid medium. Groundborne vibration propagates from the source through the ground to adjacent buildings by surface waves, having a frequency measured in cycles per second (Hertz [Hz]). Most environmental vibrations consist of a composite of many frequencies, and generally are classified as broadband or random. The normal frequency range of most groundborne vibration that can be perceived generally ranges between 1 and 200 Hz.

Vibration energy dissipates geometrically as it travels through the ground, causing the vibration amplitude to decrease with distance away from the source. Soil properties also affect the propagation of vibration, with stiffer soils, clays, and rock strata enabling more efficient transmission of vibrational energy. On interaction with a building foundation, usually a ground-to-foundation coupling, loss occurs; however, the transmitted vibration also can be amplified by structural conditions of the walls and floors, allowing resonance. Vibration in buildings typically is perceived as the rattling of windows or items on shelves, or the motion of building surfaces. At sufficiently high levels and depending on the loudness of the background airborne noise level, the vibration of interior building surfaces can be heard as a low-frequency rumbling sound, also known as groundborne noise.

Typically, groundborne vibrations generated by man-made activities attenuate rapidly with the distance from the source of the vibration. The effects of vibration on structures are typically measured by peak particle velocity (PPV) in inches per second (in/sec). Vibration decibels (VdB) is the unit used to assess effects of vibrations on people, and to distinguish vibration decibels from sound dB. With the exception of long-term occupational exposure, vibration levels rarely affect human health. Instead, most people consider vibration to be an annoyance that can affect concentration or disturb sleep. People may tolerate infrequent, short-duration vibration levels, but human annoyance to vibration becomes more pronounced if the vibration is continuous or occurs frequently. High levels of vibration can damage fragile buildings or interfere with sensitive equipment.

Typical sources of groundborne vibration in San Francisco are large-scale construction projects that involve pile driving, vibratory construction equipment, or underground tunneling. Vibration is also caused by transit vehicles in the subway system and on the surface, including Muni light-rail vehicles, historic streetcars, BART trains, and freight rail operations. In general, such vibration is only an issue when there are sensitive receptors nearby. Because rubber tires and suspension systems reduce vibrations, rubber tire vehicles such as buses, trucks, and automobiles rarely create substantial vibration absent inconsistent road surfaces such as potholes or bridge expansion joints.[155]

According to 2018 Federal Transit Administration (FTA) guidance, groundborne vibration normally is perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels.

NOISE SENSITIVE LAND USES AND EXISTING NOISE MEASUREMENTS

The dominant noise source in the project area is vehicular traffic along I-280, a two-level viaduct freeway that bisects the project site and area and generates nearly continuous traffic noise throughout the day and night. Vehicular traffic on Oakdale Avenue, a four-lane arterial roadway southwest of the project site, is also a notable noise source, but similar to other local roadways, traffic volumes drop substantially in the late evening hours.

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[155] U.S. Department of Transportation, Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018, p. 116, *https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf*, accessed July 25, 2022.

The project site is in a heavily developed urban area that is zoned PDR-2. In addition to the freeway, existing noise is also generated by adjacent land uses that may include delivery vehicle loading/unloading, forklift operation and back-up alarms, noise generated by HVAC units, and operation of power tools and other production-related equipment. The property immediately northeast of the project site is a major wholesale produce distribution facility, with the majority of its noise-generating operations occurring between approximately 12 a.m. and 9 a.m.

Noise-Sensitive Land Uses

Noise-sensitive land uses include sites used and frequented by occupants that are sensitive to changes in the ambient noise environment. Consistent with the Governor's Office of Planning and Research's General Plan Guidelines 2017, noise-sensitive receptors are defined in this draft EIR as residences, hospitals, convalescent homes, schools, churches, and sensitive wildlife habitat (e.g., nesting birds; marine mammals; protected fish species [for projects that generate underwater noise such as pile driving in San Francisco Bay]; and the habitat of rare, threatened or endangered species).[156] Hotels and motels are also considered noise sensitive receptors. As noted, sensitivity to noise may vary with the source of noise and land use context. An important way of predicting a human reaction to a new noise source is to compare it with the existing ambient noise level. In general, the more a new noise source exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it. The area surrounding the project site primarily consists of PDR land uses. The nearest noise-sensitive land use is a place of worship approximately 350 feet southwest of the nearest project property boundary. The next nearest noise-sensitive land uses are residential uses along Oakdale Avenue, approximately 440 feet southwest of the nearest project property boundary. Figure 3.C-1 shows the locations of existing noise-sensitive receptors closest to the project site.

Common Noise Equivalent Areas

To assess the effects of project-generated noise on the greater project vicinity, the surrounding land uses were grouped into discrete assessment areas. Common noise equivalent areas were established by grouping land uses considered to experience a similar range of existing noise levels, based on their shared exposure to existing major noise sources (e.g., vehicular traffic on I-280 and Oakdale Avenue). Each common noise equivalent area also contains a representative existing noise level measurement that serves as the basis for establishing existing traffic noise exposure for land uses in the common noise equivalent area. The 11 delineated common noise equivalent areas are described below and are shown on Figure 3.C-2 (p. 3.C-7). The location of noise measurements is shown in Figure 3.C-3 (p. 3.C-8).

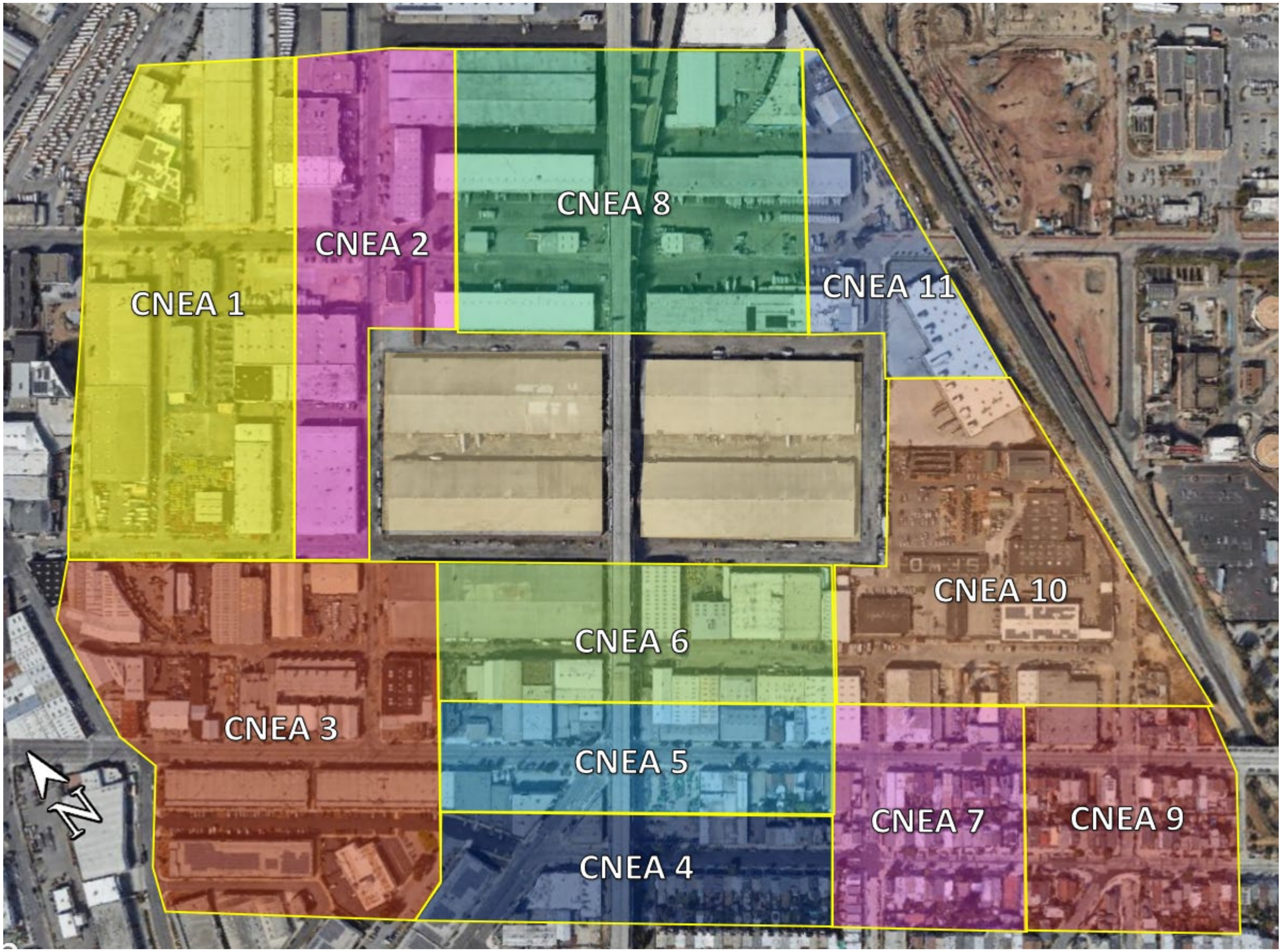
- **Common Noise Equivalent Area 1:** This common noise equivalent area includes commercial and warehouse land uses northwest of the project site. No noise-sensitive receptors were identified in this area. Existing noise levels in this common noise equivalent area are represented by measurement M1, a long-term measurement on Toland Place, approximately 288 feet northwest of the nearest project property boundary and approximately 915 feet northwest of I-280. The measured existing noise level at this common noise equivalent area was 66 dBA, CNEL.

[156] Governor's Office of Planning and Research, *State of California 2017 General Plan Guidelines, p. 136,* 2017, *http://www.opr.ca.gov/docs/OPR_COMPLETE_7.31.17.pdf*, accessed March 9, 2023.

Figure 3.C-1 Noise-Sensitive Land Uses Surrounding the Project Area

Sources: Map data from Google Imagery © 2020; compiled by AECOM

Figure 3.C-2 Common Noise Equivalent Areas for Project Traffic Noise Assessment



Sources: Map data from Google Imagery © 2022; compiled by AECOM

Figure 3.C-3 Baseline Noise Measurement Locations

Sources: Map data from Google Imagery © 2020; compiled by AECOM

- **Common Noise Equivalent Area 2:** This common noise equivalent area includes primarily commercial and warehouse land uses northwest of the project site, spanning both sides of Toland Street; an office building is located at 2095 Jerrold Avenue. No noise-sensitive receptors were identified in this area. Existing noise levels in this common noise equivalent area are represented by measurement M2, a short-term measurement on Toland Street, abutting the northwestern project property boundary, and approximately 630 feet northwest of I-280. The measured existing noise level at this common noise equivalent area was 71 dBA, CNEL.

- **Common Noise Equivalent Area 3:** This common noise equivalent area includes primarily commercial and warehouse land uses west and southwest of the project site. This common noise equivalent area features a single noise sensitive receptor, a church (Grace Good Samaritan Worship Center). Existing noise levels in this common noise equivalent area are represented by measurement M3, a short-term measurement on the northern corner of the intersection of Newcomb Avenue and Toland Street, approximately 285 feet southwest of the nearest project property boundary and approximately 680 feet northwest of I-280. The measured existing noise level at this common noise equivalent area was 70 dBA, CNEL.

- **Common Noise Equivalent Area 4:** This common noise equivalent area includes single-family homes, a park, and commercial/warehouse land uses southwest of the project site. Residential land uses are on both sides of Palou Avenue. Existing noise levels in this common noise equivalent area are represented by measurement M4, a long-term measurement on the southern side of Palou Avenue, approximately 900 feet southwest of the nearest project property boundary and approximately 100 feet southeast of I-280. The measured existing noise level at this common noise equivalent area was 80 dBA, CNEL.

- **Common Noise Equivalent Area 5:** This common noise equivalent area includes primarily commercial and warehouse land uses southwest of the project site. A small tract of residential land uses is on Oakdale Avenue near the southeastern boundary of the common noise equivalent area. Existing noise levels in this common noise equivalent area are represented by measurement M5, a short-term measurement on the southern side of Oakdale Avenue, approximately 615 feet southwest of the nearest project property boundary and approximately 85 feet southeast of I-280. The measured existing noise level at this common noise equivalent area was 81 dBA, CNEL.

- **Common Noise Equivalent Area 6:** This common noise equivalent area includes commercial and warehouse land uses immediately southwest of the project site. No noise-sensitive receptors were identified in this area. Existing noise levels in this common noise equivalent area are represented by measurement M6, a short-term measurement on the northern corner of the intersection of McKinnon Avenue and Selby Avenue, approximately 48 feet southwest of the nearest project property boundary and approximately 45 feet northwest of I-280. The measured existing noise level at this common noise equivalent area was 82 dBA, CNEL.

- **Common Noise Equivalent Area 7:** This common noise equivalent area includes single-family homes and commercial/warehouse land uses south of the project site. Residential land uses are along Oakdale Avenue and Palou Avenue. Existing noise levels in this common noise equivalent area are represented by measurement M7, a short-term measurement on the southern corner of the intersection of Oakdale Avenue and Rankin Street, approximately 611 feet south of the nearest project property boundary and approximately 690 feet southeast of I-280. The measured existing noise level at this common noise equivalent area was 73 dBA, CNEL.

- **Common Noise Equivalent Area 8:** This common noise equivalent area includes commercial and warehouse land uses immediately northeast of the project site. No noise-sensitive receptors were identified in this area. Existing noise levels in this common noise equivalent area are represented by measurement M8, a short-term measurement on the southern corner of the intersection of Oakdale Avenue and Rankin Street, approximately 254 feet northeast of the nearest project property boundary and approximately 85 feet southeast of I-280. The measured existing noise level at this common noise equivalent area was 80 dBA, CNEL.

- **Common Noise Equivalent Area 9:** This common noise equivalent area includes single-family homes, a church (Galilee Missionary Baptist Church), and commercial/warehouse land uses south of the project site. Residential land uses are along Oakdale Avenue and Palou Avenue. Existing noise levels in this common noise equivalent area are represented by measurement M9, a long-term measurement near the western corner of the intersection of Oakdale Avenue and Quint Street, approximately 880 feet south-southeast of the nearest project property boundary and approximately 1,255 feet southeast of I-280. The measured existing noise level at this common noise equivalent area was 68 dBA, CNEL.

- **Common Noise Equivalent Area 10:** This common noise equivalent area includes commercial and warehouse land uses immediately southeast of the project site. No noise-sensitive receptors were identified in this area. Existing noise levels in this common noise equivalent area are represented by measurement M10, a short-term measurement location on Rankin Street, abutting the southwestern project property line and approximately 645 feet southeast of I-280. The measured existing noise level at this common noise equivalent area was 69 dBA, CNEL.

- **Common Noise Equivalent Area 11:** This common noise equivalent area includes commercial and warehouse land uses immediately east of the project site. No noise-sensitive receptors were identified in this area. Existing noise levels in this common noise equivalent area are represented by measurement M11, a short-term measurement location on the southern corner of the intersection of Rankin Street and Jerrold Avenue, approximately 270 feet northeast of the nearest project property boundary and approximately 705 feet southeast of I-280. The measured existing noise level at this common noise equivalent area was 75 dBA, CNEL.

Existing Noise Conditions Survey

After a preliminary review of online aerial imagery and other literature, multiple sound level measurement location candidates were identified in the project vicinity for long-term and short-term sound pressure level measurements, with approval by the city. Procedures and field protocols to ensure the accuracy and validity of the measurements were followed, and are described in Appendix E of this draft EIR.

Sound level measurements were conducted from July 31 through August 2, 2018,[157] to collect sound pressure level data in the project vicinity. Three long-term (48-hour) and 23 short-term (10- to 15-minute)

[157] As discussed in the project description, this EIR relies on data collected prior to the COVID-19 pandemic to reflect the conditions at the project site when the environmental review process began in 2017. It is acknowledged that sound pressure measurements were taken before the COVID-19 pandemic, that the pandemic has affected the transportation system and travel behavior, and that because traffic noise is one of the primary noise sources in the project vicinity, the pandemic could have affected traffic noise levels in the project vicinity. However, the long-term effects of the pandemic on the transportation system, travel behavior, and resulting traffic noise are unknown at this time. It would be speculative to make assumptions regarding how the transportation system and travel behavior, and thus traffic noise could change in the future as the city recovers from the effects of the pandemic. Nevertheless, because land uses in the vicinity have not changed substantially since the sound pressure measurements were taken, existing noise conditions measured and reported herein are expected to be representative of the current ambient acoustic environment. This approach is consistent with CEQA Guidelines section 15125(a)(1).

measurements were conducted at representative noise-sensitive land uses and adjacent property boundaries. Short-term measurements were conducted at eight locations during both daytime (7 a.m. to 10 p.m.) and nighttime (10 p.m. to 7 a.m.) periods. These locations are shown on Figure 3.C-3 (p. 3.C-8) and are described as follows:

- **M1:** Long-term measurement location on Toland Place, approximately 288 feet northwest of the nearest project property boundary and approximately 915 feet northwest of I-280. The dominant noise source during the measurement period was distant vehicular traffic from I-280 and local roadways.
- **M2:** Short-term measurement location on Toland Street, abutting the northwestern project property boundary, and approximately 630 feet northwest of I-280. During the daytime hours, the dominant noise sources during the measurement periods were vehicular traffic on Toland Street, distant produce delivery truck idling, and distant vehicular traffic on I-280. During the nighttime period, vehicular traffic on Toland Street decreased, but contributions from traffic on I-280 were sustained.
- **M3:** Short-term measurement location on the northern corner of the intersection of Newcomb Avenue and Toland Street, approximately 285 feet southwest of the nearest project property boundary and approximately 680 feet northwest of I-280. During the daytime hours, the dominant noise sources during the measurement periods were vehicular traffic on Toland Street and Newcomb Avenue, intermittent truck loading at a nearby hardware store, and distant vehicular traffic on I-280. During the nighttime period, vehicular traffic on Toland Street and Newcomb Avenue decreased, but contributions from traffic on I-280 were sustained.
- **M4:** Long-term measurement location on the southern side of Palou Avenue, approximately 900 feet southwest of the nearest project property boundary and approximately 100 feet southeast of I-280. The dominant noise source during the measurement period was vehicular traffic on I-280 during all observed hours, with secondary contributions from traffic on Oakdale Avenue and Palou Avenue.
- **M5:** Short-term measurement location on the southern side of Oakdale Avenue, approximately 615 feet southwest of the nearest project property boundary and approximately 85 feet southeast of I-280. The dominant noise source during the measurement period was vehicular traffic on I-280 during all observed hours, with secondary contributions from traffic on Oakdale Avenue.
- **M6:** Short-term measurement location on the northern corner of the intersection of McKinnon Avenue and Selby Avenue, approximately 48 feet southwest of the nearest project property boundary and approximately 45 feet northwest of I-280. The dominant noise source during the measurement period was vehicular traffic on I-280, with secondary contributions from intermittent traffic on McKinnon Avenue and intermittent truck loading at nearby warehouses.
- **M7:** Short-term measurement location on the southern corner of the intersection of Oakdale Avenue and Rankin Street, approximately 611 feet south of the nearest project property boundary and approximately 690 feet southeast of I-280. The dominant noise sources during the measurement period were distant vehicular traffic on I-280 and intermittent traffic on McKinnon Avenue.
- **M8:** Short-term measurement location on the southern corner of the intersection of Oakdale Avenue and Rankin Street, approximately 254 feet northeast of the nearest project property boundary, and

approximately 85 feet southeast of I-280. The dominant noise sources during the measurement period were vehicular traffic on I-280 and intermittent traffic on Jerrold Avenue.

- **M9:** Long-term measurement location near the western corner of the intersection of Oakdale Avenue and Quint Street, approximately 880 feet south-southeast of the nearest project property boundary, and approximately 1,255 feet southeast of I-280. The dominant noise sources during the measurement period were vehicular traffic on Oakdale Avenue and distant traffic on I-280.

- **M10:** Short-term measurement location on Rankin Street, abutting the southwestern project property line and approximately 645 feet southeast of I-280. The dominant noise sources during the measurement period were continuous vehicular traffic on I-280, and intermittent traffic on Rankin Street.

- **M11:** Short-term measurement location on the southern corner of the intersection of Rankin Street and Jerrold Avenue, approximately 270 feet northeast of the nearest project property boundary, and approximately 705 feet southeast of I-280. The dominant noise sources during the measurement period were vehicular traffic on I-280, and intermittent traffic on Jerrold Avenue.

Each short-term measurement location can be compared with specific long-term measurement location data on the basis of shared existing exposure to noise sources. This comparison can then reasonably estimate the existing sound environment at short-term locations during times when short-term measurements were no longer being conducted, but long-term measurements continued.

For example, consider two hypothetical measurement locations next to a major freeway that is the dominant source of noise in the vicinity. If a 15-minute short-term measurement conducted at 2 p.m. at location A demonstrates a continuous noise level of 51 dBA L_{eq}, and during that same period (i.e., 2:00 p.m. to 2:15 p.m.), the noise level at long-term (e.g., 24-hour duration or greater) at location B demonstrates a continuous noise level of 49 dBA L_{eq}, a difference of +2 dBA is established between the measurement locations for that period. Therefore, if the full daytime period (i.e., 7 a.m. to 7 p.m.) at location B is measured to be 56 dBA, L_{eq}, the resulting full daytime period at location A is 2 dBA, L_{eq} higher than location B and can be estimated as 58 dBA, L_{eq}. This process was performed for the daytime and nighttime short-term measurements at each short-term measurement location, based on their shared exposure to specific traffic noise sources at the adjacent long-term measurement location used for 24-hour data extrapolation. Using this technique, the existing 24-hour CNEL and lowest 15-minute L_{90} (using the calculated delta between L_{90} values) were derived for each short-term location based on empirical data collected from both the short-term and long-term survey locations.[158] This approach is appropriate for extrapolating long-term noise levels from short-term noise measurements only because the acoustical environment at the short-term and long-term locations is dominated by the same source throughout the monitoring period.

Table 3.C-2 summarizes the calculated daytime, evening (7 p.m. to 10 p.m.), nighttime, and CNEL values by measurement location. Detailed data for long-term and short-term measurements, including referenced times and detailed calculations, are provided in Appendix E.

[158] This is a valid method for extrapolating long-term noise levels from short-term noise measurements when the noise monitoring location acoustical environment is dominated by the same source throughout the monitoring period (e.g., the I-280 freeway) and conducted simultaneously, as was the case for the noise measurements taken for this San Francisco Gateway analysis.

Table 3.C-2 Summary of Baseline Sound Pressure Level Measurements

Measurement Location ID	Reference LT Measurement Location ID	CNEA Represented by Measurement Location	Calculated Sound Pressure Level (dBA)				
			Daytime L_{eq} (7 a.m. – 7 p.m.)	Evening L_{eq} (7 p.m.– 10 p.m.)	Nighttime L_{eq} (10 p.m.– 7 a.m.)	Calculated CNEL	Lowest 15-Minute L_{90}
M1 (LT)		1	65	59	58	66	50
M2	—	2	71	64	61	71	51
M3	M1	3	70	63	60	70	50
M4 (LT)	M1	4	77	75	72	80	51
M5	—	5	79	77	73	81	55
M6	M4	6	77	77	75	82	51
M7	M4	7	71	68	65	73	52
M8	M9	8	78	77	72	80	52
M9 (LT)	M4	9	66	62	59	68	48
M10	—	10	68	62	61	69	50
M11	M1	11	72	67	67	75	57

Source: AECOM field measurements collected in 2018

Notes:

CNEA = common noise equivalent area
CNEL = community noise equivalent level
dBA = A-weighted decibels
LT = Long-term measurement
L_{eq} = Energy-average sound level (for described period)
L_{90} = Sound level exceeded for 90 percent of measurement period

Vibration-Sensitive Receptors

The commercial buildings surrounding the project site generally were built between the 1960s and 1980s; however, buildings to the southwest and west have earlier construction dates. The warehouse structures at 801 and 834 Toland Street, approximately 67 feet southwest and 97 feet west of the project site, respectively, match the architectural styles of the four existing warehouse structures that would be removed from the project site. The project site warehouse buildings were constructed by the U.S. military between 1940 and 1943 to support production needs during World War II, and although construction dates were not available for 801 and 834 Toland Street, this analysis assumes that their construction dates are similar, if not identical to, those of the existing project site warehouses.

There are no known structures featuring vibration-sensitive activities (e.g., research or medical laboratories) in the project vicinity. The nearest structure in which people may sleep is the residential property approximately 440 feet from the edge of the project construction area.

3.C.2 Regulatory Framework

NOISE

Federal Regulations

The Noise Control Act of 1972 directed the United States Environmental Protection Agency (U.S. EPA) to develop noise level guidelines that would protect the population from the adverse effects of environmental noise. Subsequently, the agency published the "Levels Document"[159] that contained recommendations for a maximum 55 dBA L_{dn} at the exterior and 45 dBA L_{dn} for the interior of noise-sensitive receivers, such as residences. The guidelines for noise levels that would be considered safe for community exposure without the risk of adverse health or welfare effects are summarized in Table 3.C-3. The United States Department of Housing and Urban Development standards define L_{dn} levels 65 dBA or lower as acceptable outdoor noise levels for residential use. The Federal Highway Administration (FHWA), the Federal Interagency Committee on Urban Noise, and the Federal Aviation Administration also have developed standards and guidance.

Table 3.C-3 Noise Level Effects

Effect	Level	Area
Hearing loss	≤ 70 dBA[1] (24-hour L_{eq})	All areas
Outdoor activity interference and annoyance	≤ 55 dBA (L_{dn})	Outdoor residential areas and farms as well as other outdoor areas where people spend varying amounts of time, and places where quiet is a basis for use
Outdoor activity interference and annoyance	≤ 55 dBA (24-hour L_{eq})	Outdoor areas where people spend limited amounts of time, such as school yards, and playgrounds
Indoor activity interference and annoyance	≤ 45 dBA (L_{dn})	Indoor residential areas
Indoor activity interference and annoyance	≤ 45 dBA (24-hour L_{eq})	Other indoor areas with human activities, such as schools

Source: U.S. EPA, *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*, March 1974, *http://nepis.epa.gov/Exe/ZyPDF.cgi/2000L3LN.PDF?Dockey=2000L3LN.pdf*, accessed January 10, 2023.

Notes:

1 Yearly average equivalent sound levels in decibels; the exposure period that results in hearing loss at the identified level is 40 years.

dBA = A-weighted decibel
L_{dn} = day-night sound level
L_{eq} = equivalent sound level

Federal regulations establish noise limits for medium and heavy trucks (more than 4.5 tons, gross vehicle weight rating, or at least the size of a small delivery truck).[160] The federal truck pass-by noise standard is 80 dBA at 50 feet from the vehicle pathway centerline, under specified test procedures. These requirements are implemented through regulatory controls on truck manufacturers.

Onsite occupational noise exposure levels set by the Occupational Safety and Health Act of 1970 are regulated by the Occupational Safety and Health Administration, and in California by the California Occupational Safety and Health Administration. The maximum time-weighted average noise exposure level of workers is 90 dBA over an 8-hour work shift, and 115 dBA for periods of 15 minutes or less (29 Code of Federal Regulations section 1910.95).

Federal Transit Administration Standards for Construction Noise

The FTA's Transit Noise and Vibration Impact Assessment Manual (FTA manual) was developed for use in determining significant noise and vibration impacts for transit projects and is not a regulation; however, it is one of the few federal sources that suggest both a methodology and criteria for assessing construction noise

159 United States Environmental Protection Agency (U.S. EPA), Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety, USEPA 550/9-74-004, 1974.

160 Code of Federal Regulations title 40, part 205, subpart B.

impacts. The FTA manual does not contain standardized criteria for assessing construction noise impacts but does include guidelines for noise limits at land uses where an adverse community reaction may occur. Table 3.C-4 provides the FTA general assessment construction noise criteria. The FTA manual states that noise limits, including limits on the number of hours for the operation of construction equipment, may be set at the local level, according to policies of the applicable jurisdictions.

Table 3.C-4 Federal Transit Administration Construction Noise Impact Guidelines

Land Use	1-hour L_{eq} (dBA), Day[1]	1-hour L_{eq} (dBA), Night[1]
Residential	90	80
Commercial	100	100
Industrial	100	100

Source: U.S. Department of Transportation, Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, Report No. 0123, September 2018, *https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf*, accessed April 16, 2021.

Notes:

1 Daytime hours are 7 a.m. to 10 p.m.; nighttime hours are 10 p.m. to 7 a.m.

dBA = A-weighted decibel
L_{eq} = equivalent sound level

State Regulations

California requires each local government entity to perform noise studies and implement a noise element as part of its general plan. Land use guidelines for evaluating the compatibility of various land uses as a function of community noise exposure are discussed under “San Francisco General Plan,” below.

California Building Code

The California Building Code (California Code of Regulations title 24, part 2) requires that walls and floor/ceiling assemblies separating dwelling units from each other, or from public or service areas, have a sound transmission class of at least 50, meaning they can reduce noise roughly by 50 dB.[161] Building code section 1207.4, Allowable Interior Noise Levels, also specifies a maximum interior noise limit of 45 dBA (L_{dn} or CNEL) in habitable rooms, and requires that common interior walls and floor/ceiling assemblies meet a minimum sound transmission class rating of 50 for airborne noise. It also sets an interior performance standard of 45 dBA from exterior noise sources.

Local Regulations

San Francisco General Plan

The San Francisco General Plan focuses on the effects of transportation-related noise on the health and welfare of people in their everyday activities. The plan provides officials and developers with a land-use compatibility chart that serves to inform the consideration of new land uses in areas where existing transportation noise may be considered unacceptable.

The Environmental Protection Element of the San Francisco General Plan contains Land Use Compatibility Guidelines for Community Noise for determining the compatibility of various land uses with different noise levels (see Figure 3.C-4, p. 3.C-17). These guidelines, which are similar to the state guidelines set forth by the Governor’s Office of Planning and Research, indicate maximum acceptable noise levels for various land uses. Although this table presents a range of noise levels that are considered compatible or incompatible with

161 California Building Standards Code section 1206.2.

various land uses, the maximum *satisfactory* noise level is 60 dBA (L_{dn}) for residential and hotel uses; 65 dBA (L_{dn}) for school classrooms, libraries, churches, and hospitals; 70 dBA (L_{dn}) for playgrounds, parks, office uses, retail commercial uses, and noise-sensitive manufacturing/communications uses; and 77 dBA (L_{dn}) for other commercial uses such as wholesale, some retail, industrial/manufacturing, transportation, communications, and utilities.

The Environmental Protection Element includes the following objectives and policies that pertain to noise:

- **Objective 9:** Reduce Transportation-Related Noise.
  - **Policy 9.2:** Impose traffic restrictions to reduce transportation noise.
  - **Policy 9.6:** Discourage changes in streets which will result in greater traffic noise in noise-sensitive areas.

- **Objective 10:** Minimize impact of noise on affected areas.
  - **Policy 10.1:** Promote site planning, building orientation and design, and interior layout that lessen noise intrusion.
  - **Policy 10.2:** Promote the incorporation of noise insulation materials in new construction.
  - **Policy 10.3:** Construct physical barriers to reduce noise transmission from heavy traffic carriers.

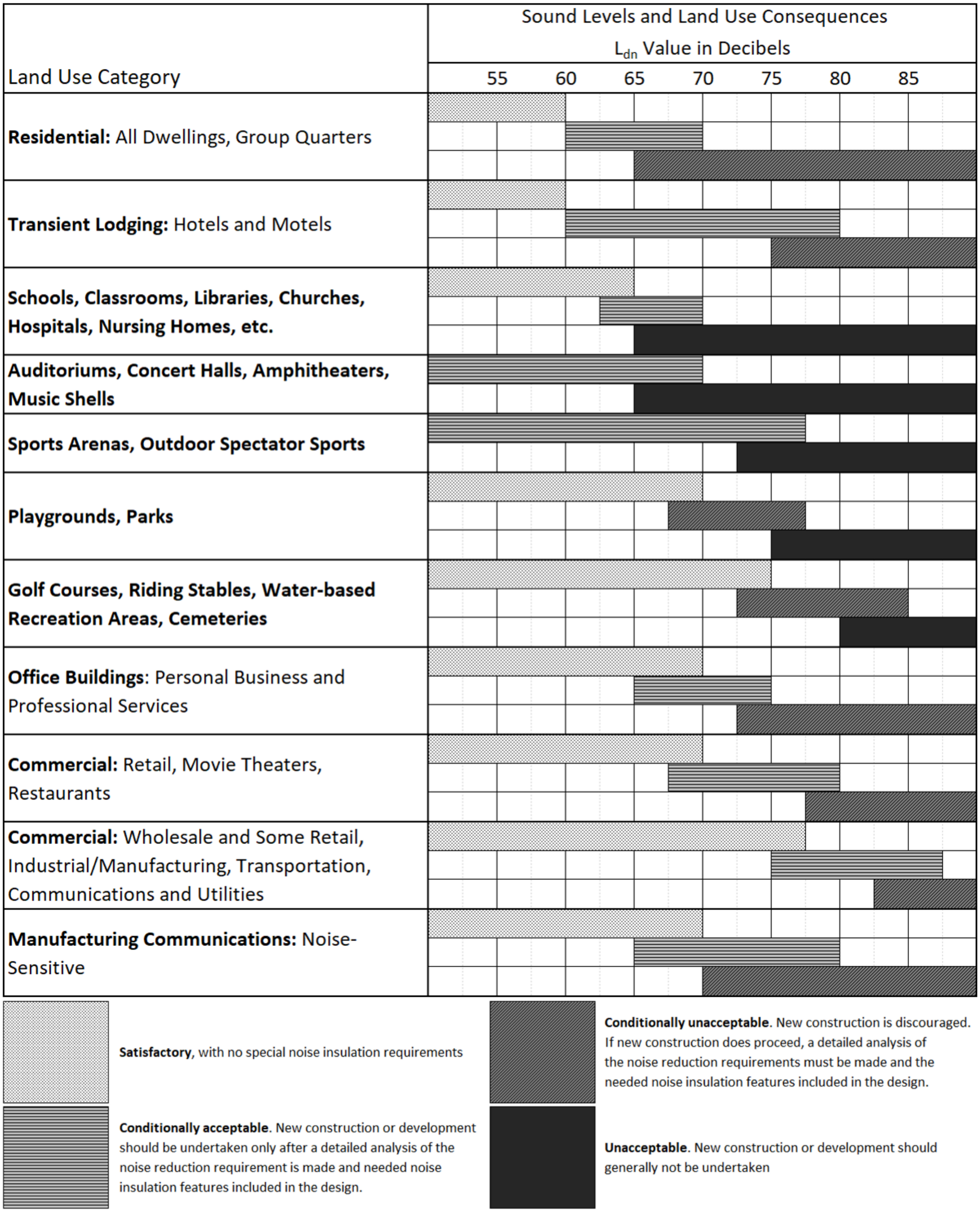
- **Objective 11:** Promote land uses that are compatible with various transportation noise levels.
  - **Policy 11.1:** Discourage new uses in areas in which the noise level exceeds the noise compatibility guidelines for that use (see Figure 3.C-4).
  - **Policy 11.2:** Consider the relocation to more appropriate areas of those land uses which need more quiet and cannot be effectively insulated from noise in their present location, as well as those land uses which are noisy and are presently in noise-sensitive areas.
  - **Policy 11.3:** Locate new noise-generating development so that the noise impact is reduced.

San Francisco Noise Control Ordinance

Article 29 of the San Francisco Police Code regulates noise generated by a variety of noise source types. The public health department is jointly responsible for implementation of this police code. The public health department develops and maintains the Guidelines for Noise Control Ordinance Monitoring and Enforcement (article 29 guidelines), which provides both definitions for and guidance on the interpretation of the police code.[162] Noise ordinance section 2900 makes the following declaration with regard to community noise levels: "It shall be the policy of San Francisco to maintain noise levels in areas with existing healthful and acceptable levels of noise and to reduce noise levels, through all practicable means, in those areas of San Francisco where noise levels are above acceptable levels as defined by the World Health Organization's Guidelines on Community Noise."

[162] City of San Francisco, San Francisco Police Code Article 29: Regulation of Noise Guidelines for Noise Control Ordinance Monitoring and Enforcement [Article 29 Guidelines], Department of Public Health, 2014.

Figure 3.C-4 City of San Francisco Land Use Compatibility Chart for Community Noise



Source: City of San Francisco, 2004, General Plan Environmental Protection Element. Compiled by AECOM, 2022.

The following paragraphs provide a summary of article 29 and the article 29 guidelines that would apply to the proposed project:

- **Construction Equipment (article 29, section 2907):** Noise generated by any construction equipment on a permitted construction site, except for impact tools such as jackhammers, shall not exceed 80 dBA when measured at a distance of 100 feet from the equipment or the construction site boundary. Exemptions to this requirement include impact tools with approved mufflers, pavement breakers, and jackhammers with approved acoustic shields, and construction equipment used in connection with emergency work.

- **Construction Work at Night (article 29, section 2908):** The operation of construction equipment on a permitted construction site during the nighttime hours, defined as 8 p.m. to 7 a.m., shall not increase ambient measured noise levels at the nearest property plane by greater than 5 dBA. Noise permits may be granted that allow exceedance of the noise standards by the San Francisco Department of Building Inspection or San Francisco Department of Public Works. Construction projects with night noise permits are subject to the limits detailed by the enforcing departments in the permit.

- **Commercial and Industrial Property Noise Limits (article 29, section 2909[b]):** Combined operation of machines or devices (such as fixed or stationary mechanical devices), music, or entertainment on a commercial or industrial property shall not increase ambient noise levels by greater than 8 dBA at any point outside of the property plane.

- **Fixed Residential Interior Noise Limits (article 29, section 2909[d]):** No fixed noise source may cause the noise levels measured in a sleeping or living room in any dwelling unit to exceed 45 dBA between the hours of 10 p.m. and 7 a.m., and 55 dBA between the hours of 7 a.m. and 10 p.m., with windows open—except where building ventilation is achieved through mechanical systems that allow windows to remain closed.

- **Exceptions (article 29 guidelines, Appendix C):** Certain noise sources do not violate local law and will not be investigated by any City of San Francisco department. Those specific to this noise analysis include, but are not limited to emergency generators, delivery and service trucks, vehicle and traffic noise, and public roadways.

VIBRATION

Federal

Table 3.C-5 provides FTA's criteria regarding vibration annoyance potential. Vibration levels for the criteria are stated in terms of vibration velocity levels, or VdB. Generally, people are more sensitive to groundborne vibration during nighttime hours when sleeping than during daytime waking hours. As shown in Table 3.C-5, vibratory activities have the potential to interfere with sleep when vibration levels exceed 72 to 80 VdB, as applicable to the frequency of source events.

Table 3.C-5 Federal Transit Administration Criteria for Groundborne Vibration

Land Use Category	Impact Levels (VdB,[1] Relative to 1 micro-in/sec)		
	Frequent Events[2]	Occasional Events[3]	Infrequent Events[4]
Category 1: Buildings where vibration would interfere with interior operations	65[5]	65[5]	65[5]
Category 2: Residences and buildings where people normally sleep	72	75	80
Category 3: Institutional land uses with primarily daytime uses	75	78	83

Source: U.S. Department of Transportation, Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, Report No. 0123, September 2018, *https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf*, accessed April 16, 2021.

Notes:

1 VdB, or vibration level, expresses vibration annoyance potential in decibels.
2 Frequent events are defined as more than 70 vibration events from the same source per day.
3 Occasional events are defined as 30 to 70 vibration events from the same source per day.
4 Infrequent events are defined as fewer than 30 vibration events from the same source per day.
5 This criterion limit is based on levels that are acceptable for most moderately sensitive equipment, such as optical microscopes. Vibration-sensitive manufacturing or research would require detailed evaluation to define the acceptable vibration levels.

in/sec = inches per second
VdB = vibration decibels

State

There are no state regulations related to construction-induced vibration. However, Caltrans' *Transportation and Construction Vibration Guidance Manual*[163] provides guidance regarding the evaluation of vibration impacts associated with construction activities. The manual includes prediction methods, assessment procedures, and guidance impact criteria regarding construction vibration. Table 3.C-6 contains guidelines developed by Caltrans regarding potential building damage thresholds from the transient and continuous vibration that is usually associated with construction activity. The activities that generate transient vibration are typically associated with single-impact or low-rate, repeated-impact vibration such as blasting, the use of drop balls, or dropped metal plates. Impact pile drivers, soil compactors (small hand-held soil compactors), crack-and-seat equipment (equipment that breaks and reseats pavement), excavation equipment, static compaction equipment, tracked vehicles, heavy vehicles on rough roadways, vibratory pile drivers, pile extraction equipment, and vibratory compaction equipment are typically associated with continuous vibration.

163 Caltrans, Transportation and Construction Vibration Guidance Manual. Division of Environmental Analysis, April 2020, *https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf*.

Table 3.C-6 Vibration Guidelines for Potential Damage to Structures

Structure Type and Condition	Maximum PPV (in/sec)	
	Transient Sources[1]	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: Caltrans, *Transportation and Construction Vibration Guidance Manual*, April 2020.

Notes:

[1] Transient sources create a single, isolated vibration event (e.g., from blasting or the use of drop balls). Continuous/frequent intermittent sources include impact pile drivers, soil compactors, vibratory pile drivers, and vibratory compaction equipment.

in/sec = inches per second
PPV = peak particle velocity

3.C.3 Impact Assessment Methodology

This section lists the thresholds that were used to conclude whether an impact would be significant and describes the methods used to determine the impacts that could occur with implementation of the proposed project and expanded streetscape variant.

SIGNIFICANCE CRITERIA

San Francisco Administrative Code chapter 31 directs the planning department to identify the environmental effects of a project using as its base the environmental checklist form set forth in the CEQA Guidelines, Appendix G, as modified by the planning department. As it relates to noise and vibration, the checklist asks whether the project would result in:

- 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.
- Excessive groundborne vibration or groundborne noise levels.
- 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.

Operational vibration is typically considered a potential concern for projects featuring major vibratory noise sources such as above and/or below-grade rail transportation (e.g., passenger and freight rail), material compaction/tamping (e.g., metal recycling facilities), and blasting (e.g., mining uses). The proposed project and expanded streetscape variant operations include typical roadway vehicles on the project site and local roadways; and the operation of standard HVAC units, which would not have the potential to generate perceptible levels of vibration at any surrounding land uses. Therefore, proposed project and expanded streetscape variant operations would not result in the generation of excessive groundborne vibration or groundborne noise levels, and this topic is not addressed further.

The project site is approximately 7.7 miles north of San Francisco International Airport (SFO) and 8.6 miles west-northwest of Oakland International Airport (OAK). The project site falls outside all predicted 65 dBA CNEL contours, in both the 2019 SFO and 2010 OAK noise exposure maps.[164, 165] Therefore, the proposed project and expanded streetscape variant would not result in the long-term exposure of people working in the area to excessive airport-related noise levels and this topic is not addressed further.

APPROACH TO ANALYSIS

Methodology and Thresholds of Significance

The following summarizes the methodology for the noise and vibration analysis for the proposed project and expanded streetscape variant and the thresholds and standards used to determine significant impacts. The analysis of construction and operational effects addresses mobile sources, both onsite and offsite, and fixed sources, such as the mechanical equipment. Further details on the information presented in this subsection can be reviewed in Appendix E.

Onsite Construction Noise

Noise levels for individual pieces of construction equipment are regulated by section 2907(a) of the city noise ordinance, which requires that equipment have a noise level limit of 80 dBA at 100 feet from the source. The limit is not applicable to impact tools that are fitted with manufacturer-recommended intake and exhaust mufflers, acoustically attenuating shields, or acoustically attenuating shrouds. The analysis assumes that construction of the proposed project or expanded streetscape variant would meet the requirements of the city noise ordinance for individual pieces of equipment. However, the use of multiple pieces of equipment simultaneously is not covered under the provisions of the ordinance. Noise generated by multiple pieces of equipment was assessed using the FTA general construction assessment methodology and criteria described below.

Project construction noise was estimated by considering the main noise-generating sound sources, calculating their aggregate sound propagation to the project property boundary, and studying the closest receptor locations. The onsite construction noise analysis approach relies on the FTA's "General Assessment" quantitative construction noise estimation guidance. The key assumptions for this analysis include:

- For a given construction phase or combination of phases, the two loudest pieces of equipment or vehicles are assumed to operate on average from the geographic centroid of the closest building A or building B work site.
- Each piece of equipment or vehicle is assigned a reference L_{max} value at a reference distance (e.g., 50 feet), and an "acoustical usage factor" that the FHWA Roadway Construction Noise Model User's Guide[166] describes as an estimated portion of a construction operation period when the L_{max} value can be expected. The reference sound level and acoustical usage factor values for each construction phase are provided in Appendix E.

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[164] ESA and BridgeNet, *San Francisco International Airport 14 Code of Federal Regulations Part 150 Study Update – Noise Compatibility Program,* Prepared for San Francisco International Airport, July 2018, *https://www.flysfo.com/sites/default/files/pdf/P150_Final_NCP_complete.pdf*.

[165] ESA, *Oakland International Airport – Airport Land Use Compatibility Plan*, Prepared for the Alameda County ALUC, December 15 2010, *https://www.acgov.org/ca/planning/generalplans/documents/OAK_ALUCP_122010_FULL.pdf*.

[166] Federal Highway Administration (FHWA), *FHWA Roadway Construction Noise Model User's Guide*, FHWA-HEP-05-054, 2006.

- Free-field conditions and no sound reduction from the ground surface are expected to occur.
- A standard acoustic energy attenuation rate of -6 dBA per doubling of distance from the assumed construction noise sources is assumed.

Construction noise impact is evaluated based on whether it exceeds the FTA general construction assessment criterion of 90 dBA 1-hour L_{eq} at the nearest noise-sensitive receptor or whether the overall noise level resulting from construction activities would be greater than 10 dBA above the ambient noise level (i.e., a perceived doubling of loudness) at any noise-sensitive receptors. Additionally, if nearby receptors are not noise-sensitive, the evaluation considers whether construction noise could exceed the FTA criterion of 100 dBA 1-hour L_{eq} for commercial and industrial uses (including office, retail, commercial, and industrial uses). If any of these quantitative standards are exceeded, the impact analysis evaluates the frequency, duration, and intensity of construction noise above the quantitative standards to determine whether a significant noise impact would occur. The evaluation of nighttime construction noise impacts consists of a quantitative analysis of the potential for construction noise to result in interior noise levels of greater than 45 dBA at noise-sensitive receptors. If interior noise levels exceed 45 dBA, the impact analysis evaluates the frequency, duration, and intensity of that noise above the quantitative standard to determine whether a significant nighttime construction noise impact would occur.

Construction Traffic Noise

Noise levels generated by construction traffic on local roadways were modeled using the FHWA's Traffic Noise Model Version 2.5. The screening-level analysis assumed a vehicle speed of 30 miles per hour (mph) on Oakdale Avenue and Toland Street, and 25 mph on smaller roadways. Although the model has the capability to account for roadway gradients and shielding effects from terrain and buildings/barriers, this analysis assumed flat topography between the roadways and noise assessment locations, and omitted existing structures that may offer additional shielding. Therefore, the results are conservative (worst-case). Project construction traffic would fall into one of the following three categories:

- **Haul Route:** These are routes used by heavy trucks transporting deliveries and debris to and from the construction site. All traffic associated with the haul route would use Toland Street from the project site, travel southwest to Oakdale Avenue, and Oakdale Avenue northwest from Toland Street to Bayshore Boulevard.
- **Concrete Route:** These are routes used by heavy trucks transporting concrete to and from the construction site. All traffic associated with the concrete route would use Toland Street from the project site and travel northeast to Evans Avenue.
- **Worker Route:** These are routes used by construction workers and fleet vehicles traveling to and from the construction site. To conservatively estimate the various routes by which construction workers would be arriving and departing from the construction site, the construction traffic noise analysis assumed that all roadways in the project vicinity, including the haul and concrete routes, would carry 75 percent of worker traffic.

For construction-related vehicular traffic noise impacts, the following quantitative standards were applied to assess vehicle-generated noise impacts from the proposed project or expanded streetscape variant:

- an increase of greater than 3 dBA in places where the existing or resulting noise environment is "conditionally acceptable," "conditionally unacceptable," or "unacceptable," based on the land use compatibility chart (Figure 3.C-4, p. 3.C-17), because such areas are already exposed to higher-than-desired noise levels; or
- an increase of greater than 5 dBA everywhere else because, as discussed above, a 5 dBA increase in noise levels is readily noticeable.

Because construction noise is temporary and would cease upon completion of construction activities, if construction vehicular traffic noise exceeds any of these quantitative standards, the impact analysis evaluates the frequency, duration, and intensity of that noise above the quantitative standard to determine whether a significant construction noise impact would occur. Construction noise impacts are evaluated in Impact NO-1.

Construction Vibration

Construction activities can generate groundborne vibration of varying degrees based on the construction activity and equipment type. The attenuation of that energy over distance is dependent on the intervening ground media (e.g., soil types) through which the vibration travels between the source and receiving location. Vibration associated with the project or expanded streetscape variant construction activities would occur most notably during major ground-disturbing activities, such as site demolition, grading, and drilling operations. These activities would require the use of bulldozers, hoe rams, and drill rigs. The Caltrans manual's[167] reference vibration level for large bulldozers, hoe rams, and caisson drilling is the same for all three of these types of construction equipment. Therefore, construction vibration levels were predicted using the shared reference level reported in the Caltrans manual, 0.089 PPV in/sec at 25 feet, which is representative of the compacted alluvial soil type surrounding the project site. This reference level allows for the assessment of compliance with structural damage criteria in the Caltrans manual.[168]

The following equation was used to estimate the vibration level at a given distance. PPVref is the reference PPV identified above, 0.089 PPV in/sec at 25 feet for a large bulldozer, hoe ram, and caisson drill rig; D is the distance from the equipment to the receiver; and "n" is assigned a value of 1.1, which is representative of the compacted alluvial soil type surrounding the project site.

$$PPV\ (in/sec) = PPV_{ref}(\frac{25}{D})^n$$

The resulting vibration levels at adjacent structures are compared to the Caltrans building damage criteria shown in Table 3.C-6 (p. 3.C-20). A significant vibration impact would occur if vibration-generating construction activities could result in building damage.

In addition, FTA guidelines are used in the analysis of vibration effects on people, using the category 2 criteria presented in Table 3.C-5 (p. 3.C-19). A significant vibration impact related to sleep disturbance could occur when nighttime construction activities generate vibration levels that meet or exceed the category 2 vibration levels. Construction activities during nighttime could use loaded trucks for after-hours deliveries.

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[167] Caltrans, *Transportation and Construction Vibration Guidance Manual*. Division of Environmental Analysis, April 2020.

[168] Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual, 2018, *https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impactassessment-manual-fta-report-no-0123_0.pdf,* accessed October 5, 2022.

The FTA guidelines provide a reference vibration velocity level for loaded trucks of 86 VdB at 25 feet. The following equation was used to estimate the nighttime construction vibration level at land uses where people would sleep. L_{vref} is the reference vibration velocity level for a loaded truck at 25 feet.

$$VdB = L_{vref} - 30\ x\ Log\left(\frac{Distance}{25}\right)$$

Should vibration levels meet or exceed the category 2 vibration levels during nighttime construction, the analysis then evaluates the duration, frequency, and intensity of the exceedance to determine whether the nighttime construction vibration impact is significant. Construction vibration impacts are evaluated in Impact NO-2.

Traffic Noise Exposure

Existing Traffic Noise

Vehicular traffic on local roadways and I-280 dominate the existing ambient noise environment. Therefore, the existing noise levels collected at the 11 baseline noise monitoring locations are reasonably representative of the existing traffic noise conditions at nearby land uses. The traffic noise analysis assesses the increase of project-only contributions to the existing, measured noise levels throughout the project area.

Offsite Traffic Noise

Project operation would result in the addition of vehicles to local roadways in the project vicinity. Offsite traffic noise generated by the proposed project or expanded streetscape variant was modeled with the FHWA Traffic Noise Model Version 2.5, using the same modeling methodology discussed for the construction traffic noise analysis.

Onsite Traffic Noise

Onsite traffic noise generated by the proposed project or expanded streetscape variant would be characteristic of the existing noise exposure already experienced throughout the studied common noise equivalent areas; therefore, onsite traffic noise levels were combined logarithmically with the project offsite traffic noise predictions to arrive at an aggregate, future traffic noise level with implementation of the proposed project for each common noise equivalent area. The traffic noise generated onsite would occur at onsite vehicle ramps and as a result of idling vehicles, as detailed next.

Vehicle Ramps

The project design includes vehicle ramps that would provide access to the three building levels above-grade. The determination of traffic volumes, vehicle mixes, and the 24-hour traffic distributions are based on the traffic noise analysis assumptions and traffic distributions based on the land use type per gross square feet on each building level.

Logistics Yards

Logistics yards would be on levels one through three of both buildings. The dominant noise generated by the logistics yards would be the vehicle movements and engine idling of medium and heavy trucks after arriving and before departing from each building. The logistics yards were modeled as area sources, matching the dimensions and locations of each logistics yard, and are representative of daytime, evening, and nighttime medium and heavy truck volumes on each level.

The CadnaA® noise prediction model (Version 2020)[169] was used to estimate the propagation of sound from onsite building ramp traffic and logistics yard vehicle idling. Model configuration settings and assumptions are documented in Appendix E, and involve factors that affect noise propagation, such as temperature and humidity, ground absorption characteristics, terrain, and the presence of structures.

Because onsite traffic noise would be generated from a central location, modeled receiver points were placed at the closest land use edge of each common noise equivalent area to estimate the maximum noise contribution to the studied common noise equivalent areas.

Vehicular traffic noise impacts were evaluated using the same quantitative standards applied to construction traffic noise. Specifically, the following quantitative standards were applied to determine whether the proposed project or expanded streetscape variant would result in significant vehicle-generated noise impacts:

- an increase of greater than 3 dBA in places where the existing or resulting noise environment is “conditionally acceptable,” “conditionally unacceptable,” or “unacceptable,” based on the land use compatibility chart (Figure 3.C-4, p. 3.C-17), because such areas are already exposed to higher-than-desired noise levels; or
- an increase of greater than 5 dBA everywhere else because, as discussed above, a 5 dBA increase in noise levels is readily noticeable.

Fixed-Source Operations

The CadnaA noise prediction model (Version 2022) was used to estimate the propagation of sound from aggregate fixed-source project operations, including proposed project or expanded streetscape variant HVAC and emergency generators.

This analysis used the same configuration settings and assumptions as described above for onsite building ramp traffic and logistics yard vehicle idling (see Appendix E).

This assessment considers the potential for noise from stationary equipment at buildings to exceed the allowed fixed-source operational noise limit of the noise ordinance, police code section 2909(b) (i.e., 8 dBA above ambient at a commercial property plane), and section 2909(d) (i.e., residential interior noise limits of 45 dBA between the hours of 10 p.m. and 7 a.m. or 55 dBA between the hours of 7 a.m. and 10 p.m.). If either of these standards from the noise ordinance are exceeded, the proposed project or expanded streetscape variant could result in a significant impact. Operational noise impacts are evaluated in Impact NO-3.

As discussed above in the summary of article 29, certain noise sources (e.g., emergency generators) are not regulated by article 29 of the police code. Nevertheless, this analysis evaluates noise from the proposed project or expanded streetscape variant’s emergency generators based on recommendations from the public health department. The public health department recommends that emergency generators should

[169] CadnaA is a Windows-based software program that predicts and assesses noise levels near industrial noise sources based on ISO 9613-2 algorithms for noise propagation calculations (ISO 1996). The software can accept sound power levels (in dB referenced to 1 picowatt) in octave-band center frequency resolution to describe the multiple sound propagation sources of the site processes or activity to be modeled. The calculations account for classical sound wave divergence plus attenuation factors resulting from air absorption, basic ground effects, and barrier/shielding. CadnaA can model the three-dimensional sound propagation complexity considering realistic, intervening natural and human-made barrier effects, including those resulting from terrain features and structures such as major buildings.

not exceed 75 dBA at the property plane *and* should comply with section 2909(d) of the noise ordinance. Additionally, testing of emergency generators should occur between the hours of 7 a.m. and 8 p.m.[170]

Cumulative Impact Assessment

The discussion of cumulative noise impacts assesses whether the proposed project or expanded streetscape variant, in conjunction with other cumulative projects, would significantly affect noise levels in the project vicinity; and if so, whether the proposed project or expanded streetscape variant's contribution to the cumulative impact would be considerable.

The cumulative impact of construction associated with the proposed project or expanded streetscape variant, in combination with construction of other cumulative projects, is presented in Impact C-NO-1. Cumulative construction vibration impacts are presented in Impact C-NO-2. The cumulative operational noise impact analysis of the proposed project or expanded streetscape variant is presented in Impact C-NO-3.

3.C.4 Project Impacts and Mitigation Measures

This section describes the impact analysis related to noise and vibration associated with the proposed project and expanded streetscape variant. Measures to mitigate significant impacts accompany the discussion of each identified significant impact.

Impact NO-1: Construction of the proposed project or project variant would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project area in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (*Less than Significant)*

PROPOSED PROJECT

Daytime Construction Noise

Construction is anticipated to occur over a total of approximately 31 months. The construction of each building would take approximately 27 months; however, the start of construction for building A would be approximately 4 months before the start of construction for building B, resulting in a total construction duration of approximately 31 months. As described in Table 3.C-7 (p. 3.C-27), construction would include demolition and site preparation, grading and ground improvements, building construction, building envelope and interior buildout, sitework, and startup and commissioning.[171] Construction work would typically occur five to six workdays per week for eight hours per day. As discussed above, noise levels for individual pieces of construction equipment are regulated by section 2907(a) of the city noise ordinance, which requires that equipment have a noise-level limit of 80 dBA at 100 feet from the source; impact tools that exceed the limit are required to be fitted with manufacturer-recommended intake and exhaust mufflers, acoustically attenuating shields, or acoustically attenuating shrouds. Construction of the proposed project would be required to comply with noise ordinance section 2907(a).

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[170] Weintraub, June, Senior Epidemiologist, Manager of Water and Noise Regulatory Programs, Population Health Division, San Francisco Department of Public Health, e-mail correspondence with Chelsea Fordham, Principal Planner, San Francisco Planning Department, June 16, 2022.

[171] In the final stages of construction, the project would undergo commissioning of building systems to ensure that they are complete and functioning properly as designed. In addition to the standard building commissioning, LEED components would undergo fundamental commissioning and verification.

Using the methodology described in "Approach to Analysis" (p. 3.C-21), Table 3.C-7 summarizes the noise levels from the two noise-dominant pieces of construction equipment required for each construction phase. In several cases, construction activities require multiple pieces of the same equipment (e.g., two or more graders); therefore, the two loudest pieces of equipment for a certain phase are the same equipment. A detailed list of anticipated equipment types and quantities for each construction phase is provided in Appendix E.

Table 3.C-7 Loudest Anticipated Construction Equipment per Phase

Phase	Phase Detail	Duration (weeks)	Loudest Two Pieces of Equipment per Phase	Hourly L_{eq} at 50 feet (dBA)	Combined Hourly L_{eq} at 50 feet (dBA)
1	Demolition and Site Preparation	8	Concrete/Industrial Saw	85	88
			Mounted Impact Hammer	85	
2	Grading and Ground Improvements	16	Grader	83	86
			Grader	83	
3[1]	Building Construction	61	Water Truck	82	85
			Generator Set	81	
4[1]	Building Envelope and Interior Buildout	60	Paver	84	87
			Paver	84	
5[1]	Sitework	25	Concrete/Industrial Saw	85	88
			Concrete/Industrial Saw	85	
6	Start-Up and Commissioning	7	Aerial Lift	80	82
			Rubber Tired Loaders	78	

Source: Data compiled by AECOM, 2022

Notes:

1 Construction phase may include nighttime work for certain time-dependent tasks, such as concrete pours required during the building construction phase. The project sponsor would be required to obtain a permit from the San Francisco Department of Public Works or the Department of Building Inspection to extend construction activities beyond the allowable construction hours (7 a.m. to 8 p.m.).

dBA = A-weighted decibels

L_{eq} = energy-average sound level (1-hour)

The estimated aggregate sound pressure level from construction activities was predicted at the following assessment locations:

- the boundary of the construction site (approximately 255 feet from the center of the nearest project building construction site);
- the nearest residential noise-sensitive land use (approximately 440 feet from the nearest project property boundary and 745 feet from the center of the nearest project building construction site); and
- the nearest nonresidential noise-sensitive land use (a church, approximately 350 feet from the nearest project property boundary and 725 feet from the center of the nearest project building construction site).

Table 3.C-8 summarizes the predicted hourly noise levels at the three studied assessment locations during the most noise-intensive construction phases (Phase 1, Demolition and Site Preparation; and Phase 5, Sitework), and the resulting relative noise increase above the existing noise level.[172] Predicted onsite construction noise levels for all studied construction phases are provided in Appendix E.

172 Decibel values presented in all report tables are rounded to the nearest whole decibel. Therefore, the differences calculated may be inconsistent with basic arithmetic expectations.

Table 3.C-8 Predicted Onsite Construction Noise Levels

Worst-Case Construction Phase	Assessment Location	Existing Daytime L_{eq}, dBA	Scenario	Predicted Hourly L_{eq}, dBA
Phase 1 Demolition and Site Prep/Phase 5 Sitework[1]	Construction Boundary	68 (M10[2])	Construction-Only Noise Level	74
			Construction Noise Level + Existing Noise Level	75
			Increase over Existing Noise Level	7
	Nearest Noise-Sensitive Land Use (Church)	70 (M3[2])	Construction-Only Noise Level	65
			Construction Noise Level + Existing Noise Level	71
			Increase over Existing Noise Level	1
	Nearest Residential Noise-Sensitive Land Use	70 (M3[2])	Construction-Only Noise Level	65
			Construction Noise Level + Existing Noise Level	71
			Increase over Existing Noise Level	1

Source: Compiled by AECOM, 2022

Notes:

1 Construction Phases 1 and 5 share the same predicted worst-case construction noise levels.

2 Indicates the baseline noise measurement location used to define the existing daytime noise level at the assessment location.

dBA = A-weighted decibels

L_{eq} = energy-average sound level (1-hour)

For the most intensive construction period, predicted onsite construction noise levels would not exceed the FTA general construction assessment criterion of 90 dBA 1-hour L_{eq} at the nearest noise-sensitive receptor, nor would construction noise levels result in a 10 dBA increase over existing noise levels (a perceived doubling of loudness) at any noise-sensitive land uses. Additionally, noise levels at the property boundary would not exceed the FTA criterion of 100 dBA 1-hour L_{eq}; therefore, they would not exceed this noise level at nearby commercial and industrial uses. The five other construction phases (discussed in detail in Appendix E) similarly would not exceed any of these quantitative noise standards; further analysis of the frequency, duration, and intensity of noise levels above these quantitative standards is not necessary. Therefore, construction of the proposed project would not generate a substantial temporary increase in ambient noise levels in the vicinity of the project area, and impacts associated with daytime construction noise would be ***less than significant***.

Nighttime Construction Noise

Nighttime construction activities are anticipated to occur during specific phases of building construction—the building construction, building envelope and interior buildout, and the sitework phases. Nighttime construction activities, as defined by article 29 of the public health department, are construction activities occurring between 8 p.m. and 7 a.m. Noise levels at the project property plane during nighttime construction activities would exceed the ambient noise levels by greater than 5 dBA, and the project sponsor would be required to obtain a permit from the San Francisco Public Works or the Department of Building Inspection to extend construction activities beyond the allowable construction hours (7 a.m. to 8 p.m.). Such permits are only granted for activities that are required to occur during nighttime periods, such as concrete pours and/or crane deliveries. Interior noise levels anticipated to be generated by the proposed project's nighttime construction at the closest residential noise-sensitive land use (440 feet from the nearest project site boundary) are shown in Table 3.C-9.

Table 3.C-9 Predicted Nighttime Construction Noise Levels at Nearest Residential Receptor

Construction Phase	Equipment Assumed	Predicted Exterior Construction Noise Level (L_{eq}, dBA)	Predicted Interior Construction Noise Level (L_{eq}, dBA)[1]
Building Construction	Two Concrete Pump Trucks	57	32
Building Envelope and Interior Buildout	One Flatbed Truck	56	31
Sitework	One Flatbed Truck	56	31

Source: Compiled by AECOM, 2022

Note:

1 An exterior to interior transmission loss of 25 dBA was assumed for the studied closest receptor, which is representative of typical residential building construction with windows closed (U.S. EPA 1974, Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety, U.S. EPA 550/9-74-004).

dBA = A-weighted decibels
L_{eq} = energy-average sound level (1-hour)

The proposed project would result in nighttime construction noise levels at the interior of the nearest residential noise-sensitive land use that would range from 31 to 32 dBA, L_{eq}. This noise level is well below the interior noise level limit of 45 dBA that is necessary to prevent sleep disturbance. Therefore, nighttime construction noise at noise-sensitive land uses would be ***less than significant***.

Construction Traffic Noise

The total number of temporary/short-term workers during the approximate 31-month duration of construction is anticipated to range from approximately 2,500 to 3,000. The construction traffic noise analysis considered three peak-traffic scenarios, made up of the peak-traffic periods when each specified route would experience its maximum daily traffic volume. These scenarios and associated traffic volumes per route are shown in Table 3.C-10. Nighttime construction traffic routes would have fewer vehicles; therefore, this analysis assumed all vehicles would travel on these routes during daytime hours.

Table 3.C-10 Construction Traffic Noise Scenarios

Studied Scenario	Daily Traffic Volumes per Route (ADT)		
	Heavy Trucks on Haul Route	Heavy Trucks on Concrete Route	Cars on Worker Route
Period of Maximum Haul Route Traffic	155	53	38
Period of Maximum Concrete Route Traffic	94	120	51
Period of Maximum Worker Route Traffic	33	43	149

Source: Data compiled by AECOM, 2022

Notes:

ADT = average daily traffic
Cars = vehicles with two axles, four wheels
Heavy Trucks = vehicles with three or more axles

Construction traffic noise levels were predicted in each common noise equivalent area for each of the three worst-case construction traffic scenarios, summarized as follows:

- Maximum Haul Route Traffic Volumes: during Phase 3, Building Construction, for building A; and Phases 1 and 2, Demolition and Site Preparation and Grading and Ground Improvements, for building B
- Maximum Concrete Route Traffic Volumes: during Phase 3, Building Construction, for building A; and Phases 2 and 3, Grading and Ground Improvements and Building Construction, for building B
- Maximum Worker Route Traffic Volumes: during Phase 5, Sitework, for building B; and Phase 6, Building Envelope and Interior Buildout, for both buildings

Using the highest predicted noise levels generated by any of the three studied scenarios listed above, Table 3.C-11 shows predicted construction traffic noise levels in each common noise equivalent area, along with the relative increase in existing noise levels. As shown in Table 3.C-11, construction traffic would not cause a measurable increase in overall traffic noise levels in the project vicinity. Therefore, impacts associated with construction traffic noise would be ***less than significant***.

Table 3.C-11 Construction Traffic Noise Prediction and Comparison

CNEA ID	Measured Daytime L_{eq} (dBA)	Worst-Case Construction Traffic Daytime L_{eq} (dBA)	Aggregate Daytime L_{eq} (dBA)	Difference
1	65	45	65	0
2	71	58	71	0
3	70	58	71	0[1]
4	77	35	77	0
5	79	43	79	0
6	77	44	77	0
7	71	42	71	0
8	78	46	78	0
9	66	40	66	0
10	68	42	68	0
11	72	43	72	0

Source: Compiled by AECOM, 2022

Notes:

[1] Decibel values presented in this table are rounded to the nearest whole decibel. The actual values for Measured Daytime L_{eq} is 70.3 and Aggregate Daytime L_{eq} is 70.6, resulting in a difference of 0.3 dBA.

CNEA = common noise equivalent area
CNEL = community noise equivalent level
dBA = A-weighted decibels
L_{eq} = equivalent-energy sound pressure level

Construction Noise Summary

In summary, as described in detail above, the proposed project would not result in a significant daytime or nighttime construction noise impact or a significant construction-related traffic noise impact, and construction noise impacts would be ***less than significant***.

EXPANDED STREETSCAPE VARIANT

Construction activities for the expanded streetscape variant would be the same as described above for the proposed project, with the exception that there would be a minimal increase in construction truck trips and construction activities associated with resurfacing the additional half of the roadways, curbs, gutters, and sidewalks across from the project site on Toland Street, Rankin Street, and McKinnon Avenue during the sitework phase of project construction. Due to the elevated existing daytime noise levels in the project vicinity, the negligible increase in construction traffic volume resulting from the expanded streetscape variant would not increase ambient daytime noise levels.

The worst-case construction equipment analyzed for the proposed project in Table 3.C-7 (p. 3.C-27) would remain the worst-case construction noise scenarios for the variant. Construction of the expanded streetscape variant would not result in higher construction noise levels than those predicted for the proposed project (Table 3.C-8, p. 3.C-28).

Similar to the proposed project, nighttime construction activities for the expanded streetscape variant would occur during the building construction, building envelope and interior buildout, and sitework phases. The worst-case construction equipment analyzed for the sitework construction phase in Table 3.C-9 (p. 3.C-29) would be the same for nighttime work for the expanded streetscape variant. The nighttime construction noise levels at the interior of the nearest residential noise-sensitive land use would be 31 to 32 dBA, L_{eq}, which is below the interior noise level of 45 dBA necessary to prevent sleep disturbance.

In summary, the expanded streetscape variant would not result in a significant daytime or nighttime construction noise impact, or a significant construction-related traffic noise impact, and construction noise impacts would be ***less than significant***.

Impact NO-2: Construction of the proposed project or project variant would not generate excessive groundborne vibration or groundborne noise levels. (*Less than Significant*)

PROPOSED PROJECT

Demolition, grading, and drilling activities would generate groundborne vibration levels and would be the primary concern for vibratory impacts on structures and human receptors because of the relatively high reference vibration levels generated by construction equipment used during these activities (e.g., hydraulic impact hammer/hoe ram operation). The proposed project would require the following construction equipment that would generate vibration: rubber-tired and tracked tractors, hoe rams, drill rigs, jackhammers, and loaded trucks. Of these sources, tracked tractors (e.g., bulldozers), hoe rams, and drill rigs have the highest potential for vibration effects. As discussed above, Caltrans'[173] reference vibration level for large bulldozers, hoe rams, and caisson drilling is the same for all three of these types of construction equipment. Therefore, construction vibration levels were predicted using the shared reference level reported in the Caltrans manual, 0.089 PPV in/sec at 25 feet, which is representative of the compacted alluvial soil type surrounding the project site.

As presented in Table 3.C-6 (p. 3.C-20), vibratory potential damage criteria for frequent vibration events range from 0.25 PPV in/sec for historic buildings to 0.5 PPV in/sec for modern industrial/commercial

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[173] Caltrans, *Transportation and Construction Vibration Guidance Manual*. Division of Environmental Analysis, April 2020.

buildings. In addition, residences and buildings where people normally sleep could experience sleep interference with vibration levels between 72 and 80 VdB.

The nearest existing structures would be approximately 70 feet from the closest project building façade. At this distance, construction vibration levels from hoe ram, bulldozer, and drilling activities are estimated to reach approximately 0.029 PPV in/sec, which would be below any potential structural damage criteria.

No establishments featuring vibration-sensitive activities (e.g., medical laboratories) were identified in the project area. The closest structure in which people would sleep is approximately 440 feet from the closest edge of the project construction boundary. Due to nighttime construction activity restrictions, the only notable nighttime vibration sources would be loaded trucks used for transporting cement and/or cranes. A loaded truck at a distance of 440 feet from the nearest residential receptor would generate a vibration level of approximately 49 VdB, approximately 23 VdB below the minimum level that could result in sleep interference (72 VdB). Therefore, impacts associated with the potential for the proposed project to generate excessive groundborne vibration or groundborne noise levels would be ***less than significant***.

EXPANDED STREETSCAPE VARIANT

The extent of proposed project demolition and construction activities stop at the project property line, which is delineated in city drawings as the approximate center line of the bounding roadways. The expanded streetscape variant would extend construction activities up to the approximate façade of adjacent buildings to the northeast, northwest, and southeast to construct proposed expanded roadway improvements and sidewalks. The existing ground outside of these buildings is asphalt, which spans from the roadway up to each building façade. This existing asphalt would require demolition (e.g., it would be broken up using a concrete saw and/or backhoe), removal, and eventually replacement with the expanded streetscape variant sidewalks and new roadway surfaces. The majority of buildings abutting these improvements were constructed in the 1940s and 1960s. The vibration damage threshold of 0.25 PPV in/sec for “old buildings” is used to evaluate the impact on buildings greater than 50 years old at the onset of construction activities for the expanded streetscape variant; the vibration damage threshold of 0.5 PPV in/sec is used to evaluate the impacts on modern buildings. A backhoe would be required for construction of the expanded streetscape variant and would operate as close as 5 feet from all adjacent buildings (both old and modern). At this distance, the vibration levels would reach 0.018 PPV in/sec. These vibration levels are below the Caltrans building damage criteria for old and modern buildings. Therefore, construction vibration impacts would be ***less than significant***.

Consistent with the proposed project analysis, nighttime construction activity restrictions would be limited to loaded trucks used for transporting cement and/or cranes. A loaded truck at a distance of 440 feet from the nearest residential receptor would generate a vibration level of approximately 49 VdB, approximately 23 VdB below the minimum level that could result in sleep interference (72 VdB). Therefore, the expanded streetscape variant would not generate excessive groundborne vibration or groundborne noise levels, and its nighttime construction vibration impact would be ***less than significant***.

Impact NO-3: Operation of the proposed project or project variant would result in the generation of a substantial temporary or permanent increase in ambient noise levels in the project area in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. *(Less than Significant with Mitigation)*

PROPOSED PROJECT

Traffic Noise

Noise levels generated by traffic on local roadways were modeled using the FHWA's Traffic Noise Model Version 2.5. The screening-level analysis assumed a vehicle speed of 30 mph on Oakdale Avenue and Toland Street, and 25 mph on smaller roadways. The following data were used to characterize and quantify the daytime, evening, and nighttime traffic data that were used as inputs for the traffic noise model.

Project Total Vehicle Volumes (Daily Average)

The studied roadway segments and associated average daily traffic volumes are shown in Table 3.C-12.

Table 3.C-12 Studied Roadway Segments with Existing and Future (with Project) ADT Volumes

Roadway Segment	Existing ADT	Existing with Project ADT	Net ADT Increase
Jerrold Avenue, east of Toland Street westbound	2,125	2,470	345
Jerrold Avenue, east of Toland Street eastbound	2,125	2,470	345
Jerrold Avenue, west of Toland Street	4,510	6,430	1,920
Kirkwood Avenue, Selby Street to Rankin Street	360	780	420
Kirkwood Avenue/Toland Street to Selby Street	270	1,180	910
McKinnon Avenue, Selby Street to Rankin Street	720	1,330	610
McKinnon Avenue, Toland Street to Selby Street	570	1,580	1,010
McKinnon Avenue, west of Toland Street	830	830	0
Oakdale Avenue, east of Toland Street	8,700	9,290	590
Oakdale Avenue, west of Toland Street	9,630	9,880	250
Rankin Street, entrance at Rankin Street to Kirkwood Avenue	720	1,920	1,200
Rankin Street, McKinnon Avenue to entrance at Rankin Street	720	1,330	610
Rankin Street, Kirkwood Avenue to Jerrold Avenue	1,060	2,640	1,580
Selby Street, entrance at Selby Street to Kirkwood Avenue	—	930	930
Selby Street, McKinnon Avenue to entrance at Selby Street	—	2,190	2,190
Selby Street, north of Kirkwood Avenue	90	90	0
Selby Street, south of McKinnon Avenue	250	1,550	1,300
Toland Street, entrance at Toland Street to Kirkwood Avenue	3,260	5,500	2,240
Toland Street, Jerrold Avenue to Evans Avenue	3,450	4,970	1,520
Toland Street, Kirkwood Avenue to Jerrold Avenue	3,530	6,290	2,760
Toland Street, McKinnon Avenue to entrance at Toland Street	3,260	4,770	1,510
Toland Street, Oakdale Avenue to McKinnon Avenue	3,100	3,610	510

Source: Adavant Consulting/LCW Consulting (Adavant), 2021, 749 Toland Street and 2000 McKinnon Avenue Project Estimation of Project Travel Demand, December.

Notes:

ADT = average daily traffic, derived from peak-hour PM traffic data per roadway by using the common peak-hour conversion multiplier of 10 to estimate average daily traffic volumes.

Project Vehicle Classification

Project vehicles would vary in type and quantity by use, and each vehicle classification has different noise-generating characteristics that were considered in the traffic noise analysis. Table 3.C-13 summarizes the vehicle classifications and the number of average daily vehicle trips estimated for each proposed use.

Table 3.C-13 Overall Project Average Daily Traffic Vehicle Volumes and Classifications per Project Land Use

Project Use Type	Automobiles (including vans)	Medium Trucks	Heavy Trucks	Total
Onsite Workers	3,030	0	0	3,030
Maker and Manufacturing	110	22	2	134
Parcel Delivery and Last-Mile Delivery	2,016	292	120	2,428
Wholesale and Storage	302	242	60	604
General Retail/Café/Quick Service	524	6	0	530
Total Project Vehicle Trips (ADT)	5,982	556	182	6,196
Traffic from Existing Uses Removed by Project	554	132	14	700
Net New Vehicle Trips (ADT)	5,428	424	168	5,496

Source: Adavant 2021, Travel Demand Memorandum, Appendix F – Table 1, Appendix D – Existing Site Total Warehouse Summary

Note:

ADT = Average Daily Traffic
Medium Trucks = Vehicles with two axles and six tires (e.g., box trucks)
Heavy Trucks = Vehicles with three or more axles

Project Vehicle Distribution by Time and Vehicle Type

As described earlier, the noise descriptors apply a penalty for nighttime noise. Therefore, not only are average daily traffic and the type of vehicle important to estimate future noise levels and effects, but the time of day that the vehicles operate is needed to derive the community noise descriptors, CNEL and L_{dn}. These data are particularly important for describing the noise levels associated with the late-night/early-morning operations by medium and heavy trucks that could occur with the project parcel delivery and last-mile delivery uses. Table 3.C-14 summarizes the distribution of vehicle use by period of the day. Detailed tables and vehicle breakdowns are provided in Appendix E.

Table 3.C-14 Summary of 24-Hour Vehicle Distribution Data

Vehicle Class	Percent Distribution Across 24-Hour Period per Vehicle Class		
	Daytime (7 a.m. to 7 p.m.)	Evening (7 p.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Autos (including vans)	76.1%	9.6%	14.3%
Medium Trucks	84.6%	9.9%	5.5%
Heavy Trucks	22.1%	13.5%	64.4%

Source: Adavant Consulting/LCW Consulting (Adavant), 2021, 749 Toland Street and 2000 McKinnon Avenue Project Estimation of Project Travel Demand, December.

The majority of heavy truck traffic activity would occur during the nighttime period for parcel/last-mile delivery facility operations. Although traffic associated with project operation would include non-parcel/last-mile delivery uses that would follow normal business hours, the percentages shown above were incorporated into the traffic noise model inputs to ensure a reasonable worst-case assessment of traffic noise, weighted toward nighttime heavy truck operation.

In addition to the proposed project vehicles on offsite roadways, onsite vehicles traveling on the building ramps and maneuvering in the logistics yards and parking areas would generate noise that could affect nearby sensitive land uses. Appendix E details how these vehicle volumes were determined. The offsite and onsite vehicle traffic noise was combined to evaluate the change to ambient noise conditions in each of the common noise equivalent areas.

Project Vehicle Noise Levels on Common Noise Equivalent Areas

Onsite and offsite traffic noise would vary by both vehicle trips and vehicle type throughout each 24-hour operating period. Table 3.C-15 shows the estimated project-related traffic noise compared with existing traffic noise levels for each studied area. CNEL is the common noise metric used to assess noise effects on humans caused by time-varying transportation-type noises (e.g., roadways, rail, or aviation) because it considers the 24-hour noise exposure at a noise-sensitive property and assesses the source on a broader scale. CNEL is also used by the State of California as the basis for assessing land use compatibility in existing noise environments.

Table 3.C-15 Predicted Project Traffic Noise Level Increase over Existing Noise Level

CNEA ID	CNEA Contains Noise-Sensitive Land Uses?	Existing Traffic Noise Level within CNEA (CNEL, dBA)	Predicted Project Traffic Noise Level (CNEL, dBA)	Existing + Project Traffic Noise Level (CNEL, dBA)	Net Increase (dBA)
CNEA 1	No	66	55	67	0[1]
CNEA 2	No	71	67	72	+1
CNEA 3	Yes	70	62	71	+1
CNEA 4	Yes	80	52	80	0
CNEA 5	Yes	81	59	81	0
CNEA 6	No	82	67	82	0
CNEA 7	Yes	73	57	73	0
CNEA 8	No	80	58	80	0
CNEA 9	Yes	68	56	68	0
CNEA 10	No	69	66	71	+2
CNEA 11	No	75	60	75	0

Source: Compiled by AECOM, 2022

Notes:

1 Decibel values presented in this table are rounded to the nearest whole decibel. The actual values for Existing Traffic Noise Level within CNEA 1 is 66.2 dBA and for Existing plus Project Traffic Noise Level is 66.5 dBA, resulting in a difference of 0.3 dBA.

CNEA = common noise equivalent area
CNEL = community noise equivalent level
dBA = A-weighted decibels

All common noise equivalent areas containing noise-sensitive land uses experience existing traffic noise levels in excess of conditionally acceptable criteria pursuant to the general plan. Therefore, as discussed in the "Approach to Analysis" section above, a significant project traffic noise impact would occur if the proposed project would result in traffic noise that increases ambient noise levels by greater than 3 dBA. Table 3.C-15 (p. 3.C-35) shows that the maximum traffic noise increase at common noise equivalent areas containing noise-sensitive land uses (CNEA 3) would be 1 dBA. Common noise equivalent area 10, the area surrounding the project site to the southeast and east (made up of warehouse, storage, distribution, and SFPUC land uses), would experience the largest traffic noise increase of 2 dBA. As discussed above, except in carefully controlled laboratory experiments, a change of only 1 dBA in sound level cannot generally be perceived by the human ear. Outside of the laboratory, a 3 dBA change is considered a barely perceptible difference. Therefore, traffic noise generated by the proposed project would not result in a substantial permanent increase in ambient noise levels. Traffic noise impacts resulting from operation of the proposed project would be ***less than significant***.

Noise from Fixed Sources

This assessment considers the potential for noise from fixed or stationary equipment at the two buildings to exceed the allowed operational noise limit of the noise ordinance, police code section 2909(b) (i.e., 8 dBA above ambient at the property plane), and section 2909(d) (i.e., interior noise limits of 45 dBA between the hours of 10 p.m. and 7 a.m. or 55 dBA between the hours of 7 a.m. and 10 p.m.). The ambient noise level used for the assessment of compliance with the ordinance is based on the L_{90} sound pressure level metric, which is typically considered to be a conservative representation of the ambient noise exposure at a receiver location under most conditions.[174]

Fixed-source noise associated with typical project operations would include the HVAC systems and testing of the emergency power generator systems. Each of these noise sources is analyzed below.

Heating, Ventilation, and Air Conditioning

The project structures would require the following three discrete mechanical systems:

- **Logistics yard ventilation:** Non-ducted system of ceiling-mounted ventilation fans to exhaust air from the logistics yards; these units would be on the proposed buildings' northwestern and southeastern façades, at building levels one through three

- **Interior space ventilation:** Ducted ventilation systems serving interior PDR spaces in the buildings; these units would be on the proposed buildings' rooftops

- **Interior space air conditioning:** Ducted split air conditioning systems[175] serving interior accessory office and retail spaces in the buildings; condenser units associated with the split air conditioning systems would be on the proposed buildings' rooftops

Because specific designs for the HVAC systems have not been prepared and a conservative assessment for CEQA review is appropriate to evaluate a worst-case operational scenario, the fixed-source operational noise analysis assumed an event during which carbon dioxide detection systems on all three project

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[174] City of San Francisco, San Francisco Police Code Article 29: Regulation of Noise Guidelines for Noise Control Ordinance Monitoring and Enforcement [Article 29 Guidelines], Department of Public Health, 2014.

[175] Split air conditioning systems separate the locations of the supply air-distribution equipment and the refrigerant-condensing equipment that are otherwise typically packaged into one housing.

logistics yard levels would reach ventilation system activation levels. This scenario would result in full-power, simultaneous operation of logistics yard ventilation units throughout both project buildings. Considering rooftop ventilation unit operation, this worst-case scenario would generate a combined ventilation flow rate of more than 1 million cubic feet per minute.

Table 3.C-16 lists the units assumed for each HVAC source and their relative unweighted sound power levels. Figure 3.C-5, Figure 3.C-6 (p. 3.C-39), and Figure 3.C-7 (p. 3.C-40) show the proposed locations of these units on each project building level, which would be the same for both buildings.

Table 3.C-16 Project HVAC Sound-Generating Sources[1]

System Association	Type	Quantity per Project Building	Project Total	Unweighted Sound Power Level (dB)
Logistics Yard Ventilation System	Ceiling-Mounted Ventilation Fan	10	20	98
PDR Ventilation System	Rooftop Ventilation Fan	8[2]	16	101
PDR Accessory Office Split AC System	Rooftop Condenser Fan Array	3[2]	6	89
Retail Split AC System	Rooftop Condenser Fan Array	1[2]	2	87

Source: Compiled by AECOM, 2022

Notes:

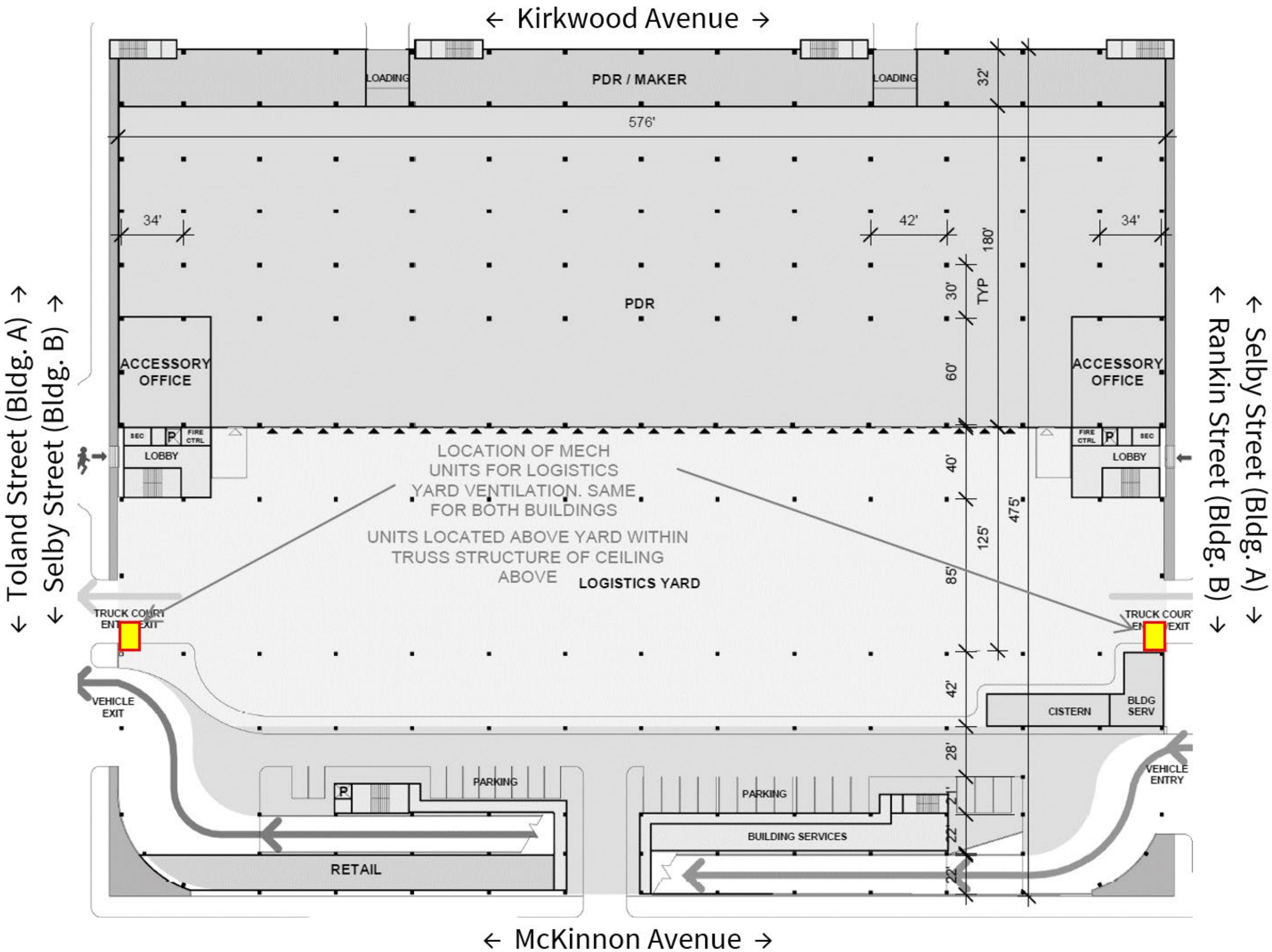
1 Manufacturer reference sound level data and conversions are provided in Appendix E.

2 Each building features six discrete rooftop HVAC areas. To model the twelve rooftop units of this table (i.e., the sum of ventilation and condenser fan arrays), each of the six rooftop areas was modeled assuming one condenser fan array and two ventilation fans. This generated a worst-case scenario for each of the six rooftop areas.

AC = air conditioning
dB = decibel
HVAC = heating, ventilation, and air conditioning
PDR = production, distribution, and repair

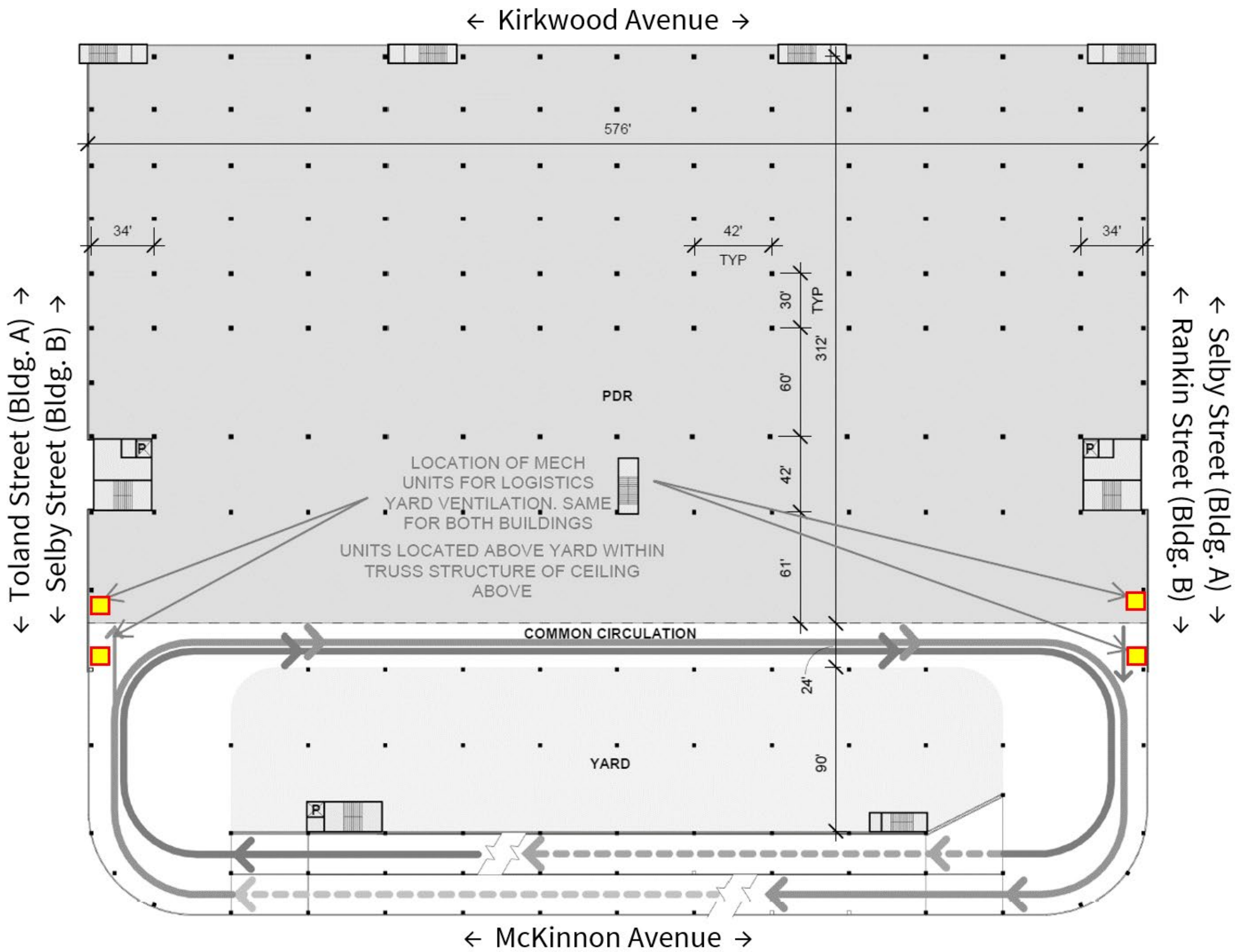
Façade ventilation units for the logistics yards were modeled at an elevation of the ceiling height for each building level. Rooftop HVAC equipment was modeled at 5 feet above the rooftop elevation. Discrete locations of individual rooftop HVAC units have yet to be defined; therefore, this analysis assumed an even distribution of HVAC equipment across the six rooftop mechanical areas for each building, resulting in a combined equipment unweighted noise level of approximately 102 dB sound power level at each location.

Figure 3.C-5 Locations of Logistics Yard Ventilation Units on Level 1



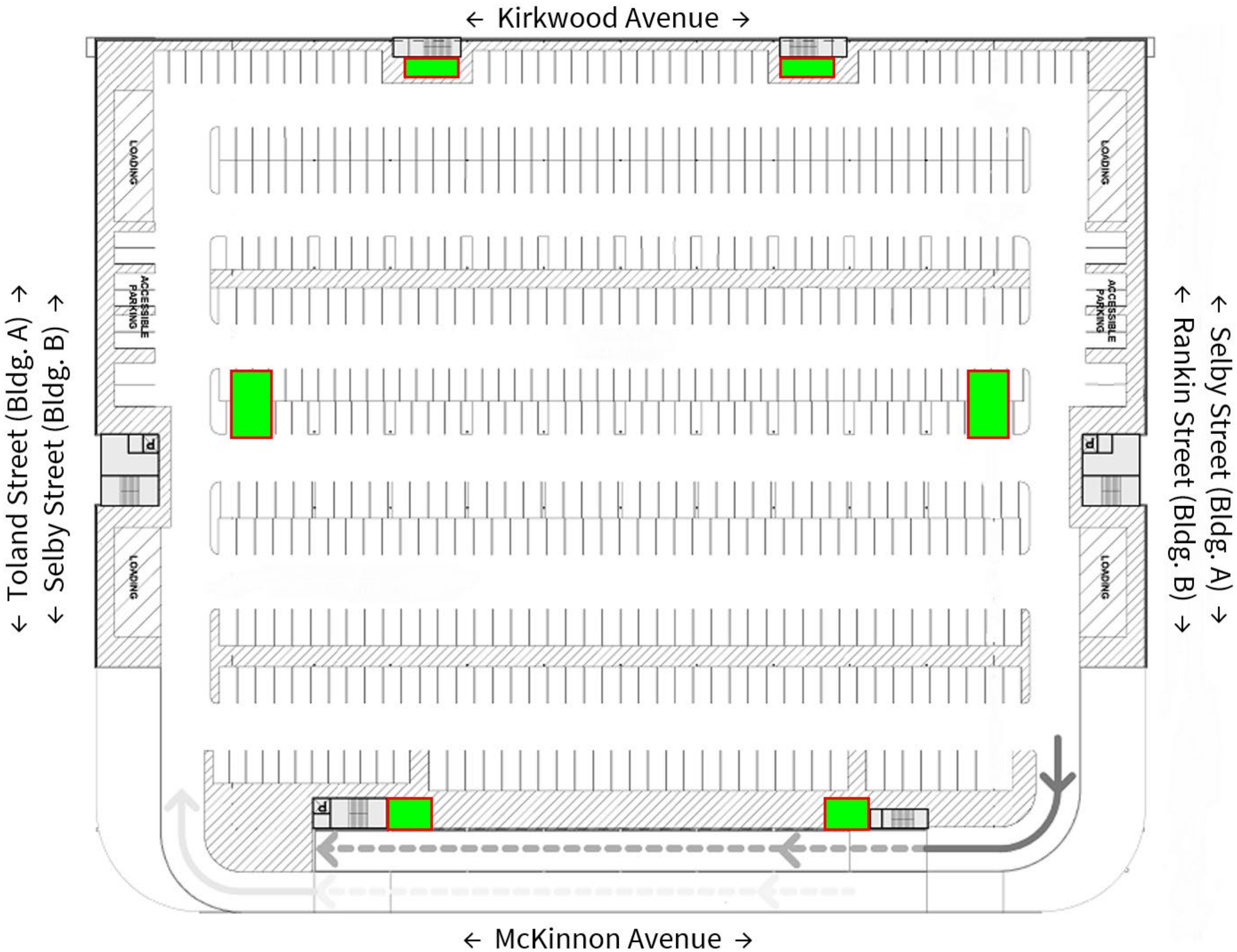
Source: Jackson Liles Architects (JLA), 2019 (October), adapted by AECOM.

Figure 3.C-6 Locations of Logistics Yard Ventilation Units on Levels 2 and 3



Source: Jackson Liles Architects (JLA), 2019 (October), adapted by AECOM.

Figure 3.C-7 Locations of Rooftop Ventilation and Condenser Units



Source: Jackson Liles Architects (JLA), 2019 (October), adapted by AECOM.

Assessment of Article 29 Section 2909(b) Compliance

Article 2909(b) limits noise from the combination of all project fixed sources to an 8 dBA or lower increase over ambient noise levels along the project property plane. Table 3.C-17 summarizes existing ambient noise levels along each property plane and the resulting project fixed source noise limits.

Table 3.C-17 Ambient Noise Levels at Property Planes and Fixed-Source Noise Limits

Project Property Boundary	Associated Adjacent CNEA ID[1]	Lowest Measured Existing 10-minute L_{90} (dBA)	Fixed-Source Noise Requirement (for Section 2909(b) Compliance) (L_{90} + 8 dBA)
Northwest (Toland Street)	CNEA 2	51	59
Southeast (Rankin Street)	CNEA 10	50	58
Central (I-280/Selby Street)	CNEA 6	51	59
Southwest (McKinnon Avenue)	CNEA 6	51	59
Northeast (Kirkwood Avenue)	CNEA 8	52	60

Source: Compiled by AECOM, 2022

Notes:

1 Although CNEAs are not drawn to meet the actual project property plane on map figures, they are used in this table to delineate the side of the project property plane at which the existing L_{90} values are assigned to determine compliance criteria.

2 The L_{90} sound pressure level metric is typically considered to be a conservative representation of the ambient noise exposure at a receiver location under most conditions. For this reason, it is used in the article 29 (2909[b]) limit.

CNEA = common noise equivalent area
dBA = A-weighted decibels
ID = identification
L90 = sound level exceeded for 90 percent of measurement period
L^{eq} = Equivalent Sound Level

To assess project fixed-source operational noise levels consistent with the article 29 (2909[b])[176] requirements, receiver points were modeled along multiple property boundary locations, at elevations of 5, 15, 30, 60, 90, 105, 120, and 140 feet. These receiver elevations were selected based on worst-case vertical elevations associated with fixed-source heights on the building façade; and elevations greatly above the building rooftop, where the shielding effects from barriers on fixed rooftop sources is diminished.

Table 3.C-18 shows the maximum predicted noise levels generated from onsite project fixed-source equipment at each project property plane. Predicted noise levels are compared with calculated noise limits associated with these property boundaries.

176 City of San Francisco, San Francisco Police Code Article 29: Regulation of Noise Guidelines for Noise Control Ordinance Monitoring and Enforcement [Article 29 Guidelines], Department of Public Health, 2014.

Table 3.C-18 Predicted Project Fixed-Source Noise Levels at Property Planes

Project Property Boundary	Fixed-Source Noise Limit (measured L_{90} + 8 dBA)	Highest Predicted Fixed-Source Noise Level along Property Plane (L_{eq}, dBA)	Elevation of Highest Noise Level along Property Plane (feet)	Exceeds Noise Limit?	Noise Reduction Required for Article 29 Compliance (dBA)[1]
Northwest (Toland Street)	59	75	30	Yes	-16
Southeast (Rankin Street)	58	74	60	Yes	-16
Central (I-280/Selby Street)	59	74	30	Yes	-15
Southwest (McKinnon Avenue)	59	64	30	Yes	-4[2]
Northeast (Kirkwood Avenue)	60	62	60	Yes	-2

Source: Compiled by AECOM, 2022

Notes:

[1] Article 29 refers to Section 2909(b)

[2] Decibel values presented in this table are rounded to the nearest whole decibel. The actual value for the Fixed-Source Noise Limit at the Southwest property boundary is 59.4 dBA and the Highest Predicted Fixed-Source Noise Level along that Property Plane is 63.7 dBA, resulting in a difference of 4.3 dBA.

dBA = A-weighted decibels
I-280 = Interstate 280
L_{eq} = equivalent-energy sound pressure level
L_{90} = sound level exceeded for 90 percent of measurement period

Predicted fixed-source noise levels due to proposed project operations would exceed the article 29 requirement (8 dBA above ambient) at all project property boundaries by 2 to 16 dBA. Noise expected to be generated by the logistics yard ventilation system is the primary cause of predicted exceedance of the article 29 requirements at elevations below the project buildings' rooftop heights because they exhaust outward from the building façades.

Without implementation of noise control measures, the proposed project's fixed-noise sources would result in exceedances of section 2909(b) requirements. Furthermore, as discussed in the Section 2.D.2, Proposed Project Uses (p. 2-20), the specific tenants that would occupy the building are unknown, and the building is designed to accommodate an assortment of PDR tenants that would change over time in response to economic and technological conditions. Individual tenants may have additional HVAC needs, which are currently unknown. Therefore, it is also possible for individual tenant HVAC systems to exceed the requirements in the noise ordinance and this impact would be ***significant***.

Mitigation Measures

To achieve compliance with the article 29 requirements and lessen noise from proposed project fixed-source mechanical equipment, Mitigation Measures M-NO-3a and M-NO-3b would be necessary. The mitigation measures identify several feasible options to achieve the required reduction from the onsite mechanical equipment.

Mitigation Measure M-NO-3a: Fixed-Source Noise Attenuation for Buildings A and B

Prior to the issuance of a building permit that allows construction of buildings A and/or B, the project sponsor shall demonstrate that the project meets the noise limits in article 29 section 2909(b). Specifically, the project sponsor shall demonstrate that fixed-source noise levels generated by mechanical equipment do not exceed 8 dBA above the ambient noise level at any property plane. The noise level limits for each property plane are as follows, but may be updated based on empirical measurements conducted at a later date as approved by the city:

- Property plane along Toland Street, Selby Street, and McKinnon Avenue: 59 dBA, L_{eq}
- Property plane along Rankin Street: 58 dBA, L_{eq}
- Property plane along Kirkwood Avenue: 60 dBA, L_{eq}

Feasible noise reduction measures to achieve the property plane noise limits identified above may include, but are not limited to, a combination of the following:

- **Ventilation Routing and Relocation:** Route or direct the ventilation units to exhaust away from the adjacent land uses (i.e., outside the property planes) and toward I-280. Relocate ventilation units away from the building edge and to a more-central location in each logistics yard.
- **Acoustically Treated Ducting:** Implement an acoustically lined duct to the exhaust of each logistics yard fan in a manner that maintains the above ventilation routing requirement.
- **Project Rooftop HVAC System:** Implement one of the following two options for rooftop HVAC unit noise reduction:
  - Install a 12-foot-tall noise barrier surrounding each of the six rooftop unit areas; or
  - Centralize all rooftop HVAC units at the rooftop center and install a 14-foot-tall barrier around the centralized unit area.

Alternatively, or in addition, the project sponsor also may implement quieter ventilation fan units, quieter HVAC units, duct silencers at the outlet of the ventilation systems, and/or acoustical louvers at ventilation system terminations at the two building edges to achieve compliance with the article 29 section 2909(b) requirement. The final design of the rooftop HVAC units and logistics yard ventilation system shall be analyzed and assessed for article 29 section 2909(b) compliance by an acoustical consultant as a requirement for building permit approval.

Upon installation of the proposed project's mechanical equipment, the project sponsor shall take noise measurements of the equipment to ensure that the equipment complies with article 29, section 2909(b). Noise measurements shall be provided to the planning department prior to receipt of a certificate of occupancy. Should noise measurements indicate that the project's fixed-source mechanical equipment noise does not comply with article 29, section 2909(b), the project sponsor, with analysis from an acoustical consultant, shall install additional noise attenuation measures necessary to meet the article 29, section 2909(b) requirement. Any additional noise attenuation measures shall be approved by the planning department; installed; and verified to meet the article 29, section 2909(b) requirement.

Mitigation Measure M-NO-3b: Fixed-Source Noise Attenuation for Building Tenants

Prior to the issuance of a building permit that allows for the installation of fixed sources that generate noise (e.g., mechanical systems), the project sponsor's acoustical consultant shall demonstrate that the project meets the noise limits in article 29 section 2909(b) (8 dBA above the ambient noise level at any property plane) and 2909(d) (45 dBA between the hours of 10 p.m. and 7 a.m., and 55 dBA between the hours of 7 a.m. and 10 p.m., with windows open—except where building ventilation is achieved through mechanical systems that allow windows to remain closed). All recommendations in the acoustical analysis necessary to ensure that noise sources would meet the noise limits in article 29 section 2909(b) and 2909(d) shall be incorporated into the building design and operations. Acoustical treatments may include, but are not limited to:

- enclosing noise-generating mechanical equipment;
- installing relatively quiet models of air handlers, exhaust fans, and other mechanical equipment;
- using mufflers or silencers on equipment exhaust fans;
- orienting or shielding equipment to protect noise-sensitive receptors to the greatest extent feasible;
- increasing the distance between noise-generating equipment and noise-sensitive receptors; and
- placing barriers around the equipment to facilitate the attenuation of noise.

The project sponsor shall provide noise measurements of the installed equipment at the department's request. Should noise measurements indicate that the above-listed performance standards in article 29 are not met, the project sponsor shall install additional noise attenuation measures necessary to ensure that the performance standards are met.

Significance after Mitigation

Additional analysis of two HVAC systems was conducted to ensure that they would achieve compliance with article 29, section 2909(b) requirements. The results of this analysis are provided in Appendix E. The analysis found that noise-reduction measures identified in Mitigation Measure M-NO-3a would reduce noise levels at the property plane by up to 18 dBA and therefore meet the property plane noise limits of article 29, section 2909(b). Details of the studied noise-reduction methods and alternative approaches that could also lead to project noise compliance at the property plane are described in Appendix E. Implementation of Mitigation Measure M-NO-3a would ensure that fixed-source noise generated by project HVAC systems would be compliant with article 29, section 2909(b) at all property planes. Additionally, Mitigation Measure M-NO-3b would ensure that all additional noise-generating equipment required by proposed project tenants would meet the requirements of article 29, sections 2909(b) and 2909(d). Therefore, impacts associated with increases in ambient noise levels from fixed sources would be ***less than significant with mitigation***.

Assessment of Article 29 Section 2909(d) Compliance

Table 3.C-19 shows predicted noise levels generated from the proposed project's onsite fixed-noise sources at the nearest residential receptors. Predicted noise levels were compared with the article 29 section 2909(d) requirements that establish maximum allowable daytime and nighttime interior noise levels for residential uses. Figure 3.C-8 (p. 3.C-46) shows the locations of the studied receiver points.

Table 3.C-19 Predicted Project Fixed-Source Noise Levels at Residential Receptors

Receiver Point	Approximate Distance from Project Site Boundary (feet)	Predicted Fixed-Source Noise Level at Residential Façade (Exterior) (L_{eq}, dBA)	Interior Noise Level Assuming 10 dBA[1] Open-Window Noise Reduction (L_{eq}, dBA)	Daytime/ Nighttime Interior Noise Level Limit for Article 29 Compliance (dBA)[2]	Exceeds Noise Limit?
2018-2022 Oakdale Avenue, 1st Floor	445	41	31	55/45	No
2018-2022 Oakdale Avenue, 2nd Floor	445	44	34	55/45	No
2039 Oakdale Avenue, 1st Floor	600	40	30	55/45	No
2039 Oakdale Avenue, 2nd Floor	600	42	32	55/45	No
1987 Oakdale Avenue, 1st Floor	600	41	31	55/45	No
1987 Oakdale Avenue, 2nd Floor	600	44	34	55/45	No
1996 Palou Avenue, 1st Floor	745	46	36	55/45	No
1996 Palou Avenue, 2nd Floor	745	47[3]	37	55/45	No

Source: Compiled by AECOM, 2022

Notes:

1 Typical residential buildings would reduce noise from outside to inside the building to within a range of 24 to 27 dB (with an average of 25 dB) of noise reduction with windows closed; and a range of 12 to 18 dB (with an average of 15 dB) of noise reduction with windows partially open. (Governor's Office of Planning and Research, State of California 2017 General Plan Guidelines, Appendix D: Noise Element Guidelines, p. 378, 2017, *http://opr.ca.gov/docs/OPR_Appendix_D_final.pdf*, accessed April 14, 2021; U.S. Environmental Protection Agency, Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety, Appendix B, Table B-4, p. B-6, March 1974.) A conservative estimate of exterior-to-interior transmission loss of 10 dBA was assumed for the studied receptors, which is representative of typical residential building construction with windows open. Federal Highway Administration (FHWA), Highway Traffic Noise: Analysis and Abatement Guidance, December 2011.

2 Article 29 refers to Section 2909(d).

3 Counter to typical expectations, predicted operational noise levels show a pattern of increasing with distance from the project noise sources. This is a result of vicinity terrain sloping upward with distance. The closest homes benefit from notable line-of-sight shielding from project noise sources due to adjacent multi-story buildings. However, at greater distances from the project, homes at higher elevations on the hillside are afforded a direct line-of-sight to project noise sources, resulting in higher predicted noise levels. The noise level predicted at the second story of 1996 Palou Avenue (a single-family home) represents the highest predicted fixed-source noise level calculated at any residential receptor in the study area (i.e., including homes farther up the slope that also experience a direct line-of-sight to project noise sources).

dBA = A-weighted decibels

L_{eq} = equivalent-energy sound pressure level

Figure 3.C-8 Predicted Project Fixed-Source Noise Levels with No Noise Reduction Measures Applied at Residential Receptors

Sources: Compiled by AECOM 2022

Proposed project predicted fixed-source noise levels would range from 30 to 37 dBA at the interior locations of the nearest residential structures. These values would not exceed the article 29 (Section 2909[d]) interior noise level limit of 55 dBA L_{eq} during the daytime or 45 dBA L_{eq} during the nighttime, and this impact would be ***less than significant***.

Emergency Generators

The proposed project would install two emergency generator units to prevent operational restrictions during periods of grid failure. Each building would be outfitted with a single 440 horsepower (hp) 400 kilovolt ampere (kVA) generator.

Consistent with the air quality analysis for this draft EIR, this noise analysis assumed that these units would be at ground level along the northeastern perimeter of the project site along Kirkwood Avenue, with an exhaust stack height of 12 feet. The reference noise source level input into the model for each unit was 70 dBA at 23 feet.[177] This level is representative of the 75 percent load reference sound level of a slightly larger, 500 kVA emergency generator.

Based on recommendations from the public health department,[178] this analysis evaluates whether the proposed project's emergency generators would exceed 75 dBA at the property plane or the fixed residential interior noise limits provided in section 2909(d) of the noise ordinance (interior noise limits of 55 dBA between the hours of 7 a.m. and 10 p.m. and 45 dBA between the hours of 10 p.m. and 7 a.m. at any receptor land use with a dwelling unit). Additionally, testing of emergency generators would occur between the hours of 7 a.m. and 8 p.m.

To assess emergency generator noise levels at the property plane, receiver points were modeled along the northeastern property boundary along Kirkwood Avenue, matching those used in the fixed-source model, and placed at the closest property plane to each generator. The maximum predicted noise level generated from emergency generator testing and emergency operation at the northeastern property plane was 68 dBA. Therefore, the property plane noise levels from temporary emergency generator testing would be ***less than significant***.

Emergency generator testing typically would need to occur once per month and between the hours of 7 a.m. and 8 p.m. to help ensure that the equipment is functioning properly. Because of the location of the generator units on the northwestern side of the project buildings (along McKinnon Avenue), generator noise at the nearest noise-sensitive residential receptors would be reduced substantially by the shielding effects of project and non-project structures. Emergency generator noise at the nearest noise-sensitive residential receptor would be approximately 21 dBA, L_{eq}, a noise level that would be inaudible in the existing urban acoustic environment during both daytime and nighttime hours. For reference, a whisper is considered to generate between 20 to 25 dBA at a listener. Considering a 10 dBA reduction from the residential building shell with open windows, interior noise levels would be below the 55 dBA, L_{eq} daytime and 45 dBA, L_{eq} nighttime noise limit in article 29, section 2909(d), and this impact would be ***less than significant***.

177 Caterpillar, Specification Sheet: LEHX0031-06 Model XQP500 500 kVA Generator, 2020.

178 Weintraub, June, Senior Epidemiologist, Manager of Water and Noise Regulatory Programs, Population Health Division, San Francisco Department of Public Health, e-mail correspondence with Chelsea Fordham, Principal Planner, San Francisco Planning Department, June 16, 2022.

EXPANDED STREETSCAPE VARIANT

The expanded streetscape variant would result in the same on- and offsite vehicle classifications, travel speeds, traffic volumes, and hourly traffic distributions as the proposed project. The resulting traffic noise would therefore be the same as described above for the proposed project. Therefore, traffic noise impacts associated with the expanded streetscape variant would be ***less than significant***.

The expanded streetscape variant also would result in the same operational noise sources as the proposed project. As a result, the expanded streetscape variant's fixed-source equipment (e.g., mechanical systems) would exceed article 29 noise limits, but with implementation of Mitigation Measures M-NO-3a and M-NO-3b, the noise impacts associated with increases in ambient noise levels would be ***less than significant with mitigation***.

The expanded streetscape variant would also include the same emergency generator noise sources as the proposed project, and emergency generator noise would be the same as described above for the proposed project. Expanded streetscape variant emergency generator noise levels would not exceed 75 dBA at the property plane, and interior noise levels would be below the noise limits in article 29, section 2909(d). Therefore, this impact would be ***less than significant***.

3.C.5 Cumulative Impacts

The geographic scope of analysis for cumulative noise and vibration impacts encompasses cumulative projects within approximately 0.25 mile of the project area. Beyond 0.25 mile, the contributions of noise from other projects would be attenuated through both distance and intervening structures, and their contributions would be minimal. The cumulative projects identified and described in Section 3.A.6, under "Cumulative Environmental Setting" and Figure 3.A-4 (p. 3.A-18) could contribute to cumulative noise and vibration impacts, as discussed below.

Operational vibration is typically considered a potential concern for projects featuring major vibratory noise sources such as above and/or below-grade rail transportation (e.g., passenger and freight rail), material compaction/tamping (e.g., metal recycling facilities), and blasting (e.g., mining uses). Operation of the proposed project and cumulative projects would not feature any of such activities; therefore, vibration from operation of the proposed project or expanded streetscape variant in combination with cumulative projects would not result in excessive groundborne vibration or groundborne noise levels, and this topic is not addressed further.

Impact C-NO-1: Construction of the project or project variant, in combination with construction of cumulative projects, would not result in the generation of a substantial temporary or permanent increase in ambient noise levels in excess of standards. *(Less than Significant)*

Of the cumulative projects, four of these projects (Bayview Community Based Transportation Plan, 2270 McKinnon Avenue, Quint-Jerrold Connector, and SF Market) would feature construction activities occurring at distances similar to or closer to noise-sensitive land uses as the project. Although construction schedules for the cumulative projects and the proposed project could change, it is possible that phases of project construction could overlap with these cumulative projects.

As shown in project construction analysis Table 3.C-8 (p. 3.C-28), project construction noise levels would not exceed 90 dBA, and the relative increase over existing noise levels at noise-sensitive land uses would be approximately 1 dBA. This contribution is minimal to cumulative construction activities. Furthermore, like the proposed project, all of the identified cumulative projects would be required to comply with sections 2907 and 2908 of the noise ordinance. These sections place noise limits on individual pieces of construction equipment and require that nighttime construction activities that could exceed 5 dBA above the ambient at the property plane obtain a night noise permit. Compliance with the noise ordinance would ensure that no significant cumulative construction noise impact would occur. Therefore, the cumulative construction noise impact of the proposed project or expanded streetscape variant is ***less than significant***.

Impact C-NO-2: Construction of the project or project variant, in combination with construction of cumulative projects, would not result in the generation of excessive groundborne vibration or groundborne noise levels. ***(Less than Significant)***

Vibration impacts related to potential damage at adjacent buildings are based on instantaneous maximum PPV levels generated by individual pieces of equipment. Therefore, vibratory effects are generally a direct result of a discrete maximum vibration of the worst-case piece of equipment, rather than a sum of equipment at further distances or lesser vibratory energy. For this reason, the cumulative impact of construction vibration from multiple construction projects near one another would generally not combine to further increase vibration levels. In essence, vibration effects are highly localized.

Vibration generated by project nighttime construction activities was predicted to be 49 VdB, approximately 23 VdB lower than the threshold of 72 VdB, which could result in sleep interference. Similar to construction noise contributions discussed in Impact C-NO-1, this contribution of vibratory energy at sensitive land uses is minimal; and if there were a circumstance where the proposed project and a cumulative project were to require vibration-generating nighttime construction activities at the same time, it would be unlikely that cumulative nighttime construction vibration would reach 72 VdB and potentially result in sleep interference. For the reasons discussed above, cumulative construction vibration impacts of the proposed project or the expanded streetscape variant would be ***less than significant***.

Impact C-NO-3: Operation of the project or project variant, in combination with cumulative projects, would not result in the generation of a substantial temporary or permanent increase in ambient noise levels in excess of standards. ***(Less than Significant)***

Traffic Noise

The project traffic noise analysis results in Table 3.C-15 (p. 3.C-35) show that worst-case traffic noise generated by project operations would increase ambient noise levels by up to 1 dBA at some noise-sensitive land uses and by up to 2 dBA at some non-noise-sensitive land uses. Relative increases of 1 to 2 dBA are generally not perceptible outside of laboratory conditions. For cumulative traffic noise impacts to occur at the noise-sensitive land use experiencing the 1 dBA increase, traffic contributions from cumulative projects would need to be capable of generating traffic noise levels at least 8 dBA greater than those predicted by project operations.

The Bayview Community Based Transportation Plan, 2270 McKinnon Avenue, and Quint-Jerrold Connector projects would not inherently increase traffic volumes on local roadways to a magnitude that would be similar to the proposed project, because the types of proposed uses do not require regular car and truck vehicle trips to support their daytime and nighttime operations. These projects would generate substantially lower traffic noise levels than the project itself and cumulatively would not be expected to increase noise levels by the estimated 8 dBA to become potentially significant. The SF Market cumulative project would expand and upgrade the existing produce market operations adjacent to the proposed project site and include up to 1,397 net-new daily vehicle trips.[179] As described in the SF Market 2011 initial study, the elevated I-280 structure generates high noise levels throughout the day and night, and the SF Market's additional vehicle trips would not cause a noticeable increase in the ambient noise levels in the area.

The proposed project and expanded streetscape variant would generate an amount of daily traffic on adjacent roadways approximately two to three times those of the SF Market Project. Considering this relative relationship, traffic from the SF Market project would generate less than a 1 dB increase in traffic noise when summed with that generated by the proposed project or expanded streetscape variant. As discussed above, increases of 1 to 2 dBA are generally not perceptible outside of laboratory conditions. Therefore, cumulative traffic noise impacts with the proposed project or expanded streetscape variant would be ***less than significant***.

Fixed Noise Sources

Fixed noise sources associated with project operations include noise generated by logistics yard ventilation systems, rooftop HVAC units, and emergency generator testing. As discussed under Impact NO-3, aggregate noise generated by the HVAC systems would result in noise levels in excess of article 29 section 2909(b) standards at the property plane. The proposed project would be required to implement Mitigation Measures M-NO-3a and M-NO-3b, which would ensure that the proposed project meets the requirements of article 29.

The cumulative projects at 2270 McKinnon Avenue and the SF Market are the two closest projects that would feature fixed noise sources associated with their operation. The property of 2270 McKinnon Avenue is approximately 1,055 feet northwest of the project center, and the SF Market Project abuts the proposed project to the northeast. The proposed project's fixed noise sources and fixed-source noise from these cumulative projects would be individually required to comply with the noise limits provided in section 2909 of the police code at the property plane (2909[b]) and at residential interiors (2909[d]). Furthermore, the structures associated with the proposed project would be expected to substantially shield future fixed noise sources associated with the SF Market Project that would otherwise propagate southward toward noise-sensitive land uses to the south. Therefore, fixed-source noise from the proposed project, combined with that from cumulative projects, would not cause a significant cumulative noise impact; and cumulative operational noise impacts from the proposed project or expanded streetscape variant would be ***less than significant***.

179 San Francisco Planning Department. Addendum 2 to the Mitigated Negative Declaration for San Francisco Market, July 21, 2022, *https://citypln-m-extnl.sfgov.org/SharedLinks.aspx?accesskey=19fcf155f022570a086659bd4f40621cae3e1d2670ff3d8fa550e92be4ba0837&VaultGUID=A4A7DACD-B0DC-4322-BD29-F6F07103C6E0*.

3.D Air Quality

This section of the draft EIR describes the existing air quality conditions in the proposed project area and vicinity, identifies the regulatory framework for air quality management, and analyzes the potential for implementation of the proposed project or expanded streetscape variant to affect air quality conditions, both regionally and locally, due to activities that emit criteria and noncriteria air pollutants. The analysis accounts for the types and quantities of emissions that would be generated on a temporary basis due to construction activities, as well as those generated over the long term due to development that could occur as a result of the project or expanded streetscape variant. The analysis determines whether those emissions are significant in relation to applicable air quality standards, and identifies feasible mitigation measures for significant adverse impacts. Information supporting this analysis of air quality impacts is included in Appendix F of this draft EIR.

The analysis in this section is based on a review of existing air quality conditions in the region, and air quality regulations administered by the U.S. EPA, the California Air Resources Board (air board), and the Bay Area Air Quality Management District (air district). This analysis includes methodologies identified in the air district's CEQA air quality guidelines and the health risk assessment (HRA) methodology published by the Office of Environmental Health Hazard Assessment (OEHHA) in 2015.[180,181]

In preparing this analysis, the planning department considered comments submitted on the NOP of an EIR (see Appendix A). The planning department received the following comments related to air quality:

- evaluate the proposed project's emissions and pollutant concentrations in the surrounding community, bearing in mind the proposed project site's location in an Air Pollutant Exposure Zone (APEZ);
- evaluate both project-level and cumulative health risks;
- evaluate all potential emissions sources, including construction and operational sources;
- evaluate the project's consistency with the air district's 2017 Clean Air Plan;
- identify those emissions that would occur in the localized region as a result of the proposed project activities surrounding the project site, and from onsite activity and vehicle idling;
- evaluate all feasible measures to minimize air pollutant emissions;
- acknowledge that certain components of the proposed project may require a permit from the air district;
- evaluate air quality impacts of the proposed project, considering existing conditions and future baseline conditions with and without the proposed project (see Chapter 1, Introduction).

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[180] Bay Area Air Quality Management District, *California Environmental Quality Act Air Quality Guidelines*, May 2017, *https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en*, accessed July 15, 2021. The air quality analysis for the San Francisco Gateway project was largely prepared based on guidance in the air district's 2017 CEQA air quality guidelines, which were the guidelines available at the time of publication of the Notice of Preparation (NOP) of an Environmental Impact Report. However, the analysis presented here is also generally consistent with the air district's April 20, 2023 release of their 2022 California Environmental Quality Act Air Quality Guidelines. Substantive clarifications provided in the 2022 CEQA air quality guidelines and applicable to the San Francisco Gateway Project have been incorporated into the air quality analysis presented in this section. The 2022 CEQA Air Quality Guidelines are available at: *https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines*. Accessed June 16, 2023.

[181] California Environmental Protection Agency, *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessment*, February 2015, *http://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf*, accessed July 15, 2021.

These analyses are provided in Section 3.D.4, Project Impacts and Mitigation Measures (p. 3.D-34).

3.D.1 Environmental Setting

The proposed project site is in the San Francisco Bay Area air basin (air basin), which includes all of San Francisco, Alameda, Contra Costa, Marin, San Mateo, Santa Clara, and Napa counties, and the southern and southwestern portions, respectively, of Sonoma and Solano counties. The study area for regional air quality impacts is the air basin. The study area for localized air quality impacts is generally within 1,000 feet of the proposed project site, as well as within 1,000 feet of haul routes for proposed project construction, and trip routes for proposed project operational vehicle travel between the site and where the on- and off-ramps merge onto or exit U.S. 101 or I-280. As described in Section 3.A.5, Historic and Existing Context of San Francisco's Bayview Hunters Point Neighborhood (p. 3.A-6), the proposed project site is in one of the most environmentally burdened areas[182] in San Francisco. The specific area evaluated for impacts is discussed below in Section 3.D.4. The air district is the regional agency responsible for air quality planning in the air basin.

CLIMATE AND METEOROLOGY

The air basin's moderate climate steers storm tracks away from the region for much of the year, although storms generally affect the region from November through April. Temperatures in the proposed project vicinity average in the mid-50s annually, generally ranging from the low 40s on winter mornings to mid-70s during summer afternoons. Daily and seasonal oscillations of temperature are small because of the moderating effects of San Francisco Bay. In contrast to the steady temperature regime, rainfall is highly variable and confined almost exclusively to the "rainy" period from November through April. Precipitation may vary widely from year to year because a shift in the annual storm track of a few hundred miles can mean the difference between a wet year and drought conditions.

Atmospheric conditions—such as wind speed, wind direction, and air temperature gradients—interact with the physical features of the landscape to determine the movement and dispersal of air pollutants regionally. The proposed project is in southeastern San Francisco, in the Peninsula climatological subregion, as defined by the air district. Marine air traveling through the Golden Gate is a dominant weather factor affecting dispersal of air pollutants in the region. Wind measurements collected on the San Francisco mainland indicate a prevailing wind direction from the west at about 10 miles per hour, and an average annual wind speed of 7.7 miles per hour.[183] Increased temperatures create the conditions in which ozone formation can increase.

AMBIENT AIR QUALITY – CRITERIA AIR POLLUTANTS

As required by the federal Clean Air Act of 1970, the U.S. EPA initially identified six criteria air pollutants that are pervasive in urban environments, and for which state and federal health-based ambient air quality standards have been established. The U.S. EPA calls these pollutants "criteria air pollutants" because the agency has regulated them by developing specific public-health-based and welfare-based criteria for setting permissible levels. Ozone, carbon monoxide (CO), particulate matter (PM), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead are the six criteria air pollutants originally identified by U.S. EPA. Since that time, subsets of particulate matter have been identified for which permissible levels have been established. These include particulate

182 Environmental burden is defined as a measurement of cumulative environmental and socioeconomic vulnerability. For more information, see *https://sfplanning.org/project/environmental-justice-framework-and-general-plan-policies#ej-communities*.

183 San Francisco Department of Public Health, San Francisco Planning Department, and Ramboll, *San Francisco Citywide Health Risk Assessment: Technical Support Documentation*, September 2020.

matter of 10 microns in diameter or less (PM_{10}) and particulate matter of 2.5 microns in diameter or less ($PM_{2.5}$). See Section 3.D.2, Regulatory Framework (p. 3.D-17), for further discussion of specific pollutants and their attainment status in the air basin with respect to state and federal air quality standards.

The region's air quality monitoring network provides information on ambient concentrations of criteria air pollutants at various locations in the San Francisco Bay Area. Table 3.D-1 presents a 5-year summary for the period 2017 to 2021 of the highest annual criteria air pollutant concentrations collected at the air quality monitoring station operated and maintained by the air district at 16th and Arkansas streets in San Francisco's Potrero Hill neighborhood. Table 3.D-1 also compares measured pollutant concentrations with the national and state standards for each of the criteria air pollutants. Concentrations shown in bold indicate an exceedance of the standard for the air basin (see Table 3.D-2, p. 3.D-5, for the air basin's attainment status for each criteria air pollutant). Table 3.D-1 does not include SO_2 because monitors are not required for the bay area because the air basin has never been designated as nonattainment for SO_2.

The ambient air quality standards—both federal and state—are expressed as airborne concentrations of various pollutants. Compliance with the standards is on a regional basis. In the bay area, compliance is demonstrated by ongoing measurements of pollutant concentrations at more than 30 air quality monitoring stations operated by the air district in all nine bay area counties. An exceedance of an ambient air quality standard at any one of the stations counts as a regional exceedance.

National and state air quality standards have been set at levels considered safe to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly with a margin of safety; and to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. As explained by the air board, "[A]n air quality standard defines the maximum amount of a pollutant averaged over a specified period of time that can be present in outdoor air without any harmful effects on people or the environment."[184] That is, if a region is in compliance with the ambient air quality standards, its regional air quality can be considered protective of public health. The national air quality standards are statutorily required to be set by the U.S. EPA at levels that are "requisite to protect the public health."[185] Therefore, the closer a region is to attaining a particular standard, the lower the human health impact is from that pollutant.

A brief description of the health effects of exposure to criteria air pollutants is provided below.

Ozone

Ozone is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG; also sometimes referred to as volatile organic compounds [VOCs] by some regulating agencies) and nitrogen oxides (NO_X). The main sources of ROG and NO_X, often referred to as ozone precursors, are combustion processes (including motor vehicle engines) and the evaporation of solvents, paints, and fuels. In the bay area, automobiles are the single largest source of ozone precursors. Ozone is referred to as a regional criteria air pollutant because its precursors are transported and diffused by wind concurrently with ozone production through the photochemical reaction process. Ozone causes eye irritation, airway constriction, and shortness of breath, and can aggravate existing respiratory diseases, such as asthma, bronchitis, and emphysema.

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[184] California Air Resources Board, *California Ambient Air Quality Standards*, 2022, *https://www.arb.ca.gov/research/aaqs/caaqs/caaqs.htm*, accessed September 1, 2022.

[185] See *https://www.law.cornell.edu/uscode/text/42/7409*.

Table 3.D-1 Summary of San Francisco Air Quality Monitoring Data (2017–2021)

Pollutant	Most-Stringent Applicable Standard	Number of Days Standards Were Exceeded and Maximum Concentrations Measured[1]				
		2017	2018	2019	2020	2021
Ozone						
Days 1-hour standard exceeded	—	0	0	0[2]	0	0
Maximum 1-hour concentration (ppm)	>0.09 ppm[3]	.087	.065	0.091	0.088	.074
Days 8-hour standard exceeded	—	0	0	1	0	0
Maximum 8-hour concentration (ppm)	>0.070 ppm[3],[4]	0.054	0.049	**0.074**	**0.056**	.055
Carbon Monoxide (CO)						
Days 1-hour standard exceeded	—	0	0	0	0	0
Maximum 1-hour concentration (ppm)	>20 ppm[3]	1.7	2.5	1.9	1.2	1.2
Days 8-hour standard exceeded	—	0	0	0	0	0
Maximum 8-hour concentration (ppm)	>9 ppm[3]	1.1	1.4	1.6	1.0	0.9
Suspended Particulates (PM_{10})						
Days 24-hour standard exceeded	—	2	0	0	2	0
Maximum 24-hour concentration ($\mu g/m^3$)	>50 $\mu g/m^3$[3 3]	**77.0**	**43.0**	**42.1**	**105.0**	**33.0**
Suspended Particulates ($PM_{2.5}$)						
Days 24-hour standard exceeded	—	7	14	0	8	0
Maximum 24-hour concentration ($\mu g/m^3$)	>35 $\mu g/m^3$[4]	**49.9**	**177.4**	**25.4**	**147.3**	**22.4**
Annual average ($\mu g/m^3$)	>12 $\mu g/m^3$[3 3],[4]	9.7	11.7	7.7	10.5	7.1
Nitrogen Dioxide (NO_2)						
Days 1-hour standard exceeded	—	0	0	0	0	0
Maximum 1-hour concentration (ppm)	>0.100 ppm[4]	0.073	0.069	0.061	0.048	0.050

Source: California Air Resource Board Top 4 Summary for the San Francisco Arkansas Street monitoring site, 2017–2021, https://www.arb.ca.gov/adam/topfour/topfourdisplay.php.
United States Environmental Protection Agency Air Data Air Quality Monitors for Arkansas Street monitoring site, 2022, https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=5f239fd3e72f424f98ef3d5def547eb5

Notes:

Bold values are in excess of applicable standard.

1 Number of days exceeded is for all days in a given year, except for particulate matter. PM_{10} is monitored every six days. Therefore, the number of days exceeded is out of approximately 60 annual samples.
2 Measured maximum 1-hour ozone concentration in 2019 is not identified by air board as an exceedance of the California Ambient Air Quality standard.
3 State standard, not to be exceeded.
4 Federal standard, not to be exceeded.

— = not applicable
air board = California Air Resources Board
$\mu g/m^3$ = micrograms per cubic meter
PM_{10} = particulate matter 10 microns in diameter or less
$PM_{2.5}$ = particulate matter 2.5 microns in diameter or less
ppm = parts per million

Table 3.D-2 State and Federal Ambient Air Quality Standards and Attainment Status

Pollutant	Averaging Time	State Standards [1]		Federal Standards [2]	
		Standard	Attainment Status	Standard	Attainment Status
Ozone	1 hour	0.09 ppm	**N**	NA	—[3]
	8 hours	0.07 ppm	**N**[4]	0.070 ppm	**N**
Carbon monoxide (CO)	1 hour	20 ppm	A	35 ppm	A
	8 hours	9 ppm	A	9 ppm	A
Nitrogen dioxide (NO_2)	1 hour	0.18 ppm	A	0.100 ppm	U
	Annual	0.030 ppm	NA	0.053 ppm	A
Sulfur dioxide (SO_2)	1 hour	0.25 ppm	A	0.075	A
	24 hours	0.04 ppm	A	0.14	A
	Annual	NA	NA	0.03 ppm	A
Particulate matter (PM_{10})	24 hours	50 µg/m³	**N**	150 µg/m³	U
	Annual[5]	20 µg/m³	**N**	NA	NA
Fine particulate matter ($PM_{2.5}$)	24 hours	NA	NA	35 µg/m³	**N**
	Annual	12 µg/m³	**N**	12 µg/m³	U/A[6]
Sulfates	24 hours	25 µg/m³	A	NA	NA
Lead	30 days	1.5 µg/m³	A	NA	NA
	Calendar quarter[7]	NA	NA	1.5 µg/m³	A
Hydrogen sulfide	1 hour	0.03 ppm	U	NA	NA
Visibility-reducing particles	8 hours	—[8]	A	NA	NA

Source: Bay Area Air Quality Management District, *Standards and Attainment Status*, 2022, https://www.baaqmd.gov/about-air-quality/research-and-data/air-quality-standards-and-attainment-status, accessed September 1, 2022.

Notes:

1 State Standards = State ambient air quality standards (California). State standards for ozone, CO (except Lake Tahoe), SO_2 (one-hour and 24-hour), NO_2, particulate matter, and visibility-reducing particles are values that are not to be exceeded. All other state standards shown are values not to be equaled or exceeded.

2 Federal Standards = national ambient air quality standards. Federal standards, other than ozone and particulates, and those based on annual averages or annual arithmetic means, are not to be exceeded more than once a year. The eight-hour ozone standard is attained when the three-year average of the fourth highest daily concentration is 0.08 ppm or less. The 24-hour PM_{10} standard is attained when the three-year average of the 99th percentile of monitored concentrations is less than the standard. The 24-hour $PM_{2.5}$ standard is attained when the three-year average of the 98th percentile is less than the standard.

3 The U.S. EPA revoked the national one-hour ozone standard on June 15, 2005.

4 This state eight-hour ozone standard was approved in April 2005 and became effective in May 2006.

5 State standard = annual geometric mean; national standard = annual arithmetic mean.

6 In December 2012, the U.S. EPA strengthened the annual $PM_{2.5}$ NAAQS from 15 to 12 µg/m³. In December 2014, the U.S. EPA issued final area designations for the 2012 primary annual $PM_{2.5}$ NAAQS. Areas designated "unclassifiable/attainment" must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.

7 Calendar quarter means any one of the following time periods during a given year: January 1 through March 31, April 1 through June 30, July 1 through September 30, or October 1 through December 31.

8 Statewide visibility-reducing particle standard (except Lake Tahoe Air Basin): Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70 percent. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

A = Attainment; **N** = Nonattainment; U = Unclassified; NA = Not Applicable, no applicable standard

CO = carbon monoxide
µg/m³ = micrograms per cubic meter.
NAAQS = National Ambient Air Quality Standards
NO_2 = nitrogen dioxide
PM_{10} = particulate matter less than 10 micrograms in diameter
$PM_{2.5}$ = particulate matter less than 2.5 micrograms in diameter
ppm = parts per million
SO_2 = sulfur dioxide
U.S. EPA = United States Environmental Protection Agency

Table 3.D-1 (p. 3.D-4) shows that according to published data at the air quality monitoring station, the most stringent applicable standard (the federal eight-hour standard of 7 parts per hundred million) was exceeded in San Francisco in 2019. The air quality monitoring station is near the northern boundary of the Potrero Hill neighborhood in San Francisco, which is adjacent to light industrial activities and residential neighborhoods, and is between two major roadways: U.S. 101 and I-280. Although the westerly wind sea breeze usually keeps pollution levels low, light wind conditions and surface-based inversions can result in elevated concentrations of ozone precursors.[186]

Carbon Monoxide

CO is an odorless, colorless gas usually formed as a result of the incomplete combustion of fuels. The single largest source of CO is motor vehicles; the highest emissions occur during low travel speeds, stop-and-go driving, cold starts, and hard acceleration. Exposure to high concentrations of CO reduces the oxygen-carrying capacity of the blood, and can cause headaches, nausea, dizziness, and fatigue; impair central nervous system function; and induce angina (chest pain) in persons with serious heart disease. Very high levels of CO can be fatal. As shown in Table 3.D-1 (p. 3.D-4), the more stringent state CO standards were not exceeded between 2017 and 2021.

Particulate Matter (PM_{10} and $PM_{2.5}$)

Particulate matter is a class of air pollutants that consists of heterogeneous solid and liquid airborne particles from man-made and natural sources. Particulate matter regulated by the state and federal Clean Air Acts is measured in two size ranges: PM_{10} for particles less than 10 microns in diameter, and $PM_{2.5}$ for particles less than 2.5 microns in diameter. In the bay area, motor vehicles generate about one-half of the air basin's particulates, through tailpipe emissions as well as brake pad and tire wear. Wood burning in fireplaces and stoves, industrial facilities, and ground-disturbing activities such as construction are other sources of fine particulates. These fine particulates are small enough to be inhaled into the deepest parts of the human lung and can cause adverse health effects. According to the air board, studies in the United States and elsewhere "have demonstrated a strong link between elevated particulate levels and premature deaths, hospital admissions, emergency room visits, and asthma attacks," and studies of children's health in California have demonstrated that particle pollution "may significantly reduce lung function growth in children." The air board also reports that statewide attainment of particulate matter standards could prevent thousands of premature deaths, lower hospital admissions for cardiovascular and respiratory disease and asthma-related emergency room visits, and avoid hundreds of thousands of episodes of respiratory illness in California. Among the criteria air pollutants that are regulated, particulates appear to represent a serious ongoing health hazard. In 1999, the air district reported in its CEQA air quality guidelines that studies had shown that elevated particulate levels contribute to the death of approximately 200 to 500 people per year in the bay area. High levels of particulate matter can exacerbate chronic respiratory ailments, such as bronchitis and asthma, and have been associated with increased emergency room visits and hospital admissions.

$PM_{2.5}$ is of particular concern because epidemiologic studies have demonstrated that people who live near freeways and high-traffic roadways have poorer health outcomes, including increased asthma symptoms

[186] Bay Area Air Quality Management District, 2022 Annual Air Monitoring Network Plan, *https://www.baaqmd.gov/~/media/files/technical-services/2022_network_plan-pdf.pdf?la=zh-tw*, accessed December 9, 2022.

and respiratory infections, and decreased pulmonary function and lung development in children.[187] New studies are also showing that long-term average exposure to $PM_{2.5}$ is associated with an increased risk of death from the novel coronavirus 2019 disease (COVID-19) in the United States. One study found that an increase of 1 µg/m^3 in $PM_{2.5}$ is associated with an 8 percent increase in the COVID-19 death rate.[188] Exposure to wildfire smoke (which includes $PM_{2.5}$) experienced by Californians in 2020 also could have contributed to increased cases of COVID-19.[189] These studies all demonstrate a correlational relationship between exposure to $PM_{2.5}$ and increases in the COVID-19 death rate, not a causal relationship.

Table 3.D-1 (p. 3.D-4) shows that the state 24-hour PM_{10} standard of 50 µg/m^3 was exceeded on four monitored days per year between 2017 and 2021. The federal 24-hour $PM_{2.5}$ standard was exceeded on seven days in 2017, 14 days in 2018, and 8 days in 2020. The state annual average standard was not exceeded between 2017 and 2021.

Nitrogen Dioxide

NO_2 is a reddish-brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO_2. Aside from its contribution to ozone formation, NO_2 can increase the risk of acute and chronic respiratory disease and reduce visibility. NO_2 may be visible as a coloring component on high pollution days, especially in conjunction with high ozone levels. In 2010, the U.S. EPA implemented a new one-hour NO_2 standard presented in Table 3.D-2 (p. 3.D-5). On November 15, 2012, the air board approved a revision to the State Implementation Plan for implementing the 2010 federal NO_2 standards. All areas in California are designated as attainment/unclassified for the federal NO_2 standards.[190] Table 3.D-1 (p. 3.D-4) shows the new federal standard was not exceeded at the San Francisco station between 2017 and 2021.

U.S. EPA also has established requirements for a new monitoring network to measure NO_2 concentrations near major roadways in urban areas with a population of 500,000 or more. Sixteen new near-roadway monitoring sites are required in California, three of which are in the bay area. These monitors are in Berkeley, Oakland, and San Jose. The Oakland station commenced operation in February 2014, the San Jose station commenced operation in March 2015, and the Berkeley station commenced operation in July 2016. The new monitoring data have not resulted in a need to change area attainment designations.[191]

Sulfur Dioxide

SO_2 is a colorless acidic gas with a strong odor. It is produced by the combustion of sulfur-containing fuels such as oil, coal, and diesel. SO_2 has the potential to damage materials, and can cause health effects at high

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[187] San Francisco Department of Public Health, *Assessment and Mitigation of Air Pollutant Health Effect from Intra-urban Roadways: Guidance for Land Use Planning and Environmental Review*, May 2008, p. 7, *http://www.sfhealthequity.org/component/jdownloads/summary/3-air/90-assessment-and-mitigation-of-air-pollutant-health-effects-from-intra-urban-roadways-guidance-for-land-use-planning-and-environmental-review?Itemid=62*, accessed July 15, 2021.

[188] Wu, X., R.C. Nethery, B.M. Sabath, D. Braun, and F. Dominici, *Exposure to Air Pollution and COVID-19 Mortality in the United States*, November 4, 2020, Science Advances, Vol. 6, Issue 45, *https://www.science.org/doi/10.1126/sciadv.abd4049*, accessed March 8, 2023.

[189] Xiaodan Zhou, Kevin Josey, Leila Kamareddine, Miah C. Caine, Tianjia Liu, Loretta J. Mickley, Matthew Cooper, and Francesca Dominici, Excess of *COVID-19 Cases and Deaths due to Fine Particulate Matter Exposure During the 2020 Wildfires in the United States*, August 13, 2021, *https://pubmed.ncbi.nlm.nih.gov/34389545/*, accessed September 15, 2021.

[190] California Air Resources Board, *State Implementation Plan Revision for Federal Nitrogen Dioxide Standard Infrastructure Requirements*, October 2012, *http://www.arb.ca.gov/desig/no2isip.pdf*, accessed September 9, 2022.

[191] Bay Area Air Quality Management District, 2013 Air Monitoring Network Plan, July 2014, *https://www.baaqmd.gov/about-air-quality/air-quality-measurement/ambient-air-monitoring-network*, accessed September 9, 2022.

concentrations. It can irritate lung tissue and increase the risk of acute and chronic respiratory disease.[192] SO_2 monitoring was terminated at the San Francisco station in 2009, because the state standard for SO_2 is being met in the bay area, and pollutant trends suggest that the air basin will continue to meet this standard for the foreseeable future.

In 2010, the U.S. EPA implemented a new one-hour SO_2 standard presented in Table 3.D-2 (p. 3.D-5). The U.S. EPA has initially designated the air basin as an attainment area for SO_2. Similar to the new federal standard for NO_2, the U.S. EPA has established requirements for a new monitoring network to measure SO_2 concentrations.[193] No additional SO_2 monitors are required for the bay area because the air basin has never been designated as nonattainment for SO_2, and no State Implementation Plan or maintenance plans have been prepared for SO_2.[194]

Lead

Leaded gasoline (phased out in the United States beginning in 1973), paint (on older houses and cars), smelters (metal refineries), and manufacture of lead storage batteries have been the primary sources of lead released into the atmosphere. Lead has a range of adverse neurotoxic health effects, which put children at special risk. Some lead-containing chemicals cause cancer in animals. Lead levels in the air have decreased substantially since leaded gasoline was eliminated. Ambient lead concentrations are only monitored on an as-warranted, site-specific basis in California. On October 15, 2008, the U.S. EPA lowered the national air quality standards for lead from 1.5 $\mu g/m^3$ to 0.15 $\mu g/m^3$. The U.S. EPA revised the monitoring requirements for lead in December 2010. These requirements focus on airports and large urban areas, resulting in an increase in 76 monitors nationally.[195] Lead monitoring stations in the bay area are at Palo Alto Airport, Reid-Hillview Airport (San Jose) and San Carlos Airport. Nonairport locations for lead monitoring are in Redwood City and San Jose.

Air Quality Index

The U.S. EPA developed the Air Quality Index (AQI) scale to make the public health impacts of air pollution concentrations easily understandable. The AQI, much like an air quality "thermometer," translates daily air pollution concentrations into a number on a scale between 0 and 500. The numbers in the scale are divided into six color-coded ranges, with numbers 0 to 300, as outlined below:

- **Green (0 to 50)** indicates "good" air quality. No health impacts are expected when air quality is in the green range.
- **Yellow (51 to 100)** indicates air quality is "moderate." Unusually sensitive people should consider limited prolonged outdoor exertion.

[192] Bay Area Air Quality Management District, *California Environmental Quality Act Air Quality Guidelines*, April 2023, p. A-62, *https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa-guidelines-2022/appendix-a-thresholds-of-significance-justification_final-pdf.pdf?la=en*, accessed June 16, 2023.

[193] United States Environmental Protection Agency (U.S. EPA), *Fact Sheet: Revisions to the Primary National Ambient Air Quality Standard, Monitoring Network, and Data Reporting Requirements for Sulfur Dioxide*, May 2016, *https://www.epa.gov/sites/default/files/2016-05/documents/final_primary_naaqs_factsheet.pdf*, accessed September 1, 2022.

[194] Bay Area Air Quality Management District, *2012 Air Monitoring Network Plan*, July 1, 2013, p. 30, *https://www.baaqmd.gov/~/media/files/technical-services/2012_network_plan.pdf?la=en*, accessed September 7, 2022.

[195] U.S. EPA, *Fact Sheet: Revisions to Lead Ambient Air Quality Monitoring Requirements*, March 2016, *https://www.epa.gov/sites/default/files/2016-03/documents/leadmonitoring_finalrule_factsheet.pdf*, accessed September 1, 2022.

- **Orange (101 to 150)** indicates air quality is "unhealthy for sensitive groups." Active children and adults, and people with respiratory disease, such as asthma, should limit outdoor exertion.
- **Red (151 to 200)** indicates air quality is "unhealthy." Active children and adults, and people with respiratory disease, such as asthma, should avoid prolonged outdoor exertion; everyone else, especially children, should limit prolonged outdoor exertion.
- **Purple (201 to 300)** indicates air quality is "very unhealthy." Active children and adults, and people with respiratory disease, such as asthma, should avoid prolonged outdoor exertion; everyone else, especially children, should limit outdoor exertion.

The AQI numbers refer to specific amounts of pollution in the air; they are based on the federal air quality standards for ozone, CO, NO_2, SO_2, PM_{10}, and $PM_{2.5}$. In most cases, the federal standard for these air pollutants corresponds to the number 100 on the AQI chart. If the concentration of any of these pollutants rises above its respective standard, it can be unhealthy for the public. In determining the air quality forecast, local air districts use the anticipated concentration measurements for each of the major pollutants, convert them into AQI numbers, and determine the highest AQI for each zone in a district.

Readings below 100 on the AQI scale would not typically affect the health of the general public, although readings in the moderate range of 50 to 100 may affect unusually sensitive people. Levels above 300 rarely occur in the United States, and readings above 200 have not occurred in the bay area in decades, with the exception of the October 2017 and November 2018 wildfires north of San Francisco and the August/September 2020 complex wildfires that occurred throughout the bay area.[196] Wildfires appear to be occurring with increasing frequency in California and the bay area as the climate changes (since 2000, 18 of the state's 20 largest wildfires and 18 of the state's 20 most destructive fires on record have occurred).[197]

As a result, the AQI in several neighboring counties reached the "very unhealthy" and "hazardous" designations, ranging from values of 201 to above 350. During those periods, the air district issued "Spare the Air" alerts and recommended that individuals stay inside with windows closed and refrain from significant outdoor activity.

AQI statistics over recent years indicate that air quality in the bay area is predominantly in the "Good" or "Moderate" categories, and healthy on most days for most people. Historical air district data indicate that the air basin experienced air quality in the red level (unhealthy) on 66 days between 2017 and 2021. As shown in Table 3.D-3, the region near the project, as measured at the Arkansas Street monitoring station, had a total of 28 red-level or orange-level (unhealthy or unhealthy for sensitive groups) days between 2017 and 2021. A number of these days are attributable to the increasing frequency of wildfires in California. This table also shows that the area experienced only one purple level (very unhealthy) day between 2017 and 2021.[198]

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[196] Bay Area Air Quality Management District, Current Air Quality, n.d., *http://www.baaqmd.gov/about-air-quality/current-air-quality*, accessed August 8, 2022.

[197] Cal Fire, Stats & Events, Top 20 Largest California Wildfires, January 13, 2022, *https://www.fire.ca.gov/media/4jandlhh/top20_acres.pdf, and Top 20 Most Destructive California Wildfires, January 13, 2022, https://www.fire.ca.gov/media/t1rdhizr/top20_destruction.pdf*, accessed August 8, 2022.

[198] Bay Area Air Quality Management District, Monthly Air Quality Index for Coast & Central Bay, 2021, *https://www.baaqmd.gov/about-air-quality/current-air-quality/air-monitoring-data/#/aqi-highs?date=2021-12-02&view=monthly*, accessed September 1, 2022.

Table 3.D-3 Air Quality Index Statistics for the Project Area

AQI Statistics for Air Basin	Number of Days by Year				
	2017	2018	2019	2020	2021
Unhealthy for sensitive groups (orange)	7	1	1	3	0
Unhealthy (red)	0	11	0	5	0
Very unhealthy (purple)	0	1	0	0	0

Source: Air district, 2022. Air Quality Index High Conditions for San Francisco – Arkansas Street.

TOXIC AIR CONTAMINANTS AND LOCAL HEALTH RISKS AND HAZARDS

In addition to criteria air pollutants, plans and individual projects may directly or indirectly emit TACs. TACs collectively refer to a diverse group of air pollutants that are capable of causing chronic (i.e., long-duration) and acute (i.e., severe but short-term) adverse effects to human health, including carcinogenic effects. Human health effects of TACs include birth defects, neurological damage, cancer, and death. There are hundreds of different types of TACs with varying degrees of toxicity. Individual TACs vary greatly in the health risk they present; at a given level of exposure, one TAC may pose a hazard that is many times greater than another.

Unlike criteria air pollutants, TACs do not have ambient air quality standards, but instead are regulated by the air district using a risk-based approach to determine which sources and pollutants to control, as well as the degree of control. An HRA is an analysis in which human health exposure to toxic substances is estimated and considered together with information regarding the toxic potency of the substances to provide quantitative estimates of health risks.[199]

Exposure assessment guidance published by the air district in the 2022 CEQA Guidelines assumes that residences would be exposed to air pollution from an emissions source 24 hours per day, 350 days per year, for 30 years.[200] In addition, the HRA typically assumes a starting exposure age of third trimester in utero, which includes the highest age sensitivity factor of any age group. Therefore, assessments of air pollutant exposure to residents typically result in the greatest adverse health outcomes of all population groups. This air district guidance is consistent with that of OEHHA published in 2015.

Exposure to $PM_{2.5}$ is strongly associated with mortality, respiratory diseases, and reductions in lung development in children, and other endpoints such as hospitalization for cardiopulmonary disease.[201] In addition to $PM_{2.5}$, diesel particulate matter (DPM) is also of concern. The air board identified DPM as a TAC in 1998, primarily based on evidence demonstrating cancer effects in humans.[202] The estimated cancer risk from

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199 In general, an HRA is required if the air district concludes that projected emissions of a specific air toxic compound from a proposed new or modified source suggest a potential public health risk. The applicant of the project that would emit TACs is required to conduct an HRA for the source in question. Such an assessment generally evaluates chronic, long-term effects, estimating the increased risk of cancer as a result of exposure to one or more TACs.

200 Bay Area Air Quality Management District, California Environmental Quality Act Air Quality Guidelines, Appendix E: Recommended Methods for Screening and Modeling Local Risks and Hazards. April 25, 2023, p. E-102, *https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines*, accessed May 1, 2023.

201 San Francisco Department of Public Works, *Assessment and Mitigation of Air Pollutant Health Effects from Intra-Urban Roadways: Guidance for Land Use Planning and Environmental Review*, May 6, 2008.

202 California Air Resources Board, *Fact Sheet: The Toxic Air Contaminant Identification Process: Toxic Air Contaminant Emissions from Diesel-Fueled Engines*, October 1998.

exposure to diesel exhaust is much higher than the risk associated with any other TAC routinely measured in the region.

In addition to monitoring criteria air pollutants, both the air district and the air board operate TAC monitoring networks in the air basin. These stations measure 10 to 15 TACs, depending on the specific station. The TACs selected for monitoring are those that have traditionally been found in the highest concentrations in ambient air, and therefore tend to produce the most substantial risk. The nearest air district ambient TAC monitoring station to the proposed project site is the station at 16th and Arkansas streets in San Francisco. Table 3.D-4 shows ambient concentrations of carcinogenic TACs measured at the Arkansas Street station, as well as the estimated cancer risks from a lifetime exposure (70 years) for these substances for the year 2019—the most recent data-year available. When TAC measurements at this station are compared to ambient concentrations of various TACs for the bay area as a whole, the cancer risks associated with mean TAC concentrations in San Francisco are similar to those for the region.

Table 3.D-4 Annual Average Ambient Concentrations of Carcinogenic Toxic Air Contaminants Measured at Air District Monitoring Station in 2019, 10 Arkansas Street, San Francisco

Substance	Concentration	Cancer Risk
Gaseous TACs	**(ppb)**	**(per Million)**
Acetaldehyde	0.38	6
Benzene	0.111	29
1,3-Butadiene	0.024	26
Carbon tetrachloride	0.069	53
Formaldehyde	1.29	27
Perchloroethylene	0.006	0.7
Methylene chloride	0.078	0.8
Chloroform	0.017	1
Trichloroethylene	0.01	0.3
Particulate TACs	**(ng/m^3)**	**(per Million)**
Chromium (hexavalent)	0.043	18
Total Risk for all TACs	**N/A**	**161.8**

Source: California Air Resources Board, Ambient Air Toxics Summary, 2019, http://www.arb.ca.gov/adam/toxics/sitesubstance.html, accessed September 1, 2022.

Notes:

ng/m^3 = nanograms per cubic meter
ppb = part per billion
TACs = toxic air contaminants

Roadway-Related Pollutants

Motor vehicles are responsible for a large share of air pollution, especially in California. Vehicle tailpipe emissions contain diverse forms of particles and gases, and also contribute to particulates by generating road dust and through tire wear. Epidemiologic studies have demonstrated that people living in proximity to freeways or busy roadways have poorer health outcomes, including increased asthma symptoms and respiratory infections, and decreased pulmonary function and lung development in children. Air pollution monitoring conducted in conjunction with epidemiologic studies has confirmed that roadway-related health effects vary with modeled exposure to particulate matter and NO_2. In traffic-related studies, the additional noncancer health risk attributable to roadway proximity was seen within 1,000 feet of the roadway and was strongest within 300 feet.[203]

Diesel Particulate Matter

The exhaust from diesel engines includes hundreds of different gaseous and particulate components, many of which are toxic. Mobile sources, such as trucks and buses, are among the primary sources of diesel emissions, and concentrations of DPM are higher near heavily traveled highways. The air board estimated average bay area cancer risk from exposure to DPM, based on a population-weighted average ambient DPM concentration, at about 480 per 1 million as of the year 2000, which is much higher than the risk associated with any other toxic air pollutant routinely measured in the region. The statewide risk from DPM, as determined by the air board, declined from 750 per 1 million in 1990 to 570 per 1 million in 1995; by 2000, the air board estimated the average statewide cancer risk from DPM at 540 per 1 million.[204,205]

In 2000, the air board approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled vehicles and engines. Subsequent air board regulations apply to new trucks and diesel fuel. With new controls and fuel requirements, 60 trucks built in 2007 were estimated to have the same particulate exhaust emissions as one truck built in 1988.[206] The regulation was estimated to result in an 80 percent decrease in statewide diesel health risk in 2020, as compared with the diesel health risk in 2000. Overall, the air board's regulations cut DPM by 78 percent statewide in the period from 1990 to 2014, even though diesel fuel use increased by 20 percent.[207]

Despite notable emission reductions, the air board recommends that proximity to sources of DPM emissions be considered in the siting of new sensitive land uses. The air board notes that these recommendations are advisory and should not be interpreted as defined "buffer zones," and that local agencies must balance other considerations, including transportation needs, the benefits of urban infill, community economic development priorities, and other quality of life issues. With careful evaluation of exposure, health risks, and affirmative steps to reduce risk where necessary, the air board's position is that infill development, mixed-use, higher density, transit-oriented development, and other concepts that benefit regional air quality can be compatible with protecting the health of individuals at the neighborhood level.[208,209]

San Francisco Modeling of Air Pollutant Exposure Zones

In an effort to identify areas of San Francisco most adversely affected by sources of TACs, San Francisco partnered with the air district to inventory and assess air pollution and exposure from mobile, stationary, and

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[203] California Air Resources Board, *Air Quality and Land Use Handbook: A Community Health Perspective*, April 2005, *http://www.arb.ca.gov/ch/handbook.pdf*.

[204] California Air Resources Board, *California Almanac of Emissions and Air Quality – 2009 Edition*, Table 5-44 and Figure 5-12, *https://www.arb.ca.gov/aqd/%E2%80%8Calmanac/almanac09/chap509.htm*, accessed September 12, 2022.

[205] This calculated cancer risk value from ambient air exposure in the bay area can be compared against the lifetime probability of being diagnosed with cancer in the United States, from all causes, which is more than 40 percent (based on a sampling of 17 regions nationwide), or greater than 400,000 per 1 million, according to the American Cancer Society. (American Cancer Society, Lifetime Probability of Developing or Dying from Cancer, last revised July 13, 2009, *https://www.cancer.org/cancer/cancer-basics/lifetime-probability-of-developing-or-dying-froM-Cancer.html*, accessed March 10, 2023.

[206] Pollution Engineering, *New Clean Diesel Fuel Rules Start*, July 2, 2006, *https://sj-admin.s3-us-west-2.amazonaws.com/2006_0700-Pollution Engineering_NewCleanDiesel.pdf*, accessed March 10, 2023.

[207] Schwarzman, M., S. Schildroth, M. Bhetraratana, A. Alvarado, and J. Balmes, *Raising Standards to Lower Diesel Emissions,* March 26, 2021, *https://www.science.org/doi/full/10.1126/science.abf8159*, accessed March 24, 2022.

[208] California Air Resources Board, *Air Quality and Land Use Handbook: A Community Health Perspective*, April 2005, *http://www.arb.ca.gov/ch/handbook.pdf*, accessed September 9, 2022.

[209] California Air Resources Board, *Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways*, April 2017, *https://www.arb.ca.gov/ch/rd_technical_advisory_final.pdf*, accessed September 9, 2022.

area sources in San Francisco. This analysis, known as the 2020 Citywide HRA, is documented in the *San Francisco Citywide Health Risk Assessment: Technical Support Documentation*.[210] Areas with poor air quality, referred to as the air pollutant exposure zone, or APEZ, were identified based on the following health-protective criteria: (1) excess cancer risk greater than 100 per 1 million population from the contribution of emissions from all modeled sources; or (2) cumulative $PM_{2.5}$ concentrations greater than 10 µg/m^3. The APEZ is expanded in certain geographic health vulnerable areas of the city, primarily the Bayview, Tenderloin, and much of the South of Market area, including the proposed project area, to be more protective, with the areas included in the APEZ based on a standard that is 10 percent more stringent than elsewhere in the city (i.e., areas where the excess cancer risk exceeds 90 per 1 million or the $PM_{2.5}$ concentration exceeds 9 µg/m^3). The proposed project site is in ZIP code 94124, which is an identified health vulnerable area. The APEZ also includes all parcels within 500 feet of a freeway. The APEZ is based on modeling that was prepared using a 20-meter by 20-meter receptor grid covering the entire city. The following summarizes the evidence supporting the APEZ criteria followed by a discussion of major sources of emissions in and near the proposed project.

Excess Cancer Risk

The greater than 100 per 1 million persons exposed (100 per 1 million excess cancer risk) criterion for defining the APEZ is based on the U.S. EPA's guidance for conducting air toxic analyses and making risk management decisions at the facility and community-scale level.[211] As described by the air district, the U.S. EPA considers a cancer risk of 100 per 1 million to be within the "acceptable" range of cancer risk. Furthermore, in the 1989 preamble to the benzene National Emissions Standards for Hazardous Air Pollutants rulemaking,[212] the U.S. EPA states that it "… strives to provide maximum feasible protection against risks to health from hazardous air pollutants by (1) protecting the greatest number of persons possible to an individual lifetime risk level no higher than approximately one per 1 million; and (2) limiting to no higher than approximately one in ten thousand [100 per 1 million] the estimated risk that a person living near a plant would have if he or she were exposed to the maximum pollutant concentrations for 70 years." The 100 per 1 million excess cancer risk is also consistent with the ambient cancer risk in the most pristine portions of the bay area, based on the air district's regional modeling.[213]

Fine Particulate Matter

In April 2011, the U.S. EPA published *Policy Assessment for the Particulate Matter Review of the National Ambient Air Quality Standards*. In this document, the U.S. EPA concludes that the then-current federal annual $PM_{2.5}$ standard of 15 µg/m^3 should be revised to a level in the range of 13 to 11 µg/m^3, with evidence strongly supporting a standard in the range of 12 to 11 µg/m^3. In December 2012, the U.S. EPA lowered the annual $PM_{2.5}$ standard from 15 to 12 µg/m^3, and issued final area designations based on that standard. On January 27, 2023, the U.S. EPA published a *Proposed Decision for the Reconsideration of the National Ambient Air Quality Standards (NAAQS) for Particulate Matter*.[214] In this reconsideration document, the U.S. EPA is considering lowering the primary annual $PM_{2.5}$ standard from 12 µg/m^3 to a range of 9 to 10 µg/m^3. The APEZ for San Francisco is based on the health protective $PM_{2.5}$ standard of 10 µg/m^3.

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[210] San Francisco Department of Public Health, San Francisco Planning Department, and Ramboll, *San Francisco Citywide Health Risk Assessment: Technical Support Documentation*, September 2020.

[211] Bay Area Air Quality Management District, *California Environmental Quality Act Air Quality Guidelines*, Appendix A: Thresholds of Significance Justification, April 20, 2023, p. A-42, accessed May 1, 2023

[212] 54 *Federal Register* 38044, September 14, 1989.

[213] Bay Area Air Quality Management District, *California Environmental Quality Act Air Quality Guidelines*, Appendix A: Thresholds of Significance Justification, April 20, 2023, p. A-42, accessed May 1, 2023.

[214] 40 CFR Parts 50, 53, and 58, January 27, 2023.

Health-Vulnerable Locations

Based on the air district's evaluation of health vulnerability in the Bay Area, those zip codes (94102, 94103, 94110, 94124, and 94130) in the worst quintile of Bay Area health vulnerability scores as a result of air pollution-related causes were afforded additional protection by lowering the standards for identifying parcels in the air pollutant exposure zone to: (1) an excess cancer risk greater than 90 per one million persons exposed, and/or (2) $PM_{2.5}$ concentrations in excess of 9 $\mu g/m^3$.[215]

Proximity to Freeways

According to the air board, studies have shown an association between the proximity of sensitive land uses to freeways and a variety of respiratory symptoms, asthma exacerbations, and decreases in lung function in children. Siting sensitive uses near freeways increases both exposure to air pollution and the potential for adverse health effects. As evidence shows that sensitive uses in an area within a 500-foot buffer of any freeway are at an increased health risk from air pollution,[216] parcels that are within 500 feet of freeways are included in the air pollutant exposure zone.

AIR POLLUTION SOURCES

Within 1,000 feet of the project site, the existing modeled cancer risk ranges from 150 to 404 per 1 million.[217] The highest cancer risk in this area coincides with proximity to U.S. 101 and I-280. Existing annual average $PM_{2.5}$ concentrations within 1,000 feet of the project site range from 10 $\mu g/m^3$ to 16 $\mu g/m^3$.

As described below under "Sensitive Receptors," the closest residential receptor is approximately 440 feet south of the proposed project site, on Oakdale Avenue between Selby Street and Rankin Street. The existing cancer risk and annual $PM_{2.5}$ concentration at this residential receptor are 180 per 1 million and 11.1 $\mu g/m^3$, respectively. The nearest worker receptors are approximately 40 feet from the proposed project site boundaries in all directions. The existing cancer risk for the closest worker receptors ranges from 144 to 398 per 1 million. The existing annual average $PM_{2.5}$ concentrations for the closest worker receptors range from 10.4 to 15.8 $\mu g/m^3$.

Air pollution sources that were evaluated in the 2020 Citywide HRA and that contribute to emissions in and near the project site area are described below.

Stationary Sources

The air district's inventory of permitted stationary sources of emissions includes gasoline dispensing stations, prime and standby diesel generators, wastewater treatment plants, recycling facilities, dry cleaners, large boilers, and other industrial facilities. There are several permitted stationary emission sources present near the proposed project site, including standby generators, gasoline stations, and other facilities such as automotive repair shops.

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215 San Francisco Planning Department and San Francisco Department of Public Health, *San Francisco Citywide Health Risk Assessment: Technical Support Documentation,* September 2020.

216 California Air Resources Board, *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005, http://www.aqmd.gov/docs/default-source/ceqa/handbook/california-air-resources-board-air-quality-and-land-use-handbook-a-community-health-perspective.pdf, accessed June 5, 2023.

217 San Francisco Department of Public Health, San Francisco Planning Department, and Ramboll, *San Francisco Citywide Health Risk Assessment: Technical Support Documentation*, September 2020.

Traffic Emissions on Major Roadways

Traffic contributes to elevated concentrations of $PM_{2.5}$, DPM, and other contaminants emitted from motor vehicles near the street level. Based on peak-hour traffic volume data collected near the project site, roadways likely to carry more than 10,000 average daily traffic in the vicinity of the proposed project site include:

- I-280;
- U.S. 101;
- Bayshore Boulevard from south of Industrial Street to César Chávez Street;
- César Chávez Street from west of U.S. 101 to east of Evans Street;
- Evans Street between César Chávez Street and east of Toland Street;
- Third Street from south of Oakdale Avenue to north of Evans Street;
- Industrial Street east of Bayshore Boulevard;
- Alemany Boulevard west of Bayshore Boulevard; and
- Oakdale Avenue between Bayshore Boulevard and Toland Street.

The large concentration of high-volume roadways is a major reason for the inclusion of the project site and surrounding area in the APEZ.

SENSITIVE RECEPTORS

Air quality does not affect every individual in the population in the same way, and some groups are more sensitive to adverse health effects than others. Population subgroups sensitive to the health effects of air pollutants include the elderly and the young, population subgroups with higher rates of respiratory disease such as asthma and chronic obstructive pulmonary disease, and populations with other environmental or occupational health exposures (e.g., indoor air quality) that affect cardiovascular or respiratory diseases such as asthma and chronic obstructive pulmonary disease. The factors responsible for variation in exposure are also often similar to factors associated with greater susceptibility to air quality health effects. For example, lower income residents may be more likely to live in substandard housing and be more likely to live near industrial or roadway sources of air pollution.

The air district defines sensitive receptors as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with preexisting serious health issues affected by air quality.[218] Examples include schools, hospitals, and residential areas. Land uses such as schools, children's daycare centers, hospitals, and nursing and convalescent homes are considered to be sensitive to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress. Residential areas are considered more sensitive to air quality conditions compared to commercial and industrial areas because people generally spend longer periods of time at their residences, with associated greater exposure to ambient air quality conditions. Offsite workers may not always be considered sensitive receptors because all employers must follow regulations set forth by the Occupational Safety and Health Administration to ensure the health and well-being of their employees. However, for the purposes of this EIR, offsite workers (workers near a proposed project) are conservatively considered sensitive receptors in this analysis. Figure 3.D-1 shows the location of sensitive receptors within 1,000 feet of the proposed project sources.

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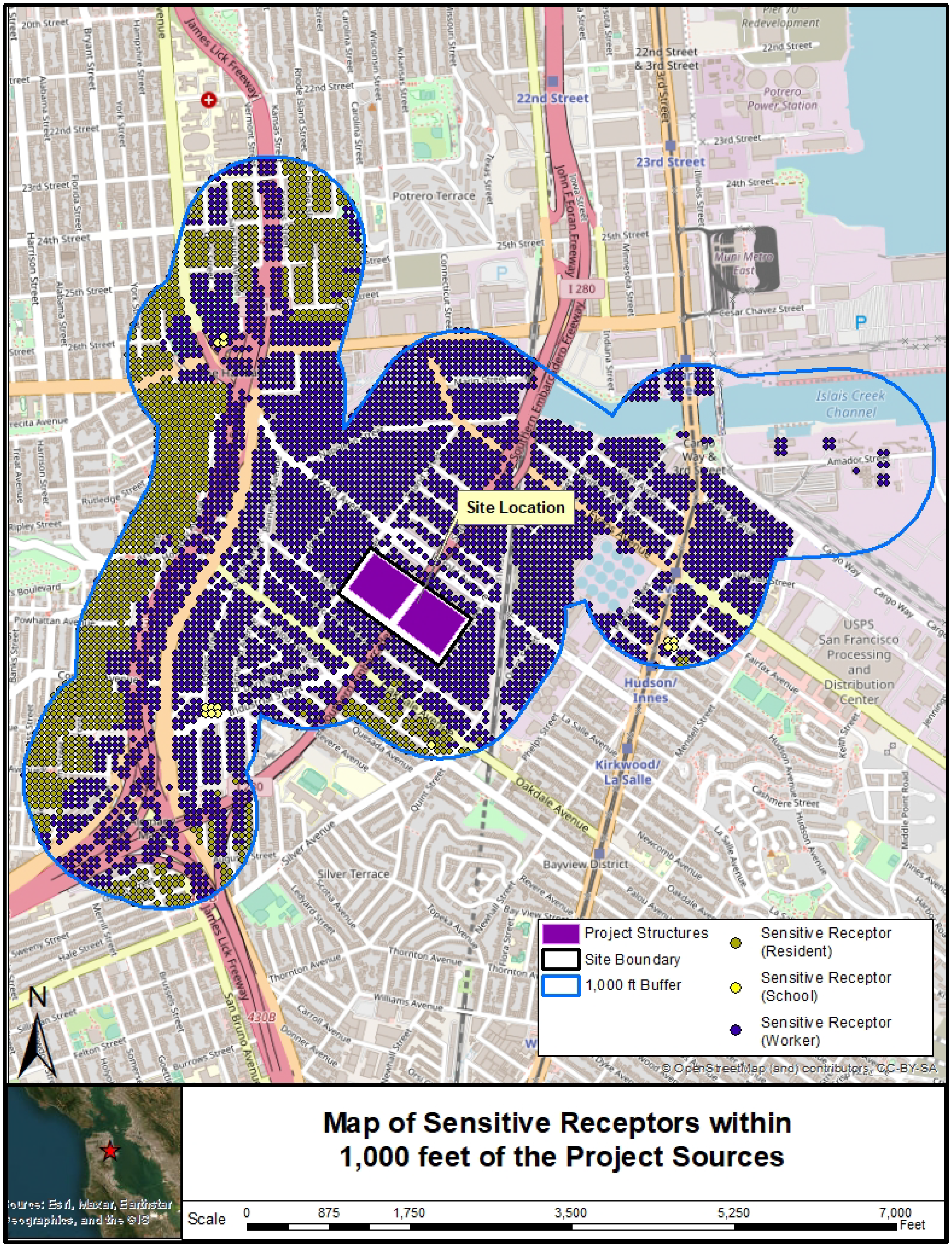
[218] Bay Area Air Quality Management District, California Environmental Quality Act Air Quality Guidelines, Appendix E: Recommended Methods for Screening and Modeling Local Risks and Hazards. April 25, 2023, p. E-14, *https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines*, accessed May 1, 2023.

Figure 3.D-1 Map of Sensitive Receptors



The surrounding uses in the project vicinity include predominantly PDR and light industrial uses. The nearest residential sensitive receptors to the project site are to the southeast of the project site, along the southern side of Oakdale Avenue east of I-280, approximately 440 feet from the proposed project site. The closest offsite worker receptors are approximately 40 feet from the proposed project boundary in all directions. In addition, other sensitive receptors would be exposed to project-generated vehicle exhaust emissions along routes to and from the project site as well as adjacent to U.S. 101 along the western side and southeast of the intersection of U.S. 101 and I-280. Schools proximate to the routes to and from the project site include Big City Montessori School along Industrial Street and Meadows Livingstone School at Potrero Avenue off U.S. 101. The closest child-care (Eva's Day Care) is approximately 950 feet to the southeast of the proposed project site and 50 feet from vehicle routes along Palou Avenue between Rankin Street and Quint Street.

ODORS

Sources that typically generate odors include wastewater treatment and pumping facilities; landfills, transfer stations, and composting facilities; petroleum refineries, asphalt batch plants, chemical (including fiberglass) manufacturing, and metal smelters; painting and coating operations; rendering plants; coffee roasters and food processing facilities; and animal feed lots and dairies. Sources of odors proximate to the proposed project site include auto body repair and paint shops, and other industrial facilities, consistent with the land use zoning of the area. The San Francisco Southeast Wastewater Treatment Plant spans several blocks southeast to northeast of the project site, opposite the railroad tracks, approximately 500 feet from the project site at the closest point.

3.D.2 Regulatory Framework

FEDERAL REGULATIONS

The 1970 Clean Air Act (most recently amended in 1990) requires that regional planning and air pollution control agencies prepare a regional air quality plan to outline the measures by which both stationary and mobile sources of pollutants will be controlled to achieve all standards by the deadlines specified in the act. These ambient air quality standards are intended to protect the public health and welfare, and they specify the concentration of pollutants (with an adequate margin of safety) to which the public can be exposed without adverse health effects. They are designed to protect those segments of the public most susceptible to respiratory distress, including asthmatics, the very young, the elderly, people weakened from other illness or disease, or persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollution levels that are somewhat above ambient air quality standards before adverse health effects are observed.

The current attainment status for the air basin, with respect to federal standards, is summarized in Table 3.D-2 (p. 3.D-5). In general, the air basin experiences low concentrations of most pollutants when compared to federal standards, except for PM_{10}, $PM_{2.5}$, and ozone, for which standards are exceeded periodically (see Table 3.D-1, p. 3.D-4).

The air basin is designated as an unclassifiable/attainment area (an area that has monitoring data that show the standard is met and not contributing to a nearby violation) with respect to the federal annual average $PM_{2.5}$ standard.

STATE REGULATIONS

Although the federal Clean Air Act established national ambient air quality standards, individual states retained the option to adopt more stringent standards, and to include other pollution sources. California had already established its own air quality standards when federal standards were established, and because of the unique meteorological challenges in California, there are many differences between the state and national ambient air quality standards, as shown in Table 3.D-2 (p. 3.D-5). California ambient standards tend to be at least as protective as national ambient standards and are often more stringent.

In 1988, California passed the California Clean Air Act (California Health and Safety Code section 39600 et seq.), which, like its federal counterpart, called for the designation of areas as attainment or nonattainment, but based on state ambient air quality standards rather than the federal standards. As indicated in Table 3.D-2 (p. 3.D-5), the air basin is designated as "nonattainment" for state ozone, PM_{10}, and $PM_{2.5}$ standards. The air basin is designated as "attainment" for other pollutants.

Toxic Air Contaminants

In 2005, the air board approved a regulatory measure to reduce emissions of toxic and criteria air pollutants by limiting the idling of new heavy-duty diesel vehicles. The regulations generally limit idling of commercial motor vehicles (including buses and trucks) within 100 feet of a school or residential area for more than five consecutive minutes, or periods aggregating more than five minutes in any one hour. Buses or vehicles also must turn off their engines upon stopping at a school and must not turn on their engines more than 30 seconds before beginning to depart from a school. Also, Senate Bill 352, adopted in 2003, limits locating public schools within 500 feet of a freeway or busy traffic corridor.

The air board has also adopted rules for new diesel trucks and for off-road diesel equipment. Along with rules adopted by the U.S. EPA, these regulations have resulted in substantially more stringent emissions standards for new diesel trucks and new off-road diesel equipment, such as construction vehicles. Each of these regulations is further described below.

Nonroad Engine Pollution Control Standards: Tier 4 Off-Road Compression-Ignition Regulations

Effective January 2011, both the U.S. EPA and the air board adopted so-called Interim Tier 4 standards for new equipment with diesel engines of 175 horsepower (hp) or greater. The interim Tier 4 emissions standards for particulate matter are about 85 percent more restrictive than previous particulate matter emissions standards (Tier 2 or Tier 3, depending on the size of the engine[219]) for these larger off-road engines. As a result, use of engines that meet the interim Tier 4 standards would reduce diesel exhaust emissions of particulate matter by approximately 85 percent, compared to new engines produced under the previous standards. Tier 4 Final standards are required for new off-road engines, depending on engine size, for all model years starting in 2014 or 2015. Compared to Tier 4 Interim standards, Tier 4 Final standards are about 80 percent more restrictive for NO_X emissions and 30 percent more restrictive for PM emissions. As a result, use of engines that meet the Tier 4 Final standards would reduce exhaust emissions of NO_X by approximately 80 percent, and reduce diesel exhaust emissions of PM by approximately 30 percent compared to new engines produced under Tier 4 Interim standards.[220]

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[219] For most construction equipment other than that with extremely powerful engines (greater than 750 hp), Tier 2 and Tier 3 emissions standards are the same with respect to PM. Therefore, cancer risk from DPM—a subset of all particulate matter—is essentially the same for Tier 2 and Tier 3 engines.

[220] California Air Resources Board, *Non-road Diesel Engine Certification Tier Chart*, *https://ww2.arb.ca.gov/resources/documents/non-road-diesel-engine-certification-tier-chart*, accessed September 12, 2022.

In-Use Off-Road Diesel-Fueled Fleets Regulation

Regarding equipment already in use, the air board adopted rules for in-use off-road diesel vehicles—including construction equipment—in 2007, most recently amended in November 2022. Beginning in 2014, air board regulations required off-road equipment fleets to begin gradual replacement of older engines with newer, cleaner engines; the installation of exhaust filters on remaining older engines; or some combination of the two to achieve fleet-wide emissions reductions. Those rules also limit idling to 5 minutes; and require a written idling policy for larger vehicle fleets, fleet operators to provide information on their engines to the air board, and vehicles to be labeled with an air board-issued vehicle identification number. The off-road rules require the retrofit or replacement of diesel engines in existing equipment. For example, Tier 2 or Tier 3 engines (for larger equipment, those manufactured since 2006) can achieve generally the same reduction in PM emissions through retrofitting by installing a diesel particulate filter (an air board-certified Level 3 Verified Diesel Emissions Control System). As amended, the start of repowering began in 2014 for large fleets, 2017 for medium-size fleets, and 2019 for small fleets.[221] The most recent amendments require the phase-out of the oldest and highest-emitting off-road engines from operation in California through the year 2036, the details of which are dependent upon the equipment tier and fleet size; restrict the addition of vehicles with Tier 3 and Tier 4 interim engines through the year 2035, which is an expansion of provisions of the regulation prior to amendment; require contracting entities to obtain and retain a fleet's valid Certificate of Reported Compliance prior to awarding a contract or hiring a fleet beginning in 2024; and, beginning in 2024, mandate the use of renewable diesel (either "R99" or "R100") for all fleets.[222] According to the air board, the recent amendments would achieve a reduction above and beyond the current regulation of approximately 31,087 tons of NO_X and 2,717 tons of fine particle pollution. Because only a certain percentage of each fleet's engines must be replaced or retrofitted on an annual or periodic basis to achieve the required emissions reductions, and because fleet turnover of heavy-duty off-road equipment takes many years, the full effect of the regulations on emissions reduction is not anticipated to be realized until sometime between 2024 and 2038, depending on the engine size and pollutant.[223]

Advanced Clean Trucks

The advanced clean truck regulation, approved in March 2021, is part of the air board's approach to achieve a large-scale transition to zero-emission medium- and heavy-duty vehicles for Class 2b to Class 8 trucks.[224] The basis of the advanced clean truck regulation is to help ensure that zero-emission vehicles, specifically medium- and heavy-duty trucks, are brought to market. For manufacturers of these vehicles, the regulation requires zero-emission truck/chassis sales to be an increasing percentage of the total annual California sales of Class 2b through Class 8 sales from 2024 to 2035; by 2035, zero-emission truck/chassis sales would need to be 55 percent of Class 2b – 3 truck sales, 75 percent of Class 4 – 8 straight truck sales, and 40 percent of truck tractor sales. The regulation also includes reporting requirements for large employers, including retailers, manufacturers, and brokers, regarding shipments and shuttle services; as well as reporting requirements about fleet operations for fleet owners with 50 or more trucks.

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221 Fleet size is based on total horsepower: large fleets are those with more than 5,000 hp, medium fleets have 2,501 to 5,000 hp, and small fleets are those with less than 2,500 hp.

222 Renewable diesel is a synthetic diesel fuel, produced from nonpetroleum renewable resources and providing substantial reductions in emissions compared to petroleum diesels. R99 means 99 percent renewable diesel and 1 percent petroleum diesel; R100 is 100 percent renewable diesel.

223 California Air Resources Board, Overview of Proposed Amendments to the In-Use Off-Road Diesel-Fueled Fleets Regulation," October 2022 *https://ww2.arb.ca.gov/resources/fact-sheets/overview-proposed-amendments-use-road-diesel-fueled-fleets-regulation*, accessed March 10, 2023.

224 Class 2b vehicles have a gross vehicle weight rating ranging from 8,501 to 10,000 pounds. Class 3 through 8 vehicles have a gross vehicle weight rating of 10,001 pounds or more. Code of Federal Regulations, Part 523 – Vehicle Classification, *https://www.ecfr.gov/current/title-49/subtitle-B/chapter-V/part-523*, accessed March 10, 2023.

Advanced Clean Fleet

The advanced clean fleet regulation is still being developed and is subject to change. Building on the advanced clean truck regulation, the basis of the proposed advanced clean fleet regulation is to deploy medium- and heavy-duty zero-emission vehicles (i.e., trucks, vans, and buses) everywhere feasible by requiring fleets, as appropriate, to transition to zero-emission vehicles. The proposed regulation targets fleets, businesses, and public entities that own or direct the operation of medium- and heavy-duty vehicles in California to increase the purchase and operation of zero-emission vehicles and achieve a transition to zero-emission vehicles fleets by 2040 everywhere feasible. The proposed regulation would affect fleets performing drayage operations; those owned by state, local, and federal government agencies; and high-priority fleets. The regulation would apply to medium- and heavy-duty vehicles, off-road yard trucks, and light-duty mail and package delivery vehicles.

Transportation Refrigeration Unit Airborne Toxic Control Measure

The air board adopted the transportation refrigeration unit (TRU) airborne toxic control measure in 2004 (and amended it in 2010 and 2011) to reduce DPM emissions and related health risk from diesel-powered TRUs. In February 2022, the air board approved amendments to the TRU airborne toxic control measure. The 2022 amendments include a lower PM emissions standard of no greater than 0.02 gram per brake hp-hour, which aligns with the U.S. EPA standard for Tier 4 final off-road PM emissions for 25 to 50 hp engines. This standard applies to all model year 2023 and newer trailer TRUs, domestic shipping container TRUs, railcar TRUs, and TRU generator set engines. Beginning in 2023, the 2022 airborne toxic control measure requires TRU owners to turn over at least 15 percent of their truck TRU fleet operating in California to zero-emission technology each year for seven years. Finally, the 2022 airborne toxic control measure includes several additional reporting requirements to demonstrate compliance. The 2022 airborne toxic control measure anticipates all truck TRUs operating in California to be zero-emission by the end of the year 2029.

Asbestos Airborne Toxic Control Measure

In July 2001, to address health concerns from exposure to naturally occurring asbestos, the air board enacted an asbestos Airborne Toxic Control Measure (ATCM) for construction, grading, quarrying, and surface mining operations. The asbestos ATCM became effective for projects in the San Francisco air basin on November 19, 2002. The requirements established by the asbestos ATCM are contained in California Code of Regulations title 17, section 93105,[225] and for projects in the Bay Area are enforced by the air district. Based on a review of the Department of Conservation's 2011 naturally occurring asbestos (mined and found) and 2010 ultramafic rock in outcrop data layers, the proposed project site is approximately 2,200 feet away from ultramafic rock.[226]

Under the asbestos ATCM, the air district requires construction activities in areas where naturally occurring asbestos is likely to be found to employ best available dust control measures and obtain air district approval of an asbestos dust mitigation plan through its naturally occurring asbestos program. The asbestos dust mitigation plan must address and describe how the operator will mitigate potential emissions of dust. The measures implemented as part of asbestos dust mitigation plan would protect workers and the public and would include, but are not limited to, the following requirements: limit construction vehicle speed to 15 miles per hour or less; provide sufficient water to disturbed areas to prevent visible emissions from

[225] California Air Resources Board, Regulatory Advisory, Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining Operations, July 29, 2002.

[226] Department of Conservation, Areas with potential for naturally occurring asbestos, 2011, https://www.arcgis.com/apps/webappviewer/index.html?id=da4b648958844134adc25ff002dbea1c, accessed July 7, 2023.

crossing the property line; adequately wet storage piles, treat with a chemical dust suppressant, or cover when material is not being added to or removed from the pile; wash down equipment before moving from the property onto a paved public road; and clean any visible track-out on paved public roads using wet sweep or a high-efficiency particulate air filter equipped vacuum device within 24 hours. In addition, the air district may require a qualified third-party consultant to conduct air monitoring for offsite and onsite migration of asbestos dust during construction activities and to modify the dust mitigation plan on the basis of the air monitoring results if necessary. The air district may also grant an exemption if a geological evaluation demonstrates that ultramafic rock or serpentine is not likely to be found through approval of the asbestos ATCM exemption application. The measures required by the air district to control naturally occurring asbestos are similar to those required by the city in compliance with the San Francisco Construction Dust Control Ordinance, discussed further below.

REGIONAL AND LOCAL REGULATIONS

Bay Area Air Quality Planning

Air quality plans developed to meet federal requirements are referred to as State Implementation Plans. The federal and state Clean Air Acts require plans to be developed for areas designated as nonattainment (with the exception of areas designated as nonattainment for the state PM_{10} standard).

The air district's *2017 Clean Air Plan: Spare the Air, Cool the Climate* was adopted on April 19, 2017, by the air district in cooperation with the Metropolitan Transportation Commission, the San Francisco Bay Conservation and Development Commission, and the Association of Bay Area Governments to provide a regional strategy to improve bay area air quality and meet public health goals.[227] The control strategy described in the 2017 Clean Air Plan includes a wide range of control measures designed to reduce emissions and lower ambient concentrations of harmful pollutants, safeguard public health by reducing exposure to air pollutants that pose the greatest health risk, and reduce GHG emissions to protect the climate.

The 2017 Clean Air Plan addresses four categories of pollutants: ground-level ozone and its key precursors, ROG and NO_X; PM, primarily $PM_{2.5}$, and precursors to secondary $PM_{2.5}$; air toxics; and GHG emissions. The control measures are categorized based on the economic sector framework, including stationary sources, transportation, energy, buildings, agriculture, natural and working lands, waste management, and water measures.

The air district is the regional agency with jurisdiction over the nine-county region in the air basin. The Association of Bay Area Governments, the Metropolitan Transportation Commission, county transportation agencies, cities and counties, and various nongovernmental organizations also participate in the efforts to improve air quality through a variety of programs. These programs include the adoption of regulations and policies, as well as implementation of extensive education and public outreach programs. The air district is responsible for attaining and/or maintaining air quality in the region within federal and state air quality standards. Specifically, the air district has the responsibility to monitor ambient air pollutant levels throughout the region, and to develop and implement strategies to attain the applicable federal and state standards. The air district has permit authority over most types of stationary emission sources and can require stationary sources to obtain permits; and can impose emission limits, set fuel or material specifications, or establish operational limits to reduce air emissions. The air district also regulates new or

[227] Bay Area Air Quality Management District, *2017 Clean Air Plan: Spare the Air, Cool the Climate*, April 19, 2017, *http://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en*, accessed September 9, 2022.

expanding stationary sources of TACs and requires air toxic control measures for many sources emitting TACs.

Air District Rules

The air district rules that would be most applicable to the proposed project pertain to permits for emergency generators. The air district regulates stationary-source air pollutant emissions through Rule 2-1 (General Permit Requirements), Rule 2-2 (New Source Review), and Rule 2-5 (New Source Review of Toxic Air Contaminants). Under these rules, all stationary sources that have the potential to emit air pollutant emissions, including criteria air pollutants and TACs, above levels specified by regulation are required to obtain permits from the air district. These rules provide guidance for the review of new and modified stationary sources of emissions, including evaluation of health risks and potential measures to reduce health risks.

Stationary sources must apply best available control technology to reduce emissions, and the air district recently updated its best available control technology requirement for emergency generators greater than 1,000 hp, requiring these sources to achieve U.S. EPA Tier 4 emissions standards.[228]

San Francisco Construction Dust Control Ordinance

Health code article 22B and San Francisco Building Code section 106.A.3.2.6 collectively constitute the Construction Dust Control Ordinance (adopted in July 2008). The ordinance requires that all site preparation work, demolition, or other construction activities in San Francisco that have the potential to create dust or to expose or disturb more than 10 cubic yards or 500 square feet of soil comply with specified dust control measures whether or not the activity requires a building permit from the department of building inspection. For projects over 0.5 acre and within 1,000 feet of sensitive receptor(s) (e.g., residences and group living quarters, schools, daycare centers, and hospitals and other health-care facilities), and other projects as deemed necessary by the Director of the San Francisco Department of Public Health (health department), the Construction Dust Control Ordinance requires that the project sponsor submit a Dust Control Plan, with a goal of minimizing visible dust, for approval by the health department prior to issuance of a building permit. Such larger projects must also identify a compliance monitor, and that person must be available at all times during construction activities.

Construction permits for projects involving more than 0.5 acre within 1,000 feet of sensitive receptor(s), such as the proposed project, would not be issued without written notification from the health department director, stating that sponsors of the development have a site-specific dust control plan, unless the director waives the requirement. The Construction Dust Control Ordinance requires project sponsors responsible for construction activities to control construction dust on a site, or implement practices that result in equivalent dust control that are acceptable to the health department director. Dust suppression activities may include watering all active construction areas enough to prevent dust from becoming airborne. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water must be used if required by article 21, section 1100, et seq., of the San Francisco Public Works Code.

Regulation of Odors

The air district's regulation 7 places general limitations on odorous substances and specific emission limitations on certain odorous compounds. The regulation limits the "discharge of any odorous substance

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[228] Bay Area Air Quality Management District, Best Available Control Technology for Emergency Backup Engines greater than or equal to 1,000 brake-horsepower, 2021, *https://www.baaqmd.gov/permits/apply-for-a-permit/engine-permits*, accessed March 10, 2023

which causes the ambient air at or beyond the property line…to be odorous and to remain odorous after dilution with four parts of odor-free air." The air district must receive odor complaints from 10 or more complainants within a 90-day period for the limitations of this regulation to go into effect. If this criterion has been met, an odor violation can be issued by the air district if a test panel of people can detect an odor in samples collected periodically from the source.

3.D.3 Impact Assessment Methodology

This section lists the thresholds that were used to conclude whether an impact would be significant; and describes the methods used to determine the impacts that could occur with implementation of the proposed project and expanded streetscape variant.

SIGNIFICANCE CRITERIA

Implementation of the proposed project or expanded streetscape variant would have a significant impact related to air quality if it would:

- conflict with or obstruct implementation of the applicable air quality plan;
- result in a cumulatively considerable net increase of any criteria air pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard;
- expose sensitive receptors to substantial pollutant concentrations; or
- result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

APPROACH TO ANALYSIS

Proposed Project Features

This section provides an overview of the approach to analysis; additional detail is provided in Appendix F, Air Quality Supporting Information, of this EIR. In general, the proposed project or expanded streetscape variant has the potential to generate emissions during both the construction and operational phases. The construction phases would involve demolition, excavation and soil improvement, foundation slab-on-grade, superstructure and skin, and then interior work. Both proposed buildings would generally be completed at the same time (with some staggering due to logistics and equipment staging). The analysis assumes that both buildings would begin occupancy at the same time. Operations would result in increased vehicle travel, including potential use of TRUs on trucks visiting the site, once the buildings are occupied; new area sources of emissions (i.e., landscape maintenance, periodic architectural coating, and consumer products); and new stationary sources of emissions. These stationary sources would consist of emissions that could be generated from businesses occupying the manufacturing and maker space and two 400 kV diesel generators that would provide emergency power sources.

The proposed project would demolish four existing onsite buildings, thereby resulting in the removal of the onsite uses and related emissions sources associated with such buildings and ancillary infrastructure. Existing uses at the project site are detailed in Section 2.C.1 of this EIR (p. 2-3). This analysis considers the net new emissions from the proposed project, accounting for the removal of existing emissions sources through demolition.

Construction work would typically occur five to six days per week for eight hours per day at times between 7 a.m. and 8 p.m., as allowed in San Francisco. Some nighttime (8 p.m. to 7 a.m.) construction is anticipated for certain activities; however, this would be limited and would require a permit from the San Francisco Department of Public Works or Department of Building Inspection to extend construction activities beyond allowable construction hours. During construction, air quality impacts could result from exhaust emissions generated by off-road construction equipment and on-road vehicles used by construction workers, vendor deliveries, and material hauling. Fugitive dust emissions would result from demolition and earthmoving activities; fugitive ROG emissions would be generated from paving and the application of architectural coatings.

The proposed project or expanded streetscape variant would be constructed over approximately 31 months. A list of construction equipment expected to be used and level of activity (i.e., number of days and hours per day of use)—as well as the anticipated number of construction worker, vendor, and haul trips by phase for the proposed project—is included in Appendix F in the section describing the assumptions and methodology for the analysis. Pursuant to Director Bulletin No. 2,[229] a clean construction priority processing application for the proposed project and expanded streetscape variant was approved by the planning department, thereby committing the project sponsor to the use of equipment meeting Tier 4 interim or final engine emissions standards for construction equipment rated 25 hp or greater. Emissions from construction equipment were estimated using emission factors for U.S. EPA Tier 4 (interim) emissions standards for equipment greater than 25 hp, consistent with equipment requirements for the planning department's clean construction priority processing, and using equipment-specific emission factors and aggregate model years provided in OFFROAD 2017 for equipment less than 25 hp.[230] Off-road construction emissions are therefore conservative (i.e., worst case) because the project would likely include a combination of Tier 4 interim and Tier 4 final equipment. Pursuant to Director Bulletin No. 2, where access to grid power is available, portable diesel engines (e.g., generators) shall be prohibited. Emissions from on-road motor vehicles were estimated using total vehicle trips, average trip distances, and EMFAC 2021 mobile source emission factors for the aggregate fleet mix, inclusive of running and starting exhaust emissions.[231] Fugitive dust emissions (PM_{10} and $PM_{2.5}$) generated by construction activities (demolition, earthwork, truck loading, and stockpiling) were also estimated with the methodology used by California Emissions Estimator Model (CalEEMod), such as U.S. EPA's AP-42: Compilation of Air Emissions Factors; compliance with the city's Construction Dust Control Ordinance, discussed above, was accounted for. For interior architectural coatings, the analysis used CalEEMod coating application assumptions and ROG emission factors for coatings based on the land use type and square footage of buildings to be constructed. For exterior architectural coatings, the analysis used the proposed square footages of the building facades and information of the ROG content of the anticipated coatings to be used (e.g., anti-graffiti coatings and metal sealants).

Operation of the proposed project would include the same potential emissions sources as the expanded streetscape variant. Operation of the proposed project or expanded streetscape variant is assumed to begin as early as 2025. Operational emissions sources would include stationary sources (diesel-powered

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229 San Francisco Planning Department, Director Bulletin No. 2. *https://sfplanning.org/sites/default/files/forms/DB2_Type3_Supplemental Application.pdf*, accessed March 10, 2023.

230 OFFROAD2017 is a California Air Resources Board's emissions inventory database for off-road diesel engines, used to quantify the amount of pollutants from thousands of engines in equipment used in industrial applications, agriculture, construction, mining, oil drilling, power generation, and many other industries. OFFROAD2017 is anticipated to be the most current available and approved source to be used to generate emission factors for the different types of equipment anticipated to be used for the project.

231 EMFAC is California Air Resources Board's database of on-road vehicle activity data (e.g., emissions rates, vehicle population, VMT, etc.) for different regions throughout California (e.g., at the air basin, air district, county, or statewide level). Emission factors were developed using EMFAC 2021 to generate emissions rates (in grams per mile) for the county of San Francisco.

emergency generators), area sources (consumer products, architectural coatings, and landscape equipment), and mobile sources (daily passenger vehicle commute trips made by onsite workers; daily visiting vendor and delivery automobile, van, and truck trips and onsite idling; and TRUs mounted on a portion of the visiting trucks). Emissions factors from the air board and U.S. EPA's AP-42 Compilation of Air Pollutant Emissions Factors were used to estimate emissions from two 400 kV emergency generators operating up to 50 hours per year.

Emissions associated with manufacturing and maker space were also estimated; these uses may consist of food and beverage processing, apparel and other garment products, furniture and fixtures, printing (including three-dimensional), prototyping, and publishing. Potential emissions for such uses were estimated based on the most emission-intensive uses identified through emissions profiles from existing manufacturing facilities in the San Francisco Bay Area. The most emissions-intensive uses were screen printing as a generator of ROG and NO_X emissions, and a bakery as a generator of PM emissions. Area source emissions were estimated using CalEEMod.

Mobile source emissions were estimated using emissions factors from EMFAC 2021 for both travel to and from the site and onsite idling. Resuspended roadway dust and tire and brake wear from on-road vehicle travel were also estimated. The transportation analysis conducted for this EIR informed the trip rates and distances. For the purposes of the HRA, the portion of total on-road emissions that would occur within the HRA modeling domain (i.e., within 1,000 feet of the proposed project site and proposed traffic routes to and from U.S. 101 and I-280) were estimated based on the longest trip distance within the HRA modeling domain for the respective vehicle categories. Onsite idling was estimated not to exceed five minutes per truck per trip, in compliance with the air board's airborne toxic control measure to limit diesel-fueled commercial motor vehicle idling, which limits idling to five minutes in accordance with title 13, California Code of Regulations, section 2485. Up to 25 percent of manufacturing and maker space, 46 percent of parcel and last mile delivery use, and 45 percent of wholesale and storage use would include refrigeration and thereby have the potential to require refrigerated trucks; emissions associated with TRU use for single-unit and tractor trailer trucks were estimated using emissions factors from OFFROAD 2021. The proposed project and expanded streetscape variant would not use natural gas and therefore would not include any natural gas-powered boilers or other emissions as a result of natural gas use. Onsite goods movement equipment, such as forklifts, would be required by the proposed project to be electric, and therefore would not contribute to emissions generated on site.[232]

In addition to analyzing the criteria air pollutant impact of the proposed project or expanded streetscape variant (assuming full buildout in 2025) the draft EIR provides an analysis of the project and expanded streetscape variant's impacts in years 2035 and 2050. Mobile source and TRU emissions were revised for these future operational years using emissions factors for the respective operational calendar years from EMFAC and OFFROAD. This additional analysis is provided in response to comments received on the NOP requesting a future baseline analysis of the project's air quality impact, and to provide information demonstrating the effect of federal and state regulations on the project or expanded streetscape variant's mobile source and TRU emissions in these future years.

[232] Electricity use does not result in direct emissions of criteria pollutants because emissions occur at power plants, which undergo a separate permitting process for their emissions.

Additional information on the project's operational emissions sources is included in the Appendix F section on assumptions and methodology for the analysis.

Methodology and Thresholds of Significance

The thresholds of significance used as the basis for determining criteria air pollutant and odor air quality impacts under CEQA are discussed in the following subsections. The thresholds are based on substantial evidence identified in Appendix A, Thresholds of Significance Justification, of the air district's 2022 CEQA air quality guidelines.[233]

For each of the impact areas discussed in the following subsections, the impacts of both the proposed project and expanded streetscape variant are evaluated. The expanded streetscape variant would involve a relatively small additional amount of construction that would occur within the same timeframe identified for the proposed project. The expanded streetscape variant is evaluated by applying the methodology described in the following subsections for the purposes of analysis of the proposed project and by considering the incremental difference in construction activity and location of the expanded streetscape variant compared to the proposed project. The analysis considers this incremental increase in construction activity occurring concurrently with the proposed project construction, thereby potentially increasing the average daily construction emissions. If the expanded streetscape variant were constructed during a separate timeframe, the average daily construction emissions would be substantially less than those of the proposed project. The proposed operational emissions sources would be the same under the proposed project and expanded streetscape variant, and therefore the operational methodology described in the following subsections is applicable to each.

Consistency with the Clean Air Plan

The most recently adopted air quality plan for the air basin is the *2017 Clean Air Plan: Spare the Air, Cool the Climate*.[234] The 2017 Clean Air Plan is a road map that demonstrates how the San Francisco Bay Area will achieve compliance with the state ozone standards as expeditiously as practicable, and how the region will reduce the transport of ozone and ozone precursors to neighboring air basins. The proposed project or expanded streetscape variant would be consistent with the 2017 Bay Area Clean Air Plan if it would support the plan's goals, would incorporate applicable control measures into the project, and would not disrupt or hinder implementation of any control measures from the plan. Consistency with this plan is the basis for determining whether the proposed project or expanded streetscape variant would conflict with or obstruct implementation of an applicable air quality plan and is discussed under Impact AQ-1.

Regional Criteria Air Pollutant Impacts

As shown in Table 3.D-2 (p. 3.D-5), the air basin is designated as being in nonattainment for ozone, $PM_{2.5}$, and PM_{10}. By definition, regional air pollution is largely a cumulative impact in that no single project is sufficient in size to, by itself, result in nonattainment of air quality standards. Instead, a project's individual emissions are considered to contribute to the existing, cumulative air quality conditions. If a project's contribution to cumulative air quality conditions is considerable, then the project's impact on air quality would be considered significant.

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[233] Bay Area Air Quality Management District, *California Environmental Quality Act Air Quality Guidelines, Appendix A: Thresholds of Significance Justification.* April 20, 2023, accessed May 1, 2023.

[234] Bay Area Air Quality Management District, *2017 Clean Air Plan: Spare the Air, Cool the Climate*, April 19, 2017, *http://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en*, accessed August 12, 2022

Table 3.D-5 identifies quantitative criteria air pollutant significance thresholds. The table is followed by a discussion of each threshold. Projects that would result in criteria pollutant emissions above these significance thresholds would result in a cumulatively considerable net increase in nonattainment criteria air pollutants in the air basin (ozone precursors and PM). Construction emissions are assessed solely with respect to the average daily thresholds, pursuant to the air district's guidance.[235] Operational emissions are assessed against both average daily and maximum annual thresholds. Those projects that would result in emissions that do not exceed these thresholds would not result in a cumulatively considerable net increase in nonattainment criteria air pollutants (ozone precursors or PM), the second bulleted significance criteria identified above. Impacts AQ-2 and AQ-3 analyze construction and operational criteria air pollutant impacts, respectively, resulting from the proposed project or expanded streetscape variant.

Table 3.D-5 Criteria Air Pollutant Significance Thresholds

Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (lbs./day)	Average Daily Emissions (lbs./day)	Maximum Annual Emissions (tons/year)
ROG	54	54	10
NO_X	54	54	10
PM_{10}	82 (exhaust)	82	15
$PM_{2.5}$	54 (exhaust)	54	10
Fugitive dust	Construction Dust Ordinance or other Best Management Practices	Not Applicable	

Source: Bay Area Air Quality Management District, *California Environmental Quality Act Air Quality Guidelines*, Chapter 3: Thresholds of Significance, April 20, 2023, Table 3-1 (p. 3-4), accessed May 1, 2023.

Notes:

lbs./day = pounds per day
NO_x = oxides of nitrogen
PM_{10} = particulate matter equal to or less than 10 micrometers in diameter
$PM_{2.5}$ = particulate matter equal to or less than 2.5 micrometers in diameter
ROG = reactive organic gas

The air district's 2022 CEQA air quality guidelines Appendix A, Thresholds of Significance Justification, provides evidence to support the criteria air pollutant significance thresholds listed in Table 3.D-5; these thresholds for the ozone precursors ROG and NO_X are tied to the air district's offset requirements for ozone precursors. This is based on the fact that the bay area is not in attainment with the federal ozone standard. Therefore, such an approach is appropriate "to prevent further deterioration of ambient air quality and thus has nexus and proportionality to prevention of a regionally cumulative significant impact (e.g., worsened status of nonattainment)."[236] As discussed on page 3.D-17, the ambient air quality standards have been established by developing specific public-health-based and welfare-based criteria as the basis for setting permissible levels. Therefore, attainment can be considered protective of public health, thereby providing a strong link between a mass emission threshold and avoidance of health effects. For PM_{10} and $PM_{2.5}$, the air district established significance thresholds based on the federal New Source Review program for new stationary sources of pollution, which contains stricter thresholds than the air district's offset program for

[235] BAAQMD, CEQA Air Quality Guidelines, 2022, Table A-1, p. A-4 *https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines*, accessed June 20, 2023.

[236] Bay Area Air Quality Management District, *CEQA Air Quality Guidelines, Appendix A: Thresholds of Significance Justification,* April 20, 2023, p. A-46, *https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa-guidelines-2022/appendix-a-thresholds-of-significance-justification_final-pdf.pdf?la=en*, accessed June 16, 2023.

these pollutants. "These thresholds represent the emission levels above which a project's individual emissions would result in a considerable adverse contribution to the [air basin]'s existing air quality conditions."[237] As with ROG and NO_X, these thresholds provide a connection between a mass emission threshold and avoidance of health effects.

Fugitive dust emissions from land use development projects are primarily associated with construction activities. Studies have shown that the application of best management practices at construction sites can significantly control fugitive dust,[238] and individual measures have been shown to reduce fugitive dust by anywhere from 30 to 90 percent.[239] San Francisco's Construction Dust Control Ordinance requires a number of fugitive dust control measures to ensure that construction projects do not result in visible dust. The project would be subject to the requirements of the Construction Dust Control Ordinance, which is the basis for determining the significance of criteria air pollutant and ozone precursor impacts from fugitive dust emissions associated with construction activities. Impact AQ-2 analyzes construction-related fugitive dust emissions. Fugitive dust emissions associated with operational activities are also assessed in Impact AQ-3 and included in the total PM emissions, compared against the significance thresholds presented in Table 3.D-5 (p. 3.D-27). Impact AQ-4 also includes construction and operational fugitive dust in the health risk $PM_{2.5}$ analysis.

Other Criteria Air Pollutants

Regional concentrations of CO and SO_2 in the air basin have not exceeded the state standards for more than two decades. As discussed previously, the air basin is in attainment for both CO and SO_2. The air district has demonstrated, based on modeling, that to exceed the California ambient air quality standard of 9.0 parts per million (ppm) (8-hour average) or 20.0 ppm (1-hour average) for CO, project traffic, in addition to existing traffic, would need to exceed 44,000 vehicles per hour at affected intersections (or 24,000 vehicles per hour where vertical and/or horizontal mixing is limited). Projects that do not result in 44,000 vehicles per hour in combination with background traffic (or 24,000 vehicles per hour where applicable) would not have the potential to result in a significant CO impact.[240]

The transportation analysis indicates that the proposed project would generate 615 new vehicle trips during the weekday p.m. peak hour.[241] Peak-hour traffic volume at the roadway segment with the greatest traffic volumes near the project site (along Bayshore Boulevard from south of Industrial Street to Cesar Chavez Street) is 2,200 vehicles per hour. The same traffic increases would be associated with the expanded streetscape variant. If all of the proposed project vehicle trips traveled along Bayshore Boulevard, which is not a likely scenario, the existing plus project or expanded streetscape variant traffic volumes at nearby intersections would be well below the screening criterion of 44,000 vehicles per hour and the more restrictive screening criterion of 24,000 vehicles per hour. Given the air basin's attainment status and the limited CO and SO_2 emissions that could result from the proposed project or expanded streetscape variant,

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237 Ibid.

238 Western Regional Air Partnership, *WRAP Fugitive Dust Handbook*, September 7, 2006, *https://www.wrapair.org/forums/dejf/fdh/content/FDHandbook_Rev_06.pdf*, accessed March 16, 2023.

239 Bay Area Air Quality Management District, *CEQA Air Quality Guidelines, Appendix A: Thresholds of Significance Justification,* April 20, 2023, p. A-45, *https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa-guidelines-2022/appendix-a-thresholds-of-significance-justification_final-pdf.pdf?la=en*, accessed June 16, 2023.

240 Bay Area Air Quality Management District, *CEQA Air Quality Guidelines, Chapter 4: Screening for Criteria Air Pollutants and Precursors.* April 20, 2023, p. 4-5, https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa-guidelines-2022/ceqa-guidelines-chapter-4-screening_final-pdf.pdf?la=en, accessed June 16, 2023.

241 Adavant and LCW Consultants, 749 Toland Street and 2000 McKinnon Avenue Project, Final Estimation of Project Travel Demand, December 10, 2021.

the proposed project or expanded streetscape variant would not result in a cumulatively considerable net increase in CO or SO_2, and a quantitative analysis is not required.

Community Risk and Hazard Impacts

As part of the environmental review for the proposed project and expanded streetscape variant, the planning department conducted an HRA to provide quantitative estimates of $PM_{2.5}$ concentration exposure and health risks from exposures to TACs. Impacts were evaluated for receptors within 1,000 feet of the project site. To account for the large traffic volumes generated by the proposed project or expanded streetscape variant, additional receptors from the 2020 Citywide HRA geodatabase were included within 1,000 feet of proposed traffic routes between the project site and U.S. 101 and I-280, as well as along construction haul routes. The HRA was conducted consistent with air district and OEHHA guidance.

Consistent with air district recommendations for HRAs, the U.S. EPA's regulatory dispersion model (AERMOD)[242] was used to estimate pollutant concentrations at receptors consistent with the 2020 Citywide HRA geodatabase within the proposed project's HRA modeling domain. The pollutant concentrations files from AERMOD were then supplied as inputs to the air board's Hot Spots Analysis and Reporting Program (HARP2),[243] along with corresponding project-related TAC emissions (emissions estimating methodology summarized above), to estimate the health risk impacts associated with the construction and operation phases of the proposed project. TAC exposure factors and guidance from the 2015 OEHHA Air Toxics Hot Spots Program[244] are accounted for in the HARP2 software.

For construction, the HRA modeling assumed a 2.6-year construction duration, which is slightly longer than the 31-month anticipated construction duration. Construction activity was modeled to occur six days per week for 10 hours per day (7 a.m. to 5 p.m.). Modeling for select construction phases (i.e., building construction, architectural coating, and paving) accounted for potential nighttime (8 p.m. to 7 a.m.) work. Both off-road and on-road sources of TACs associated with the proposed project's construction and operation phases were included in the HRA. For construction, off-road sources of emissions were modeled as adjacent volume and area (fugitive dust) sources spanning the footprint of the proposed project site. On-road emissions were modeled as adjacent volume sources along construction vehicle routes.

The operational phase of the HRA included emissions from the two emergency generators and on-road vehicles, both traveling to and from the site and operating on site. Emergency generators were modeled as point sources, and on-road vehicles were represented by adjacent volume sources along traffic routes and onsite ramps. A portion (60 percent) of the on-road vehicle exhaust from onsite vehicles was modeled as point sources, released through 16 exhaust vents installed as part of the proposed project, and the remaining 40 percent of exhaust emissions from onsite vehicle activity was modeled as volume sources released through openings along the ramps and the active roof. Additional details on the model input parameters, source locations, and receptors are provided in Appendix F of this EIR.

After conducting dispersion modeling, concentrations of $PM_{2.5}$ are presented where the project would have the greatest impact on receptors. In addition, TAC concentrations were evaluated to determine the potential cancer risk from the project. The impact of $PM_{2.5}$ concentrations and potential cancer risk from the project variant was evaluated based on the increased level of emissions and proximity to receptors relative to the

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242 AERMOD Dispersion Model. https://www.epa.gov/scram/air-quality-dispersion-modeling-preferred-and-recommended-models#aermod.
243 HARP Air Dispersion Modeling and Risk Tool. https://ww2.arb.ca.gov/resources/documents/harp-air-dispersion-modeling-and-risk-tool.
244 Office of Environmental Health Hazard Assessment (OEHHA), February 2015, *Air Toxics Hot Spots Program Guidance Manual*.

project. Two exposure scenarios were evaluated to assess long-term cancer risk and annual $PM_{2.5}$ concentrations for both residential and offsite worker exposures. These included:

- **Residential Exposure Scenario 1:** This scenario evaluates the cancer risk that construction activities and operation of the proposed project or expanded streetscape variant would pose to residential receptors. Cancer risk was assessed over a 30.6-year period, with construction occurring during the first 2.6 years, and operations for the remaining 28 years.

- **Residential Exposure Scenario 2:** This scenario evaluates the cancer risk that the operational-only TAC emissions of the proposed project or expanded streetscape variant would pose to residential receptors over a 30-year period.

- **Worker Exposure Scenario 1:** This scenario evaluates the cancer risk that the construction activities and operation of the proposed project or expanded streetscape variant would pose to offsite worker receptors. Cancer risk was assessed over a 25.6-year period, with construction occurring during the first 2.6 years and operations for the remaining 23 years.

- **Worker Exposure Scenario 2:** This scenario evaluates the cancer risk that operational-only TACs from the proposed project or expanded streetscape variant would pose to offsite worker receptors over a 25-year period.

The purpose of analyzing multiple health risk exposure scenarios is to ensure analysis and disclosure of the most impactful scenario. The approximately 30-year residential exposure scenarios 1 and 2, and the 25-year offsite worker exposure scenarios 1 and 2 are consistent with 2015 OEHHA health risk guidance. Detailed methodology pertaining to the HRA and dispersion modeling is available in Appendix F.

The thresholds of significance used to evaluate health risks from new sources of TACs associated with construction and operation of the proposed project or expanded streetscape variant are based on the potential for the proposed project or expanded streetscape variant to substantially affect the geography or severity of the APEZ at sensitive receptor and worker locations. As discussed previously in Section 3.D.2, the offsite receptors within 1,000 feet of the project site, and vehicle routes between the proposed project site and U.S. 101 and I--280, are within the APEZ. If a sensitive receptor or worker location meets the APEZ criteria with the proposed project or variant but would not meet the APEZ criteria without it, a substantial health risk contribution threshold is defined as an annual average $PM_{2.5}$ concentration at or above 0.3 $\mu g/m^3$ or an excess cancer risk at or greater than 10.0 per 1 million. The 0.3 $\mu g/m^3$ annual average $PM_{2.5}$ concentration and the excess cancer risk of 10.0 per 1 million persons exposed are the project-level health risk levels identified by the air district; they are the levels below which the air district considers new sources not to make a considerable contribution to cumulative health risks.[245] For those locations already meeting the APEZ criteria, a lower significance threshold is required to ensure that the proposed project or variant's contribution to existing health risks would not be significant. In these areas, project- or expanded streetscape variant-generated $PM_{2.5}$ concentrations at or above 0.2 $\mu g/m^3$, or an excess cancer risk at or greater than 7.0 per 1 million, would be a substantial health risk contribution, and a significant impact

[245] Bay Area Air Quality Management District, *CEQA Air Quality Guidelines, Chapter 5: Project-Level Air Quality Impacts.* April 20, 2023, p. 5-14, *https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa-guidelines-2022/ceqa-guidelines-chapter-5-project-air-quality-impacts_final-pdf.pdf?la=en*, accessed June 16, 2023.

would occur.[246] Projects that result in a cancer risk or annual average $PM_{2.5}$ concentration below these levels at sensitive or worker receptors would not expose sensitive or worker receptors to substantial pollutant concentrations. The chronic hazard index (HI) resulting from the proposed project is also disclosed and compared with the air district's chronic HI threshold of 1.0.

Table 3.D-6 presents the cancer risk and $PM_{2.5}$ health risk thresholds that are applied to the proposed project and expanded streetscape variant.

Table 3.D-6 Excess Cancer Risk and $PM_{2.5}$ Concentration Thresholds

Affected Sensitive Receptors	$PM_{2.5}$ (µg/m^3)	Excess Cancer Risk (cases per 1 million population)
APEZ Criteria		
APEZ criteria for health-vulnerable locations[1]	9.0	90.0
Thresholds for Construction and Operation		
Significance threshold for project contribution to sensitive receptors meeting the APEZ criteria[2,3]	0.2	7.0
Significance threshold for project contribution to sensitive receptors that do not meet the APEZ criteria, but would meet the APEZ criteria as a result of the project[3,4]	0.3	10.0

Sources:

San Francisco Department of Public Health, Environmental Health, Planning, Memorandum to File regarding 2014 Air Pollutant Exposure Zone Map, April 9, 2014.

Jerrett, M., et al., "Spatial Analysis of Air Pollution and Mortality in Los Angeles," Epidemiology 16:727–736, 2005.

Notes:

1 See San Francisco Modeling of Air Pollution Exposure Zone discussion above. The project site is in a health-vulnerable location.

2 A 0.2 µg/m^3 increase in $PM_{2.5}$ would result in a 0.28 percent increase in noninjury mortality, or an increase of about 21 excess deaths per million population per year from noninjury causes in San Francisco. This information is based on M. Jerrett et al. 2005. The excess cancer risk has been proportionally reduced to result in a significance criterion of seven per 1 million persons exposed.

3 San Francisco Department of Public Health, Environmental Health, Planning, Memorandum to File regarding 2014 Air Pollutant Exposure Zone Map (April 9, 2014).

4 Bay Area Air Quality Management District, 2022 California Environmental Quality Act Air Quality Guidelines, Chapter 3: Thresholds of Significance, April 20, 2023, https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines, accessed June 16, 2023.

APEZ = Air Pollutant Exposure Zone
µg/m^3 = micrograms per cubic meter
$PM_{2.5}$ = particulate matter less than or equal to 2.5 micrometers in diameter

The health risk impact of the proposed project or expanded streetscape variant at the maximally exposed sensitive receptors is presented in Impact AQ-4. Impact AQ-4 also provides health risk information from existing (background) sources of air pollution based on the 2020 Citywide HRA. Furthermore, Impact AQ-4 provides the health risk impact of the proposed project or expanded streetscape variant, in addition to background health risks, under a 2035 and 2050 baseline scenario.[247] This additional analysis is provided in

246 A 0.2 µg/m^3 increase in $PM_{2.5}$ would result in a 0.28 percent increase in noninjury mortality, or an increase of about 21 excess deaths per 1,000,000 population per year from noninjury causes in San Francisco. This information is based on Jerrett M. et al., Spatial Analysis of Air Pollution and Mortality in Los Angeles, *Epidemiology* 16 (2005): 727–736. The excess cancer risk has been proportionally reduced to result in a significance criterion of 7 per 1 million persons exposed.

247 The planning department completed a 2035 and 2050 Baseline Citywide HRA analysis to inform the San Francisco Housing Element Update 2022's environmental review; these baseline HRAs project citywide health risks assuming the Housing Element 2022 update is not adopted. The 2035 and 2050 Baseline Citywide HRAs update the health risk (cancer risk and $PM_{2.5}$ concentrations) from mobile sources, including updating

response to comments received on the NOP from the air board requesting a future baseline analysis of the project's air quality impact and requesting information demonstrating the effect of federal and state regulations on mobile source emissions in these future years.[248] The primary emissions source from the proposed project or expanded streetscape variant is mobile sources, including heavy duty diesel vehicles, single-unit trucks, vans, and automobiles. As discussed in this air quality section, emissions from these sources are anticipated to decrease in future years due to increasingly stringent emissions regulations and vehicle turnover. Therefore, providing future year analysis with and without this proposed San Francisco Gateway Project provides useful information to decision-makers to aid in understanding the scale of change anticipated from future regulations. Specifically, to disclose future baseline plus project health risk impacts for the years 2035 and 2050, this air quality analysis for the proposed project applies the lifetime cancer risk and annual $PM_{2.5}$ concentration identified through the San Francisco Housing Element 2022 Update EIR modeling for the 2035 and 2050 baseline years (assuming no housing element update).[249] [250] The project-level analysis below discloses the 2035 and 2050 baseline health risks (assuming no housing element update), plus the health risks of the proposed project at the offsite maximally exposed individual sensitive receptor, for both residential and offsite worker sensitive receptors. This analysis is conservative (worst-case) because it does not account for reduced health risks from the proposed project in future years 2035 and 2050 resulting from lower vehicle emissions due to increasingly stringent regulations.

Odors

This analysis evaluates whether the proposed project or expanded streetscape variant would create objectionable odors that would affect a substantial number of people (e.g., by introducing new land uses that are typically associated with odor complaints). Typical odor sources of concern include wastewater treatment plants, sanitary landfills, transfer stations, composting facilities, petroleum refineries, asphalt batch plants, chemical manufacturing facilities, fiberglass manufacturing facilities, auto body shops, rendering plants, and coffee roasting facilities. The air district identifies a screening distance for new sources of potential odors, such as wastewater treatment plants, landfills and transfer stations, refineries, asphalt and chemical plants, food processing facilities, and the like, of 1 or 2 miles, depending on use. In general, such setback distances would avoid the potential for significant odor impacts. Impact AQ-5 evaluates the proposed project's potential to create objectionable odors affecting a substantial number of people.

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traffic volumes throughout the city and emissions factors assuming a 2035 and 2050 mobile source fleet. All other emissions sources (e.g., stationary sources, maritime emissions, Caltrain/rail emissions) remain constant between the 2020 Citywide HRA and the 2035 and 2050 Baseline Citywide HRAs. (Source: San Francisco Planning Department, San Francisco Housing Element 2022 Update EIR, 2022, *https://sfplanning.org/environmental-review-documents?title=HOusing+Element&field_environmental_review_categ_target_id=All&items_per_page=10*.).

[248] Project emissions profile (based on year 2025 at full build out) were added to the baseline health risks identified for the years 2035 and 2050 from the San Francisco Housing Element 2022 Update EIR. This is considered a conservative approach because it does not account for reduced emissions associated with the project in future years as a result of improved technologies and increasingly stringent emissions reduction regulations. Therefore, baseline plus project health risks presented for the years 2035 and 2050 are conservative and project impacts are overestimated.

[249] San Francisco Planning Department, San Francisco Housing Element 2022 Update EIR, 2022, *https://sfplanning.org/environmental-review-documents?title=HOusing+Element&field_environmental_review_categ_target_id=All&items_per_page=10*.

[250] Projections for the 2035 and 2050 baseline years include assumptions about the buildout of the department's development pipeline as well as additional growth that may occur by 2035 and 2050 without implementation of the housing element 2022 update. At the time of preparation, the department's Q1 2019 development pipeline represented the most recent data available. San Francisco is projected to have 462,000 housing units under the 2035 baseline (approximately 56,000 units more than 2020 conditions) and 508,000 housing units under the 2050 baseline (approximately 102,000 units more than 2020 conditions).

Cumulative Impact Assessment

Regional air quality impacts are cumulative impacts. Emissions from past, present, and future projects contribute to adverse regional air quality impacts on a cumulative basis. No single development project is large enough to result in regional nonattainment of ambient air quality standards. The project-level thresholds for mass emissions of criteria air pollutants are based on levels at which new sources are not anticipated to result in a considerable net increase in nonattainment criteria air pollutants. These thresholds are used to evaluate the significance of construction and operational impacts from future actions consistent with the proposed action. Therefore, if a future project's mass emissions do not exceed the project-level thresholds, that project would not result in a considerable contribution to cumulatively significant regional air quality impacts. For this reason, no separate cumulative criteria air pollutant mass emissions analysis is warranted.

Other emissions, such as those leading to odors, were cumulatively analyzed and evaluated based on whether there would be other sources of emissions in the vicinity of the proposed project area that would combine with the potential emissions and odors associated with the proposed project to create a cumulative adverse effect to a substantial number of people.

Because the proposed project is in the APEZ, existing health risks resulting from ambient air quality conditions have been shown through modeling to be greater than the surrounding areas due to poor air quality and pollution from roadways. Therefore, community health risks in the APEZ are already significant. As a result, the thresholds for evaluating localized health risk impacts for a project in the APEZ are lower than those established by the air district. As discussed above, a project- or expanded streetscape variant-generated $PM_{2.5}$ concentration at or above 0.2 µg/m^3, or an excess cancer risk at or greater than 7.0 per 1 million from a project at sensitive receptors in the APEZ, would be a substantial health risk contribution to the existing significant cumulative air quality impact in this area.

The project-level analysis identified the maximally exposed individual residential and offsite worker receptor. Nearby projects were identified within 1,000 feet of the maximally exposed offsite residential and worker sensitive receptors, and a cumulative health risk analysis was performed to disclose the extent to which these projects also contribute to a cumulative impact with the proposed project (see Section 3.A.5, Historic and Existing Context of San Francisco's Bayview Hunters Point Neighborhood [p. 3.A-6], Section 3.A.6, Overview of Existing and Cumulative Environmental Setting [p. 3.A-15], and Figure 3.A-4 [p. 3.A-18]). The projects within 1,000 feet of the offsite maximally exposed residential and worker receptors would be along Oakdale Avenue. The construction of any city-sponsored construction project in the APEZ would be required to follow the clean construction ordinance requirements to use low emitting off-road construction equipment.[251]

Health risks from existing sources are also accounted for as part of the cumulative impact analysis. As described above, the city developed a baseline year 2020 health risk geodatabase for the entire City of San Francisco (the 2020 Citywide HRA). Health risks (cancer risk and annual $PM_{2.5}$ concentrations) from the 2020 baseline year were added to those modeled for the proposed project at the offsite maximally exposed residential and worker receptors.

[251] San Francisco Planning Department, San Francisco Clean Construction Ordinance, August 2015. *https://www.sfdph.org/dph/files/EHSdocs/AirQuality/San_Francisco_Clean_Construction_Ordinance_2015.pdf*, accessed March 9, 2023.

The project's cumulative analysis also evaluates impacts at the offsite maximally exposed residential and worker receptors in years 2035 and 2050. As discussed in the section of Appendix F describing the results of the air quality analysis, the planning department developed future year health risk databases as part of the Housing Element 2022 Update EIR for years 2035 and 2050. The Housing Element 2022 Update EIR evaluates the impacts of constructing 150,000 housing units in San Francisco by 2050. This analysis uses the housing element 2022 update future year health risk databases (assuming implementation of the Housing Element 2022 update) to inform analysis of the project's cumulative impacts to the offsite maximally exposed residential and worker receptors, in addition to analyzing cumulative projects within 1,000 feet. This is because implementation of the housing element 2022 update is a reasonably foreseeable action; therefore, using 2035 and 2050 data that include the housing element update is appropriate. Accordingly, this analysis uses the housing element update's 2035 and 2050 health risk databases for the proposed project's cumulative analysis. Additional details on this cumulative analysis are provided in Appendix F.

3.D.4 Project Impacts and Mitigation Measures

This section describes the analysis of impacts related to air quality associated with the proposed project and expanded streetscape variant. Measures to mitigate significant impacts accompany the discussion of each identified significant impact.

Impact AQ-1: The proposed project or project variant could conflict with or obstruct implementation of the 2017 Clean Air Plan. (*Less than Significant with Mitigation*)

PROPOSED PROJECT

The most recently adopted air quality plan for the air basin is the *2017 Clean Air Plan (2017 Clean Air Plan): Spare the Air, Cool the Climate*.[252] The 2017 Clean Air Plan is a roadmap that demonstrates how the bay area will, in accordance with the requirements of the California Clean Air Act, implement all feasible measures to reduce ozone precursors (ROG and NO_X), and reduce the transport of ozone and its precursors to neighboring air basins. It also provides a climate and air pollution control strategy to reduce ozone, PM, TACs, and GHG emissions that builds on existing regional, state, and national programs.

In determining consistency with the 2017 Clean Air Plan, this analysis considers whether the proposed project would (1) support the primary goals of the 2017 Clean Air Plan, (2) include applicable control measures from the 2017 Clean Air Plan, and (3) avoid disrupting or hindering implementation of control measures identified in the 2017 Clean Air Plan.

Primary Goals and Applicable Control Measures of the 2017 Clean Air Plan

The primary goals of the 2017 Clean Air Plan are to protect air quality and public health at the regional and local scale, and to protect the climate by reducing regional criteria air pollutant emissions; reducing local air-quality-related health risks (by meeting state and national ambient air quality standards); and reducing GHG emissions (to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050).[253]

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[252] Bay Area Air Quality Management District, *2017 Clean Air Plan: Spare the Air, Cool the Climate*, April 19, 2017, *http://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en*, accessed March 16, 2023.

[253] The air district's 2030 GHG target is consistent with the California's GHG 2030 reduction target under Senate Bill 32. The air district's 2050 target is consistent with the state's 2050 GHG reduction target under Executive Order S-3-05.

To meet the primary goals, the 2017 Clean Air Plan recommends specific control measures and actions. These control measures are grouped into various categories, and include stationary and area source measures, mobile source measures, transportation control measures, and energy and climate measures. The 2017 Clean Air Plan recognizes that to a great extent, community design dictates individual travel mode, and that a key long-term control strategy to reduce emissions of criteria air pollutants, air toxics, and GHG emissions from motor vehicles is to channel future bay area growth into urban communities where goods and services are close at hand and people have a range of viable transportation options. To this end, the 2017 Clean Air Plan includes 85 control measures aimed at reducing air pollution in the air basin.

The vast majority of the control measures included in the 2017 Clean Air Plan do not apply directly to the proposed project because they target facilities or land uses that are not proposed as part of the project (e.g., energy generation, waste management, agricultural, forest or pasture lands); vehicles or equipment that would not be used during construction or operational phases of the proposed project (e.g., airplanes, farming equipment); and/or involve rulemaking or other actions under the jurisdiction of agencies not directly involved with design and approval of the proposed project. For example, 40 of these measures address stationary sources (such as oil refineries and cement kilns, but also include large boilers used in commercial and industrial facilities) and will be implemented by the air district using its permit authority and are therefore not suited to implementation through local planning efforts or project approval actions.

The control measures identified in the 2017 Bay Area Clean Air Plan that are most applicable to the proposed project are those in the transportation, building, energy, natural and working lands, waste, and water sectors, some of which would be implemented as part of, but not limited to, the proposed project's compliance with San Francisco's general plan, planning code, green building code, and requirements articulated in the GHG reduction strategy.

Project Consistency with the Goals and Applicable Control Measures from the 2017 Clean Air Plan

The proposed project is a clean construction priority project pursuant to Planning Director Bulletin No. 2, thereby incorporating, at a minimum, equipment that meets Tier 4 interim emissions standards for all equipment greater than 25 hp, which would minimize construction-related exhaust emissions. Furthermore, as described in more detail in Impact AQ-3 below, construction equipment with engines greater than 25 hp would be required to be rated Tier 4 Final, and construction equipment that is readily available as plug-in or battery-electric equipment shall be used instead of diesel-powered equipment during construction, in accordance with Mitigation Measure M-AQ-3h. These measures would be consistent with the 2017 Clean Air Plan's MSM-C1, "Construction and Farming Equipment," which encourages the use of various strategies, such as the use of renewable electricity and fuels, to reduce emissions from construction and farming equipment.

The proposed project would further align with the 2017 Clean Air Plan's Energy and Buildings Measures through implementation of existing city policies and additional design features aimed at improving energy efficiency and reducing reliance on nonrenewable energy resources, including elimination of onsite natural gas infrastructure and incorporation of onsite solar power generation.

The building sector control measure BL1, "Green Buildings," calls for identifying barriers to effective local implementation of the California Green Building Standards (CALGreen) (Title 24) statewide building energy code, and developing solutions to improve implementation/enforcement. The proposed project would be subject to the provisions of the San Francisco Green Building Code, and therefore would comply with some of the most stringent building energy-related requirements in the country. Energy control measure EN2, "Decarbonize Buildings," plans to increase renewable energy production and consumption in bay area buildings. The proposed project would install a rooftop photovoltaic solar system for onsite electricity generation and would eliminate onsite natural gas infrastructure.

The waste sector control measure WA3, "Green Waste Diversion," calls for developing model policies to facilitate local adoption of ordinances and programs to reduce the amount of green waste going into landfills. The proposed project would support this measure by complying with the Mandatory Recycling and Composting Ordinance, as well as the requirements in the San Francisco Green Building Code, to divert 75 percent of demolition debris from landfills.

The proposed project would result in vehicle trips from visiting cars, vans, and trucks serving the proposed land uses, as well as commute trips associated with onsite employees traveling to and from the site daily as their place of work. The resultant mobile source emissions are the highest emissions source generated by the proposed project, constituting approximately two-thirds of the project's total emissions.

The project would add last-mile delivery distribution use in the San Francisco service area; which would accommodate existing demand and projected growth in the parcel and last-mile delivery market without inducing new trips (described further in Section 3.B.4, Impact TR-5 [p.3.B-53]).[254] The siting of the facility in this location would be more efficient in terms of vehicle miles travelled (VMT) and would therefore result in lower mobile-source emissions from these trips than from scenarios in which parcel and last-mile delivery uses serving the city would either:

1. expand existing facilities or operations outside San Francisco; or
2. construct new facilities outside San Francisco.

Furthermore, as described in Section 2.D.9, Transportation Demand Management Plan (p. 2-33), the proposed project is required to implement TDM features, consistent with planning code section 169, to reduce vehicle miles traveled and reliance on single-passenger, gasoline-powered vehicles. Because the department cannot precisely quantify the effectiveness of TDM measures, it would be speculative to account for the reduced air emissions achieved through implementation of a TDM program. Similarly, the air emissions analysis does not account for VMT efficiency achieved through the proposed project by siting it in San Francisco rather than a location outside of San Francisco.

The impacts of the proposed project with respect to GHG emissions are discussed in the initial study (see Appendix B, Section E.9, Greenhouse Gas Emissions). As stated there, the proposed project would comply with the city's Greenhouse Gas Reduction Strategy; therefore, it would not result in significant impacts associated with an increase in GHGs or conflict with measures adopted for the purpose of reducing such emissions. The city's Greenhouse Gas Reduction Strategy complies with numerous 2017 Bay Area Clean Air Plan control measures to reduce GHG emissions, many of which are related to transportation, energy conservation, waste reduction, and water conservation. Therefore, the proposed project would not conflict with the 2017 Clean Air Plan measures for these specific sectors.

[254] Note that the transportation analysis assumes a VMT credit for this efficiency in siting (Section 3.B of this EIR). Although this is relevant for the discussion of consistency with the applicable air quality plan, in order to disclose the change in criteria air pollutants that would occur as a result of this project at this site, the air quality emissions estimates conservatively do not take a mileage reduction (credit) for locating parcel and last-mile delivery land uses closer to the San Francisco customer base.

The proposed project would be consistent with numerous control measures of the 2017 Bay Area Clean Air Plan, which demonstrates how the region will improve ambient air quality and achieve the state and federal ambient air quality standards. However, the proposed project would result in unmitigated operational NO_X emissions that would exceed the thresholds of significance that were established by the air district (discussed further under Impact AQ-3). Because NO_X (an ozone precursor) emissions thresholds would be exceeded on an ongoing basis during project operations and because the region is in nonattainment for ozone, the proposed project would not support one of the Clean Air Plan's primary goals—to reduce regional criteria air pollutant emissions. Therefore, the proposed project could conflict with the Clean Air Plan, and this impact would be ***significant***.

Mitigation Measures

As detailed under Impact AQ-3, Mitigation Measures M-AQ-3a through M-AQ-3i would reduce NO_X emissions from the proposed project and the potential for the project to conflict with the applicable air quality plan, the 2017 Bay Area Clean Air Plan.

Significance after Mitigation

Mitigation Measure M-AQ-3h entails implementing additional emissions reduction commitments for the proposed project to minimize construction-related emissions. In addition, as detailed in the discussion of Impact AQ-3, implementation of Mitigation Measures M-AQ-3a through M-AQ-3g and M-AQ-3i would reduce operational NO_X emissions to a level that would not exceed the thresholds of significance for NO_X. These mitigation measures would further reinforce actions such as offroad equipment and TRU electrification that align with the 2017 Clean Air Plan. Therefore, with implementation of these mitigation measures, the proposed project would not conflict with the applicable air quality plan, and this impact would be ***less than significant with mitigation*****.**

EXPANDED STREETSCAPE VARIANT

The expanded streetscape variant comprises the same land uses, site plan, development intensity, and operations as the proposed project, but proposes rebuilding the entire cross section of the streets along the project perimeter to Better Streets standards. The footprint would involve additional ground disturbance to improve the remainder of the adjacent public rights-of-way. However, the construction-related activities for the expanded streetscape variant would be subject to the same requirements as the proposed project, including clean construction priority processing, committing the project to the use of Tier 4 construction equipment. In addition, the expanded streetscape variant would plant approximately 108 additional street trees, further aligning with clean air strategies. Operations of the expanded streetscape variant would not vary from the proposed project. However, despite the additional tree planting and benefits provided by the expanded streetscape variant, the expanded streetscape variant could, for the same reasons cited for the proposed project, conflict with or obstruct implementation of the 2017 Clean Air Plan, and this impact would be ***significant***.

Significance after Mitigation

With implementation of mitigation measures described above for the proposed project (i.e., Mitigation Measures M-AQ-3a through M-AQ-3i), operational NO_X emissions would be reduced to a less-than-significant level and the expanded streetscape variant would be consistent with the applicable air quality plan that demonstrates how the region will improve ambient air quality and achieve the state and federal ambient air quality standards. Therefore, and for the same reasons described above for the proposed project, this impact would be ***less than significant with mitigation***.

Impact AQ-2: Construction of the proposed project or project variant would not result in a cumulatively considerable net increase in a criteria air pollutant for which the project region is in nonattainment status under an applicable federal, state, or regional ambient air quality standard. (*Less than Significant*)

PROPOSED PROJECT

During the proposed project's construction period, construction activities would result in emissions of ozone precursors and particulate matter in the form of fugitive dust and exhaust (e.g., vehicle tailpipe emissions). Emissions of ozone precursors and particulate matter are primarily a result of the combustion of fuel from on-road and off-road vehicles. However, ROGs are also emitted from activities that involve paint, other types of architectural coatings, or asphalt paving. Additional details and assumptions are provided in Appendix F.

Fugitive Dust

Demolition, excavation, grading, and other construction activities may cause wind-blown dust that could contribute particulate matter into the local atmosphere. The Construction Dust Control Ordinance requires that all site preparation work, demolition, or other construction activities in San Francisco that have the potential to create dust or to expose or disturb more than 10 cubic yards or 500 square feet of soil comply with specified dust control measures whether or not the activity requires a permit from the department of building inspection. In compliance with the Construction Dust Control Ordinance, the project sponsor and the contractor responsible for construction activities at the project site would be required to use the following practices to control construction dust on the site, or other practices that result in equivalent dust control that are acceptable to the director. Dust suppression activities may include watering all active construction areas sufficiently to prevent dust from becoming airborne; increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. During excavation and soil-moving activities, contractors shall wet sweep or vacuum the streets, sidewalks, paths, and intersections where work is in progress at the end of the workday. Inactive stockpiles (where no disturbance occurs for more than seven days) greater than 10 cubic yards or 500 square feet of excavated material, backfill material, import material, gravel, sand, road base, and soil shall be covered with a 10-mil (0.01-inch) polyethylene plastic (or equivalent) tarp and braced down, or protected with other equivalent soil stabilization techniques. For projects over one-half acre, such as the proposed project, the dust control ordinance requires that the project sponsor submit a dust control plan for approval by the San Francisco Department of Public Health.[255] The site-specific dust control plan would require the implementation of additional dust control measures such as installation of dust curtains and windbreaks, independent third-party inspections and monitoring, provision of a public complaint hotline, and suspension of construction during high wind conditions.

San Francisco ordinance 175-91 restricts the use of potable water for soil compaction and dust control activities undertaken in conjunction with any construction or demolition project occurring within the boundaries of San Francisco unless permission is obtained from SFPUC. Nonpotable water must be used for soil compaction and dust control activities during project construction and demolition.

In addition, as discussed on page 183 of the initial study (Appendix B), the phase II environmental site assessment determined that there were trace levels of asbestos at several locations where soil samples were taken, with no discernible pattern to the detection. The asbestos ATCM requires construction activities in areas where naturally occurring asbestos is likely to be found to employ best available dust control

[255] The department of building inspection will not issue a building permit without written notification from the director of public health that the applicant has a site-specific dust control plan, unless the director waives the requirement.

measures. Before the start of construction activities, the project sponsor would be required to submit the necessary documentation to the air district to ensure compliance with the asbestos ATCM, which may include approval of an asbestos ATCM exemption application or preparation of an asbestos dust mitigation plan. The project sponsor would be required to ensure that construction contractors comply with the asbestos ATCM requirements to prevent airborne (fugitive) dust containing asbestos from migrating beyond property boundaries during excavation and handling of excavated materials.

Compliance with the regulations and procedures set forth by the Construction Dust Control Ordinance and the asbestos ATCM would reduce potential dust-related air quality impacts, including dust-related particulate matter (a criteria air pollutant) and naturally occurring asbestos that may be a constituent of that particulate matter, and this impact would be ***less than significant***.

Criteria Air Pollutants

Construction activities would result in emissions of criteria air pollutants from the use of off- and on-road vehicles and equipment, architectural coatings, and paving activities. The proposed project is a clean construction priority project pursuant to Planning Director Bulletin No. 2, thereby incorporating, at a minimum, equipment that meets Tier 4 interim emissions standards for all equipment greater than 25 hp. Table 3.D-7 through Table 3.D-9 show the estimated emissions from each year of construction in comparison to the thresholds of significance.[256] As shown in Table 3.D-7 through Table 3.D-9, the proposed project's construction activities would not exceed any of the air district's criteria air pollutant significance thresholds. Therefore, the proposed project's construction criteria air pollutant impact would be ***less than significant***.

Table 3.D-7 Summary of Year 1 (2022) Proposed Project Total and Average Daily Unmitigated Construction Emissions

Year 1 (2022) Emissions Source	ROG	NO_X	PM_{10} (Exhaust Only)	$PM_{2.5}$ (Exhaust Only)
Off-road equipment (tons)	0.12	2.21	0.02	0.02
On-road equipment (tons)	0.04	0.44	0.01	0.01
Year 1 (2022) total emissions (tons)	**0.16**	**2.65**	**0.03**	**0.03**
Average daily (2022) emissions (pounds per day)[1]	**2.02**	**34.24**	**0.36**	**0.35**
Threshold of significance (pounds per day)	*54*	*54*	*82*	*54*
Exceeds threshold?	*No*	*No*	*No*	*No*

Notes:

1. Based on project-specific construction phasing, emissions reflect the assumption that all ground-disturbing activities associated with building A would occur in 2022 and ground-disturbing activities associated with building B would occur in 2022 and 2023. The analysis assumes that all demolition activities would occur in 2022. Average daily emission estimates are based on 155 construction workdays in 2022.

NO_x = oxides of nitrogen
PM_{10} = particulate matter less than or equal to 10 micrometers in diameter
$PM_{2.5}$ = particulate matter less than or equal to 2.5 micrometers in diameter
ROG = reactive organic gas

[256] The analysis was conducted assuming that project construction would begin in year 2022 and be completed in year 2024. However, construction is now expected to begin in year 2024 and would be completed in year 2026. Therefore, the emission estimates presented in Table 3.D-7 through Table 3.D-9 are conservative; as construction occurs in later years, exhaust-related emissions are anticipated to result in lower levels of emissions due to advancements in engine technology, retrofits, and equipment fleet turnover as stricter regulatory standards take effect.

Table 3.D-8 Summary of Year 2 (2023) Proposed Project Total and Average Daily Unmitigated Construction Emissions

Year 2 (2023) Emissions Source	ROG	NO_X	PM_{10} (Exhaust Only)	$PM_{2.5}$ (Exhaust Only)
Off-road equipment (tons)	0.24	4.65	0.06	0.06
On-road equipment (tons)	0.04	0.41	0.01	0.01
Architectural coatings (tons)	0.69	—	—	—
Year 2 (2023) total emissions (tons)	**0.97**	**5.05**	**0.07**	**0.07**
Average daily (2023) emissions (pounds per day)[1]	**7.47**	**38.85**	**0.53**	**0.52**
Threshold of significance (pounds per day)	*54*	*54*	*82*	*54*
Exceeds threshold?	*No*	*No*	*No*	*No*

Notes:

1. Based on project-specific construction phasing, emissions reflect the assumption that all ground-disturbing activities associated with building B would occur in 2022 and 2023. The analysis assumes architectural coating activities would occur in 2023 and 2024. Average daily emission estimates are based on 260 construction workdays in 2023.

NO_x = oxides of nitrogen
PM_{10} = particulate matter less than or equal to 10 micrometers in diameter
$PM_{2.5}$ = particulate matter less than or equal to 2.5 micrometers in diameter
ROG = reactive organic gas

Table 3.D-9 Summary of Year 3 (2024) Proposed Project Total and Average Daily Unmitigated Construction Emissions

Year 3 (2024) Emissions Source	ROG	NO_X	PM_{10} (Exhaust Only)	$PM_{2.5}$ (Exhaust Only)
Off-road equipment (tons)	0.25	4.65	0.04	0.04
On-road equipment (tons)	0.04	0.30	<0.01	<0.01
Architectural coatings (tons)	1.39	—	—	—
Paving activities (tons)	0.02	—	—	—
Year 3 (2024) total emissions (tons)	**1.69**	**4.95**	**0.05**	**0.04**
Average daily (2024) emissions (pounds per day)[1]	**13.28**	**38.79**	**0.36**	**0.35**
Threshold of significance (pounds per day)	*54*	*54*	*82*	*54*
Exceeds threshold?	*No*	*No*	*No*	*No*

Notes:

1. Based on project-specific construction phasing, emissions reflect the assumption that all ground-disturbing activities would occur in 2022 and 2023. The analysis assumes architectural coating activities would occur in 2023 and 2024 and l paving activities would occur in 2024. Average daily emission estimates are based on 255 construction workdays in 2024.

NO_x = oxides of nitrogen
PM_{10} = particulate matter less than or equal to 10 micrometers in diameter
$PM_{2.5}$ = particulate matter less than or equal to 2.5 micrometers in diameter
ROG = reactive organic gas

EXPANDED STREETSCAPE VARIANT

The expanded streetscape variant comprises the same land uses, site plan, development intensity, and operations as the proposed project, but proposes rebuilding the entire cross section of the streets along the project perimeter to Better Streets standards. Therefore, the proposed expanded streetscape variant would result in criteria air pollutant and ozone precursor emissions similar to those of the proposed project, but would include a slightly larger footprint, estimated to be approximately 100,000 square feet. The expanded streetscape variant would result in additional ground disturbance to improve the remainder of the adjacent public rights-of-way. As a result, the same construction equipment used for the street and sidewalk improvements for the proposed project would be used for the expanded streetscape variant, but only for the limited area and time necessary to complete the roadway, curb cut, sidewalk, planting, and other upgrades. The equipment use and worker and truck trips associated with the additional construction for the expanded streetscape variant would be nominal, and would not substantially change the average daily emissions that would occur over the construction period compared to those of the proposed project. For example, the proposed project's construction emissions associated with sitework would occur during year 3 construction. As shown in Table 3.D-9 (p. 3.D-40), year 3 construction activities would result in average daily emissions of approximately 39 pounds of NO_X and 13 pounds of ROG per day. Conservatively assuming that the sitework-related equipment use would increase by 50 percent under the expanded streetscape variant to implement the expanded street improvements, average daily emissions in year 3 would increase to approximately 46 pounds per day of NO_X and 14 pounds per day of ROG, but would not exceed the 54 pound-per-day significance thresholds.[257] In addition, improvements associated with the expanded streetscape variant would be subject to the San Francisco Construction Dust Control Ordinance, the asbestos ATCM, and the requirements for a clean construction priority project, like the proposed project. For the same reasons cited for the proposed project, the expanded streetscape variant's construction-related emissions would be ***less than significant***.

Impact AQ-3: The proposed project or project variant would result in a cumulatively considerable net increase in a criteria air pollutant for which the project region is in nonattainment status under an applicable federal, state, or regional ambient air quality standard. (*Less than Significant with Mitigation*)

PROPOSED PROJECT

Operation of the proposed project has the potential to create air quality impacts, which would be associated primarily with area sources, stationary sources, and mobile sources. Area sources would include ROG emissions from consumer products (e.g., solvents and cleaning supplies) and periodic architectural coatings. Onsite stationary sources could include up to two 400 kV diesel-powered backup generators. Mobile source emissions include onsite operational off-road equipment (e.g., forklifts), vehicles traveling to and from the project site and operating onsite, and TRUs operating on a portion of the trucks serving the proposed project operations. As described in Section 2.D.4, Mechanical Equipment (p. 2-24), all tenant leases would require all yard equipment to be electric. Therefore, onsite operational off-road equipment is not anticipated to be an emissions source from proposed project operations. In addition, beyond the

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[257] Emissions associated with the expanded streetscape variant were conservatively calculated by increasing off-road construction equipment emissions during sitework activities by 50 percent. For reference, sitework-related off-road construction equipment use under the proposed project would result in approximately 1.95 total tons of NO_X and 0.11 total ton of ROG in year 3. Therefore, under the expanded streetscape variant, off-road construction equipment emissions during sitework activities would be approximately 2.93 total tons of NO_X and 0.16 total ton of ROG (1.95 tons times 1.5 equals 2.93 tons and 0.11 ton times 1.5 equals 0.16 ton). As a result, total year 3 emissions would be 5.92 tons of NO_X and 1.75 tons of ROG. This is calculated by taking the proposed project's total emissions in year 3 shown in Table 3.D-9, p. 3.D-40 (4.95 tons of NOx), subtracting the proposed project's sitework-related emissions (1.95 tons of NOx), and adding the expanded streetscape variant's sitework-related emissions (2.93 tons of NOx [i.e., the proposed project's sitework-related emissions increased by 50 percent]). After converting tons to pounds and dividing by the number of construction workdays in year 3 (255 days), this would result in approximately 46 pounds per day of NO_X and 14 pounds per day of ROG. This is a conservative approach because the expanded streetscape variant comprises the same land uses and site plan as the proposed project but would improve the remainder of adjacent public rights-of-way, including new roadway surfaces, curb cuts, sidewalks, street trees, and other amenities, which would not result in 50 percent additional activity. For additional detail, refer to Appendix F.

backup generator stationary sources, no energy sources of criteria air pollutants are expected because the proposed project precludes natural gas infrastructure and would rely on electricity, inclusive of that generated by onsite solar, as the buildings' operational power source. Additional details and assumptions regarding emissions sources and operational activity are provided in Appendix F.

In addition, as described in Section 2.C.1 (p. 2-3) of this EIR, the project site is currently occupied. Uses at the site generate existing daily operational emissions from building operations and mobile sources, which are considered part of the existing conditions of the site. These emissions would be eliminated with the demolition of the four existing onsite buildings as part of the proposed project.[258] The demolition of these buildings would thereby result in the removal of the onsite uses and the emissions sources associated with such buildings and ancillary infrastructure. This analysis considers the net new emissions from the proposed project, accounting for the removal of existing emissions sources through demolition.

Project Operational Emissions at Build Out in 2025

Table 3.D-10 and Table 3.D-11 (p. 3.D-44) summarize the estimated maximum daily and annual emissions, respectively, as a result of proposed project operations for the operational year 2025, which was identified as the earliest potential year of operation at the beginning of the environmental analysis, as well as the total existing daily operational emissions that would be eliminated due to demolition of existing onsite uses.[259] The net increase of long-term operational emissions (i.e., the delta between existing site operational emissions and those of the proposed project) and the thresholds of significance are shown in these tables.

As shown in Table 3.D-10 and Table 3.D-11 (p. 3.D-44), the net increase in emissions of ROG, $PM_{2.5}$, and PM_{10} would not exceed their respective daily or annual significance thresholds. However, the net increase in daily and annual operational emissions of NO_X would exceed the significance thresholds for this criteria air pollutant. Therefore, the proposed project would result in a cumulatively considerable net increase in NO_X, for which the project region is in nonattainment status under an applicable federal, state, or regional ambient air quality standard. This impact would be ***significant***.

Project Operational Emissions in Years 2035 and 2050

Over time, it is anticipated that certain emissions control technologies will advance, and air pollutant regulations will become more stringent, resulting in a reduction in long-term operational emissions with no change in operational activity with the proposed project. The following future year analyses are provided for informational purposes to clarify the project's impacts given the assumption that technologies are likely to improve, and regulations are anticipated to become more stringent.

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[258] As discussed in Section 2.C.1 in Chapter 2, the project setting sections of the initial study and technical studies reflect the conditions at the project site when the environmental evaluation process began in 2017. In August 2020, the project sponsor submitted building permit applications for an interim use on the project site, which is in operation as of this draft EIR's publication. The interim use is a parcel delivery service use, focusing on last-mile e-commerce delivery, and occupies one-half of the site (the two buildings west of I-280). Additionally, as of August 2022, the project sponsor has submitted building permit applications for improvements to the two buildings east of I-280. These uses are temporary in nature and would ultimately be replaced by the proposed project, if it were to be approved. Analyzing the change in the environment from the uses that occupied the site in 2017 to the proposed use is considered conservative, or worst-case, because the interim use is more intense than the uses that existed on site in 2017; therefore, the impact of the project would be greater when compared to the uses that existed on the site in 2017.

[259] The analysis was conducted assuming that the earliest operations would commence in 2025. However, construction is now expected to be completed in year 2026, at the earliest. Therefore, the emission estimates presented in Table 3.D-10 through Table 3.D-13 are conservative; as operations occur in later years, exhaust-related emissions are anticipated to result in lower levels of emissions due to fleet turnover and advancements in engine technology, fuel efficiency, and adoption of electric and other alternative-fuel vehicles and equipment (i.e., TRUs). Moreover, there will be reduced ROG emissions from area sources such as consumer products as stricter regulatory standards take effect.

Table 3.D-10 Net Change in Daily Unmitigated from Proposed Project in Year 2025

Emissions Source/Description	ROG	NO_X	PM_{10}	$PM_{2.5}$
Area[1]	21.6	<0.1	<0.1	<0.1
Energy[1]	0.0	0.0	0.0	0.0
Manufacturing and maker space[2]	3.0	34.8	1.8	1.1
Stationary sources[3]	1.5	4.0	0.2	0.2
Mobile[4]	9.9	110.2	44.9	13.0
Transportation refrigeration units[5]	17.1	16.9	0.5	0.4
Total proposed project daily operational emissions[6]	53.0	165.9	47.4	14.7
Total existing daily operational emissions	9.3	17.5	6.4	2.0
Net increase in daily long-term emissions[6]	43.7	**148.4**	41.0	12.8
Threshold of significance	*54*	*54*	*82*	*54*
Exceeds threshold?	*No*	***Yes***	*No*	*No*

Source: Modeled by AECOM 2022 (see Appendix F, Air Quality Supporting Information)

Notes:

1. Area and energy sources are modeled using CalEEMod defaults for the proposed land uses. The project would be designed without natural gas; therefore, no emissions would occur from energy sources.
2. Manufacturing and maker space emissions are based on emissions profiles from existing similar land uses, and the maximum potential emissions for a “worst-case” use emissions profile are presented for each pollutant.
3. Stationary (i.e., backup generator) emissions sources are modeled outside of CalEEMod, using both CalEEMod input factors and U.S. EPA emissions factors.
4. Mobile emissions account for onsite activity and trips to/from the site, based on the project-specific vehicle miles traveled analysis and relevant travel assumptions, as detailed in Appendix F (see the section describing the assumptions and methodologies for the analysis). Emissions account for PM generated by exhaust emissions and brake wear, tire wear, and resuspended roadway dust. They were calculated using the air board’s EMFAC 2021 emission factors for exhaust, brake wear and tire wear; and U.S. EPA’s AP-42 methodology for resuspended roadway dust.
5. Transportation refrigeration unit emissions account for travel to and from the site, as well as onsite idling. Emissions were estimated using the air board’s OFFROAD 2021 Emissions Inventory.
6. Totals may not add due to rounding.

air board = California Air Resources Board
CalEEMod = California Emissions Estimator Model
NO_X = oxides of nitrogen
PM = particulate matter
PM_{10} = particulate matter less than or equal to 10 micrometers in diameter
$PM_{2.5}$ = particulate matter less than or equal to 2.5 micrometers in diameter
ROG = reactive organic gas
U.S. EPA = United States Environmental Protection Agency

Table 3.D-11 Net Change in Annual Unmitigated Operational Emissions from Proposed Project in Year 2025 (tons per year)

Emissions Source/Description	ROG	NO_X	PM_{10}	$PM_{2.5}$
Area[1]	3.9	<0.1	<0.1	<0.1
Energy[1]	0.0	0.0	0.0	0.0
Manufacturing and maker space[2]	0.4	4.6	0.2	0.1
Stationary sources[3]	<0.1	0.1	<0.1	<0.1
Mobile[4]	1.8	20.1	8.2	2.4
Transportation refrigeration units[5]	3.1	3.1	0.1	0.1
Total proposed project annual operational emissions[6]	9.3	27.9	8.5	2.6
Total existing annual operational emissions	*1.7*	*3.2*	*1.2*	*0.4*
Net increase in annual long-term emissions[6]	7.6	**24.7**	7.3	2.2
Threshold of significance	*10*	*10*	*15*	*10*
Exceeds threshold?	*No*	***Yes***	*No*	*No*

Source: Modeled by AECOM 2022 (see Appendix F, Air Quality Supporting Information)

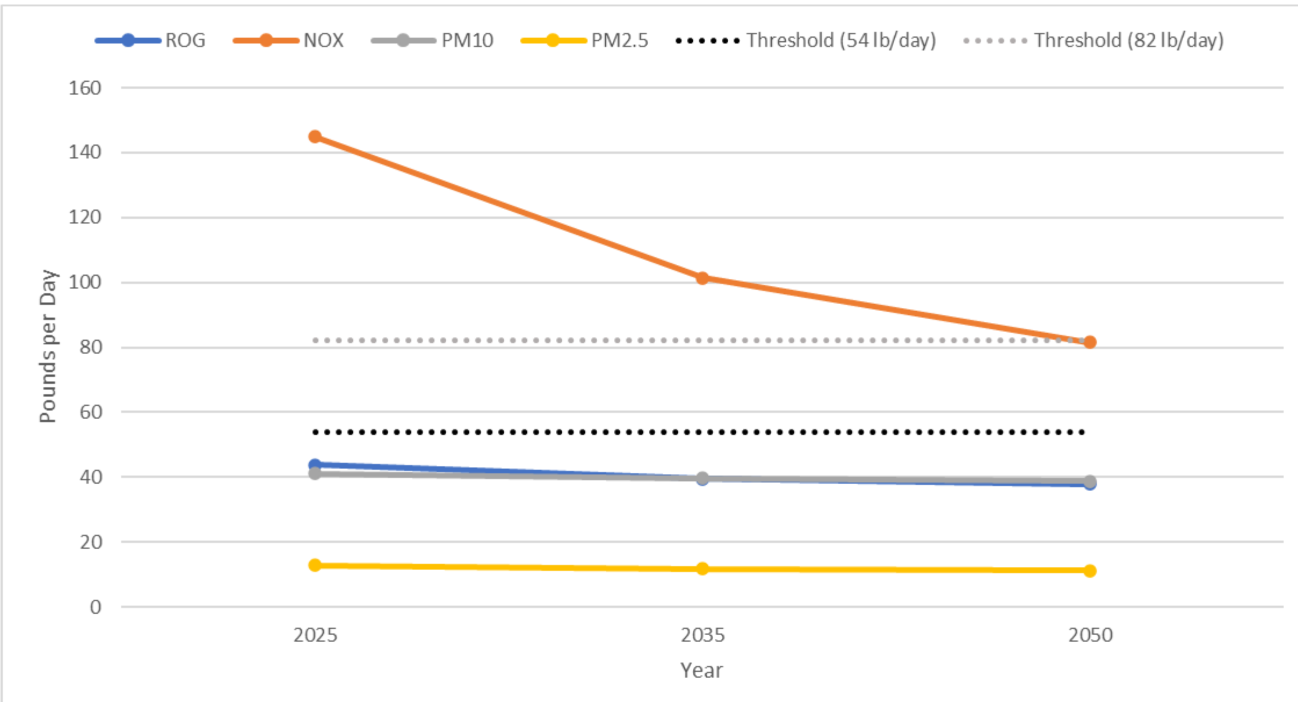
Notes:

1. Area and energy sources are modeled using CalEEMod defaults for the proposed land uses. The project would be designed without natural gas; therefore, no emissions would occur from energy sources.
2. Manufacturing and maker space emissions are based on emissions profiles from existing similar land uses, and the maximum potential emissions for a "worst-case" use emissions profile are presented for each pollutant.
3. Stationary (i.e., backup generator) emissions sources are modeled outside of CalEEMod, using both CalEEMod input factors and U.S. EPA emissions factors.
4. Mobile emissions account for onsite activity and trips to/from the site, based on the project-specific vehicle miles traveled analysis and relevant travel assumptions, as detailed in the methodology memorandum. Emissions were calculated using the air board's EMFAC 2021 emission factors.
5. Transportation refrigeration unit emissions account for travel to and from the site, as well as onsite idling. Emissions were estimated using the air board's OFFROAD 2021 Emissions Inventory.
6. Totals may not add due to rounding.

air board = California Air Resources Board
CalEEMod = California Emissions Estimator Model
NO_X = oxides of nitrogen
PM_{10} = particulate matter less than or equal to 10 micrometers in diameter
$PM_{2.5}$ = particulate matter less than or equal to 2.5 micrometers in diameter
ROG = reactive organic gas
U.S. EPA = United States Environmental Protection Agency

The air board provides mobile source emissions factors for vehicle activity in future years, reflecting how mobile source emissions will change over time with fleet turnover and changes in regulations and technology. Figure 3.D-2 shows the net increases in daily operational emissions of criteria air pollutants and ozone precursors in the years 2025, 2035, and 2050, which account for elimination of existing onsite emissions that will be replaced with the proposed project's emissions. Emissions factors for the years 2035 and 2050 from EMFAC 2021 and OFFROAD 2017 were used to estimate future year emissions associated with the proposed project's mobile and transportation refrigeration unit sources, respectively. This captures baseline assumptions established by the air board regarding incremental emissions reductions from these sources over time. Emissions generated by all other sources associated with the proposed project were assumed to remain constant in future years.

Figure 3.D-2 Net Change in Daily (Unmitigated) Operational Emissions from Proposed Project Over Time (Years 2025, 2035, and 2050) (pounds per day)



Source: Modeled by AECOM 2022 (see Appendix F, Air Quality Supporting Information)

Notes:

This chart is based on data presented in Table 6 (2025), Table 10 (2035), and Table 12 (2050) in the results section of Appendix F.

The Bay Area threshold of significance of for ROG, NO_X, and $PM_{2.5}$ is 54 lb/day.

The Bay Area threshold of significance of for PM_{10} is 82 lb/day.

lb/day = pounds per day
NO_X = oxides of nitrogen
PM = particulate matter
PM_{10} = particulate matter less than or equal to 10 micrometers in diameter
$PM_{2.5}$ = particulate matter less than or equal to 2.5 micrometers in diameter
ROG = reactive organic gas

As presented in Figure 3.D-2, without incorporation of mitigation measures, the proposed project's operational emissions would attenuate over time with fleet turnover and changes in regulations and technology that would reduce emissions. Although the NO_X emissions would still exceed thresholds, the project-generated daily emissions of NO_X would decline by approximately 27 percent and 38 percent by the years 2035 and 2050, respectively, relative to the initial operating year of 2025. In addition, other criteria air pollutants would be reduced as follows: ROG by approximately 8 percent (2035) and 11 percent (2050); PM_{10} by approximately 3 percent (2035) and 5 percent (2050); and $PM_{2.5}$ by approximately 7 percent (2035) and 10 percent (2050). Furthermore, improvements in emissions that may result from very recent or still-developing regulations, such as the November 2022 amendments to the in-use off-road diesel-fueled fleets regulation, the 2022 TRU airborne toxic control measure amendments, and the under-development advanced clean fleet regulations, summarized above in Section 3.D.2, Regulatory Framework (p. 3.D-17), are not captured in these future emissions estimates. Additional emissions reductions beyond those shown in Figure 3.D-2 (p. 3.D-45) for years 2035 and 2050 would likely be achieved through technological advances that would further reduce area source emissions associated with consumer products, stationary source emissions associated with backup generators, and potentially further mobile source emissions reductions if fleet electrification or other emissions reductions occur at a faster rate than currently projected by the air board in the EMFAC database for the vehicle activity.

Mitigation Measures

Mitigation measures have been identified to reduce the significant operational NO_X emissions from the proposed project and the cumulatively considerable contribution to regional air quality. The measures identify actions to reduce mobile and stationary emission sources and establish a performance standard for daily and annual NO_X emissions with monitoring and reporting requirements. In addition, although all tenant leases would require onsite off-road operational equipment to be electric (Section 2.D.4, p. 2-24), mitigation has been included to ensure implementation and monitoring of this requirement, because it is a key assumption pertaining to the minimization of unmitigated onsite diesel emissions from long-term project operations.

Mitigation Measure M-AQ-3a: Electrification of Yard Equipment

The project sponsor shall stipulate in tenant lease agreements that all yard equipment, such as forklifts, be electric to reduce NO_X emissions from these sources.

Mitigation Measure M-AQ-3b: Electrification of Transportation Refrigeration Units

The project sponsor shall require that all transportation refrigeration units operating on the project site be electric or alternative zero-emissions technology, including hydrogen fuel cell transport refrigeration and cryogenic transport refrigeration, to reduce emissions of NO_X without substantially increasing other emissions. Any electric or hybrid transportation refrigeration units shall be charged via grid power (i.e., not an idling truck or diesel engine). The project design shall also include necessary infrastructure; for example, requiring all dock doors serving transportation refrigeration units to be equipped with charging infrastructure to accommodate the necessary plug-in requirements for electric transportation refrigeration units while docked or otherwise idling, as well as the electrical capacity to support the onsite power demand associated with electric transportation refrigeration unit charging requirements.

Mitigation Measure M-AQ-3c: Prohibition of Truck and Van Idling for More than Two Minutes

The project sponsor shall require that onsite idling of all visiting gasoline- or diesel-powered vans and trucks not exceed two minutes, and that appropriate signage and training for onsite workers and truck drivers be provided to support effective implementation of this limit.

Mitigation Measure M-AQ-3d: Limitation on Model Year of Visiting Trucks

The project sponsor shall require that any gasoline- or diesel-powered vehicle, whether owned or operated by tenant(s), that enters or operates on the project site and has a gross vehicle weight rating greater than 14,000 pounds, have a model year dated no more than nine years upon the completion of project construction activities (e.g., should construction be completed in year 2026, visiting trucks must be model year 2017 or newer).

Mitigation Measure M-AQ-3e: Diesel Backup Generator Specifications

The project sponsor shall ensure that the diesel backup generators meet or exceed the air board's Tier 4 final off-road emission standards. Additionally, once operational, the diesel backup generators shall be maintained in good working order for the life of the equipment, and any future replacement of the diesel backup generators shall be required to be consistent with these emissions specifications. The project sponsor shall ensure that records of the testing schedule for the diesel backup generators are maintained for the life of the diesel backup generators. If the planning department requests additional information about these tests, the project sponsor shall provide the information within three months.

Mitigation Measure M-AQ-3f: Limitation on Manufacturing and Maker Space Emissions

The project sponsor shall prohibit the use of stationary equipment sources, such as boilers, whose combined emissions for the manufacturing and maker space uses would exceed 10 pounds per day in NO_X emissions.

Mitigation Measure M-AQ-3g: Compliance with CalGreen Tier 2 Green Building Standards

The project shall meet CalGreen Tier 2 green building standards, including all provisions related to designated parking for clean air vehicles, electric vehicle charging, and bicycle parking.

Mitigation Measure M-AQ-3h: Requirements for Off-Road Construction Equipment

The project sponsor shall comply with the following:

A. Engine Requirements

   1. The project sponsor shall require that the construction contractor use electric-powered construction equipment for all equipment that is readily available as plug-in or battery-electric equipment, to the maximum extent feasible during each construction phase and activity. Electric equipment may include, but is not limited to, concrete/industrial saws,

sweepers/scrubbers, aerial lifts, welders, air compressors, fixed cranes, forklifts, cement and mortar mixers, pressure washers, and pumps. Where access to alternative sources of power is available (i.e., grid power), portable diesel engines (e.g., generators) shall be prohibited. If grid power is not available, alternative power such as battery storage or hydrogen fuel cells shall be used, if available. If such alternative power is not available, portable diesel engines shall meet Tier 4 Final off-road emissions standards.

2. All off-road equipment greater than 25 hp and operating for more than 20 total hours over the entire duration of construction activities shall have engines that meet or exceed either U.S. EPA's or air board's Tier 4 Final off-road emission standards.

3. Diesel engines, whether for off-road or on-road equipment, shall not be left idling for more than two minutes at any location, except as provided in exceptions to the applicable state regulations regarding idling for off-road and on-road equipment (e.g., traffic conditions and safe operating conditions). The contractor shall post legible and visible signs in English, Spanish, and Chinese in designated queuing areas and at the construction site to remind operators of the two-minute idling limit.

4. The project sponsor shall instruct construction workers and equipment operators in the maintenance and tuning of construction equipment, and require that such workers and operators properly maintain and tune equipment in accordance with manufacturer specifications.

B. Waivers

The planning department's environmental review officer (ERO) or designee may waive the alternative source of power requirement of subsection (A)(1) if an alternative source of power is limited or infeasible at the project site. If the ERO grants the waiver, the contractor must use the next cleanest piece of off-road equipment, or another alternative that results in comparable NO_X reductions.

C. Construction Emissions Minimization Plan

Before starting onsite construction activities, the contractor shall submit a construction emissions minimization plan (plan) to the ERO or designee for review and approval. The plan shall state, in reasonable detail, how the contractor will meet the engine requirements of section A.

1. The plan shall include estimates of the construction timeline by phase, with a description of each piece of off-road equipment required for every construction phase. The description may include but is not limited to equipment type, equipment manufacturer, equipment identification number, engine model year, engine certification (tier rating), horsepower, engine serial number, and expected fuel use and hours of operation. For off-road equipment using alternative fuels, the description shall also specify the type of alternative fuel being used.

2. The project sponsor shall ensure that all applicable requirements of the plan have been incorporated into the contract specifications. The plan shall include a certification statement that the project sponsor agrees to comply fully with the plan.

3. The project sponsor shall make the plan available to the public for review on site during working hours. The project sponsor shall post at the construction site a legible and visible sign summarizing the plan. The sign shall also state that the public may ask to inspect the plan for the project at any time during working hours and shall explain how to request to inspect the plan. The project sponsor shall post at least one copy of the sign in a visible location on each side of the construction site facing a public right-of-way.

D. Monitoring

After start of construction activities, the contractor shall submit reports every six months to the ERO or designee, documenting compliance with the plan. After completion of construction activities and prior to receiving a final certificate of occupancy, the project sponsor shall submit to the ERO a final report summarizing construction activities, including the start and end dates and duration of each construction phase, and the specific information required in the plan.

Mitigation Measure M-AQ-3i: Development and Implementation of Operational Emission Management Plan

The project sponsor shall develop and implement an Operational Emissions Management Plan (OEMP) that shall demonstrate that the project's net operational NO_X emissions do not exceed the performance standard of 54 pounds per day and 10 tons per year. "Net operational NO_X emissions" refers to the NO_X emissions generated by the proposed project minus the NO_X emissions occurring at the site as of 2017 that would be removed with implementation of the proposed project. The OEMP shall consist of the components described in this mitigation measure. Development, implementation, and reporting of the OEMP shall follow the timeline and appropriate triggers set forth below. The project sponsor shall identify one or more individuals who shall be responsible for overseeing implementation of the OEMP and shall work directly with the ERO or designee to ensure that implementation meets the following requirements and demonstrates attainment of the performance standard.

A. Performance Standard

The OEMP and related emissions assessments/operational emissions reports, as required below, shall be developed by the project sponsor and approved by the ERO or designee, and shall demonstrate that the proposed project does not exceed the performance standard of a net increase of NO_X emissions consistent with the air district thresholds of 54 pounds per day and 10 tons per year.

B. Emissions Assessment

Prior to occupancy for each PDR tenant, the project sponsor shall require the tenant to conduct an emissions assessment. Prior to the requirement to submit an OEMP, the project sponsor shall retain all emissions assessments from individual tenants. The emissions assessment shall include:

1. A brief description of proposed tenant activities that are reasonably expected to generate NO_X emissions, and written confirmation that the tenant can and will comply with Mitigation Measures M-AQ-3a through M-AQ-3g as applicable, including compliance with requirements to provide periodic reporting and necessary evidence that the tenant is implementing the applicable measures after the start of occupancy.

2. Estimates of expected NO_X emissions in annual tons and average pounds per day for all activities associated with the tenant's use (inclusive of onsite and offsite mobile emission sources). Emission estimation methods shall generally follow the approach used in this EIR and in Appendix F, Air Quality Supporting Information, taking into account current air board- or air district-recommended emissions factors (vehicle types, model year, fleet mix, etc.), or another agreed-upon method (subject to approval by the ERO or designee and provided that such method is supported by substantial evidence).

3. The tenant's estimated expected NO_X emissions shall be itemized for each of the following sources and summed for a total of all emissions in terms of the maximum potential annual emission (tons per year) and average daily emissions (pounds per day):

   - stationary sources such as generators and specialized equipment;
   - estimated mobile source emissions accounting for offsite travel and onsite activity; and
   - other emissions sources, such as area sources.

C. Operational Emissions Management Plan

The project sponsor shall submit an OEMP to the ERO or designee for review and approval prior to one or more tenants in the project site occupying a combined total of 500,000 square feet of floor area. The OEMP shall describe, in reasonable detail, how the sum of all tenants' and total project NO_X emissions will not exceed the performance standard. Specifically, the OEMP shall include the following:

1. Responsibility. The OEMP will identify one or more individuals who shall be responsible to oversee implementation, monitoring, and reporting for the OEMP.

2. Reporting Template. The OEMP will identify, in reasonable detail, the format template and required contents of the operational emissions reports (described further below).

3. Emissions Assessments. Emissions assessments will be performed for each proposed tenant in the project, as described above.

4. Total Emissions Estimate. The project's performance will be documented in relation to the performance standard of daily and annual NO_X emissions, taking into account all tenancies/ operations at the project site.

5. Additional Emissions Reduction Measures. If the total emissions estimate described above is projected to result in an exceedance of the NO_X performance standard, the OEMP shall identify additional specific operational emissions reduction measures to lessen the project's emissions to a level that does not exceed the performance standard. To ensure that the proposed project NO_X emissions do not exceed the performance standard, these measures shall be implemented prior to any operational activities that were projected to exceed that standard. To the extent that the identified emissions reductions can be quantified, the OEMP shall quantify the expected reductions. The OEMP shall quantitatively demonstrate that total project operations meet the daily and annual NO_X performance standard. To the extent that required emissions reduction and reporting measures are applicable to individual tenants, the OEMP shall provide that these measures be incorporated into lease terms for individual tenants of the project. Such operational emission reduction measures may include, but are not limited to, the following:

   - modification of project operations, including through the use of different equipment, limitations on types of tenants/uses, or limitations on the size or intensity of specific uses;
   - implementation of specific fleet performance metrics, including electric vehicle and zero-emission vehicle standards; minimum model year requirements that are more stringent than those required by Mitigation Measure M-AQ-3d; or achievement of regulatory requirements ahead of compliance schedules;
   - reductions in onsite or offsite worker vehicle trips, including through implementation of additional TDM measures such as providing contributions or incentives for sustainable transportation;
   - funding or completing projects in coordination with community groups, as applicable, to directly reduce or eliminate sources of existing NO_X emissions not generated by the project, with emission reduction projects occurring in the following locations in order of priority to the extent available: (1) in the neighborhood surrounding the project site (i.e., Bayview Hunters Point); (2) in the city of San Francisco; and (3) in the air basin; and
   - other emission reduction measures that become feasible due to advances in technology, economic changes, or other factors during the lifetime of the project.

6. Updates. The OEMP shall be updated and resubmitted to the ERO or designee for review and approval prior to occupancy by any subsequent PDR tenant until the reporting period has concluded, as described below in the "Monitoring and Reporting" section of this mitigation measure. Additionally, each tenant shall verify periodically that its emissions assessment remains accurate, and at least: (1) upon a substantial change in the tenant operations, and (2) every other year.

7. Exceptions. The following list identifies allowable exceptions for certain uses to provide an emissions assessment and for the need to update the OEMP upon a change in tenancy at the project site.

    - Retail uses less than 8,400 square feet and manufacturing and maker uses less than 35,000 square feet shall not be required to submit an emissions assessment unless they include any stationary source(s) that would result in NO_X emissions and would require permitting by the air district. Although uses below the identified square footages are not required to submit emissions assessments, the total project operational emissions, which are calculated [by summing all tenant emissions assessments] and compared against the performance standard for all project operations, shall include 1.3 pounds per day of NO_X for retail uses totaling up to 8,400 square feet and 12.2 pounds per day of NO_X from manufacturing and maker uses totaling up to 35,000 square feet. Should an individual retail or manufacturing and maker tenant or the cumulative total of multiple retail or manufacturing and maker uses exceed the square footages for each respective use or include any stationary source(s) that would result in NO_X emissions and would require permitting by the air district, an emissions assessment must be prepared for that tenant's operations to be included in the total operational emissions estimate for the project site.

    - The termination of a proposed or existing tenancy, or the substitution of any terminated use with a new use that is equally or less intensive based on an updated emissions assessment of estimated NO_X emissions, shall not trigger a requirement to submit an updated OEMP as long as any requirements in the former plan remain relevant and in effect.

8. Monitoring and Reporting. After the start of operations under an approved OEMP, the project sponsor shall submit annual operational emissions reports to the ERO, documenting compliance with the OEMP.

    Each report shall include a summary of compliance with operational controls for all applicable activities completed in the period covered by the annual report. If the project has complied with all required operational controls and no emissions-generating activity levels increase, then no further estimation of emissions is required.

    If any operational controls are modified or if an increase in emissions-generating activity levels has occurred, then the report shall include an estimate of NO_X emissions for the relevant emissions source. For example, if generators were operated for more hours during the reporting period than allotted in the OEMP, then the report shall include actual generator emissions, summarized from logs. In all cases, the reporting shall demonstrate that the project does not exceed the NO_X performance standard through implementation of the additional emissions reduction measures or other equivalent measures, subject to approval by the ERO or designee.

    The reporting period for this measure shall conclude at the earlier of (1) 10 years after commencement of operations pursuant to the initial approved OEMP; or (2) the project sponsor submitting three sequential annual reports demonstrating, to the satisfaction of the

ERO or designee, that the project's actual reported emissions have not exceeded the performance standard, as described above. If the total NO_X emissions from the emissions assessments for all tenants indicate an increase or change in tenancy that would materially increase the net operational NO_X emissions to a level that would approach or exceed the performance standard, the requirements for the OEMP would be reinstated.

The obligations for the preparation of emissions assessments and implementation of control measures to limit NO_X emissions to not exceed the performance standard shall remain in effect for the life of the project, subject to periodic review and monitoring by the ERO or designee. If the ERO or designee determines, on the basis of substantial evidence, that it is no longer necessary for the project sponsor to complete emissions assessments to meet the performance standard, the ERO or designee may temporarily or permanently waive the assessment requirement.

Significance after Mitigation

Implementation of Mitigation Measures M-AQ-3a through M-AQ-3g would reduce emissions associated with various operational sources from the proposed project. These measures would reduce the project's operational emissions of NO_X, the criteria air pollutant for which the project would exceed the relevant threshold. These measures would also reduce emissions associated with all criteria pollutants.

- Mitigation Measure M-AQ-3a would eliminate diesel emissions associated with onsite operational yard equipment. This requirement was identified by the project sponsor to be included in the project. It has been included as a mitigation for that reason, and to ensure implementation and monitoring of this requirement. This requirement is a key assumption pertaining to the minimization of unmitigated onsite diesel emission from long-term project operations.

- Mitigation Measure M-AQ-3b would eliminate diesel emissions associated with operations of TRUs serving the project site.

- Mitigation Measure M-AQ-3c would minimize onsite emissions associated with idling of visiting single-unit and tractor trailer trucks and vans by lowering the idling time from the regulatory limit of 5 minutes to a limit of 2 minutes.

- Mitigation Measure M-AQ-3d would reduce emissions associated with visiting single-unit and tractor trailer trucks because newer model vehicles—as opposed to the average fleet mix, which typically includes trucks that are more than nine years old (e.g., trucks operating in the year 2026 that are older than model year 2017)—result in lower emissions. This is due to implementation of more stringent emissions control regulations and implementation of cleaner (less emitting) technologies over time.

- Mitigation Measure M-AQ-3e would reduce emissions associated with backup generators serving the project site by requiring the generators to meet Tier 4 final emissions standards.

- Mitigation Measure M-AQ-3f would limit total emissions associated with manufacturing and maker space to ensure that unique operations allowed under this use would not exceed 10 pounds per day in NO_X emissions.

- Mitigation Measure M-AQ-3g would promote further reductions in NO_X emissions by providing necessary infrastructure, and accommodations for alternative modes of transportation and clean vehicle fleets. The adoption and use of alternative modes of transportation and clean vehicles by users of the project site is speculative and cannot be accurately quantified; therefore, emissions reductions associated with this measure are not quantified in Table 3.D-12 and Table 3.D-13 (p. 3.D-56).

Table 3.D-12 and Table 3.D-13 quantitatively summarize the mitigated project's operational net increase in daily and annual emissions, respectively, with incorporation of mitigation measures M-AQ-3a through M-AQ-3f. They also provide a comparison to the significance thresholds shown in Table 3.D-5 (p. 3.D-27). As shown in Table 3.D-12 and Table 3.D-13, implementation of Mitigation Measures M-AQ-3a through M-AQ-3f would substantially reduce net NO_X emissions from project operations. For example, the proposed project would result in a net increase of 148.4 pounds of NO_X per day in year 2025 without the implementation of mitigation measures; this would be reduced to 64.1 pounds of NO_X per day in 2025 with implementation of mitigation measures, equating to a nearly 57 percent reduction in NO_X emissions. As discussed above, the effectiveness of Mitigation Measure M-AQ-3g cannot be accurately quantified and is therefore not accounted for in the emissions presented in the preceding tables. More detailed methodology and calculations applied to the quantification of each of these mitigation measures are provided in Appendix F. However, this would still not reduce the project's impacts to a level that would be less than significant (i.e., not exceeding a net increase of 54 pounds of NO_X per day). Therefore, additional Mitigation Measures M-AQ-3h and M-AQ-3i have been identified to further reduce the proposed project's overall NO_X emissions.

Mitigation Measure M-AQ-3h would further reduce the proposed project's NO_X emissions by reducing NO_X emissions during construction. Construction emissions would not exceed NO_X significance thresholds (see Impact AQ-2); however, because the air basin is in nonattainment for ozone precursors (i.e., NO_X), and because the proposed project's operations would result in a significant NO_X impact, the proposed project must implement all feasible mitigation measures to reduce this impact (including during construction). Reducing the project's construction-related NO_X emissions would reduce the project's overall contribution to cumulatively significant air quality impacts. Table 3.D-14 (p. 3.D-56) presents the reduction in construction-related emissions with implementation of Mitigation Measure M-AQ-3h. Because the reductions shown in Table 3.D-14 would occur only during the construction period, and would not persist during project operations when the project's significant operational emissions would occur, these emissions reductions are not included in Table 3.D-12.

Table 3.D-12 Net Change in Daily Operational Emissions from Proposed Project in Year 2025 with Mitigation Measures M-AQ-3a through M-AQ-3f (pounds per day)

Emissions Source/Description	ROG	NO_X	PM_{10}	$PM_{2.5}$
Area[1]	21.6	<0.1	<0.1	<0.1
Energy	0.0	0.0	0.0	0.0
Manufacturing and maker space[2]	3.0	10.0	1.8	1.1
Stationary sources[3]	1.5	0.4	0.2	0.2
Mobile[4]	8.1	71.2	44.5	12.6
Transportation refrigeration units[5]	0.0	0.0	0.0	0.0
Total proposed project daily operational emissions[6]	34.1	81.6	46.5	13.9
Total existing daily operational emissions	9.3	17.5	6.4	2.0
Net increase in daily long-term emissions[6]	24.8	**64.1**	40.2	11.9
Threshold of significance	*54*	*54*	*82*	*54*
Exceeds threshold?	*No*	***Yes***	*No*	*No*

Source: Modeled by AECOM 2022 (see Appendix F, Air Quality Supporting Information)

Notes:

1. Area sources are modeled using CalEEMod defaults for the proposed land uses.
2. Manufacturing and maker space emissions for ROG and particulate matter are based on emissions profiles from existing similar land uses, and the maximum potential emissions for a “worst-case” use emissions profile; NO_X emissions presented are based on the control measure to limit manufacturing and maker space stationary equipment sources to a combined total of 10 pounds per day.
3. Stationary (i.e., backup generator) emissions sources are modeled outside of CalEEMod, using both CalEEMod input factors and U.S. EPA emissions factors.
4. Mobile emissions account for onsite activity and trips to/from the site, based on the project-specific VMT analysis and relevant travel assumptions, as detailed in the methodology memorandum. Emissions were calculated using the air board’s EMFAC 2021 emission factors for the 2016 model year and newer fleet mix in the calendar year 2025.
5. The control measure to electrify transportation refrigeration units eliminates this emissions source.
6. Totals may not add due to rounding.

air board = California Air Resources Board
CalEEMod = California Emissions Estimator Model
NO_X = oxides of nitrogen
PM_{10} = particulate matter less than or equal to 10 micrometers in diameter
$PM_{2.5}$ = particulate matter less than or equal to 2.5 micrometers in diameter
ROG = reactive organic gas
U.S. EPA = United States Environmental Protection Agency

Table 3.D-13 Net Change in Annual Operational Emissions from Proposed Project in Year 2025 with Mitigation Measures M-AQ-3a through M-AQ-3f (tons per year)

Emissions Source/Description	ROG	NO_X	PM_{10}	$PM_{2.5}$
Area[1]	3.9	<0.1	<0.1	<0.1
Energy	0.0	0.0	0.0	0.0
Manufacturing and maker space[2]	0.4	1.3	0.2	0.1
Stationary sources[3]	<0.1	<0.1	<0.1	<0.1
Mobile[4]	1.5	13.0	8.1	2.3
Transportation refrigeration units[5]	0.0	0.0	0.0	0.0
Total proposed project annual operational emissions[6]	*5.9*	*14.3*	*8.4*	*2.4*
Total existing annual operational emissions	*1.7*	*3.2*	*1.2*	*0.4*
Net increase in annual long-term emissions[6]	4.1	**11.1**	7.2	2.1
Threshold of significance	*10*	*10*	*15*	*10*
Exceeds threshold?	*No*	***Yes***	*No*	*No*

Source: Modeled by AECOM 2022 (see Appendix F, Air Quality Supporting Information)

Notes:

1. Area sources are modeled using CalEEMod defaults for the proposed land uses.
2. Manufacturing and maker space emissions for ROG and particulate matter are based on emissions profiles from existing similar land uses, and the maximum potential emissions for a "worst-case" use emissions profile; NO_X emissions presented are based on the control measure to limit manufacturing and maker space stationary equipment sources to a combined total of 10 pounds per day.
3. Stationary (i.e., backup generator) emissions sources are modeled outside of CalEEMod, using both CalEEMod input factors and U.S. EPA emissions factors.
4. Mobile emissions account for onsite activity and trips to/from the site, based on the project-specific VMT analysis and relevant travel assumptions, as detailed in the methodology memorandum. Emissions were calculated using the air board's EMFAC 2021 emission factors for the 2016 model year, and newer fleet mix in the calendar year 2025.
5. The control measure to electrify transportation refrigeration units eliminates this emissions source.
6. Totals may not add due to rounding.

Air board = California Air Resources Board
CalEEMod = California Emissions Estimator Model
NO_X = oxides of nitrogen
PM_{10} = particulate matter less than or equal to 10 micrometers in diameter
$PM_{2.5}$ = particulate matter less than or equal to 2.5 micrometers in diameter
ROG = reactive organic gas
U.S. EPA = United States Environmental Protection Agency

Table 3.D-14 Reduction in Proposed Project Average Daily Construction Emissions with Mitigation Measure M-AQ-3h (pounds per day)

Year/Description	ROG	NO_x	PM_{10} (Exhaust Only)	$PM_{2.5}$ (Exhaust Only)
Year 1	-0.67	-23.80	-0.14	-0.14
Year 2	-0.96	-31.51	-0.36	-0.36
Year 3	-0.73	-30.78	-0.14	-0.14

Notes:

NO_x = oxides of nitrogen
PM_{10} = particulate matter less than or equal to 10 micrometers in diameter
$PM_{2.5}$ = particulate matter less than or equal to 2.5 micrometers in diameter
ROG = reactive organic gas

As described above, implementation of Mitigation Measure M-AQ-3i would further reduce operational emissions. The OEMP requires that if the total net new emissions estimate for actual tenant and project operations are projected to exceed the NO_X performance standard, then additional feasible emissions reduction measures must be identified and implemented prior to occupancy (i.e., prior to the emissions occurring, to ensure that the project does not exceed the NO_X performance standard). This plan would require approval by the ERO or designee, to ensure that the project's achievement of the performance standard is feasible and enforceable. The OEMP would not be required to be submitted to the ERO or designee for review and approval until one or more tenants in the project site occupy a combined total of 500,000 square feet of floor area. This is because the 500,000 square feet of floor area represents 23 percent of the total project site, meaning that operations within 23 percent of the project site would represent approximately 23 percent of the total net new daily and annual operational emissions from the project. These emissions would be approximately 35 pounds per day and 5.7 tons per year of NO_X without implementation of Mitigation Measures M-AQ-3a through M-AQ3f, and approximately 15 pounds per day and 2.6 tons per year of NO_X with implementation of Mitigation Measures M-AQ-3a through M-AQ3f. These NO_X emissions are well below the air district's significance threshold and the performance standard for the OEMP, as defined in part A of Mitigation Measure M-AQ3i.

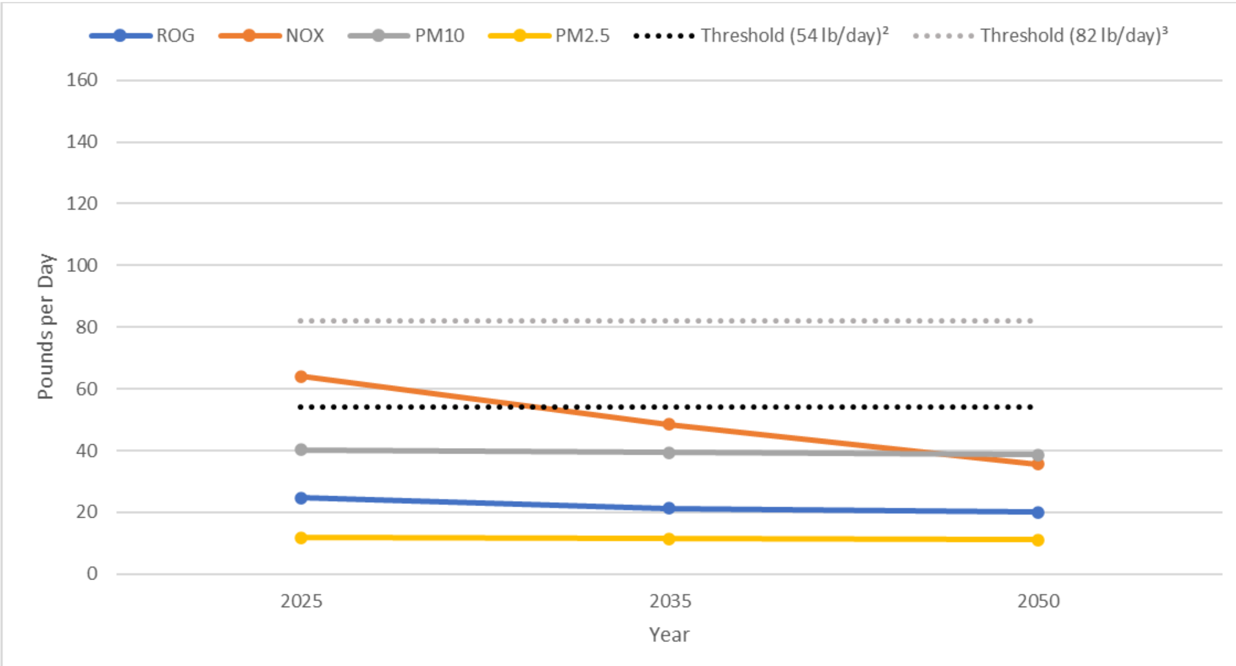
Mitigation Measure M-AQ-3i provides for the ongoing review and monitoring of all operational emissions sources. It also provides the mechanism to require the implementation of additional measures to reduce operational emissions from the proposed project to a level that would not exceed the performance standard for NO_X—a net increase of 54 pounds per day or 10 tons per year—which is consistent with the air district threshold. Measures to ensure that the project does not exceed the performance standard would include, among others, limiting the operations or uses at the site, implementing electric vehicle and zero emissions vehicle standards, minimum model year vehicle requirements beyond year 2017, and achievement of regulatory requirements ahead of compliance schedules.

With implementation of Mitigation Measures M-AQ-3a through M-AQ-3i, the net increase in operational NO_X emissions from implementation of the proposed project would be reduced to a level that would not exceed the NO_X threshold of significance. Therefore, the proposed project would not result in a cumulatively considerable net increase in any criteria pollutant for which the project region is in nonattainment status under an applicable federal, state, or regional ambient air quality standard, and this impact would be ***less than significant with mitigation***.

Mitigated Project Operational Emissions in Years 2035 and 2050

As shown in Figure 3.D-3, by the year 2035, implementation of Mitigation Measures M-AQ-3a through M-AQ-3f would reduce the daily and annual net increase in emissions to a less-than-significant level. Furthermore, emissions would continue to be reduced into future years, as shown for 2050. Based on modeling for years 2035 and 2050—and as presented below in Figure 3.D-3 and further detailed in the results section of Appendix F—Mitigation Measure M-AQ-3i, the Operational Emissions Management Plan, may no longer be necessary starting in the year 2035 because NO_X emissions from mobile sources would substantially decrease, and the proposed project's long-term operational emissions would be less than significant with implementation of Mitigation Measures M-AQ-3a through M-AQ-3f alone.

Figure 3.D-3 Net Change in Daily Operational Emissions from Proposed Project Over Time (Years 2025, 2035, and 2050) with Mitigation Measures M-AQ-3a through M-AQ-3f (pounds per day)



Source: Modeled by AECOM 2022 (see Appendix F, Air Quality Supporting Information)

Notes:

This chart is based on data presented in Table 17 (2025), Table 19 (2035), and Table 21 (2050) in the results section of Appendix F.

The Bay Area threshold of significance for ROG, NO_X and $PM_{2.5}$ is 54 lb/day.

The Bay Area threshold of significance for PM_{10} is 82 lb/day.

lb/day = pounds per day
NO_X = oxides of nitrogen
PM = particulate matter
PM_{10} = particulate matter less than or equal to 10 micrometers in diameter
$PM_{2.5}$ = particulate matter less than or equal to 2.5 micrometers in diameter
ROG = reactive organic gas

EXPANDED STREETSCAPE VARIANT

The expanded streetscape variant includes the same land uses, employment, operations, and site plan as the proposed project, but proposes rebuilding the entire cross section of the streets along the project perimeter to Better Streets standards. The expanded streetscape variant would have the same operational emissions sources as the proposed project. Therefore, operational emissions that would result from the expanded streetscape variant would be the same as those that would result from the proposed project; and as described above for the proposed project, the expanded streetscape variant operational emissions would exceed NO_X daily and annual thresholds of significance. Therefore, the expanded streetscape variant's operational emissions would be ***significant***.

Significance after Mitigation

The expanded streetscape variant would be subject to Mitigation Measures M-AQ-3a through M-AQ-3i, and the emissions reductions achieved through implementation of such measures would be equivalent to those detailed in Table 3.D-12 through Table 3.D-14 (pp. 3.D-55 through 3.D-56) and described above for the proposed project. Therefore, operational emissions that would result from the expanded streetscape variant with mitigation would be the same as those that would result from the proposed project with mitigation. The expanded streetscape variant's operational emissions would not exceed NO_X daily or annual thresholds of significance with implementation of Mitigation Measures M-AQ-3a through M-AQ-3i, as reported above for the proposed project. As with the proposed project, Mitigation Measure M-AQ-3i may not be required for the expanded streetscape variant beyond year 2035, due to the reduction in future year emissions associated with increasingly stringent emissions requirements and vehicle turnover. Therefore, the expanded streetscape variant's operational emissions would be ***less than significant with mitigation***.

FOR INFORMATIONAL PURPOSES – PROJECT SITING AND TRANSPORTATION DEMAND MANAGEMENT MEASURES

For informational purposes, this section discusses two factors not taken into account in the air quality impact analysis for the proposed project and expanded streetscape variant:

1. siting of a parcel and last mile delivery facility closer to its consumer base (i.e., a dense urban center); and
2. the additional transportation demand measures that would be implemented by the proposed project or expanded streetscape variant.

Although the proposed project would generate mobile source emissions, siting a parcel and last-mile delivery use like the San Francisco Gateway Project closer to its customer base would improve VMT efficiency compared to current locations and the majority of new development of last-mile delivery uses serving the San Francisco market. Furthermore, the proposed project would minimize the regional air pollutant emissions for the portion of the project that may include parcel and last-mile delivery tenants. Currently, most of the last-mile delivery facilities serving customers in San Francisco are outside the city (e.g., South San Francisco, San Bruno, or Hayward). Based on current services for existing demand, if a parcel and last-mile delivery facility is not built at the project site, demand for parcel and last-mile delivery would continue to be served by a location outside San Francisco.

Locating a new PDR facility for parcel and last-mile delivery tenants in San Francisco would serve the existing and growing demand that would otherwise be met by more distant facilities. This would therefore result in reduced regional VMT and associated air pollutant emissions for parcel and last-mile delivery uses. [260] The relative comparison of miles per delivery route was evaluated in a study of e-commerce facility siting for the region, and the results are provided below in Table 3.D-15. The change in VMT between a parcel and last-mile delivery use outside the city (e.g., South San Francisco, which was used in the analysis[261]) and one at the proposed project site was also calculated based on this information. Deliveries from the proposed project site by automobiles, vans, and smaller trucks, which would typically have a local destination, would have a shorter travel distance to the areas with the greatest existing and projected e-commerce market

[260] Langan Engineering, Urban E-commerce Distribution Facility Selection Criteria, February 26, 2021. See Appendix C.

[261] South San Francisco was used in the analysis because there is an existing facility in South San Francisco that serves San Francisco, and because the Langan Engineering August 15, 2019, technical memorandum indicated that a facility could be located there based on zoning, proximity to delivery market, and availability of regional road network, among other factors. Other potential facilities that could be developed based on these factors would be further from the projected areas of e-commerce growth that would be served by the proposed project; they would therefore result in mobile air pollutant emissions greater than would be experienced with a facility in South San Francisco.

growth and last-mile delivery demand.[262] Larger trucks (such as tractor trailer trucks) making deliveries to the proposed project site would generally come from outside the city and need to travel farther than trucks serving a location outside San Francisco, resulting in an increase in VMT and air pollutant emissions from these trips compared to a facility outside San Francisco.[263]

Table 3.D-15 Relative Comparison of Miles per Delivery Route to San Francisco in the San Francisco Bay Area

Site Location	Miles per Route to San Francisco County Line (one way)
South San Francisco	5.3 miles
Richmond	20.2 miles
Oakland	6.4 miles
San Leandro	20.9 miles
Hayward	25.4 miles

Source: Langan Engineering 2021[264]

Overall, the reduction in travel distance for the majority of parcel and last-mile delivery trips that could be accommodated by the proposed project would reduce regional air pollutant emissions that would result from existing or future similar operations outside the city.

Additionally, as a part of project operations, the proposed project would implement a TDM program consistent with planning code section 169. Measures would include actions that would reduce trips to and from the project site by standard-fuel-powered vehicles. Although it is not possible to accurately quantify the reductions associated with the TDM program, reduced trip rates would result in a parallel reduction in mobile-source criteria air pollutant emissions associated with proposed project operations.

Overall, these project features would further reduce the above-disclosed mobile-source emissions from anticipated project operations.

Impact AQ-4: The proposed project would not result in emissions of $PM_{2.5}$ and TACs that would expose sensitive receptors to substantial pollutant concentrations. (*Less than Significant*)

Construction activities for the proposed project would generate emissions of TACs and $PM_{2.5}$ associated with off-road equipment, on-road vehicles, demolition of existing onsite structures, earthmoving activities, architectural coating activities, and off-gas from paving. Construction emissions would be temporary in nature, ceasing once construction was complete. Upon completion of the proposed project, operational emissions of TACs and $PM_{2.5}$ from the proposed project's stationary and mobile sources would exist. Nearby sensitive receptors could be exposed to substantial pollutant concentrations of TACs and $PM_{2.5}$ from these short- and long-term emissions, resulting in a localized health risk. The proposed project site is also in the APEZ, an area where air pollutant levels exceed health protective standards. As a result, an HRA was conducted to estimate the incremental change in cancer risks, localized annual $PM_{2.5}$ concentrations, and chronic HI that would result from the proposed project. The analysis is based on the estimates of mass

262 Adavant and LCW Consultants, 749 Toland Street and 2000 McKinnon Avenue Project, Final Estimation of Project Travel Demand, December 10, 2021.
263 Ibid.
264 Langan Engineering, Urban E-commerce Distribution Facility Selection Criteria, February 26, 2021.

emissions that would be generated onsite and within the HRA domain[265] during construction and operational phases of the proposed project. Additional modeling details and assumptions are provided above in the approach to analyzing (see “Community Risk and Hazard Impacts,” p. 3.D-29) and in Appendix F. For construction, the HRA modeling assumed a 2.6-year construction duration, which is slightly longer than the 31-month anticipated construction duration. The operational phase of the HRA included emissions from the two emergency generators and on-road vehicles, both traveling to and from the site and operating on site.

As detailed in the approach to assessing health impacts in Section 3.D.3 (p. 3.D-29), two scenarios[266] each for residential and offsite worker receptors were evaluated to assess long-term cancer risk and annual $PM_{2.5}$ concentrations. The purpose of having two scenarios for each receptor type is to analyze which scenario would result in the greatest potential impacts.

CONSTRUCTION SOURCES

Construction of the proposed project would generate emissions of criteria air pollutants, precursors, and TACs (i.e., DPM) from a variety of sources, including off-road construction equipment, on-road vehicles, demolition of existing onsite structures, earthmoving activities, architectural coating activities, and off-gas from paving activities. During construction of the proposed project, demolition and earthwork (grading, stockpiling, and truck loading) activities and vehicle travel on paved roadways would generate fugitive dust emissions. These sources of DPM and fugitive dust were included in the HRA analysis.

OPERATIONAL SOURCES

Operational sources of the proposed project would include stationary (e.g., emergency generators and manufacturing and maker space activities) and on-road mobile sources. The proposed project includes two emergency generators assumed to be 400 kV. Potential tenants in either of the multi-story PDR buildings may include manufacturing and maker space, consisting of food and beverage processing, apparel and other garment products, furniture and fixtures, printing (including three-dimensional), prototyping, and publishing. These uses may generate gaseous criteria pollutants, particulate matter, and TACs from the use of kilns, presses, refrigeration, varnishes, and welding. The air district provided TAC profiles from existing manufacturing facilities, and the HRA analysis for this EIR uses the worst-case profile, scaled to reflect the floor area of the proposed project.

Mobile source emissions, inclusive of exhaust emissions and fugitive dust associated with vehicle travel on roads from on-road vehicles, were included in the HRA analysis. On-road mobile sources include onsite vehicle circulation and offsite travel routes. Details and assumptions for the on-road mobile sources are provided in Section 3.D.3, “Approach to Analysis” (p. 3.D-23) and in Appendix F.

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265 The HRA modeling area is defined as within 1,000 feet of the proposed project site, as well as within 1,000 feet of haul routes for proposed project construction and trip routes for the proposed project’s operational vehicle travel between the site and where the on- and off-ramps merge onto or exit U.S. 101 or I-280.

266 Both scenarios include the use of Tier 4 Interim emission standards for construction equipment rated 25 horsepower or greater as part of the proposed project’s approval as a Type 3 Clean Construction Project, pursuant to Director Bulletin No. 2, *https://sfplanning.org/sites/default/files/forms/DB2_Type3_SupplementalApplication.pdf*.

NEARBY RECEPTORS

The closest residential receptors are approximately 440 feet to the south of the project site along Oakdale Avenue, east of I-280 and west of Rankin Street. There are also sensitive receptors to the northwest of the project site in the block bordered by Upton Street and Barneveld, McKinnon, and Jerrold avenues. The closest school is the Big City Montessori School on Industrial Avenue, approximately 2,200 feet from the project site, on the route to and from the U.S. 101 and I-280 interchange to the south. For the purposes of this EIR, offsite worker receptors were also included as sensitive receptors. The closest offsite worker locations are approximately 40 feet from the proposed project in all directions. Figure 3.D-1 (p. 3.D-16) illustrates the location of sensitive receptors analyzed for the HRA analysis.

HEALTH RISK RESULTS

Project Health Risks

The modeled offsite excess cancer risk and annual $PM_{2.5}$ concentrations for Scenarios 1 and 2 at the maximally exposed residential and offsite worker receptors are shown in Table 3.D-16 and Table 3.D-17 (p. 3.D-64), respectively. The maximally exposed receptor is the sensitive receptor location with the maximum cancer risk and $PM_{2.5}$ concentration from the proposed project. The maximally exposed residential receptor was approximately 440 feet to the south of the project site, on Oakdale Avenue. The maximally exposed offsite worker receptor was 40 feet south of the proposed project site, on McKinnon Avenue. Figures 5 through 13 in the results section of Appendix F, illustrate the location of the maximally exposed residential and worker receptors for cancer risk and $PM_{2.5}$ concentrations due to the proposed project. Details on the other modeled scenarios, which result in lower impacts, are available in Appendix F.

Health risk impacts due to existing conditions plus the proposed project were evaluated at the maximally exposed residential and offsite worker receptors for lifetime cancer risk and annual $PM_{2.5}$ concentrations. The results of the existing plus proposed project health risk impacts are summarized in Table 3.D-18 (p. 3.D-65) and Table 3.D-19 (p. 3.D-66), respectively.

As shown in Table 3.D-16 and Table 3.D-17, the health risk impacts associated with the proposed project do not exceed the project thresholds of significance established for receptors in the APEZ. The proposed project's maximum cancer risk impact is 4.68 and 5.10 per 1 million for residential and worker receptors, respectively. This equates to approximately 67 percent and 73 percent of the more restrictive APEZ cancer risk significance threshold of 7 per 1 million. The proposed project's maximum annual $PM_{2.5}$ concentrations are 0.08 and 0.17 $\mu g/m^3$ for residential and worker receptors, respectively. These $PM_{2.5}$ impacts are 40 percent and 85 percent of the more restrictive APEZ annual $PM_{2.5}$ concentration significance threshold of 0.2 $\mu g/m^3$. As explained in "Approach to Analysis" in Section 3.D.3 (pp. 3.D-29 through 3.D-32), these thresholds have been specifically established for the purpose of determining whether health risks associated with a project would make a considerable contribution to existing significant health risks at receptors.

In addition, the maximum noncancer chronic HI for residential receptors would occur during operations with a HI of 0.00179, as shown in Table 24 in the results section of Appendix F. The maximum noncancer chronic HI for worker receptors would occur during the second year of construction with a HI of 0.00634. Noncancer chronic HI increases due to the project would be well below the significance threshold of 1.0. Therefore, health risks associated with proposed project construction and operations would be ***less than significant***.

Table 3.D-16 Existing Plus Project Lifetime Cancer Risk at Maximally Exposed Individual Residential and Offsite Worker Receptor Type

Cancer Risk	Residential Receptor	Worker Receptor
Receptor coordinates (UTM X, UTM Y)	(553000, 4177080)	(552920, 4177300)
Existing lifetime excess cancer risk (2020)[1] (per 1 million)	189.50	216.56
Existing cancer risk meets APEZ criteria?	Yes	Yes
Proposed project cancer risk (per 1 million)	4.68[2]	5.10[3]
Existing + proposed project cancer risk (per 1 million)	194.18	221.66
Meets APEZ cancer risk criteria with proposed project contribution?	Yes	Yes
Significance threshold for project contribution (per 1 million)	**7.0**	**7.0**
Threshold exceeded?	**No**	**No**

Source: AECOM 2022; see Appendix F, Air Quality Supporting Information.

Notes:

1. Background cancer risk from the 2020 Citywide HRA database.
2. RS2 = Resident Scenario 2: exposure is from operational-only emissions for a duration of 30 years. Starting age of exposure is third trimester in utero.
3. WS1 = Worker Scenario 1: exposure includes 2.6 years of construction emissions plus 23 years of operational emissions for a total exposure duration of 25.6 years. Starting age of exposure is 16 years for the first year of construction.
4. The project's impact is considered worst-case and conservative because the project risk does not account for reductions in emissions that would occur over time from cleaner vehicles and increasingly stringent regulations, or for mitigation measures identified in the criteria pollutant analysis that would have the co-benefit of reducing cancer risk (Mitigation Measures M-AQ-3b through M-AQ-3h).

m = meter
UTM = Universal Transverse Mercator
UTM X = eastward-measured distance
UTM Y = northward-measured distance

Table 3.D-17 Existing Plus Project Annual $PM_{2.5}$ Concentration at Maximally Exposed Individual Residential and Offsite Worker Receptor Types

$PM_{2.5}$ Concentration	Residential Receptor	Worker Receptor
Receptor coordinates (UTM X, UTM Y)	(553000, 4177080)	(552920, 4177300)
Existing annual average $PM_{2.5}$ concentration (2020)[1] ($\mu g/m^3$)	11.30	11.97
Existing $PM_{2.5}$ concentration meets APEZ criteria?	Yes	Yes
Proposed project annual average $PM_{2.5}$ concentration ($\mu g/m^3$)	0.08[2]	0.17[2]
Existing + proposed project annual average $PM_{2.5}$ concentration ($\mu g/m^3$)	11.38	12.14
Meets APEZ $PM_{2.5}$ concentration criteria with proposed project contribution?	Yes	Yes
Significance threshold for project contribution ($\mu g/m^3$)	**0.2**	**0.2**
Threshold exceeded?	**No**	**No**

Source: AECOM 2022; see Appendix F, Air Quality Supporting Information.

Notes:

1. Background $PM_{2.5}$ concentration from the 2020 Citywide HRA database.
2. S1/S2 = Scenarios 1 and 2: exposure is the maximum year of annual average $PM_{2.5}$ concentration from operations. Scenarios 1 and 2 are equivalent.
3. The project's impact is considered worst-case and conservative because the project risk does not account for reductions in emissions that would occur over time from cleaner vehicles and increasingly stringent regulations, or for mitigation measures identified in the criteria pollutant analysis that would have the co-benefit of reducing $PM_{2.5}$ concentrations (Mitigation Measures M-AQ-3b through M-AQ-3g).

m = meter
$\mu g/m^3$ = micrograms per cubic meter
$PM_{2.5}$ = particulate matter less than 2.5 micrograms in diameter
UTM = Universal Transverse Mercator
UTM X = eastward-measured distance
UTM Y = northward-measured distance

Table 3.D-18 2035 Baseline Plus Project Lifetime Cancer Risk at Maximally Exposed Individual Residential and Offsite Worker Receptor Types

Cancer Risk	Residential Receptor	Worker Receptor
Receptor coordinates (UTM X, UTM Y)	(553000, 4177080)	(552920, 4177300)
Future 2035 baseline lifetime excess cancer risk[1] (per 1 million)	65.28	69.63
Future 2035 baseline cancer risk meets APEZ criteria?	No	No
Proposed project cancer risk (per 1 million)[4]	4.68[2]	5.10[3]
Existing + proposed project cancer risk (per 1 million)	69.96	74.73
Meets APEZ cancer risk criteria with proposed project contribution?	No	No
Significance threshold for project contribution (per 1 million)[5]	**10.0**	**10.0**
Threshold exceeded?	**No**	**No**

Source: AECOM 2022; see Appendix F, Air Quality Supporting Information.

Notes:

1. Future 2035 baseline (assuming no implementation of housing element 2022 update) obtained from *San Francisco Housing Element 2022 Update EIR*, Appendix I.2.
2. RS2 = Resident Scenario 2: exposure is from operational-only emissions for a duration of 30 years. Starting age of exposure is third trimester in utero.
3. WS1 = Worker Scenario 1: exposure includes 2.6 years of construction emissions plus 23 years of operational emissions for a total exposure duration of 25.6 years. Starting age of exposure is 16 years for the first year of construction.
4. The project's impact is considered worst-case and conservative because the project risk does not account for reductions in emissions that would occur over time from cleaner vehicles and increasingly stringent regulations, or for mitigation measures identified in the criteria pollutant analysis that would have the co-benefit of reducing cancer risk (Mitigation Measures M-AQ-3b through M-AQ-3h.
5. The project contribution significance threshold of an excess cancer risk of 10 per one million only applies to sensitive receptors that do not meet APEZ criteria under baseline conditions but would meet APEZ criteria as a result of the proposed project.

UTM = Universal Transverse Mercator
UTM X = eastward-measured distance
UTM Y = northward-measured distance

Table 3.D-19 2050 Baseline Plus Project Lifetime Cancer Risk at Maximally Exposed Individual Residential and Offsite Worker Receptor Types

Cancer Risk	Residential Receptor	Worker Receptor
Receptor coordinates (UTM X, UTM Y)	(553000, 4177080)	(552920, 4177300)
Future 2050 baseline lifetime excess cancer risk[1] (per 1 million)	53.71	53.80
Future 2050 baseline cancer risk meets APEZ criteria?	No	No
Proposed project cancer risk (per 1 million)[4]	4.68[2]	5.10[3]
Existing + proposed project cancer risk (per 1 million)	58.39	58.90
Meets APEZ cancer risk criteria with proposed project contribution?	No	No
Significance threshold for project contribution (per 1 million)[5]	**10.0**	**10.0**
Threshold exceeded?	**No**	**No**

Source: AECOM 2022; see Appendix F, Air Quality Supporting Information.

Notes:

1. Future 2050 baseline (assuming no implementation of housing element 2022 update) obtained from *San Francisco Housing Element 2022 Update EIR*, Appendix I.2.
2. RS2 = Resident Scenario 2: exposure is from operational-only emissions for a duration of 30 years. Starting age of exposure is third trimester in utero.
3. WS1 = Worker Scenario 1: exposure includes 2.6 years of construction emissions plus 23 years of operational emissions for a total exposure duration of 25.6 years. Starting age of exposure is 16 years for the first year of construction.
4. The project's impact is considered worst-case and conservative because the project risk does not account for reductions in emissions that would occur over time from cleaner vehicles and increasingly stringent regulations, or for mitigation measures identified in the criteria pollutant analysis that would have the co-benefit of reducing cancer risk (Mitigation Measures M-AQ-3b through M-AQ-3h).
5. The project contribution significance threshold of an excess cancer risk of 10 per one million only applies to sensitive receptors that do not meet APEZ criteria under baseline conditions but would meet APEZ criteria as a result of the proposed project.

UTM = Universal Transverse Mercator
UTM X = eastward-measured distance
UTM Y = northward-measured distance

Project Health Risks in Years 2035 and 2050

In addition to the 2020 existing conditions, the city evaluated future baseline health risks and $PM_{2.5}$ concentrations as part of the San Francisco Housing Element 2022 Update EIR.[267] The Housing Element 2022 Update EIR evaluates the impacts of constructing 150,000 housing units in San Francisco by 2050. The Housing Element 2022 Update EIR analysis compares the housing element update's impacts to a future baseline that assumes no implementation of the update.[268] To disclose future baseline plus project health risk impacts for the years 2035 and 2050, this air quality analysis for the proposed San Francisco Gateway project applies the lifetime cancer risk and annual $PM_{2.5}$ concentration identified through the Housing Element 2022 Update EIR modeling for the 2035 and 2050 baseline years (assuming no housing element update). The estimated cancer risk for these future baseline years is more than 60 percent lower than the 2020 existing conditions; total $PM_{2.5}$ concentrations were reduced by less than 10 percent at the maximally exposed individual sensitive receptor. The decrease in cancer risk and $PM_{2.5}$ concentrations from 2020 to future 2035 and 2050 years is attributed to the assumption that vehicles will become lower emitting in future years as a result of vehicle technological improvements, more stringent regulations, and the retirement of older vehicles. Health risk impacts for each baseline year (2035 and 2050) plus the proposed project at the offsite maximally exposed individual sensitive receptors are shown in Table 3.D-18 through Table 3.D-21. As shown in Table 3.D-18 and Table 3.D-19 (cancer risk) (pp. 3.D-65 and 3.D-66) and Table 3.D-20 and Table 3.D-21 (annual $PM_{2.5}$) (pp. 3.D-68 and 3.D-69), the project's impacts are held constant (i.e., they are the same as presented in Table 3.D-16 and Table 3.D-17, pp. 3.D-63 and 3.D-64); however, the health risk from the project, like that of the future baseline conditions, would diminish over time due to cleaner vehicles and increasingly stringent regulations. The contribution from the proposed project ranged from about 7 to 9 percent for cancer risk[269] and about 1 to 2 percent of the annual $PM_{2.5}$ concentration[270] for the total impact (future baseline plus proposed project). These results are conservative, because it is expected that the proposed project's contribution to cancer risk and $PM_{2.5}$ also would be lower in future years. Additional details on this analysis are provided in Appendix F.

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267 San Francisco Planning Department, San Francisco Housing Element 2022 Update EIR, 2022, *https://sfplanning.org/environmental-review-documents?title=HOusing+Element&field_environmental_review_categ_target_id=All&items_per_page=10*.

268 Projections for the 2035 and 2050 baseline years include assumptions about the buildout of the department's development pipeline as well as additional growth that may occur by 2035 and 2050 without implementation of the housing element 2022 update. At the time of preparation, the department's Q1 2019 development pipeline represented the most recent data available. San Francisco is projected to have 462,000 housing units under the 2035 baseline (approximately 56,000 units more than 2020 conditions) and 508,000 housing units under the 2050 baseline (approximately 102,000 units more than 2020 conditions).

269 Proposed project contributions to future baseline plus proposed project cancer risk are 4.68 / 69.96 = 6.7 percent (resident 2035 baseline); 5.10 / 74.75 = 6.8 percent (worker 2035 baseline); 4.68 / 58.39 = 8 percent (resident 2050 baseline); and 5.10 / 58.90 = 8.7 percent (worker 2050 baseline).

270 Proposed project contributions to future baseline plus proposed project annual $PM_{2.5}$ concentrations are 0.08 / 10.52 = 0.8% (resident 2035 baseline); 0.17 / 10.96 = 1.6 percent (worker 2035 baseline); 0.08 / 10.61 = 0.8 percent (resident 2050 baseline); and 0.17 / 11.05 = 1.5 percent (worker 2050 baseline).

Table 3.D-20 2035 Baseline Plus Project Annual $PM_{2.5}$ Concentration at Maximally Exposed Individual Residential and Offsite Worker Receptor Types

$PM_{2.5}$ Concentration	Residential Receptor	Worker Receptor
Receptor coordinates (UTM X, UTM Y)	(553000, 4177080)	(552920, 4177300)
Future 2035 annual average $PM_{2.5}$ concentration[1] (µg/m³)	10.44	10.79
Future 2035 baseline $PM_{2.5}$ concentration meets APEZ criteria?	Yes	Yes
Proposed project annual average $PM_{2.5}$ concentration (µg/m³)[3]	0.08[2]	0.17[2]
Existing + proposed project annual average $PM_{2.5}$ concentration (µg/m³)	10.52	10.96
Meets APEZ $PM_{2.5}$ concentration criteria with proposed project contribution?	Yes	Yes
Significance threshold for project contribution (µg/m³)	**0.2**	**0.2**
Threshold exceeded?	**No**	**No**

Source: AECOM 2022; see Appendix F, Air Quality Supporting Information.

Notes:

1. Future 2035 baseline (assuming no housing element 2022 update) obtained from *San Francisco Housing Element 2022 Update EIR*, Appendix I.2.
2. S1/S2 = Scenarios 1 and 2: exposure is the maximum year out of construction and operations. Scenarios 1 and 2 are equivalent.
3. The project's impact is considered worst-case and conservative because the project risk does not account for reductions in emissions that would occur over time from cleaner vehicles and increasingly stringent regulations, or for mitigation measures identified in the criteria pollutant analysis that would have the co-benefit of $PM_{2.5}$ concentrations (Mitigation Measures M-AQ-3b through M-AQ-3g).

m = meter
µg/m³ = micrograms per cubic meter
$PM_{2.5}$ = particulate matter less than or equal to 2.5 micrometers in diameter
UTM = Universal Transverse Mercator
UTM X = eastward-measured distance
UTM Y = northward-measured distance

Table 3.D-21 2050 Baseline Plus Project Annual $PM_{2.5}$ Concentration at Maximally Exposed Individual Residential and Offsite Worker Receptor Types

$PM_{2.5}$ Concentrations	Residential Receptor	Worker Receptor
Receptor coordinates (UTM X, UTM Y)	(553000, 4177080)	(552920, 4177300)
Future 2050 annual average $PM_{2.5}$ concentration[1] (µg/m³)	10.53	10.88
Future 2050 baseline $PM_{2.5}$ concentration meets APEZ criteria?	Yes	Yes
Proposed project annual average $PM_{2.5}$ concentration (µg/m³)[3]	0.08[2]	0.17[2]
Existing + proposed project annual average $PM_{2.5}$ concentration (µg/m³)	10.61	11.05
Meets APEZ $PM_{2.5}$ concentration criteria with proposed project contribution?	Yes	Yes
Significance threshold for project contribution (µg/m³)	**0.2**	**0.2**
Threshold exceeded?	**No**	**No**

Source: AECOM 2022; see Appendix F, Air Quality Supporting Information.

Notes:

1. Future 2050 baseline (assuming no housing element 2022 update) obtained from *San Francisco Housing Element 2022 Update EIR*, Appendix I.2.
2. S1/S2 = Scenarios 1 and 2: exposure is the maximum year out of construction and operations. Scenarios 1 and 2 are equivalent.
3. The project's impact is considered worst-case and conservative because the project risk does not account for reductions in emissions that would occur over time from cleaner vehicles and increasingly stringent regulations, or for mitigation measures identified in the criteria pollutant analysis that would have the co-benefit of $PM_{2.5}$ concentrations (Mitigation Measures M-AQ-3b through M-AQ-3g).

m = meter
µg/m³ = micrograms per cubic meter
$PM_{2.5}$ = particulate matter less than or equal to 2.5 micrometers in diameter
UTM = Universal Transverse Mercator
UTM X = eastward-measured distance
UTM Y = northward-measured distance

EXPANDED STREETSCAPE VARIANT

As described previously, the expanded streetscape variant includes the same land uses, site plan, development intensity, and operations as the proposed project, but proposes rebuilding the entire cross section of the streets along the project perimeter to Better Streets standards. Therefore, the proposed expanded streetscape variant would result in a level of $PM_{2.5}$ and TAC emissions similar to those of the proposed project, but would include a slightly larger footprint, estimated to be approximately 100,000 square feet.

As shown in Table 3.D-16 (p. 3.D-63), the proposed project's lifetime cancer risk to residential receptors is 4.68 per 1 million. The proposed project's lifetime cancer risk to worker receptors is 5.10 per 1 million. Therefore, both the residential and worker receptor lifetime cancer risks are substantially below the project contribution threshold of 7 per 1 million, and the additional emissions associated with the streetscape improvements under the expanded streetscape variant would not result in an exceedance of the health risk thresholds.

Similarly, the annual average $PM_{2.5}$ concentrations disclosed in Table 3.D-17 (p. 3.D-64) are the maximum annual $PM_{2.5}$ concentrations that would result from the project, and these emissions would occur during project operations not during construction. As shown in Table 3.D-17, the annual averaged $PM_{2.5}$ concentrations from the operations of the proposed project at the maximum individual sensitive receptors are 0.08 μg/m^3 and 0.17 μg/m^3 for residential and worker receptors, respectively. As shown in Table 23 in the results section of Appendix F, the maximum annual $PM_{2.5}$ concentration during any given year of construction for the proposed project is estimated to be 0.01 μg/m^3 for the residential receptor and 0.10 μg/m^3 for the worker receptor, both of which are substantially below the threshold of 0.2 μg/m^3. Even if these concentrations would increase by 50 percent, the maximum annual average concentration would not exceed the significance threshold of 0.2 μg/m^3, and the maximum annual average $PM_{2.5}$ concentration would continue to occur during project operations. Table 24 in the results section of Appendix F, indicates that the noncancer chronic HI during Year 3 construction is estimated to be 0.0008 for the residential receptor and 0.005 for the worker receptor, which are both well below the threshold of 1. Therefore, the health risks associated with the expanded streetscape variant would be ***less than significant***.

Impact AQ-5: The proposed project or project variant would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. (*Less than Significant*)

PROPOSED PROJECT

Construction of the proposed project would generate temporary odors associated with diesel exhaust from diesel-powered equipment and ROG emissions associated with the application of asphalt and architectural coatings. The air district does not have any recommended thresholds or screening distances associated with construction-related odorous emissions. However, odors associated with diesel fumes, asphalt paving, and architectural coatings would be temporary and would disperse rapidly with distance from the source. Any potentially noxious odors would be generally confined to the immediate vicinity of the project site and would dilute with increasing distance from the source so that odors would not adversely affect a substantial number of people.

Operationally, the proposed project would provide space for PDR uses, including manufacturing and maker space, parcel and last-mile delivery, and wholesale and storage, as well as retail space and onsite circulation to support proposed uses. Manufacturing and maker space could include the manufacturing of products that have odors. Retail uses would include amenities such as a café, convenience store, or sandwich shop. Some people may find odors from restaurants objectionable at times, although a potential case would be unlikely to generate a substantial level of odorous emissions. Similarly, some food processing facilities can result in odorous emissions that some people may find objectionable. However, this is not anticipated as a primary land use associated with the proposed project. In addition, air district regulation 7 places general limitations on odorous substances, and specific emission limitations on certain odorous compounds, as detailed in Section 3.D.2, Regulatory Framework, p. 3.D-22. The proposed project would not accommodate new operational sources that typically generate odors affecting a substantial number of people such as wastewater treatment and pumping facilities; landfills, transfer stations, and composting facilities; and petroleum refineries or asphalt batch plants. The surrounding uses in the project vicinity include predominantly PDR and light industrial uses, and the proposed project would not result in operational activities that would generate odorous emissions substantially different from those of existing and surrounding land uses of the proposed project site.

Given the temporary nature and limited geographical scope of construction activities, the consistency between the proposed project uses and existing and surrounding land uses, and that nuisance odors are regulated by the air district, odor impacts would be ***less than significant***.

EXPANDED STREETSCAPE VARIANT

The expanded streetscape variant comprises the same land uses, employment, operations, and site plan as the proposed project, but proposes rebuilding the entire cross section of the streets along the project perimeter to Better Streets standards. The expanded streetscape variant would include a slightly larger footprint than the proposed project. The larger footprint would result in additional ground disturbance to improve the remainder of the adjacent public rights-of-way. The equipment use and worker and truck trips associated with the additional construction for the expanded streetscape variant would be nominal; they would not substantially change the level of emissions, including those that lead to odors, that would occur over the construction period compared to that of the proposed project.

The expanded streetscape variant would have the same operational emissions sources as the proposed project. The expanded streetscape variant does not include any change in long-term operational emissions sources or intensity from the proposed project. Therefore, operational emissions that would result from the expanded streetscape variant, including those that would lead to odors, would be the same as those that would result from the proposed project. Therefore, for the reasons cited above, the expanded streetscape variant would not result in other emissions, such as those leading to odors, that would adversely affect a substantial number of people, and this impact would be ***less than significant***.

3.D.5 Cumulative Impacts

Regional air quality effects are inherently cumulative effects—the nonattainment status of regional pollutants results from past and present development in the air basin. No single project would be sufficient in size to result in nonattainment of regional air quality standards. The potential for the proposed project or expanded streetscape project variant to result in significant criteria air pollutant emissions, and therefore a cumulatively considerable contribution to nonattainment criteria pollutants, is addressed under Impact AQ-2 and Impact AQ-3. Therefore, no separate cumulative criteria air pollutant analysis is required. The discussion of cumulative impacts here addresses cumulative impacts related to exposure to local sources of $PM_{2.5}$ and TAC emissions and to other sources of emissions, such as those leading to odors.

Impact C-AQ-1: The proposed project or project variant in combination with existing conditions and cumulative projects would result in a significant cumulative health risk impact. The proposed project's contribution would be less than cumulatively considerable. (*Less than Significant*)

The offsite maximally exposed resident and worker are in an area currently designated as an APEZ; therefore, a significant health risk impact already exists. As discussed under Impact AQ-4, the HRA conducted to determine whether the proposed project or expanded streetscape variant would substantially contribute to the existing health risks at the offsite maximally exposed resident concluded that the impact would be less than significant.

This cumulative health risk analysis evaluates health risks from existing emissions sources, proposed project emissions, and emissions from nearby projects within 1,000 feet of the offsite maximally exposed residential and worker receptors to disclose the cumulative risks at the offsite maximally exposed resident and worker receptors. One project (Bayview Community-Based Transportation Plan) was common to both the offsite maximally exposed residential and worker receptor, and two additional projects (2270 McKinnon Avenue and the SF Market) were within the 1,000 feet of the offsite maximally exposed worker receptor.

The Bayview Community-Based Transportation Plan was adopted on February 28, 2020.[271] It would include improvements along Oakdale Avenue, such as installing new crosswalks, painted median islands, and painted safety zones; reducing travel lanes; installing edge lines to calm traffic; and potentially providing protected bikeways. According to the Bayview Community-Based Transportation Plan quick-build project status, all of these improvements were completed by 2021; however, the city plans additional improvements in this corridor. The construction of any improvements would be required to follow the clean construction ordinance requirements; for projects in the APEZ, this ordinance would limit DPM emissions. Additionally, construction emissions would be temporary and would spread out along the corridor. Upon completion, the Bayview Community-Based Transportation Plan improvements along Oakdale Avenue would likely result in minimal changes to TACs and $PM_{2.5}$ from diesel traffic.

The 2270 McKinnon Avenue CEQA Exemption Determination (dated October 25, 2022), prepared by the planning department, stated that the project is a clean construction priority project pursuant to Planning Director Bulletin No. 2, committing to the use of Tier 4 engines on all diesel-fueled construction equipment and resulting in substantially reduced DPM and $PM_{2.5}$ emissions compared to the construction fleet average emissions. [272] No emergency generators or fire water pumps have been identified by the project sponsor for this project. Minimal changes to TACs and $PM_{2.5}$ from diesel traffic would be anticipated upon the completion of this project.

The SF Market's 2011 Mitigated Negative Declaration identified less-than-significant project-level and cumulative air quality impacts. In July 2022, the planning department issued Addendum 2 to the SF Market Mitigated Negative Declaration.[273] Addendum 2 analyzed changes to the project's construction phasing and determined that the changes to the project would not result in any new or more severe impacts than previously identified in the 2011 Mitigated Negative Declaration. It did not identify any significant cumulative construction or operational transportation impacts, and no mitigation measures were identified. Upon completion, the SF Market anticipates a net increase of approximately 110 new vehicle trips during the a.m. peak hour[274] and very few new trips during the p.m. peak hour. The net-new vehicle trips equate to about 15 percent of the truck trip increase associated with the proposed project or expanded streetscape variant. The contribution of truck trips from the proposed project or expanded streetscape variant on the maximally exposed individual residential and worker receptors is about 20 percent (cancer risk) and about 25 percent (annual $PM_{2.5}$). Therefore, conservatively assuming that all new vehicle trips from the SF Market pass by the maximally exposed individual receptors of the proposed project or expanded streetscape variant, the net increase in health risk impacts would be approximately 3 to 4 percent.

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[271] Bayview Community-Based Transportation Plan, Final Plan available at: *https://www.sfmta.com/reports/bayview-cbtp-final-plan*, accessed March 16, 2023.

[272] San Francisco Planning Department, 2270 McKinnon Avenue CEQA Exemption Determination, October 2022, https://citypln-m-extnl.sfgov.org/External/link.ashx?Action=Download&ObjectVersion=-1&vault={A4A7DACD-B0DC-4322-BD29-F6F07103C6E0}&objectGUID={8CA18C38-D785-4F15-8B2A-55F4A1ED715E}&fileGUID={5D662E13-D3B7-49D8-A193-D37E2140D725}.

[273] San Francisco Planning Department, Addendum 2 to Mitigated Negative Declaration, July 2022, *https://sfplanning.org/environmental-review-documents?title=san+francisco+market+project&field_environmental_review_categ_target_id=212&items_per_page=10*, accessed March 16, 2023.

[274] San Francisco Market Expansion and Reconstruction Update Addendum to the Transportation Impact Study – Case No. 2009.1153ENV, July 12, 2022, Table 11, page 25.

As a result, these cumulative projects would increase health risks at the offsite maximally exposed residential and worker receptors. However, both of the maximally exposed receptors are located in the APEZ; therefore, a cumulative health risk currently exists and would continue to exist under cumulative conditions, even without the proposed project or expanded streetscape variant. The project's contribution is conservatively considered to remain unchanged from the analysis presented in Impact AQ-4, acknowledging that the project's health risks from mobile sources would likely decrease over time under cumulative conditions due to decreasing mobile source emissions from implementation of regulations and improved technology. This change for future years in 2035 and 2050 is discussed in Impact AQ-3; it is particularly evident in Figure 3.D-2 (p. 3.D-45), which shows the net change in daily operational emissions over time.

As previously discussed in Impact AQ-4, the city developed future citywide health risks and $PM_{2.5}$ concentrations as part of the San Francisco Housing Element Update 2022 EIR.[275] The Housing Element Update 2022 EIR identifies the anticipated number of new housing units across San Francisco and establishes lifetime cancer risk and annual $PM_{2.5}$ concentrations assuming implementation of the housing element update. Therefore, as part of the cumulative analysis for this EIR, the 2035 and 2050 health risks assume implementation of the 2022 Housing Element, which includes implementation of future housing development. Table 3.D-22 and Table 3.D-23 (cancer risk) (pp. 3.D-74 and 3.D-75) and Table 3.D-24 and Table 3.D-25 (annual $PM_{2.5}$) (pp. 3.D-76 and 3.D-77) summarize the cumulative impacts at the maximally exposed residential and worker receptors. Similar to the future baseline years (without implementation of the housing element), the project's impact does not change because its emissions were held constant; this is conservative because mobile source emissions from the proposed project would be reduced due to cleaner vehicles and increasingly stringent regulations over time. The cumulative impacts at the maximally exposed receptors increase only slightly compared to the future baseline years without the housing element—by averages of less than 1 percent (cancer risk in 2035), 6 percent (cancer risk in 2050), and 1 percent (annual $PM_{2.5}$ concentration in 2035 and 2050).[276] This small difference is primarily because most of the anticipated future housing is not likely to occur near the proposed project or the maximally exposed receptors. Additional details on cumulative health risks are provided in Appendix F.

[275] San Francisco Planning Department, San Francisco Housing Element 2022 Update EIR, 2022, *https://sfplanning.org/environmental-review-documents?title=HOusing+Element&field_environmental_review_categ_target_id=All&items_per_page=10*.

[276] Average 2035 baseline cancer risk between maximally exposed residential and worker is about -0.4 percent = 69.6 per 1 million (with housing element) / 70 per 1 million (without housing element). Average 2050 baseline cancer risk between maximally exposed residential and worker is about 6 percent = 57 per 1 million (with housing element) / 53.8 per 1 million (without housing element). Average 2035 baseline annual average $PM_{2.5}$ concentration between maximally exposed residential and worker is about 1 percent = 10.7 per 1 million (with housing element) / 10.6 per 1 million (without housing element). Average 2050 baseline annual average $PM_{2.5}$ concentration between maximally exposed residential and worker is about 1 percent = 10.8 per 1 million (with housing element) / 10.7 per 1 million (without housing element).

Table 3.D-22 2035 Cumulative Plus Project Lifetime Cancer Risk at Maximally Exposed Individual Residential and Offsite Worker Receptor Types

Cancer Risk	Residential Receptor	Worker Receptor
Receptor coordinates (UTM X, UTM Y)	(553000, 4177080)	(552920, 4177300)
Future 2035 cumulative lifetime excess cancer risk[1] (per 1 million)	67.21	71.98
2035 cumulative cancer risk meets APEZ criteria?	No	No
Proposed project cancer risk (per 1 million)	4.68[2, 4]	5.10[3, 4]
Future 2035 cumulative + proposed project cancer risk (per 1 million)	71.89	77.08
Meets APEZ cancer risk criteria with proposed project contribution?	No	No
Significance threshold for project contribution (per 1 million)[5]	**10.0**	**10.0**
Threshold exceeded?	**No**	**No**

Source: AECOM 2022; see Appendix F, Air Quality Supporting Information.

Notes:

1. 2035 Cumulative (assuming implementation of housing element 2022 update) obtained from *San Francisco Housing Element 2022 Update EIR*, Appendix I.2.
2. RS2 = Resident Scenario 2: exposure is from operational-only emissions for a duration of 30 years. Starting age of exposure is third trimester in utero.
3. WS1 = Worker Scenario 1: exposure includes 2.6 years of construction emissions plus 23 years of operational emissions for a total exposure duration of 25.6 years. Starting age of exposure is 16 years for the first year of construction.
4. The project's impact is considered worst-case and conservative because the project risk does not account for reductions in emissions that would occur over time from cleaner vehicles and increasingly stringent regulations, or for mitigation measures identified in the criteria pollutant analysis that would have the co-benefit of reducing cancer risk (Mitigation Measures M-AQ-3b through M-AQ-3h).
5. The project contribution significance threshold of an excess cancer risk of 10 per one million only applies to sensitive receptors that do not meet APEZ criteria under baseline conditions but would meet APEZ criteria as a result of the proposed project.

UTM = Universal Transverse Mercator
UTM X = eastward-measured distance
UTM Y = northward-measured distance

Table 3.D-23 2050 Cumulative Plus Project Lifetime Cancer Risk at Maximally Exposed Individual Residential and Offsite Worker Receptor Types

Cancer Risk	Residential Receptor	Worker Receptor
Receptor coordinates (UTM X, UTM Y)	(553000, 4177080)	(552920, 4177300)
Future 2050 baseline lifetime excess cancer risk[1] (per 1 million)	56.35	57.55
2050 cumulative cancer risk meets APEZ criteria?	No	No
Proposed project cancer risk (per 1 million)[4]	4.68[2]	5.10[3]
Future 2050 cumulative + proposed project cancer risk (per 1 million)	61.03	62.65
Meets APEZ cancer risk criteria with proposed project contribution?	No	No
Significance threshold for project contribution (per 1 million)[5]	**10.0**	**10.0**
Threshold exceeded?	**No**	**No**

Source: AECOM 2022; see Appendix F, Air Quality Supporting Information.

Notes:

1. Future 2050 baseline (assuming no implementation of housing element 2022 update) obtained from *San Francisco Housing Element 2022 Update EIR*, Appendix I.2.
2. RS2 = Resident Scenario 2: exposure is from operational-only emissions for a duration of 30 years. Starting age of exposure is third trimester in utero.
3. WS1 = Worker Scenario 1: exposure includes 2.6 years of construction emissions plus 23 years of operational emissions for a total exposure duration of 25.6 years. Starting age of exposure is 16 years for the first year of construction.
4. The project's impact is considered worst-case and conservative because the project risk does not account for reductions in emissions that would occur over time from cleaner vehicles and increasingly stringent regulations, or for mitigation measures identified in the criteria pollutant analysis that would have the co-benefit of reducing cancer risk (Mitigation Measures M-AQ-3b through M-AQ-3h).[5.] The project contribution significance threshold of an excess cancer risk of 10 per one million only applies to sensitive receptors that do not meet APEZ criteria under baseline conditions but would meet APEZ criteria as a result of the proposed project.

UTM = Universal Transverse Mercator
UTM X = eastward-measured distance
UTM Y = northward-measured distance

Table 3.D-24 2035 Cumulative Plus Project Annual $PM_{2.5}$ Concentration at Maximally Exposed Individual Residential and Offsite Worker Receptor Types

$PM_{2.5}$ Concentration	Residential Receptor	Worker Receptor
Receptor coordinates (UTM X, UTM Y)	(553000, 4177080)	(552920, 4177300)
Future 2035 annual average $PM_{2.5}$ concentration[1] (μg/m³)	10.55	10.93
2035 cumulative $PM_{2.5}$ concentration meets APEZ criteria?	Yes	Yes
Proposed project annual average $PM_{2.5}$ concentration (μg/m³)[3]	0.08[2]	0.17[2]
Future 2035 cumulative + proposed project annual average $PM_{2.5}$ concentration (μg/m³)	10.63	11.10
Meets APEZ $PM_{2.5}$ concentration criteria with proposed project contribution?	Yes	Yes
Significance threshold for project contribution (μg/m³)	**0.2**	**0.2**
Threshold exceeded?	**No**	**No**

Source: AECOM 2022; see Appendix F, Air Quality Supporting Information.

Notes:

1. Future 2035 baseline (assuming no implementation of housing element 2022 update) obtained from *San Francisco Housing Element 2022 Update EIR*, Appendix I.2.
2. S1/S2 = Scenarios 1 and 2: exposure is the maximum year out of construction and operations. Scenarios 1 and 2 are equivalent.
3. The project's impact is considered worst-case and conservative because the project risk does not account for reductions in emissions that would occur over time from cleaner vehicles and increasingly stringent regulations, or for mitigation measures identified in the criteria pollutant analysis that would have the co-benefit of reducing cancer risk (Mitigation Measures M-AQ-3b through M-AQ-3g).

m = meter
μg/m³ = micrograms per cubic meter
$PM_{2.5}$ = particulate matter less than or equal to 2.5 micrometers in diameter
UTM = Universal Transverse Mercator
UTM X = eastward-measured distance
UTM Y = northward-measured distance

Table 3.D-25 2050 Cumulative Plus Project Annual $PM_{2.5}$ Concentration at Maximally Exposed Individual Residential and Offsite Worker Receptor Types

$PM_{2.5}$ Concentration	Residential Receptor	Worker Receptor
Receptor coordinates (UTM X, UTM Y)	(553000, 4177080)	(552920, 4177300)
Future 2050 annual average $PM_{2.5}$ concentration[1] ($\mu g/m^3$)	10.64	11.02
2050 cumulative $PM_{2.5}$ concentration meets APEZ criteria?	Yes	Yes
Proposed project annual average $PM_{2.5}$ concentration ($\mu g/m^3$)[3]	0.08[2]	0.17[2]
Future 2050 cumulative + proposed project annual average $PM_{2.5}$ concentration ($\mu g/m^3$)	10.72	11.19
Meets APEZ $PM_{2.5}$ concentration criteria with proposed project contribution?	Yes	Yes
Significance threshold for project contribution ($\mu g/m^3$)	**0.2**	**0.2**
Threshold exceeded?	**No**	**No**

Source: AECOM 2022; see Appendix F, Air Quality Supporting Information.

Notes:

1. Future 2050 baseline (assuming no implementation of housing element 2022 update) obtained from *San Francisco Housing Element 2022 Update EIR*, Appendix I.2.
2. S1/S2 = Scenarios 1 and 2: exposure is the maximum year out of construction and operations. Scenarios 1 and 2 are equivalent.
3. The project's impact is considered worst-case and conservative because the project risk does not account for reductions in emissions that would occur over time from cleaner vehicles and increasingly stringent regulations or for mitigation measures identified in the criteria pollutant analysis that would have the co-benefit of reducing cancer risk (Mitigation Measures M-AQ-3b through M-AQ-3g).

m = meter
$\mu g/m^3$ = micrograms per cubic meter
$PM_{2.5}$ = particulate matter less than or equal to 2.5 micrometers in diameter
UTM = Universal Transverse Mercator
UTM X = eastward-measured distance
UTM Y = northward-measured distance

For locations in the APEZ, annual $PM_{2.5}$ concentrations at or above 0.2 $\mu g/m^3$, or an excess cancer risk at or greater than 7.0 per 1 million, would be a cumulatively considerable health risk contribution and would result in a significant cumulative impact.[277] As shown in Table 3.D-22 and Table 3.D-23 (cancer risk) (pp. 3.D-74 and 3.D-75) and Table 3.D-24 and Table 3.D-25 (annual $PM_{2.5}$) (pp. 3.D-76 and 3.D-77), the proposed project's health risk contributions at the offsite maximally exposed residential and worker receptors do not exceed these thresholds, so the contribution of the proposed project and the expanded streetscape variant would not be cumulatively considerable. Therefore, although there is an existing cumulatively significant impact due to past, present, and probable future[278] air pollutants at receptor locations, the proposed project or expanded streetscape variant would not substantially contribute to this cumulatively significant impact. This cumulative impact would be ***less than significant***.

[277] San Francisco Department of Public Health, San Francisco Planning Department, and Ramboll, *San Francisco Citywide Health Risk Assessment: Technical Support Documentation*, September 2020.

[278] Probable future is based on 2035 and 2050 health risks and $PM_{2.5}$ concentrations that include anticipated number of new housing units across San Francisco, most of which are not near the proposed project.

Impact C-AQ-2: The proposed project or project variant, in combination with cumulative projects, would not combine with other sources of emissions, such as those leading to odors, that would adversely affect a substantial number of people. (*Less than Significant*)

Impact AQ-5 describes the potential of odorous emissions from the proposed project and expanded streetscape variant. Section 3.D.1 (p. 3.D-17) identifies sources of odors in the vicinity of proposed project site, including a wastewater treatment plant and pump stations, which are the types of odorous facilities by the air district. The city's Southeast Wastewater Treatment Plant (wastewater treatment plant) is approximately 500 feet east of the proposed project or expanded streetscape variant site at the nearest location. However, odors dissipate substantially with distances, and the proposed project or expanded streetscape variant itself would not be expected to contribute any new sources of odors that could combine with that of the city's Southeast Wastewater Treatment Plant to result in a cumulative odor impact. In addition, the 2270 McKinnon Avenue Project would replace an existing ancillary building with storage space, and the SF Market Project would expand the existing warehousing operations and reconfigure surrounding roadways for improved access. Each of these actions could increase vehicle activity, but would not result in new emissions considered to be substantial sources of odors. Therefore, the potential for the proposed project or the expanded streetscape variant to combine with cumulative projects to result in a significant cumulative odor impact is limited, and the cumulative impact related to other sources of emissions, such as odors, would be ***less than significant***.

CHAPTER 4
OTHER CEQA CONSIDERATIONS

This chapter discusses the following topics in relation to the proposed project and expanded streetscape variant: growth-inducing impacts, significant unavoidable impacts, significant irreversible impacts, and areas of known controversy and issues to be resolved.

4.A Growth Inducement

CEQA Guidelines section 15126.2[e] requires an examination of the direct and indirect impacts of the proposed project and expanded streetscape variant, including the potential of the project to induce growth leading to changes in land use patterns and population densities and related impacts on environmental resources. Specifically, the CEQA Guidelines state that the EIR shall discuss:

> [T]he ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth … It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

A project has the potential to induce growth both directly and indirectly. Direct growth inducement would result if a project involved construction of new housing or construction of commercial development that attracted new visitors. Indirect growth inducement would result, for instance, if implementing a project resulted in any of the following:

- substantial new housing or permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises);
- a construction effort with substantial short-term employment opportunities that indirectly stimulates the need for additional housing and services to support the new temporary employment demand; or
- removal of an obstacle to additional growth and development, such as removing a constraint on a required public utility or service (e.g., construction of a major sewer line with excess capacity through an undeveloped area) or adding development adjacent to undeveloped land.

Growth inducement itself is not an environmental effect, but it may lead to foreseeable environmental effects. Generally, a project that increases population is not viewed as having a significant impact on the environment unless the physical changes that would be needed to accommodate the project-related population growth would have adverse impacts on the environment. These environmental effects may include increased demand on other community and public services and infrastructure, increased traffic and noise, degradation of air or water quality, or loss of plant or animal habitats. Physical changes associated with transportation and circulation, noise, and air quality are described and analyzed in this draft EIR and the various environmental topic sections in the initial study (Appendix B of this draft EIR).

The Association of Bay Area Governments and Metropolitan Transportation Commission adopted Plan Bay Area 2050 on October 21, 2021. Plan Bay Area 2050 is a state-mandated integrated long-range transportation and land use plan, establishing targeted growth areas and housing allocations, identifying priority transportation improvements, and setting forth directions and initiatives to reduce greenhouse emissions. Plan Bay Area identifies the project site as within a designated Priority Production Area, which are locally identified places for job growth in middle-wage industries like manufacturing, logistics, or other trades. [279, 280] The proposed project and expanded streetscape variant would site PDR uses in a dense infill setting to create employment near housing and reduce VMT for potential distribution uses by locating such uses in San Francisco proximate to multiple freeways, rather than traditional suburban locations. Therefore, the proposed project and expanded streetscape variant are consistent with Plan Bay Area 2050's policy to direct employment growth in a Priority Production Area.

The total number of temporary/short-term workers during the approximate 31-month duration of construction is anticipated to range from approximately 2,500 to 3,000. The number of construction workers would vary throughout the construction duration, depending on the specific construction phase. Construction of the proposed project or expanded streetscape variant would not cause substantial population growth or a substantial increase in housing demand in the region. It is anticipated that construction employees who are not already living in San Francisco would likely commute from their residences elsewhere in the Bay Area rather than permanently relocate to San Francisco from more distant locations; this is typical for employees in the various construction trades. Therefore, construction of the proposed project or expanded streetscape variant would not induce population growth in the city or region.

The proposed project or expanded streetscape variant would not involve the construction of residential units that would directly and substantially increase the population in San Francisco. Under the proposed project and expanded streetscape variant, construction of two new multi-story PDR buildings would create new employment opportunities. As discussed in Chapter 2, Project Description, an average of up to 1,980 employees would be onsite on a typical day. Prior to commencing the interim use at the project site in 2020, uses on the project site (i.e., automotive storage, fleet management, general storage, food-related storage, and temporary storage) employed an estimated 735 workers (see Section E.2, Population and Housing, in Appendix B of this draft EIR for further discussion). Therefore, the proposed project and expanded streetscape variant would result in a net increase in employment of approximately 1,242 employees relative to pre-2020 conditions.

Employment growth in San Francisco has been anticipated by the city, based on projections consistent with Plan Bay Area 2050. Plan Bay Area 2050 projects that the Bay Area will add 1.4 million new jobs between 2015 and 2050. Approximately 17 percent of this regional job growth—approximately 236,000 new jobs—is anticipated to occur in San Francisco. [281] The increase of approximately 1,242 new employees attributed to the proposed project and expanded streetscape variant would represent less than 1 percent

[279] Association of Bay Area Governments, *Priority Production Areas*, 2022, *https://www.arcgis.com/home/webmap/viewer.html?panel=gallery&suggestField=true&url=https%3A%2F%2Fservices3.arcgis.com%2Fi2dkYWmb4%20%20%20wHvYPda%2Farcgis%2Frest%2Fservices%2Fpriority_development_areas_current%2FFeatureServer%2F0*, accessed November 28, 2022.

[280] Association of Bay Area Governments, Plan Bay Area 2050, October 2021, *https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf*, accessed November 28, 2022.

[281] Association of Bay Area Governments, Plan Bay Area 2050, October 2021, *https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf*, accessed November 28, 2022.

of San Francisco's projected employment growth between 2015 and 2050. This increase in employment would not exceed the Association of Bay Area Governments' projections for employment in San Francisco.

In San Francisco's 2019 Jobs Housing Nexus Analysis, San Francisco had an estimated 1.74 workers per household. Based on this number of workers per household, the proposed project or expanded streetscape variant's approximately 1,242 new employees would be equivalent to 714 households. The United States Census Bureau's American Community Survey 1-Year estimate for 2021 reports that approximately 86 percent of the employees in the city currently live in San Francisco.[282] Using this percentage, the new households attributed to the proposed project or expanded streetscape variant would generate a potential demand for approximately 614 new residential units in San Francisco. It should be noted that it is likely that a percentage of the employees may already live in San Francisco, and this total would not necessarily be "new" housing demand. Rather, this is a conservative estimate of new housing demand.

As of January 2022, the California Department of Finance estimates that there were 415,316 housing units in San Francisco and a vacancy rate of 6.5 percent, or approximately 2,946 vacant units.[283] Additionally, as of the third quarter of 2022, the city estimates that 68,348 new housing units are in the development pipeline, of which 4,756 are under construction.[284] The city's existing available housing stock plus the new housing units under construction could accommodate the project's new employee-generated housing demand. Overall, the increase in the number of employees resulting from the proposed project or expanded streetscape variant would be consistent with the employment forecasts for San Francisco and would not result in housing demand that would exceed the number of currently vacant housing units or housing units currently under construction in San Francisco. Therefore, the proposed project or expanded streetscape variant would not directly or indirectly induce growth in San Francisco beyond projections.

Typical growth-inducing factors might be the extension of urban services or transportation infrastructure to a previously unserved or underserved area, or the removal of major barriers to development from construction of utility infrastructure with the capacity to serve new growth. The proposed project and expanded streetscape variant consist of redevelopment of two parcels in a core industrial area of San Francisco; the project is on an infill site surrounded by existing urban development and served by existing infrastructure. The proposed project or expanded streetscape variant would not extend existing roadways into undeveloped areas or increase the capacity of other local or regional transportation facilities. As discussed in Section E.12, Utilities, in Appendix B of this draft EIR, existing utility infrastructure would have the capacity to serve the proposed project or expanded streetscape variant; no new infrastructure is required. Therefore, the proposed project or expanded streetscape variant would not induce growth indirectly through the extension of roads or other infrastructure.

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282 U.S. Census Bureau 2021 American Community Survey 1-Year. Table S0801, *https://data.census.gov/table?t=Commuting: Employment&g=0500000US06075_1600000US0667000&tid=ACSST1Y2021.S0801e*, accessed December 5, 2022.

283 California Department of Finance, January 2022, E-5 Population and Housing Estimates for Cities, Counties, and the State, *https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2022/*, accessed December 5, 2022.

284 City of San Francisco, 2022 Q3 Housing Development Pipeline, *https://sfplanning.org/sites/default/files/documents/reports/Housing_Production_Development_Pipeline-2022Q3.pdf*, accessed February 14, 2023.

4.B Significant Unavoidable Environmental Effects

CEQA Guidelines sections 15126(b) and 15126.2(c) require an EIR to include a discussion of any significant environmental impacts that cannot be avoided if the project is implemented. As discussed throughout Chapter 3 of this EIR, all impacts identified related to the proposed project and expanded streetscape variant would be either less than significant or would be mitigated to a less-than-significant level. Chapter 3 and Appendix B of this EIR identify all significant and potentially significant environmental impacts related to implementing the proposed project and expanded streetscape variant; identify feasible mitigation measures that could avoid or reduce these significant and potentially significant impacts; and present a determination whether these mitigation measures would reduce these impacts to less-than-significant levels. Based on the environmental analyses in this EIR, the city has determined that implementation of the proposed project or expanded streetscape variant would not result in significant and unavoidable environmental impacts.

4.C Significant Irreversible Changes

CEQA Guidelines section 15126(c) provides that an EIR shall include a detailed statement setting forth "[i]n a separate section…[a]ny significant effects on the environment that would be irreversible if the Project is implemented." Accordingly, CEQA Guidelines section 15126.2(d) provides the following guidance for analyzing the significant irreversible environmental changes of a Project:

> Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irretrievable damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

Development of the proposed project or expanded streetscape variant would use both renewable and nonrenewable natural resources during both construction and operation. Energy use associated with construction of the proposed project and expanded streetscape variant would include that associated with the use of diesel fuel consumption from on-road hauling trips and off-road construction diesel equipment, and gasoline and diesel fuel consumption from on-road worker commute and vendor trips. These energy expenditures would be temporary and limited to the duration of the 31-month construction period. Other nonrenewable and slowly renewable resources consumed as a result of development of the new buildings would include, but would not necessarily be limited to, lumber and other forest products, sand and gravel, cement, asphalt, steel, other building materials, and water. There are no unusual characteristics of the project that would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in other parts of the city and region. Therefore, it is not expected that construction fuel consumption associated with the proposed project or expanded streetscape variant would be more inefficient, wasteful, or unnecessary than at other construction sites in the region. Implementation of mitigation measures during construction, such as Mitigation Measure M-AQ-3h: Requirements for Off-Road Construction Equipment, would also reduce fuel consumption. See Section 3.D, Air Quality, for further discussion.

The proposed project and expanded streetscape variant would commit future generations to an irreversible commitment of energy. Energy use associated with operation of the proposed project and expanded streetscape variant would include onsite electricity use associated with PDR and retail uses in the two new buildings (e.g., building space heating, cooling, and lighting, as well as operation of equipment and machines); electricity for offsite water treatment and distribution; and fuel for vehicle travel, including commute trips by onsite employees as they commute to and from work and travel by visiting worker vehicles servicing the proposed land uses (i.e., those vehicles associated with proposed land use operations but not related to onsite employees, such as parcel delivery trips). Operation of the proposed project or expanded streetscape variant would require an ongoing commitment of potable water for building occupants and landscaping. Energy conservation design features to meet state and local goals for energy efficiency and renewable energy have been incorporated into the project design to further reduce wasteful, inefficient, and unnecessary consumption of energy during project operations. The proposed project and expanded streetscape variant would comply with Title 24 of the California Code of Regulations, all mandatory elements of the California Green Building Standards Code, and the San Francisco Green Building Code, the San Francisco Electric Vehicle Readiness Ordinance, and the San Francisco Better Roof Ordinance. The proposed project and expanded streetscape variant would also incorporate TDM measures, such as car-share parking, bicycle parking, wayfinding, and showers and lockers; they would also provide electric docking stations to minimize onsite idling and resultant fuel use by trucks. These features would minimize the amount of transportation fuel consumed. The project would seek LEED Gold certification or higher and would include the use of sustainable building materials; water- and energy-efficient mechanisms in the building design; and other measures that would further minimize the amount of fuel, water, and energy consumed. Furthermore, the project site is in an area with a lower level of VMT per capita, in comparison to the regional average.[285] Overall, the proposed project or expanded streetscape variant would use less energy and water over its lifetime than comparable buildings not built to those standards. See Section E.19, Energy, in Appendix B of this draft EIR for further discussion.

The project site is in a developed urban area completely covered by impervious surfaces, and contains a small amount of vegetation. Therefore, the proposed project and expanded streetscape variant would not represent a commitment of undeveloped open space or agricultural lands to new land uses.

The proposed project and expanded streetscape variant would not result in irreversible damage from environmental accidents, such as an accidental spill of a hazardous material. During construction and operation, the proposed project and expanded streetscape variant could require routine transport, use, and storage of hazardous materials. In the State of California, the storage and use of hazardous substances are strictly regulated and enforced by local, regional, and state agencies to prevent impacts related to environmental accidents (see Section E.17, Hazards and Hazardous Materials, in Appendix B of this draft EIR for further discussion). In San Francisco, articles 21 and 21A of the San Francisco Health Code enforce mandatory measures to minimize the risk of a hazardous materials release, and article 22A of the San Francisco Health Code, commonly referred to as the Maher Ordinance, provides measures for safe handling of hazardous soils in the city. Each of these regulations is specifically designed to protect the public health through improved procedures for the handling of hazardous materials, better technology in the equipment used to transport these materials, and a more coordinated, quicker response to emergencies. The nature of construction and operation would not involve unusual amounts or types of hazardous materials that could result in irreversible damage from an accidental release and would not pose any greater risk of upset or

[285] San Francisco Planning Department, Eligibility Checklist: CEQA section 21099 – Modernization of Transportation Analysis, San Francisco Gateway Project, December 19, 2018.

accident than the existing uses at the site or at other similar PDR development elsewhere in the city and region.

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

As discussed in Chapter 1, Introduction, the planning department published a NOP and initial study for the proposed project and expanded streetscape variant on March 9, 2022; and sent a notice of availability of these documents to governmental agencies, organizations, and persons who may have an interest in the project. The NOP and the initial study are included as appendices to this draft EIR (see Appendix A and Appendix B, respectively, of this draft EIR). The NOP requested that agencies and interested parties comment on environmental issues that should be addressed in the draft EIR. The 30-day comment period concluded on April 8, 2022; the planning department received one comment letter following the close of the comment period. The planning department considered the comments from all letters received to inform the preparation of the draft EIR.

The planning department held a virtual public scoping meeting on March 30, 2022, with options for joining by phone (toll-free) or computer. The purpose of the public scoping meeting was to inform the public about the proposed project, explain the environmental review process, and provide an opportunity for the public to make comments and express concerns related to the proposed project and expanded streetscape variant's environmental issues. There were no comments provided at the public scoping meeting.

Comments received on the NOP that relate to environmental issues are summarized in Table 1.C-1 (p. 1-3) in Chapter 1, Introduction; the table identifies where these issues are addressed in the draft EIR and initial study. Comments related to the merits of the proposed project and the expanded streetscape variant and to other matters not addressed by CEQA (i.e., the purpose of CEQA is to ensure that the lead agency and the public are informed of the physical environmental changes resulting from a project), will be provided to decision-makers as part of the entitlement process. Potential areas of controversy and issues to be resolved for the proposed project or expanded streetscape variant, as expressed by agencies and community members, are listed below, along with the section(s) of the draft EIR where each comment is addressed:

- Use of local roadways by transportation network companies, residents, employees, and visitors to the site (Section 3.B, Transportation and Circulation, and Appendix C, Transportation Supporting Information)
- Pedestrian and bicycle access during construction (Section 3.B, Transportation and Circulation)
- Pedestrian safety and conflicts with project-generated traffic (Section 3.B, Transportation and Circulation)
- Noise impacts during construction and operation (Section 3.C, Noise and Vibration)
- Consistency with the Bay Area Air Quality Management District's 2017 Clean Air Plan measures (Section 3.D, Air Quality)
- Cumulative air quality emissions (Section 3.D, Air Quality)
- Cumulative health impacts resulting from TACs and $PM_{2.5}$ emissions (Section 3.D, Air Quality)

- Cumulative impacts from environmental, health, and socioeconomic indicators (Section 3.A.4, Approach to Analysis, particularly "Approach to Socioeconomic Effects" [p. 3.A-6]; Section 3.A.5, Historic and Existing Context of San Francisco Bayview Hunters Point Neighborhood [p. 3.A-6]; Section 3.B, Transportation and Circulation; Section 3.C, Noise and Vibration; Section 3.D, Air Quality; and Appendix B, Initial Study)
- Environmental justice and civil rights effects, addressed to the extent such effects are considered significant effects on the environment in accordance with CEQA Guidelines sections 15064(e), 15126.2(a), and 15131(a) (Section 3.A.4, Approach to Analysis, particularly "Approach to Socioeconomic Effects" [p. 3.A-6]; Section 3.A.5, Historic and Existing Context of San Francisco Bayview Hunters Point Neighborhood [p. 3.A-6]; Section 3.B, Transportation and Circulation; Section 3.C, Noise and Vibration; Section 3.D, Air Quality; and Appendix B, Initial Study)

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CHAPTER 5
ALTERNATIVES

5.A Introduction

This chapter presents the alternatives analysis, required by CEQA, for the proposed San Francisco Gateway Project (proposed project). The discussion includes the methodology used to select alternatives to the proposed project for detailed CEQA analysis; this methodology informed the development of potentially feasible alternatives that could avoid or substantially lessen the significant impacts identified while still meeting most of the project's basic objectives. This chapter identifies a reasonable range of alternatives that meet these criteria and evaluates them for their comparative merits with respect to minimizing adverse environmental effects.

This chapter is divided into five main sections:

- Section 5.A, Introduction, describes the CEQA requirements for an alternatives analysis and the project objectives, and summarizes the proposed project's significant impacts.
- Section 5.B, Alternatives Screening and Selection, introduces each of the selected alternatives and explains how alternatives were screened for selection.
- Section 5.C, Alternatives Analysis, provides a description of each of the selected alternatives and presents an assessment of the environmental impacts of each of the alternatives, organized by resource topic.
- Section 5.D, Comparison of Alternatives and Environmentally Superior Alternative, identifies the environmentally superior alternative, based on the described analysis.
- Section 5.E, Alternatives Considered but Rejected, discusses alternatives that were considered but withdrawn from further study because they were not feasible or did not substantially reduce significant impacts of the proposed project.

5.A.1 CEQA Requirements for Alternatives Analysis

CEQA Guidelines section 15126.6(a) states that an environmental impact report (EIR) must evaluate the comparative merits of the alternatives and include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the project. Specifically, the CEQA Guidelines set forth the following criteria for selecting and evaluating alternatives:

- "An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives which are infeasible." (CEQA Guidelines section 15126.6(a))

- "[T]he discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly." (CEQA Guidelines section 15126.6(b))
- "The range of potential alternatives shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects." (CEQA Guidelines section 15126.6(c))
- "The specific alternative of 'no project' shall also be evaluated along with its impact." (CEQA Guidelines section 15126.6(e)(1))
- "The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project. The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision-making." (CEQA Guidelines section 15126.6(f))

5.A.2 Project Objectives

As presented in Chapter 2, Project Description, the project sponsor, Prologis, L.P., identified one underlying objective and nine additional objectives for the proposed project; these objectives aided in the identification, selection, and evaluation of alternatives. The proposed project's underlying objective is to develop a modern, flexible, and durable PDR facility for a diverse and evolving range of uses in a central urban environment. The proposed project's more specific objectives include the following:

- Advance progress toward the City's long-standing goals to preserve, upgrade, and expand PDR space, including those reflected in the General Plan,[286] Bayview Hunters Point Area Plan,[287] Five-Point Plan for PDR (2012),[288] Make to Manufacture Advanced Manufacturing Playbook (2016),[289] Proposition X (2016),[290] and Economic Recovery Task Force Report (2020).[291]
- Replace functionally outdated PDR space on the project site with first- and best-in-class facilities and replenish the supply of PDR space in the City that has been displaced by other development.
- Redevelop underutilized property to make efficient use of existing utilities, circulation, and complementary uses in the surrounding PDR-2 zoning district.
- Use innovative design at a size and scale that accommodates a range of large and small PDR uses, and can adapt over time to different industries and market needs, including anticipated growing demand for parcel delivery and/or last-mile delivery services, in an economically feasible way.

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[286] San Francisco Planning Department, *San Francisco General Plan*, *https://generalplan.sfplanning.org/*.
[287] San Francisco Planning Department, *Bayview Hunters Point Area Plan*, *https://generalplan.sfplanning.org/Bayview_Hunters_Point.htm*.
[288] San Francisco Office of Economic and Workforce Development, Five-Point Plan for PDR, 2012, *https://sfmayor.org/article/mayor-lee-supervisor-cohen-celebrate-completion-first-phase-wholesale-produce-market*.
[289] The San Francisco Mayor's Office of Civic Innovation, the San Francisco Office of Economic and Workforce Development and SFMade, *Make to Manufacture, Advanced Manufacturing Playbook*, 2016, *https://sfmade.org/wp-content/uploads/Make_to_Manufacture.pdf*.
[290] San Francisco Planning Department, *Proposition X*, 2016, *https://sfplanning.org/sites/default/files/documents/legis/code-summaries/160698.pdf*.
[291] The City and County of San Francisco, *Economic Recovery Task Force Report,* 2020, *https://www.onesanfrancisco.org/sites/default/files/inline-files/FNL_70_EconomicRecoveryTaskForceReport_1020_ENG_Screen.pdf*.

- Site PDR uses in a dense infill setting to create employment near housing and reduce vehicle miles traveled for potential distribution uses by locating such uses in San Francisco proximate to multiple freeways, rather than traditional suburban locations.
- Provide a positive fiscal impact by creating jobs at a variety of experience levels, including career-building and advancement opportunities, enhancing property values, generating property taxes, and introducing workers who will support direct and indirect local business growth in the Bayview.
- Boost resiliency in the local supply chain and disaster response capabilities by providing large-scale, adaptable facilities that can be rapidly mobilized in a central location.
- Using carbon-efficient construction techniques, develop a project with infrastructure that facilitates carbon-efficient vehicle fleets and operations as cost-effective technology becomes available.
- Create a safe and compelling streetscape, consistent with Better Streets standards, with green infrastructure and active ground floors, accessible by multiple modes of transportation, including bicycles and pedestrians.

5.A.3 Summary of Significant Impacts

Based on the environmental analyses in this EIR, the city has determined that implementation of the proposed project would result in significant impacts. The following resource topics and the listed significant impacts analyzed in the initial study (Appendix B) or the draft EIR would be reduced to a less-than-significant level with implementation of mitigation measures:

- **Cultural Resources** – adverse impacts on archaeological resources, disturbance of human remains, and cumulative cultural resource impacts (Section E.3 of the initial study)
- **Tribal Cultural Resources** – adverse impacts on tribal cultural resources and cumulative tribal cultural resource impacts (Section E.4 of the initial study)
- **Wind** – wind hazards in publicly accessible areas and cumulative wind impacts (Section E.9 of the initial study)
- **Geology and Soils** – adverse direct or indirect impacts on unique paleontological resources (Section E.15 of the initial study)
- **Noise and Vibration** – substantial increase in ambient noise levels from onsite HVAC mechanical systems (Section 3.C of the draft EIR)
- **Air Quality** – conflict with or obstruct implementation of the 2017 Clean Air Plan and result in a cumulatively considerable net increase in nitrogen oxides (NO_X), a criteria air pollutant for which the region is in nonattainment (Section 3.D of the draft EIR)

All other resource topics analyzed in the initial study or draft EIR would have no impact or would have a less-than-significant impact that would not require any mitigation. With the implementation of mitigation measures, the proposed project would not result in any significant and unavoidable impacts.

5.A.4 Strategies to Avoid or Lessen Significant Impacts

This section discusses the proposed project or variant's significant impacts and how the significant impacts were considered in the development of project alternatives. As discussed above, all project significant impacts can be reduced to less than significant with implementation of mitigation measures identified in this EIR and initial study. Therefore, the consideration of alternatives focused on ways to reduce the significant impacts of the project that would potentially avoid the need to undertake the identified mitigation.

CONSTRUCTION IMPACTS ON CULTURAL, TRIBAL CULTURAL, AND PALEONTOLOGICAL RESOURCES

As described in the initial study—in Sections E.3, Cultural Resources; E.4, Tribal Cultural Resources; and E.15, Geology and Soils—construction of the proposed project or expanded streetscape variant would result in ground disturbance that could potentially impact underground archeological, tribal, or paleontological resources. Mitigation Measures M-CR-2, Archeological Testing, M-TCR-1, Tribal Cultural Resources Interpretive Program, and M-GE-5, Inadvertent Discovery of Paleontological Resources, would reduce the potential impacts to these resources to less-than-significant levels. One approach to reduce the construction-related impacts to these underground resources would be to substantially reduce the extent of ground disturbance at the project site. As described in the initial study, whether such resources occur on the project site and the precise location of underground resources, if present, is not known. Therefore, alternatives that seek to reduce the amount and location of ground disturbance on the site would not necessarily lessen the potentially significant impact to cultural, tribal, and paleontological resources.

WIND HAZARDS

As described in Section E.9, Wind, of the initial study, the proposed project or expanded streetscape variant would result in wind conditions that exceed wind hazards thresholds at two locations near the northwestern corner of the proposed project site on either side of Kirkwood Avenue. Two mitigation measures were proposed to reduce the wind impacts at these two locations. Mitigation Measure M-WI-1a, Wind Hazard Evaluation for Building Design and Streetscape Modifications, would ensure that the proposed project does not exceed the wind hazard criterion in the event of design changes. Additionally, Mitigation Measure M-WI-1b, Maintenance of Landscaping Features that Reduce Wind Hazards, would entail the maintenance, for the life of the project buildings, of any landscaping features required to ensure that the one-hour wind hazard is not exceeded. Therefore, the proposed project would not create wind hazards in publicly accessible areas of substantial pedestrian use, and the impact would be less than significant with mitigation. The wind hazard impacts could also be reduced by altering the massing and reducing the heights of the two buildings. Therefore, a strategy to examine shorter buildings could reduce the proposed project's wind hazard exceedance.

NOISE

As discussed in Section 3.C, Noise and Vibration, operation of the proposed project or expanded streetscape variant would result in an increase in ambient noise levels at the project property plane by up to 16 dBA in excess of applicable standards. Mitigation Measures M-NO-3a and M-NO-3b require that the project meet the noise limits in article 29 by attenuating noise at fixed-source mechanical equipment. Feasible noise reduction measures to achieve the noise limits are discussed in Section 3.C, Noise and Vibration, under Mitigation Measures M-NO-3a and M-NO-3b (pp 3.C-43 and 3.C-44). As a result, operational noise impacts would be reduced to a less-than-significant level with mitigation. Another approach to reduce the fixed-source noise impacts of the proposed project would be to reduce the size or intensity of the overall development and modify the types of uses in a way that could lessen the size, required airflow, and power ratings of the HVAC units.

AIR QUALITY

As discussed in Section 3.D, Air Quality, the net increase in daily and annual operational emissions of NO_X from the project or expanded streetscape variant would exceed the daily and annual thresholds of significance for this criteria air pollutant. Therefore, the proposed project would result in a cumulatively considerable net increase in NO_X, an ozone precursor, and this impact would be significant. Mitigation measures have been identified to reduce NO_X emissions and are detailed in Section 3.D, Air Quality. Implementation of Mitigation Measures M-AQ-3a through M-AQ-i would reduce emissions of all criteria air pollutants, including NO_X, associated with operational sources from the proposed project or expanded streetscape variant to ensure that the project does not exceed the NO_X significance threshold. One approach to reduce the project or expanded streetscape variant operational NO_X emissions would be to reduce the size of the overall development, which would lessen the associated vehicle trips and onsite activities that generate criteria air pollutant emissions. Another strategy to reduce operational air quality impacts would be to change the mix of PDR uses on site and the amount of PDR square footage allocated to different PDR uses.

5.B Alternatives Screening and Selection

In accordance with CEQA Guidelines section 15126.6(a), this EIR examines a reasonable range of alternatives to the proposed project or to the location of the project. An alternative selected for analysis must attain most of the project's basic objectives, avoid or substantially lessen the significant environmental impacts of the project, and be potentially feasible. An EIR need not consider an alternative whose impact cannot be reasonably ascertained and whose implementation is remote and speculative. Furthermore, an EIR need not consider every conceivable alternative but must consider a reasonable range of alternatives to foster informed decision-making and public participation.

The planning department's alternatives selection process began with identifying alternatives that would potentially avoid or lessen the project's significant impacts. Strategies primarily involved either reducing the amount of development (i.e., reduction of the project size/massing) or changing the mix of PDR uses (i.e., changes or restrictions to the proportion of PDR uses [e.g., manufacturing and maker space; parcel delivery service, including last-mile delivery; wholesale and storage; and fleet management]). For example, alternatives that reduce building height or massing would potentially minimize wind hazards as well as air quality and noise impacts.

While most alternatives were qualitatively evaluated to determine if they should be carried forward for further consideration in the EIR, the planning department completed a quantitative travel demand and air quality assessment of each selected alternative and one alternative that was later rejected from further consideration. This quantitative analysis provides a meaningful comparison of the proposed project's transportation and air quality impacts to the project alternatives. More detailed information is in the final travel demand memorandum, included in Appendix D, and in Appendix F in the section analyzing the air quality and health impacts of the project alternatives. Specifically, because vehicle trips and air emissions are interrelated, more detailed information on travel demand associated with the alternatives is provided in the final travel demand memorandum. The air quality alternatives memorandum in Appendix F evaluates the operational NO_X emissions associated with the alternatives but does not evaluate mass emissions of other criteria air pollutants; this is because emissions of these pollutants would not exceed significance thresholds, even without implementation of mitigation measures. The Appendix F alternatives analysis also evaluates potential health risks resulting from TAC and $PM_{2.5}$ emissions. The information provided in Appendix D on travel demand and in Appendix F on air quality and health risks has informed the selection of alternatives, analyses, and discussion included in this alternatives chapter.

The planning department then screened the potential alternatives for their feasibility and ability to meet most of the project objectives. This process resulted in the selection of four alternatives to be carried forward for detailed evaluation. These four alternatives, including the No Project Alternative, represent a reasonable range of alternatives to foster meaningful public participation and informed decision-making.

5.B.1 Alternatives Selected

Based on the screening process described above, the following alternatives were developed and selected for detailed analysis in the draft EIR:

- No Project Alternative assumes the project site would not be developed with either the proposed project or expanded streetscape variant, that approximately 75 percent of the site (336,000 gross square feet) would be occupied by parcel and last-mile delivery uses, and that the remaining space by other PDR uses (e.g., wholesale and storage).
- Code-Compliant Alternative assumes the demolition of the existing four single-story PDR buildings on site and construction of two new two-story buildings (plus active roof). The building height would be consistent with the height limitation of the existing 65-J height and bulk district. This alternative would include the same tenant use mix as the proposed project, but less space than analyzed for the proposed project.
- Fleet Management Use Mix Alternative assumes demolition of the existing four single-story PDR buildings onsite and construction of two new three-story buildings (plus active roof) in the same configuration used for the proposed project. This alternative would include less space for parcel delivery than the proposed project and would not include wholesale/storage, manufacturing and maker, or retail uses. Fleet management uses would occupy approximately the same amount of space as the parcel delivery uses.
- Expanded Parcel Delivery Use Alternative assumes demolition of the existing four single-story PDR buildings onsite and construction of two new three-story buildings (plus active roof) in the same configuration used for the proposed project. This alternative would provide space for only one PDR use, consisting of parcel delivery service, including last-mile delivery; no other PDR or retail space would be included in this alternative.

These four alternatives represent a reasonable range of feasible alternatives as required under CEQA. These alternatives would lessen and, in some cases, avoid potentially significant adverse impacts related to archeological, tribal cultural, and paleontological resources; wind hazards; noise and vibration; and air quality (operational NO_X emissions).

Table 5-1 presents a comparison of the proposed project and the alternatives in terms of key features and characteristics—including the amount of floor space allocated for different PDR uses—and how well the alternatives meet the project objectives. Section 5.C (p. 5.C-11) presents detailed descriptions of the alternatives, including the assumptions used in analyzing their environmental impacts.

Table 5-1 Comparison of Proposed Project and Alternatives Characteristics and Satisfaction of Project Objectives

Building Characteristics	Proposed Project	No Project Alternative	Code-Compliant Alternative	Fleet Management Use Mix Alternative	Expanded Parcel Delivery Use Alternative
Number of Buildings	2	4	2	2	2
Stories	3 (plus active roof) [1]	1	2 (plus active roof) [1]	3 (plus active roof) [1]	3 (plus active roof) [1]
Height	97 feet (115 feet maximum, including rooftop appurtenances)	32 feet	65 feet (75 feet maximum, including rooftop appurtenances)	97 feet (115 feet maximum, including rooftop appurtenances)	97 feet (115 feet maximum, including rooftop appurtenances)
Proposed Uses	**Area (gross square feet)**	**Area (gross square feet)**	**Area (gross square feet)**	**Area (gross square feet)**	**Area (gross square feet)**
Total Building Square Footages	**2,160,000**	**448,000**	**1,363,000**	**2,160,000**	**2,160,000**
PDR Uses and Percent of Total PDR Space	1,166,800	448,000	733,538	1,131,800	1,131,800
Manufacturing and Maker Space[2]	35,000 (3%)	NA	22,006 (3%)	NA	NA
Parcel Delivery	759,400 (65%)	336,000 (75%)	476,800 (65%)	567,200 (50%)	1,131,800 (100%)
Wholesale/Storage	372,400 (32%)	112,000 (25%)	234,732 (32%)	NA	NA
Fleet Management[3]	NA	NA	NA	564,600 (50%)	NA
PDR Support Spaces (Logistics Yard and Vehicle Circulation)	441,300	72,409 (unenclosed)	207,898	484,700	484,700
Parking	543,500	42,737 (unenclosed)	416,564	543,500	543,500
Retail	8,400	NA	5,000	NA	NA

Building Characteristics	Proposed Project	No Project Alternative	Code-Compliant Alternative	Fleet Management Use Mix Alternative	Expanded Parcel Delivery Use Alternative
Additional Information					
Vehicle Parking Spaces	1,166	170	547	1,166	1,166
Bicycle Parking Spaces[4]	100 Class I 12 Class II	NA	48 Class I 6 Class II	95 Class I 4 Class II	95 Class I 4 Class II
Net New Employees[5]	1,242	15	508	1,161	1,161
Street and Sidewalk Improvements and Transportation Demand Management Plan	Yes	No	Yes	Yes	Yes
New Docks	Yes	No	Yes, but with reduced capacity	Yes	Yes
Generators	Yes (two 400 kV generators)	No	Yes (two 400 kV generators)	Yes (two 400 kV generators)	Yes (two 400 kV generators)
Summary of Ability of Alternatives to Meet Project Objectives[6]					
Underlying Objective: The project sponsor's underlying objective is to develop a modern, flexible, and durable PDR facility for a diverse and evolving range of uses in a central urban environment.	Yes	No	Yes	Partially	Partially
Objective 1: Advance progress toward the City's long-standing goals to preserve, upgrade, and expand PDR space, including those reflected in the General Plan, Bayview Hunters Point Area Plan, Five-Point Plan for PDR (2012), Make to Manufacture Advanced Manufacturing Playbook (2016), Proposition X (2016), and Economic Recovery Task Force Report (2020).	Yes	No	Yes	Yes	Yes
Objective 2: Replace functionally outdated PDR space on the project site with first- and best-in-class facilities and replenish the supply of PDR space in the City that has been displaced by other development.	Yes	No	Yes	Yes	Yes

Building Characteristics	Proposed Project	No Project Alternative	Code-Compliant Alternative	Fleet Management Use Mix Alternative	Expanded Parcel Delivery Use Alternative
Objective 3: Redevelop underutilized property to make efficient use of existing utilities, circulation, and complementary uses in the surrounding PDR-2 zoning district.	Yes	No	Yes	Yes	Yes
Objective 4: Use innovative design at a size and scale that accommodates a range of large and small PDR uses, and can adapt over time to different industries and market needs, including anticipated growing demand for parcel delivery and/or last-mile delivery services, in an economically feasible way.	Yes	No	Partially	Partially	Partially
Objective 5: Site PDR uses in a dense infill setting to create employment near housing and reduce vehicle miles traveled for potential distribution uses by locating such uses in San Francisco proximate to multiple freeways, rather than traditional suburban locations.	Yes	Yes	Yes	Yes	Yes
Objective 6: Provide a positive fiscal impact by creating jobs at a variety of experience levels, including career-building and advancement opportunities, enhancing property values, generating property taxes, and introducing workers who will support direct and indirect local business growth in the Bayview.	Yes	No	Partially	Yes	Yes
Objective 7: Boost resiliency in the local supply chain and disaster response capabilities by providing large-scale, adaptable facilities that can be rapidly mobilized in a central location.	Yes	No	Yes	Yes	Yes
Objective 8: Using carbon-efficient construction techniques, develop a project with infrastructure that facilitates carbon-efficient vehicle fleets and operations as cost-effective technology becomes available.	Yes	No	Partially	Yes	Yes

Building Characteristics	Proposed Project	No Project Alternative	Code-Compliant Alternative	Fleet Management Use Mix Alternative	Expanded Parcel Delivery Use Alternative
Objective 9: Create a safe and compelling streetscape, consistent with Better Streets standards, with green infrastructure and active ground floors, accessible by multiple modes of transportation, including bicycles and pedestrians.	Yes	No	Yes	Yes	Yes

Source: Prologis, Inc. 2022

Notes:

1. The top level (Level 4) for the proposed project, the Fleet Management Use Mix Alternative, and the Expanded Parcel Delivery Use Alternative consists of elevator and stair access structures, solar array, and a screened, open-air multi-purpose deck for parking and/or material and vehicle staging (see Figure 2.D-8, p. 2-19 for more details). The top level (Level 3) of the Code-Compliant Alternative consists of a small portion of enclosed space, solar array, and a screened, open-air, multi-purpose deck for parking and/or material and vehicle staging.
2. Manufacturing and Maker Space: This use is defined as a light industrial use that provides for the fabrication or production of goods, by hand or machinery, for distribution to retailers, wholesalers, or the public. Makers are often characterized by their production and custom activities that usually involve individual or special design, handiwork, and/or design-related innovation and experimentation. Examples of this light industrial use include food and beverage processing, apparel and other garment products, furniture and fixtures, printing (including three-dimensional printing), prototyping, and publishing. This use is defined in Chapter 2, Project Description.
3. Fleet Management: This use would allow private and public fleets to be staged and maintained. Uses would include private retail vehicle staging, private fleet staging and maintenance, and public fleet staging and maintenance. Private retailers would store and maintain vehicles to be sold or rented. The private vehicles would be mostly parked, and the space would be used as storage; light maintenance and washing would be associated with this use. Private fleet staging and maintenance would involve storage and potential light maintenance of shuttles servicing specific institutions, businesses, and/or independent shuttle services. Public fleet staging and maintenance would include the storage and maintenance of buses, trolleys, and/or shuttles for a public transportation agency, such as the San Francisco Municipal Transportation Agency or San Francisco Paratransit. This use is defined in Chapter 2, Project Description.
4. Class I bicycle parking spaces are spaces in secure, weather-protected facilities intended for use as long-term, overnight, and workday bicycle storage by dwelling unit residents, nonresidential occupants, and employees. Class II bicycle parking spaces are bike racks in publicly accessible, highly visible locations and are intended for transient or short-term use by visitors, guests, and patrons to the building or use. Class II bike racks allow the bicycle frame and one wheel to be locked to the rack (with one U-shaped lock), and provide support to bicycles without damage to the wheels, frame, or components (planning code section 155.1).
5. As calculated in the initial study (Appendix B), there were 735 existing employees prior to commencing the interim use of the project site in 2021; the project would result in a total of 1,980 (rounded), or a net increase of 1,242 employees relative to pre-2021 conditions. These calculations assume one employee per 597 gross square feet of PDR space and one employee per 370 gross square feet retail space. This employment density is based on a May 2019 report prepared to update the city's nexus fees: Keyser Marston Associates, Jobs Housing Nexus Analysis, San Francisco, May 2019, *https://commissions.sfplanning.org/cpcpackets/2019-011975PCA.pdf*, accessed January 26, 2020, and April 4, 2023.
6. Terms used to describe an alternative's ability to meet project objectives:
   Yes = alternative would substantially meet the project objective
   No = alternative would not substantially meet the project objective
   Partially = alternative would meet the project objective to a limited extent; not as substantially as those alternatives with a "yes"

No public open space is required or proposed for the project.

All numbers are rounded approximations.

kV = kilovolt
NA= not applicable
PDR = production, distribution, and repair

An expanded streetscape variant of the proposed project is analyzed in the initial study and the EIR (Figure 2.E-1, p. 2-40). The expanded streetscape variant comprises the same land uses and site plan as the proposed project but would improve the remainder of adjacent public rights-of-way to Better Streets standards. These improvements would include new roadway surfaces, curb cuts, sidewalks, street trees, and other amenities. The maximum depth of ground disturbance associated with the streetscape improvements would be no more than 3 feet, and less than 100,000 square feet of additional surface area would be disturbed as part of the expanded streetscape variant. With the exception of the No Project Alternative, the expanded streetscape variant may also occur as a variant to any of the proposed alternatives described below.

5.C Alternatives Analysis

This section presents a detailed description of the selected alternatives, along with an analysis of their potential environmental impacts compared to the proposed project or expanded streetscape variant. The potential environmental impacts of each alternative are organized into three subheadings:

- **Impact Analysis – EIR Topics**, including transportation and circulation, noise and vibration, and air quality
- **Impact Analysis – Initial Study Topics with Less than Significant with Mitigation Determinations**, including cultural resources, tribal cultural resources, wind, and geology and soils (specifically, related to paleontological resources)
- **Impact Analysis – Other Initial Study Topics,** including land use and planning, population and housing, GHG emissions, shadow, recreation, utilities and service systems, public services, biological resources, hydrology and water quality, hazards and hazardous materials, mineral resources, energy, agricultural and forestry resources, and wildfire

Table 5-6 (p. 5-43) identifies the level of impact for the proposed project or expanded streetscape variant and each alternative (i.e., not applicable, no impact, less-than-significant impact, or less-than-significant impact with mitigation) and indicates whether the impact of the alternative would be the less than, greater than, or similar to that of the proposed project or expanded streetscape variant.

The project setting sections of the initial study, draft EIR, and technical studies reflect baseline conditions at the project site when the environmental evaluation process began in 2017. However, in August 2020, the project sponsor submitted building permit applications for an interim use of the project site. The assessment of physical environmental impacts for each alternative is based on the anticipated change in the environmental conditions as compared to the 2017 environmental baseline presented in Chapter 3, Environmental Setting, Impacts, and Mitigation Measures, for the proposed project and for each of the alternatives analyzed in this chapter. All of the alternatives described below (including the No Project Alternative) and their effects are then compared to the proposed project and expanded streetscape variant, to inform the public and decision-makers whether the alternatives could have lesser, similar, or greater environmental impacts than the proposed project.

5.C.1 No Project Alternative

As required by CEQA Guidelines section 15126.6(e), a No Project Alternative must be analyzed to allow decision makers to compare the impacts of approving the project with the impacts of not approving the project. The No Project analysis must discuss the existing conditions at the time the NOP is published. It must also discuss what would be reasonably expected to occur in the foreseeable future if the project were not approved and development continued to occur in accordance with existing plans, and consistent with available infrastructure and community services (CEQA Guidelines section 15126.6(e)(2)).

DESCRIPTION OF NO PROJECT ALTERNATIVE

The No Project Alternative considered in this draft EIR represents what would reasonably be expected to occur in the foreseeable future, including occupancy of existing buildings by new PDR tenants. The No Project Alternative and its effects are then compared to the proposed project and expanded streetscape variant, which also analyze the impacts from 2017 baseline conditions.

Under the No Project Alternative, the project site would not be developed with either the proposed project or expanded streetscape variant as described in Chapter 2, Project Description, of the EIR. Instead, as shown in Table 5-1 (p. 5-7), the No Project Alternative assumes that approximately 75 percent of the site (336,000 gross square feet) would be occupied by parcel and last-mile delivery uses. This is an increase over the existing conditions from when the project's environmental review started (i.e., no buildings were occupied by parcel delivery in 2017 vs. parcel delivery services have been operating in two buildings since 2020). The remaining space (112,000 gross square feet in the fourth existing building) would be occupied by other types of PDR uses (e.g., wholesale and storage uses). This reflects what would reasonably be expected to occur in the foreseeable future compared to the uses that existed on site in 2017. The No Project Alternative would employ approximately 750 people—15 more employees than under baseline 2017 conditions, and 1,227 fewer employees than under the proposed project or expanded streetscape variant.

Under the No Project Alternative, the existing four single-story PDR buildings would not be demolished; other than tenant improvements (such as interior upgrades), no construction or site improvements—such as grading, excavation, or alterations to the height and massing of the buildings—would occur at the site. The No Project Alternative would not include sustainability features proposed under the project, such as a rooftop solar array, water- and energy-efficient designs, and electric vehicle charging infrastructure for trucks, transportation refrigeration units, or passenger vehicles, except as may be required through the building permitting process for tenant improvement applications in the future.

The No Project Alternative would not include street, sidewalk, or streetscape improvements; bicycle parking; or a TDM plan. Additionally, this alternative would not include the proposed improvements under the expanded streetscape variant that is described above. The project site has two approximately 600-foot-long by 80-foot-wide areas that are primarily used for parking and vehicular staging. On-street parking along the project site perimeter is estimated to provide parking for approximately 250 to 310 standard vehicles (approximately 50,000 square feet).

The existing buildings do not exceed the 65-foot maximum height limit, and the No Project Alternative would not require planning code amendments for height district reclassification and associated zoning map amendments, or planning code amendments to adopt a Special Use District for the project site.

IMPACT ANALYSIS – EIR TOPICS

Transportation and Circulation

Travel Demand. Based on the same methodology used for the proposed project's transportation analysis, Table 5-2 presents the net new person trips by way of travel and vehicle trips, under both the proposed project and the No Project Alternative, for the weekday daily and a.m. and p.m. peak-hour conditions. The No Project Alternative would result in a reduction of approximately 50 to 60 percent in daily and peak-hour net new vehicle trips from those under the proposed project or expanded streetscape variant.

Table 5-2 Net New Weekday Daily and A.M. and P.M. Peak Hour Travel Demand for Proposed Project and the No Project Alternative

Proposed Project and Alternative	Net New Person Trips[1]			Net New Vehicle Trips		
	Daily	AM	PM	Daily	AM	PM
Proposed Project[2]	8,910	648	795	6,008	431	571
No Project Alternative[3]	3,880	231	330	2,838	173	273
Change from Proposed Project[4]	-5,030	-417	-465	-3,170	-258	-298
% Change from Proposed Project[4]	-56%	-64%	-58%	-53%	-60%	-52%

Source: Adavant Consulting/LCW Consulting, 2023 (see Appendix D)

Notes:

1. Person trips by all ways of travel.
2. Travel demand for the expanded streetscape variant is the same as for the proposed project.
3. No Project Alternative: No Project row indicates travel demand change in person and vehicle trips from existing (2017) conditions.
4. Travel demand change in trips and percent change from the proposed project.

Construction. The No Project Alternative would not involve construction of new buildings or street network changes, and only minimal tenant improvements are anticipated to occur. Due to the limited construction activities associated with the No Project Alternative, construction-related transportation impacts would be less than under the proposed project. Therefore, construction-related transportation impacts of the No Project Alternative would be less than the ***less-than-significant*** impacts identified for the proposed project or expanded streetscape variant.

Potentially Hazardous Conditions and Accessibility. As presented in Table 5-2, the No Project Alternative would add 173 net new vehicle trips during the a.m. peak hour, and 273 net new vehicle trips during the p.m. peak hour (258 fewer vehicle trips than under the proposed project during the a.m. peak hour, and 298 fewer vehicle trips than under the proposed project during the p.m. peak hour). However, the No Project Alternative would not include the proposed project's street network changes, which would remove existing deficiencies on the sidewalks and roadways adjacent to the project site.

Because the No Project Alternative would add person and vehicle trips to a transportation network with existing deficiencies (e.g., discontinuous streets, lack of sidewalks, and curbs and gutters), it could result in increased conflicts between people walking, bicycling, and driving in the vicinity of the project site, which could lead to potentially hazardous conditions. However, considering the area context (i.e., in an industrial area, on a discontinuous street network, and with few observations of people walking or bicycling in the area), the No Project Alternative would not add a substantial number of person and vehicle trips that would create potentially hazardous conditions or substantially worsen existing deficiencies in the transportation network, or interfere with accessibility. Therefore, operational impacts of the No Project Alternative related to potentially hazardous conditions and accessibility would be ***less than significant,*** which would be similar to the proposed project.

Transit Delay. Due to the reduced number of vehicle trips, the No Project Alternative would generate net new vehicle trips below the screening criterion (300 vehicles during the peak hour) for projects that would typically not result in significant public transit delay effects. The No Project Alternative would generate 50 to 60 percent fewer peak hour vehicle trips than the proposed project. Furthermore, potential increases in transit travel times on nearby transit routes would be reduced under the No Project Alternative in comparison to the already less-than-significant transit delay impact identified for the proposed project or expanded streetscape variant. Therefore, transit delay impacts for the No Project Alternative would be ***less than significant***, similar to the proposed project.

Vehicle Miles Traveled. As described for the proposed project in Impact TR-5, the project site is in San Francisco's sole Priority Production Area under the region's Sustainable Communities Strategy (Plan Bay Area), which prioritizes areas for economic development investments and protection of industrial businesses from competing land uses. Similar to the proposed project or expanded streetscape variant, the No Project Alternative would not be inconsistent with the three criteria outlined in CEQA section 21099(b)(1) (i.e., development of multimodal transportation networks, diversity of land uses, and reduction of GHG emissions). In addition, similar to the proposed project or expanded streetscape variant, the No Project Alternative would not be inconsistent with the region's Sustainable Communities Strategy. Furthermore, based on the same methodology as the proposed project, the average daily VMT per capita calculated for each proposed project-specific land use under the No Project Alternative would be below the significance threshold identified by the planning department in determining a development project's potential to result in a substantial VMT impact. Therefore, the impact of the No Project Alternative related to VMT and induced automobile travel would be ***less than significant,*** which would be similar to the proposed project.

Loading. Under the No Project Alternative, all PDR operations, including loading operations, would occur either inside the buildings or in the areas between buildings, all within the fenced area, similar to existing conditions. As a result of the large amount of onsite areas that would be available for loading activities, the No Project Alternative would accommodate the anticipated loading demand. Therefore, impacts of the No Project Alternative related to loading would be ***less than significant,*** which would be similar to the proposed project.

Cumulative Analysis. For the same reasons discussed for the proposed project or expanded streetscape variant, no significant cumulative impacts from the No Project Alternative were identified regarding construction-related transportation impacts or operational impacts (i.e., potentially hazardous conditions, accessibility, transit delay, VMT, and loading). Therefore, cumulative transportation and circulation impacts with the No Project Alternative would be ***less than significant***. Because the No Project Alternative would include limited construction activities and less travel demand than the proposed project, the cumulative construction-related transportation impacts and operational transit delay impacts would be less than those under the proposed project. Cumulative impacts related to potentially hazardous conditions, accessibility, VMT, and loading would be similar to those under the proposed project.

Noise and Vibration

Construction Noise and Vibration. Under the No Project Alternative, the existing four single-story PDR buildings would not be demolished and no ground-disturbing construction activities would occur. Construction noise generated by the No Project Alternative would be limited to minimal tenant improvements (such as interior upgrades) that would not require major noise-generating heavy construction equipment or activities. Therefore, similar to the proposed project or expanded streetscape variant, impacts generated by construction noise would be ***less than significant.*** No vibration would be generated under the No Project Alternative because ground-disturbing activities would not be required for the tenant improvements and ***no impacts*** would occur.

Operational Noise from Fixed Sources. There are a variety of fixed or stationary noise sources on the existing site in the form of both rooftop and ground-level HVAC systems. Unlike the proposed project, the No Project Alternative would not introduce new fixed sources of noise; therefore, there would be no new noise effects at the property plane or noise-sensitive land uses. ***No impacts*** would occur from the No Project Alternative because no new fixed sources of noise would be needed as part of this alternative.

Operational Noise from Mobile Sources. The No Project Alternative would result in less than half the number of vehicle trips than are estimated for the proposed project or expanded streetscape variant. As described in Section 3.C of the draft EIR, the proposed project would not result in significant noise traffic-related noise increases, and the reduced vehicle trips associated with the No Project Alternative would result in noise level increases lower than those under the proposed project. Therefore, similar to the proposed project or expanded streetscape variant, impacts from traffic noise level increases under the No Project Alternative would be ***less than significant***.

Cumulative Analysis. The No Project Alternative would involve limited construction activities in the form of tenant improvements (such as interior upgrades), and the existing buildings, site, and surrounding sidewalks and streets would remain unchanged from the existing conditions. This alternative would not result in construction noise levels that would combine with that of other reasonably foreseeable projects identified in Section 3.A.6 (p. 3.A-15) and Figure 3.A-4 (p. 3.A-18) to result in significant cumulative construction noise and vibration impacts. Additionally, since the No Project Alternative would not require new fixed sources of noise, it would not have the potential to contribute to cumulative fixed-source noise impacts. Also, for the same reasons discussed for the proposed project or expanded streetscape variant (Section 3.C.5, p. 3.C-48), no significant cumulative operational traffic-related noise impacts would occur. As a result, cumulative construction and operational noise and vibration impacts would be less than those under the proposed project and expanded streetscape variant. Therefore, similar to the proposed project or expanded streetscape variant, cumulative noise and vibration impacts under the No Project Alternative would be ***less than significant***.

Air Quality

Conflict with Clean Air Plan. Under the No Project Alternative, no construction other than tenant improvements (such as interior upgrades) would occur, and operational activity would be more limited than under the proposed project. The No Project Alternative would not incorporate site improvements or measures that are part of the proposed project, such as elimination of onsite natural gas infrastructure and incorporation of onsite solar generation, which support control measures of the 2017 Clean Air Plan. However, the No Project Alternative would continue operations of the existing land uses and would not conflict with any of the goals or control measures of the 2017 Clean Air Plan. Although the No Project Alternative would result in an increase in operational intensity over the 2017 baseline conditions, including increased employment and vehicle trips serving the site, operational emissions would be substantially lower than those under the proposed project and would not exceed the air district's thresholds of significance (see Appendix F in the section analyzing the alternatives). The No Project Alternative would not disrupt or hinder implementation of the 2017 Clean Air Plan policies or control measures; it would generate minimal construction emissions and operational emissions that would be less than the air district's thresholds of significance. Unlike the proposed project, the No Project Alternative would not conflict with or obstruct implementation of an applicable air quality plan, and this impact would be ***less than significant.***

Construction Air Pollutant Emissions. Under the No Project Alternative, the existing four single-story PDR buildings would not be demolished. As a result, no demolition and construction activities would occur at the site beyond minimal tenant improvements (such as interior upgrades), and no heavy construction equipment would be required; as a result, there would be minimal construction-related emissions. Therefore, similar to the proposed project or expanded streetscape variant, construction impacts related to criteria air pollutant emissions for the No Project Alternative would ***be less than significant***.

Operational Air Pollutant Emissions. Unlike the proposed project, the No Project Alternative would not include manufacturing and maker use as a PDR use, would not require backup generators, and would require limited, if any, transportation refrigeration units, thereby eliminating or limiting operational emissions associated with these sources. In addition, as explained in Section 5.C.1, Transportation and Circulation (p. 5-12), the No Project Alternative would result in a net increase of approximately 2,838 daily vehicle trips over 2017 baseline conditions, but approximately 53 percent fewer daily vehicle trips than the proposed project, thereby substantially reducing mobile source emissions under this alternative from those under the proposed project. However, the No Project Alternative would continue using natural gas as an energy source, which would generate some onsite emissions. The total net increase in operational NO_X emissions under the No Project Alternative would be approximately 44.7 pounds per day (8.2 tons per year), or 29 percent of the proposed project's operational net increase in NO_X emissions, and other criteria pollutant emissions would be similarly reduced (see the alternatives analysis in Appendix F for more detailed emissions analysis). This increase in NO_X emissions under the No Project Alternative is below the air district's average daily and annual NO_X threshold of 54 pounds per day and 10 tons per year, respectively. Therefore, operations of the No Project Alternative would not result in a cumulatively considerable net increase in any criteria air pollutant for which the project region is in nonattainment, and this impact for the No Project Alternative would be ***less than significant***.

Health Risks. As explained above, interior tenant improvements would be the only construction-related emissions, and operational emissions would be substantially reduced from those under the proposed project, given the smaller footprint and reduced level of parcel delivery and wholesale/storage uses and related vehicle trips. Therefore, health risks would be substantially less for the No Project Alternative than those under the proposed project, likely by at least 50 percent. Therefore, because the No Project Alternative would result in less emissions and health risks than the proposed project and because the proposed project and cumulative health risk impact would be less than significant, health impacts for the No Project Alternative and under cumulative no project conditions would also be ***less than significant.***

Odors. Short-term generation of odors associated with construction activities under the No Project Alternative would range from minimal to none. Due to similar but more limited operational uses, the No Project Alternative would result in ***less-than-significant*** project and cumulative impacts related to the generation of odors that could adversely affect a substantial number of people, which would be similar to the proposed project.

IMPACT ANALYSIS – INITIAL STUDY TOPICS DETERMINED TO BE LESS THAN SIGNIFICANT WITH MITIGATION

The initial study (Appendix B) of the draft EIR concluded that the impacts of the proposed project or expanded streetscape variant would be less than significant with mitigation for the following environmental resource areas: cultural resources, tribal cultural resources, wind, and paleontological resources.

Under the No Project Alternative, the existing four single-story PDR buildings would not be demolished, and only minimal tenant improvements (such as interior upgrades) would be implemented. No grading or excavation would be required under the No Project Alternative. Operations would occur much as they do under the interim conditions that started in 2020 (i.e., predominantly parcel delivery use).

Under the No Project Alternative, no changes to the footprint or location of the existing structures would occur, and the project site would not be developed with either the proposed project or expanded streetscape variant as described in Chapter 2, Project Description. No physical impacts related to site-specific conditions would occur in the resource areas of cultural resources, tribal cultural resources, wind, or paleontological resources. Compared to the proposed project and expanded streetscape variant, this alternative would have ***no impact*** on any of the construction-related impacts to archeological, tribal and cultural, and paleontological resources. In addition, because there would be no change in building massing under the No Project Alternative compared to the existing conditions, there would be no wind hazard criterion exceedances, and this alternative would result in ***no impact*** on wind conditions. Therefore, the impacts under the No Project Alternative for these resources would be less than those under the proposed project and expanded streetscape variant, and none of the mitigation measures identified for the proposed project or expanded streetscape variant would be required for the No Project Alternative.

IMPACT ANALYSIS – OTHER INITIAL STUDY TOPICS

The initial study (Appendix B) of the draft EIR concluded that the proposed project or expanded streetscape variant would have no impacts or less-than-significant impacts related to the following environmental resource areas: land use and planning, population and housing, GHG emissions, shadow, recreation, utilities and service systems, public services, biological resources, hydrology and water quality, hazards and hazardous materials, mineral resources, energy, agricultural and forestry resources, and wildfire.

The No Project Alternative would employ approximately 750 people, which would be 1,227 fewer employees than under the proposed project or expanded streetscape variant. Because of the reduction of employees compared to the proposed project or expanded streetscape variant, and like the proposed project or expanded streetscape variant, there would be ***no impact*** *or* ***less than significant*** impacts associated with unplanned population, employment, and housing growth; displacement of people; or increased demand for recreation, utilities and service systems, and public services (discussed in the initial study [see Appendix B of the draft EIR]). Furthermore, because there would be no change to the footprint and location of the existing structures under the No Project Alternative, no physical impacts related to site-specific conditions would occur in the areas of land use and planning, shadow, biological resources, and hydrology and water quality. Impacts analyzed for these resource topics would be less than those under the proposed project. Impacts related to GHG emissions and energy also would be ***less than significant***, as they would be under the proposed project and expanded streetscape variant. The GHG emission levels and energy use associated with the No Project Alternative would be similar to those of the GHG emissions that currently occur at the project site (i.e., the GHG levels from existing buildings and mobile sources) and would be less than those under the proposed project.

With respect to hazardous materials and waste, the project site is not listed in the state and/or federal databases as a hazardous waste site on the Cortese list. Under the No Project Alternative, grading or excavation would not be required, so there would be no potential exposure of construction workers or the public to subsurface contamination. However, because minor tenant improvement activities may occur under the No Project Alternative, construction workers or members of the public could be exposed to lead-based paint or asbestos that are part of the existing building. Any tenant improvements would be required to follow all applicable standards and regulations for hazardous building materials (as detailed in initial study Section E.17, Hazards and Hazardous Materials). Like the proposed project or expanded streetscape variant, the tenant improvement activities are not expected to create a significant hazard for construction workers, the public, or the environment through the routine transport, use, or disposal of hazardous materials due to compliance with hazardous materials regulations. The No Project Alternative would result in a ***less-than-significant*** impact with respect to the handling of hazardous materials, similar to the proposed project and expanded streetscape variant.

As with the proposed project and expanded streetscape variant, impacts related to mineral resources, agricultural or forestry resources, or wildfire would not be applicable under the No Project Alternative because there are no such resources or conditions in the project area.

5.C.2 Code-Compliant Alternative

The Code-Compliant Alternative, summarized in Table 5-1 (p. 5-7) and detailed below, assumes that the project sponsor would develop the project site in compliance with the existing planning code and land use designations. This alternative would reduce impacts related to noise, air quality, and wind hazards that would occur under the proposed project or expanded streetscape variant. Additionally, this alternative would aid decision makers in understanding the potential impacts related to the size and scale of the proposed project.

DESCRIPTION OF CODE-COMPLIANT ALTERNATIVE

The Code-Compliant Alternative would demolish the existing four single-story PDR buildings on site and construct two new two-story buildings (plus active roof). Each of the two buildings would have approximately the same ground floor shape as the proposed project and would have a similar orientation on the site. However, under the Code-Compliant Alternative, the buildings would not exceed the 65-J height and bulk district requirements (65 feet maximum height) and would only have two floors plus an active roof. As a result, there would be no planning code amendments for height district reclassification and associated zoning map amendments, and there would be no planning code amendments to adopt a Special Use District for the project site. A shorter construction schedule of 26 months (compared to 31 months for the proposed project or expanded streetscape variant) is anticipated for this alternative given the reduced building height and square footage.

The combined building square footage of the Code-Compliant Alternative (1,363,000 square feet) is less than that under the proposed project (2,160,000 square feet). Similar to the proposed project, the Code-Compliant Alternative would provide space for several main types of PDR uses, as described in Chapter 2, Section 2.D.2, Proposed Project Uses (p. 2-20). These uses could consist of manufacturing and maker space; parcel delivery service, including last-mile delivery; and wholesale and storage. As shown in Table 5-1 (p. 5-7), although the building's overall square footage would be less than that of the proposed project, the allocation of the PDR uses would be proportional to the proposed project, with 3 percent consisting of manufacturing and maker space, 65 percent consisting of parcel delivery, and 32 percent consisting of wholesale/storage. The proportion of ground-floor retail would be the same as under the proposed project (0.4 percent of the gross building area; i.e., 5,000 square feet). The Code-Compliant Alternative would include sustainability features similar to those of the proposed project, such as water- and energy-efficient designs and electrical docking stations.

Similar to the proposed project, each building would include a combination of enclosed and partially enclosed spaces, with a multi-level vehicular system (comprising staging, circulation, and logistics yard areas) serving each level. In both buildings, all three levels of the PDR space would have direct vehicular access via a one-way ramp system for vehicles as large as tractor trailers. Due to the 65-J height and bulk district requirements, the top level of this alternative would consist of a small portion of enclosed space, solar array, and a screened, open-air, multipurpose deck for parking and/or material and vehicle staging, with a clear height of approximately 20 feet.

The transportation and circulation changes and improvements under the Code-Compliant Alternative would be the same as those under the proposed project or expanded streetscape variant. The Code-Compliant Alternative would include the same street, sidewalk, and streetscape improvements as described for the proposed project. Parking for vehicles and bicycles and the TDM plan would comply with city design standards, the same as the proposed project, but would be less because of the reduced size of this alternative compared to the proposed project. Additionally, this alternative could also include the street improvements that are described for the expanded streetscape variant.

IMPACT ANALYSIS – EIR TOPICS

Transportation and Circulation

Travel Demand. Table 5-3 presents the net new person trips by way of travel and vehicle trips, under both the proposed project and the Code-Compliant Alternative, for the weekday daily and a.m. and p.m. peak-hour conditions. Due to the reduced extent of development, the Code-Compliant Alternative would result in a reduction of approximately 34 to 38 percent in daily and peak hour vehicle trips from those under the proposed project (see Table 5-3).

Table 5-3 Net New Weekday Daily and A.M. and P.M. Peak Hour Travel Demand for Proposed Project and the Code-Compliant Alternative

Proposed Project and Alternative	Net New Person Trips[1]			Net New Vehicle Trips		
	Daily	AM	PM	Daily	AM	PM
Proposed Project[2]	8,910	648	795	6,008	431	571
Code-Compliant Alternative	5,838	406	521	3,924	268	379
Change from Proposed Project[3]	-3,072	-242	-274	-2,084	-163	-192
% Change from Proposed Project[3]	-34%	-37%	-34%	-35%	-38%	-34%

Source: Adavant Consulting/LCW Consulting, 2023 (see Appendix D)

Notes:

1. Person trips by all ways of travel.
2. Travel demand for the expanded streetscape variant is the same as for the proposed project.
3. Travel demand change in trips and percent change from the proposed project.

Construction. Overall, the Code-Compliant Alternative would result in less impacts because it entails smaller structures (i.e., 1,363,000 square feet of new construction, compared to 2,160,000 square feet for the proposed project or expanded streetscape variant) and a shorter duration of construction (i.e., an estimated 26 months of construction duration, compared to 31 months for the proposed project or expanded streetscape variant). Therefore, for reasons similar to those described for the proposed project or expanded streetscape variant, construction-related transportation impacts for the Code-Compliant Alternative would be less than the ***less-than-significant*** impacts identified for the proposed project or expanded streetscape variant.

Potentially Hazardous Conditions and Accessibility. Transportation and circulation changes and improvements under the Code-Compliant Alternative would be the same as those under the proposed project or expanded streetscape variant. As with the proposed project or expanded streetscape variant, future development consistent with the Code-Compliant Alternative would be required to conform to city design standards and undergo review by city agencies, including the fire and police departments, if applicable. Therefore, for the same reasons discussed for the proposed project or expanded streetscape variant, the Code-Compliant Alternative's impacts related to potentially hazardous conditions and accessibility would be ***less than significant,*** which would be similar to the proposed project or expanded streetscape variant.

Transit Delay. As shown in Table 5-3 (p. 5-19), the Code-Compliant Alternative would reduce peak hour vehicle trips in comparison to the proposed project, but trips would remain greater than the SF transportation guidelines screening criterion of 300 peak hour vehicle trips for projects that would not result in significant public transit delay effects. However, due to the reduced number of vehicle trips compared to the proposed project (34 to 38 percent fewer peak hour vehicle trips) and for the same reasons discussed in the qualitative assessment under Impact TR-4 for the proposed project and the expanded streetscape variant, potential increases in transit travel times on nearby transit routes would be reduced under the Code-Compliant Alternative in comparison to the already less-than-significant transit delay impact identified for the proposed project or expanded streetscape variant. Therefore, transit delay impacts for the Code-Compliant Alternative would be ***less than significant.***

Vehicle Miles Traveled. Similar to the proposed project or expanded streetscape variant, the Code-Compliant Alternative would not be inconsistent with the criteria outlined in CEQA section 21099(b)(1). In addition, the Code-Compliant Alternative would not be inconsistent with the region's Sustainable Communities Strategy, given that the project site is in San Francisco's only Priority Production Area under the region's Sustainable Communities Strategy (Plan Bay Area), which prioritizes areas for economic development investments and protection of industrial businesses from competing land uses. Similar to the proposed project or expanded streetscape variant, and based on the same methodology as used for the proposed project, the average daily VMT per capita calculated for each land use under the Code-Compliant Alternative would be below the VMT significance threshold. The Code-Compliant Alternative would include transportation network changes similar to those of the proposed project or expanded streetscape variant that fit within the general types of projects that would not substantially induce automobile travel. Therefore, the impact of the Code-Compliant Alternative related to VMT and induced automobile travel would be ***less than significant,*** which would be similar to the proposed project or expanded streetscape variant.

Loading. Similar to the proposed project or expanded streetscape variant, each building under the Code-Compliant Alternative would include a combination of enclosed and partially enclosed spaces, with a multi-level vehicular system that provides staging, circulation, and logistics yard areas serving the proposed parcel delivery and wholesale and storage PDR uses. In addition, the Code-Compliant Alternative would include the same on-street commercial vehicle and passenger loading zones and onsite loading docks (accessed via curb cuts on Kirkwood Avenue). The on-street commercial loading zones and loading docks accessed via Kirkwood Avenue would serve the ground-floor light manufacturing/maker and retail uses. Similar to the proposed project or expanded streetscape variant, the proposed onsite and on-street loading facilities for the Code-Compliant Alternative would be adequate to accommodate the projected loading demand for this alternative. Therefore, impacts of the Code-Compliant Alternative related to loading would be ***less than significant***, which would be similar to the proposed project or the expanded streetscape variant.

Cumulative Analysis. For the same reasons discussed for the proposed project or expanded streetscape variant, no significant cumulative impacts were identified regarding construction-related transportation impacts or operational impacts (i.e., potentially hazardous conditions, accessibility, transit delay, VMT, and loading). Therefore, similar to the proposed project or expanded streetscape variant, cumulative transportation and circulation impacts with the Code-Compliant Alternative would be ***less than significant***. Because the Code-Compliant Alternative would include less overall construction and development intensity and less travel demand than the proposed project, cumulative construction-related transportation impacts and operational transit delay impacts of this alternative would be less than those under the proposed project or the expanded streetscape variant. Cumulative impacts of the Code-Compliant Alternative related to potentially hazardous conditions, accessibility, VMT, and loading would be similar to those under the proposed project or expanded streetscape variant.

Noise and Vibration

Construction Noise and Vibration. Under the Code-Compliant Alternative, noise- and vibration-generating construction activities and equipment are expected to be nearly identical to those analyzed for the proposed project and expanded streetscape variant due to the similar scope of construction work areas, grading and excavation, and activity types. The total duration of construction would be less than that of the proposed project (i.e., 26 months of construction duration, compared to 31 months for the proposed project or expanded streetscape variant). The amount of material required for delivery to the site under the Code-Compliant Alternative would be roughly 20 to 40 percent less than that under the proposed project, due to the reduced height of the proposed new structures. The construction noise and vibration assumptions used for the proposed project (e.g., the types and quantities of construction equipment, their reference sound levels, and usage factors) would not change under the Code-Compliant Alternative. Therefore, similar to the proposed project or expanded streetscape variant, impacts generated by construction noise and vibration would be ***less than significant.***

Fixed-Source Noise. The Code-Compliant Alternative would require HVAC systems to support the facility's enclosed and partially enclosed areas. Although the total square feet of areas served may reduce the overall HVAC system requirements under the Code-Compliant Alternative, noise generated from operation of the ventilation fans and rooftop air conditioning units would exceed the article 29 section 2909(b) thresholds at the property plane, as they did under the proposed project. The overall noise levels at the property plane would be less than or similar to those projected under the proposed project because the Code-Compliant Alternative would have reduced HVAC requirements. Nevertheless, the fixed-source noise levels would still exceed thresholds at the property plane. Mitigation Measures NO-3a and NO-3b, as detailed under Impact NO-3 for the proposed project, would apply to the Code-Compliant Alternative and would reduce operational noise to below impact thresholds. This alternative would also require an emergency generator unit at each building that would be of similar capacity and tested on the same schedule as that used for the proposed project. Similar to the proposed project or expanded streetscape variant, property plane noise impacts generated by emergency generator testing would be less than significant. In summary, fixed-source noise impacts associated with the HVAC units under the Code-Compliant Alternative, like the proposed project or expanded streetscape variant, would be ***less than significant with mitigation*.**

Mobile Source Noise. The reduction in onsite and offsite operational traffic volumes would result in traffic noise lower than the less-than-significant levels estimated for the proposed project and expanded streetscape variant. Therefore, similar to the proposed project or expanded streetscape variant, impacts related to traffic noise level increases at noise-sensitive land uses would be ***less than significant***.

Cumulative Analysis. Like the proposed project or expanded streetscape variant, the Code-Compliant Alternative would not have significant cumulative construction-related noise and vibration impacts. With respect to fixed sources (i.e., the HVAC mechanical systems and emergency generators) under the Code-Compliant Alternative, the fixed-source operational noise would be approximately equal to or less than the fixed-source operational noise for the proposed project. As described for the proposed project, the other cumulative projects listed in Section 3.A.6 (p. 3.A-15) and shown on Figure 3.A-4 (p. 3.A-18) would also be required to meet the article 29, section 2909(b) noise level limits and would not therefore combine to result in significant cumulative noise impacts associated with fixed sources. As described in the transportation analysis above, the Code-Compliant Alternative would result in a 35 percent reduction in daily vehicle trips. As a result, the cumulative effect of traffic noise with other cumulative projects would be less than that under the proposed project or expanded streetscape variant. Therefore, the overall contribution to cumulative construction and operational noise and vibration impacts would be similar to that under the proposed project or expanded streetscape variant, and cumulative noise and vibration impacts with the Code-Compliant Alternative would be ***less than significant***.

Air Quality

Conflict with Clean Air Plan. The Code-Compliant Alternative would have a reduced project size and less operational activity than the proposed project or expanded streetscape variant. This would result in reduced construction and operational emissions. Like the proposed project or the expanded streetscape variant, the Code-Compliant Alternative construction would incorporate actions consistent with the 2017 Clean Air Plan's MSM-C1, "Construction and Farming Equipment" because the Code-Compliant Alternative would pursue priority processing as a Type 3 Clean Construction Project and would use Tier 4 construction equipment. The Code-Compliant Alternative also would incorporate design features, such as the elimination of onsite natural gas and the incorporation of onsite solar power, among other improvements related to building energy and sustainability, consistent with the San Francisco Green Building Code. The alternative would thereby be in alignment with the 2017 Clean Air Plan energy control measure EN2, "Decarbonize Buildings," and the waste sector control measure WA3, "Green Waste Diversion." However, also like the proposed project or expanded streetscape variant, operational emissions under the Code-Compliant Alternative would exceed thresholds for maximum daily and annual emissions of NO_X. For the same reasons discussed for the proposed project or expanded streetscape variant, the Code-Compliant Alternative could conflict with or obstruct implementation of an applicable air quality plan. Mitigation Measures M- AQ-3a through M-AQ-3g—as detailed under Impact AQ-3— would apply to the Code-Compliant Alternative, as they would for the proposed project or expanded streetscape variant. These measures would reduce operational NO_X emissions to a level that would not exceed the thresholds of significance. These mitigation measures would further reinforce actions such as yard equipment and transportation refrigeration unit electrification, and use of cleaner on-road vehicles, all of which align with the 2017 Clean Air Plan. With implementation of these mitigation measures, the Code-Compliant Alternative would not conflict with the applicable air quality plan. Therefore, this impact under the Code-Compliant Alternative, like the proposed project or expanded streetscape variant, would be ***less than significant with mitigation*.**

Construction Air Pollutant Emissions. Similar to the proposed project or expanded streetscape variant, the Code-Compliant Alternative would demolish the existing four single-story PDR buildings. However, under the Code-Compliant Alternative, the two new buildings would have a total building area of approximately 1,363,000 square feet, approximately 63 percent the size of the proposed project or expanded streetscape variant. The overall construction duration of the Code-Compliant Alternative would be 26 months, approximately five months less than the proposed project or expanded streetscape variant. Overall emissions during building construction are anticipated to be less due to the reduced building size and shorter construction period. Development under the Code-Compliant Alternative would be subject to the same requirements as the proposed project or expanded streetscape variant, such as the San Francisco Construction Dust Control Ordinance; and would also pursue priority processing as a Type 3 Clean Construction Project and use Tier 4 construction equipment. Construction-related emissions for the Code-Compliant Alternative would be less than those under the proposed project or expanded streetscape variant; and, like the proposed project or expanded streetscape variant, construction criteria air pollutant impacts under the Code-Compliant Alternative would be ***less than significant.***

Operational Air Pollutant Emissions. The Code-Compliant Alternative would include a distribution of PDR uses proportional to that for the proposed project (i.e., about 65 percent parcel and last-mile delivery, 32 percent wholesale and storage, and 3 percent manufacturing and maker uses), as well as ground-level retail use. The use of backup generators, transportation refrigeration units, and vehicle circulation under the Code-Compliant Alternative would be similar to those under the proposed project or expanded streetscape variant, but would be reduced. Due to the reduced project size, the Code-Compliant Alternative would result in approximately two-thirds of the maximum daily and annual operational emissions of NO_X when compared to the proposed project or expanded streetscape variant. Operational emissions from the Code-Compliant Alternative would result in a net increase of approximately 97.6 pounds per day and 16.1 tons per year of NO_X, which would exceed the air district's NO_X thresholds of significance.[292] Therefore, the Code-Compliant Alternative would result in a cumulatively considerable net increase in NO_X, a criteria air pollutant for which the project region is in nonattainment status. Like the proposed project or expanded streetscape variant, the Code-Compliant Alternative's impact would be significant. Mitigation Measures M-AQ-3a through M-AQ-3g—as detailed under Impact AQ-3—would apply to the Code-Compliant Alternative. The proposed project's mitigated operational mobile source emissions of NO_X would be reduced by approximately 35 percent with implementation of mitigation measures. Applying the same proportion of emissions reductions to the Code-Compliant Alternative, mobile source emissions would reduce the Code-Compliant Alternative operational emissions of NO_X by approximately 27 pounds per day, or 5 tons per year. In addition, manufacturing and maker space emissions of NO_X would be limited to 10 pounds per day (a reduction of about 12 pounds per day, or 1.5 tons per year), and emissions from use of transportation refrigeration units would be reduced to zero through use of electric or other clean-powered units. The combination of these emissions reductions would result in a net increase of approximately 48 pounds per day, or about 7.5 tons per year under the Code-Compliant Alternative, which are below the NO_X significance thresholds. Mitigation Measures M-AQ-3h and M-AQ3i would not be required for the Code-Compliant Alternative. Therefore, with implementation of Mitigation Measures AQ-3a through AQ-3g, the Code-Compliant Alternative would not result in a cumulatively considerable net increase in any criteria pollutant for which the project region is in nonattainment status

[292] The air district's threshold of significance for NOX is 54 pounds per day and 10 tons per year.

under an applicable federal, state, or regional ambient air quality standard, and this impact would be ***less than significant with mitigation***.

Health Risks. Unmitigated operational $PM_{2.5}$ exhaust and total emissions from onsite and offsite sources for the Code-Compliant Alternative would generally decrease by about 30 percent in comparison to the proposed project or expanded streetscape alternative (see Appendix F, Table 4, in the section analyzing the alternatives), but there would be only a slight decrease in construction emissions compared to the proposed project or expanded streetscape variant. A health risk assessment was prepared for this alternative because the location of emissions would be different from that of the proposed project due to the lower building height. The lifetime cancer risk, annual $PM_{2.5}$ concentration, and noncancer chronic and acute health risks from the Code-Compliant Alternative would be less than those of the proposed project or expanded streetscape variant. The maximum lifetime cancer risk is estimated to be 4.11 per one million (12 percent lower than the proposed project) and 4.09 per one million (20 percent lower than the proposed project) for the residential and worker receptors, respectively. Noncancer chronic and acute health risks for the Code-Compliant Alternative would be well below the significance threshold; annual $PM_{2.5}$ concentrations for the Code-Compliant Alternative are estimated to be 0.065 $\mu g/m^3$ and 0.142 $\mu g/m^3$ at the maximally exposed residential and worker receptors, respectively (see Appendix F, Table 6, in the section analyzing the alternatives). As explained in Impact AQ-5 in Section 3.D, Air Quality, the health risk impacts associated with the proposed project or expanded streetscape variant would not exceed the project thresholds of significance. Therefore, because the Code-Compliant Alternative would result in reduced health-related impacts in comparison to the proposed project, and for the same reasons detailed in the discussions of Impacts AQ-4 and C-AQ-1 for the proposed project or expanded streetscape variant, project and cumulative health impacts associated with the Code-Compliant Alternative's construction and long-term operations would be ***less than significant***.

Odors. Generation of odors associated with construction and operational activities under the Code-Compliant Alternative would be similar to those under the proposed project or expanded streetscape variant. Therefore, for the same reasons discussed in Section 3.D, Air Quality, Impacts AQ-5 and C-AQ-2, for the proposed project or expanded streetscape variant, the Code-Compliant Alternative would result in ***less-than-significant*** project and cumulative impacts related to the generation of odors that could adversely affect a substantial number of people.

IMPACT ANALYSIS – INITIAL STUDY TOPICS DETERMINED TO BE LESS THAN SIGNIFICANT WITH MITIGATION

The initial study (Appendix B) of the draft EIR concluded that the impacts of the proposed project or expanded streetscape variant would be less than significant with mitigation for the following environmental resource areas: cultural resources, tribal cultural resources, wind, and paleontological resources.

As described above, the Code-Compliant Alternative would demolish the existing four single-story PDR buildings on site and construct two new two-story buildings (plus active roofs) that would be approximately the same ground floor shape as the proposed project or expanded streetscape variant and would have a similar orientation on the site and foundation system. However, under the Code-Compliant Alternative, the buildings would be 32 feet shorter than the proposed project and would not exceed the 65-foot maximum height limit. Although the building square footage would be less than that of the proposed project or expanded streetscape variant, the allocation of the PDR uses would be proportional to the proposed project or expanded streetscape variant.

Under the Code-Compliant Alternative, physical impacts to archeological, tribal and cultural, and paleontological resources would be similar to those for the proposed project or expanded streetscape variant. The same mitigation measures identified for the proposed project or expanded streetscape variant would be required for the Code-Compliant Alternative. Impacts under this alternative would therefore be ***less than significant with mitigation.***

Under the Code-Compliant Alternative, the buildings would be 65 feet tall, which would be 32 feet shorter than the proposed project buildings. This alternative would be expected to result in less wind impacts than were identified for the proposed project or expanded streetscape variant. However, because there would be a reasonably uniform reduction all around (i.e. the shape of the building and the distance between it and neighboring buildings would stay more or less the same), it is likely that the effects would be similar to, but less than the proposed project or expanded streetscape variant. Wind mitigation would still be required for the Code-Compliant Alternative to ensure that there is not a wind hazard criterion exceedance.[293] Therefore, the wind impact under this alternative, like the proposed project or expanded streetscape variant, would be ***less than significant with mitigation.***

IMPACT ANALYSIS – OTHER INITIAL STUDY TOPICS

The initial study (Appendix B) of this draft EIR concluded that the proposed project or expanded streetscape variant would have no impacts or less-than-significant impacts related to the following environmental resource areas: land use and planning, population and housing, GHG emissions, shadow, recreation, utilities and service systems, public services, biological resources, hydrology and water quality, hazards and hazardous materials, mineral resources, energy, agricultural and forestry resources, and wildfire.

As shown in Table 5-1 (p. 5-7), there would be a net increase of approximately 508 employees associated with the Code-Compliant Alternative in comparison to approximately 1,242 net new employees under the proposed project or expanded streetscape variant. Therefore, the potential for unplanned population and housing growth would be less than the less-than-significant impacts identified for the proposed project or expanded streetscape variant.[294] Because of the slight reduction of employees compared to the proposed project or expanded streetscape variant, there would be a similar yet slightly reduced impact associated with unplanned population, employment, and housing growth; displacement of people; or increased demand for recreation, utilities and service systems, and public services (discussed in the initial study [see Appendix B of this draft EIR]). The footprint and location of the planned structures under the Code-Compliant Alternative would be the same as those of the proposed project or expanded streetscape variant, so the impacts related to site-specific conditions that would occur in the areas of land use and planning, biological resources, hydrology and water quality, and hazards and hazardous materials would be similar to those under the proposed project or expanded streetscape variant. Impacts analyzed for these resource topics would be ***no impact*** *or* ***less than significant***, which is similar to the proposed project or expanded streetscape variant.

Impacts related to GHG emissions and energy also would be ***less than significant***, as they would with the proposed project or expanded streetscape variant. The GHG emission levels and energy use associated with the Code-Compliant Alternative project site land uses (i.e., buildings and mobile sources) would be less than

[293] Hankin, David, NOVA Fluid Mechanics, email correspondence between NOVA Fluid Mechanics and AECOM, October 17, 2022.

[294] For the purposes of calculating the number of employees, it is assumed that 2017 uses of the project site employed 735 workers. Therefore, the proposed project and Code-Compliant Alternative would result in a net increase in employment of approximately 1,243 employees and 508 employees, respectively, relative to 2017 conditions.

those under the proposed project or expanded streetscape variant because of the proportionately smaller development footprint. Therefore, the GHG emission levels and energy use would be less than the proposed project or expanded streetscape variant, because of the smaller development footprint of this alternative and because it would result in 34 percent fewer daily person trips and 35 percent fewer vehicle trips than the proposed project (see earlier transportation and air quality analysis for the Code-Compliant Alternative under "Impact Analysis – EIR Topics").

As described above, the Code-Compliant Alternative buildings would not exceed the 65-foot maximum height limits and would be 32 feet shorter than the proposed project or expanded streetscape variant. The Code-Compliant Alternative buildings would not cast shadows on any public parks or open spaces and would result in slightly less shadow on portions of streets, sidewalks, and private properties in the project vicinity than the proposed project or expanded streetscape variant, and this impact would be ***less than significant***.

As with the proposed project or expanded streetscape variant, impacts related to mineral resources, agricultural or forestry resources, or wildfire would not be applicable under the Code-Compliant Alternative because there are no such resources or conditions in the project area.

5.C.3 Fleet Management Use Mix Alternative

The Fleet Management Use Mix Alternative, summarized in Table 5-1 (p. 5-7) and detailed below, assumes that the project sponsor would develop the project site with a different mix of PDR uses than that of the proposed project. The purpose of this alternative is to reduce air emissions from mobile sources and eliminate emissions from manufacturing and maker uses that would occur under the proposed project or expanded streetscape variant, and to aid decision makers in understanding the potential impacts related to a different PDR tenant use mix than analyzed for the proposed project.

DESCRIPTION OF FLEET MANAGEMENT USE MIX ALTERNATIVE

The Fleet Management Use Mix Alternative would demolish the existing four single-story PDR buildings on site and construct two new three-story buildings (plus active roof) in the same configuration used for the proposed project.

The combined building square footage of the Fleet Management Use Mix Alternative (2,160,000 square feet) is the same as that of the proposed project. This alternative is different from the proposed project because it would include less space for parcel delivery than the proposed project (50 percent of the total PDR floor area, as shown in Table 5-1, p. 5-7). Unlike the proposed project, this alternative would eliminate the wholesale/storage space. The active PDR floor area would be divided equally between parcel delivery service, including last-mile delivery, and fleet management.[295] In addition, the manufacturing and maker and retail space that is included in the proposed project would be removed under the Fleet Management Use Mix Alternative and the square footage would instead be allocated to the two PDR uses that comprise this alternative. The areas of the buildings identified for these uses in the proposed project (35,000 square feet of manufacturing and maker space and 8,400 square feet of retail) would instead be used for PDR support space to maximize the efficiency of each building's layout and internal circulation. Under the Fleet Management Use Mix Alternative, planning code amendments for height district reclassification, associated zoning map

[295] Fleet management uses allow private and public fleets to be staged and maintained. Uses could include private retail vehicle staging, private fleet staging and maintenance, and public fleet staging and maintenance. See Section 2.D in Chapter 2 for further discussion.

amendments, and planning code amendments to adopt a Special Use District for the project site would be required, similar to the proposed project. Additionally, the project approvals for the Fleet Management Use Mix alternative would reflect minimum/maximum square footage limits for the fleet management and parcel delivery service uses and would prohibit retail and manufacturing and maker uses.

The Fleet Management Use Mix Alternative would include sustainability features similar to those under the proposed project, such as water- and energy-efficient designs, electrical docking stations, and an active rooftop with a solar array. Similar to the proposed project, the Fleet Management Use Mix Alternative would include street, sidewalk, and streetscape improvements; bicycle parking; and a TDM plan. Additionally, this alternative could also include the street improvements that are described for the expanded streetscape variant.

IMPACT ANALYSIS – EIR TOPICS

Transportation and Circulation

The Fleet Management Use Mix Alternative includes the same amount of development area as the proposed project or expanded streetscape variant. However, all of it would be allocated to PDR uses: approximately half for private and/or public fleet storage and management uses, and half for parcel and last-mile delivery uses. For transportation analysis purposes, it is assumed that 50 percent of the fleet storage area would be allocated to public fleet management (e.g., Muni), and the other 50 percent would be used by private fleet operators. Transportation and circulation changes and improvements under the Fleet Management Use Mix Alternative would be the same as those under the proposed project, except that the on-street commercial loading zones on McKinnon Avenue would not be provided under this alternative.

Travel Demand. Table 5-4 presents the net new person trips by way of travel and vehicle trips, under both the proposed project and the Fleet Management Use Mix Alternative, for the weekday daily and a.m. and p.m. peak-hour conditions. Under the Fleet Management Use Mix Alternative, fleet management uses would replace about 25 percent of the parcel and last-mile delivery uses—and all of the manufacturing and maker, wholesale and storage, and retail uses—included under the proposed project or expanded streetscape variant. As shown in Table 5-4, the Fleet Management Use Mix Alternative would reduce daily and peak hour vehicle trips by approximately 15 to 30 percent compared to the proposed project or expanded streetscape variant.

Table 5-4 Net New Weekday Daily and A.M. and P.M. Peak Hour Travel Demand for Proposed Project and the Fleet Management Use Mix Alternative

Proposed Project and Alternative	Net New Person Trips[1]			Net New Vehicle Trips		
	Daily	AM	PM	Daily	AM	PM
Proposed Project[2]	8,910	648	795	6,008	431	571
Fleet Management Use Mix Alternative	6,108	354	544	5,078	301	474
Change from Proposed Project[3]	-2,802	-294	-251	-930	-130	-97
% Change from Proposed Project[3]	-31%	-45%	-32%	-15%	-30%	-17%

Source: Adavant Consulting/LCW Consulting, 2023 (see Appendix D)

Notes:

1. Person trips by all ways of travel.
2. Travel demand for the expanded streetscape variant is the same as for the proposed project.
3. Travel demand change in trips and percent change from the proposed project.

Construction. The Fleet Management Use Mix Alternative would involve the same amount (i.e., 2,160,000 square feet) and duration (i.e., 31 months) of construction activities as the proposed project or expanded streetscape variant, and construction-related transportation impacts would be ***less than significant***, which would be similar to the proposed project or expanded streetscape variant.

Potentially Hazardous Conditions and Accessibility. Transportation and circulation changes and improvements under the Fleet Management Use Mix Alternative would be the same as those under the proposed project or expanded streetscape variant, with the exception that the on-street commercial loading zones on McKinnon Avenue would not be provided under this alternative. Like the proposed project or expanded streetscape variant, the Fleet Management Use Mix Alternative would be required to conform to city design standards and undergo review by city agencies, including the fire and police departments, if applicable. Therefore, for the reasons discussed for the proposed project or expanded streetscape variant, impacts of the Fleet Management Use Mix Alternative related to potentially hazardous conditions and accessibility would be ***less than significant***, which would be similar to the proposed project or expanded streetscape variant.

Transit Delay. As described above and in Table 5-4 (p. 5-27), the Fleet Management Use Mix Alternative would result in a reduction in daily and peak hour vehicle trips in comparison to the proposed project or expanded streetscape variant. However, the number of vehicle trips under the Fleet Management Use Mix Alternative would still remain greater than the SF transportation guidelines screening criterion of 300 peak hour vehicle trips for projects that would not result in significant public transit delay effects. Due to the reduced number of vehicle trips compared to the proposed project or expanded streetscape variant (17 to 30 percent fewer peak hour vehicle trips), and for the same reasons discussed in the qualitative assessment under Impact TR-4 for the proposed project, potential increases in transit travel times on nearby transit routes would be somewhat reduced under the Fleet Management Use Mix Alternative in comparison to the already less-than-significant transit delay impact identified for the proposed project or expanded streetscape variant. Therefore, transit delay impacts for the Fleet Management Use Mix Alternative would be ***less than significant***, which would be similar to the proposed project or expanded streetscape variant.

Vehicle Miles Traveled. Similar to the proposed project or expanded streetscape variant, the Fleet Management Use Mix Alternative would not be inconsistent with the criteria outlined in CEQA section 21099(b)(1)), nor with the region's Sustainable Communities Strategy. In addition, the project site is in San Francisco's only Priority Production Area under the region's Sustainable Communities Strategy (Plan Bay Area), which prioritizes areas for economic development investments and protection of industrial businesses from competing land uses. Furthermore, based on the same methodology as the proposed project, the average daily VMT per capita calculated for the PDR uses under the Fleet Management Use Mix Alternative would be below the value calculated for the proposed project or expanded streetscape variant, as well as below the VMT significance threshold. As described above, the Fleet Management Use Mix Alternative would include the majority of the transportation network changes and improvements included under the proposed project or expanded streetscape variant, which fit within the general types of projects that would not substantially induce automobile travel. Therefore, the impact of the Fleet Management Use Mix Alternative related to VMT and induced automobile travel would be ***less than significant***, which would be similar to the proposed project or expanded streetscape variant.

Loading. Similar to the proposed project or expanded streetscape variant, each building under the Fleet Management Use Mix Alternative would include a combination of enclosed and partially enclosed spaces, with a multi-level vehicular system that provides staging, circulation, and logistics yard areas serving the proposed fleet management and parcel delivery PDR uses. In addition, the Fleet Management Use Mix Alternative would include the same onsite loading docks accessed via curb cuts on Kirkwood Avenue as the proposed project or expanded streetscape variant. However, because this alternative would not include any ground-floor manufacturing or maker or retail uses, it would not include the on-street commercial loading zones on McKinnon Avenue to accommodate demand generated from those uses. The Fleet Management Use Mix Alternative would also provide the same on-street passenger loading zones on Rankin and Toland streets as the proposed project or expanded streetscape variant. Similar to the proposed project or expanded streetscape variant, the proposed onsite and on-street loading facilities for the Fleet Management Use Mix Alternative would be adequate to accommodate the projected loading demand for this alternative. Therefore, impacts of the Fleet Management Use Mix Alternative related to loading would be ***less than significant***, which would be similar to the proposed project or expanded streetscape variant.

Cumulative Analysis. For the same reasons discussed for the proposed project or expanded streetscape variant, no significant cumulative impacts regarding construction-related transportation impacts or operational impacts (i.e., potentially hazardous conditions, accessibility, transit delay, VMT, and loading) would occur under the Fleet Management Use Mix Alternative. Therefore, cumulative transportation and circulation impacts with the Fleet Management Use Mix Alternative would be ***less than significant***, which would be similar to the proposed project or expanded streetscape variant.

Noise and Vibration

Construction Noise and Vibration. Under the Fleet Management Use Mix Alternative, noise- and vibration-generating construction activities, equipment, phases, and durations would be the same as those analyzed for the proposed project or expanded streetscape variant. Therefore, similar to the proposed project or expanded streetscape variant, impacts generated by construction noise and vibration would be ***less than significant.***

Fixed-Source Noise. The Fleet Management Use Mix Alternative would require HVAC systems to support the facility's enclosed and partially enclosed areas. Although shifts in square footage of uses may redistribute the HVAC systems, the overall HVAC needs of the facility would be similar to those required by the proposed project or expanded streetscape variant. The Fleet Management Use Mix Alternative would increase the area of logistics yard uses by 9.8 percent, and would therefore require a slight increase in ventilation system capacity while conversely slightly reducing the necessary capacities of rooftop HVAC equipment. Because the design and capacity of the system are similar to those of the proposed project or expanded streetscape variant, operational noise from fixed sources under the Fleet Management Use Mix Alternative would exceed the article 29, section 2909(b) thresholds at the property plane. Mitigation Measures M-NO-3a and M-NO-3b, as detailed under Impact NO-3, would apply to the Fleet Management Use Mix Alternative, as they would to the proposed project, and would reduce operational noise to below impact thresholds. This alternative would also require an emergency generator unit at each building that would be of similar capacity and tested on the same schedule as that used for the proposed project. Similar to the proposed project or expanded streetscape variant, property plane noise impacts generated by emergency generator testing would be less than significant. In summary, fixed-source noise impacts associated with the HVAC units under the Fleet Management Use Mix Alternative would be ***less than significant with mitigation***, like the proposed project or expanded streetscape variant.

Mobile Source Noise. The Fleet Management Use Mix Alternative would reduce onsite and offsite traffic volumes by approximately 14 percent, with a 50 percent reduction in heavy truck trips during the nighttime

(10 p.m. to 7 a.m.) period compared to the proposed project or expanded streetscape variant. These reductions are partially offset by the alternative's public fleet operations, which would increase nighttime medium truck (bus) trips from 31 to 130 (an increase of approximately 425 percent). The increase would be primarily concentrated in the 5 a.m. and 7 a.m. period, when buses are leaving the facility to begin public transportation services. Despite the large relative increase in nighttime period bus trips, the noise-reducing effects of halving the nighttime heavy trucks assumed in the proposed project or expanded streetscape variant would offset the potential increase in bus noise and result in a net nighttime traffic noise reduction of approximately 0.1 dBA compared to the proposed project or expanded streetscape variant.[296] Therefore, impacts from onsite and offsite traffic at noise-sensitive land uses would be ***less than significant***, the same significance determination as for the proposed project or expanded streetscape variant.

Cumulative Analysis. The Fleet Management Use Mix Alternative would use the same construction equipment types, quantities, and construction approaches as the proposed project or expanded streetscape variant. Thus, for the same reasons as described for the proposed project or expanded streetscape variant, cumulative construction-related noise and vibration impacts resulting from the Fleet Management Use Mix Alternative would be less than significant.

With respect to fixed sources of noise (i.e., the HVAC mechanical systems and emergency generators) under the Fleet Management Use Alternative, the fixed-source operational noise would be approximately equal to the fixed-source operational noise for the proposed project or expanded streetscape variant. Thus, for the same reasons as described for the proposed project or expanded streetscape variant, cumulative noise impacts associated with fixed-source noise resulting from the Fleet Management Use Mix Alternative would be less than significant.

As described in the mobile source noise analysis above, the Fleet Management Use Mix Alternative would result in slightly lower traffic noise levels than those predicted for the proposed project or expanded streetscape variant; thus, the cumulative effect of traffic noise with this alternative and other cumulative projects with this alternative would be less than the cumulative effect with the proposed project or expanded streetscape variant. Therefore, the overall cumulative construction and operational noise and vibration impacts associated with the Fleet Management Use Mix Alternative would be ***less than significant***.

Air Quality

Conflict with Clean Air Plan. Because the Fleet Management Use Mix Alternative and the proposed project would be the same in terms of floor area, number of buildings, and site plan improvements, the Fleet Management Use Mix Alternative would result in construction emissions similar to those under the proposed project or expanded streetscape variant. Total operational space would be the same as the proposed project or expanded streetscape variant, but the Fleet Management Use Mix Alternative PDR use mix would be allocated to fleet management use and parcel delivery, including last-mile delivery use. This alternative would not include wholesale and storage space, retail, or manufacturing and maker space use. Like the proposed project or expanded streetscape variant, the Fleet Management Use Mix Alternative construction would incorporate actions consistent with the 2017 Clean Air Plan's MSM-C1, "Construction and Farming Equipment" because the Fleet Management Use Mix Alternative would pursue priority processing as a Type 3 Clean Construction Project and use Tier 4 construction equipment. The Fleet Management Use Mix Alternative also would incorporate design features, such as the elimination of onsite natural gas and the incorporation of onsite solar power, among other building energy- and sustainability-related improvements consistent with the San Francisco

[296] See Appendix E, San Francisco Gateway Noise Technical Report.

Green Building Code. The alternative would thereby be in alignment with the 2017 Clean Air Plan energy control measure EN2, "Decarbonize Buildings," and the waste sector control measure WA3, "Green Waste Diversion."

The Fleet Management Use Mix Alternative would result in a net increase in operational emissions of NO_X, approximately 64 percent of the proposed project's net increase in operational NO_X emissions.[297] These estimated NO_X emissions would not exceed the air district's threshold for maximum daily and annual emissions of NO_X.[298] Therefore, the Fleet Management Use Mix Alternative would not conflict with or obstruct implementation of an applicable air quality plan, and this impact under the Fleet Use Mix Alternative would be ***less than significant***, and lower than that of the proposed project or expanded streetscape variant.

Construction Air Pollutant Emissions. As with the proposed project or expanded streetscape variant, the Fleet Management Use Mix Alternative would demolish the existing four single-story PDR buildings and construct two new buildings in a configuration similar to that used for the proposed project or expanded streetscape variant. As a result, construction activities would be similar to those for the proposed project or expanded streetscape variant, and would result in comparable emissions. Development under the Fleet Management Use Mix Alternative would be subject to the same requirements as the proposed project or expanded streetscape variant, such as the San Francisco Construction Dust Control Ordinance; and would pursue priority processing as a Type 3 Clean Construction Project, and use Tier 4 construction equipment. Therefore, construction-related emissions for the Fleet Management Use Mix Alternative would be similar to those for the proposed project or expanded streetscape variant, and construction impacts on criteria air pollutants under the Fleet Management Use Mix Alternative would be ***less than significant.***

Operational Air Pollutant Emissions. The Fleet Management Use Mix Alternative includes an amount of development and PDR uses similar to those for the proposed project or expanded streetscape variant. However, approximately 50 percent of the PDR gross square footage would be allocated for private and/or public fleet storage and management uses, and about 50 percent for parcel and last-mile delivery uses; there would be no manufacturing and maker use or ground-level retail use for this alternative, unlike the proposed project or expanded streetscape variant. Although still applicable to the parcel delivery use, transportation refrigeration units are not anticipated to be needed for fleet management; therefore, related emissions would not be generated for this use. In addition, the vehicle fleet mix serving the fleet management use differs from that of the wholesale and storage use under the proposed project or expanded streetscape variant in that it would include buses, which are not a vehicle category that may serve the proposed project or expanded streetscape variant, and there would be very few single-unit and tractor trailer trucks. In addition, because this alternative would reduce the parcel delivery square footage, it would result in fewer single-unit and tractor trailer trucks and lower associated emissions than those under the proposed project or expanded streetscape variant.

Under this alternative, the elimination of manufacturing and maker space and reduced transportation refrigeration units, and the shift in the vehicle fleet mix to reduce single-unit and tractor trailer trucks, would result in a decrease in operational mass emissions of NO_X as compared to the proposed project or expanded streetscape variant. The Fleet Management Use Mix Alternative would result in NO_X emissions that would not

[297] The project's net increase in daily NO_X emission is 148.4 pounds per day. The Fleet Management Use Mix Use Alternative would result in a net increase of 53.6 pounds per day of NO_X, or approximately 94.8 pounds per day less.

[298] It should be noted that the estimate of daily emissions is likely conservative because it represents a maximum day in which peak vehicle trips and onsite vehicle movement along with testing of both emergency generators would occur.

exceed the air district's significance thresholds of 54 pounds per day and 10 tons per year. Specifically, NO_X emissions under the Fleet Management Use Mix Alternative would be approximately 53.6 pounds per day and 9.1 tons per year, substantially lower than the operational emissions under the proposed project or expanded streetscape variant, without the need to implement mitigation measures. Therefore, this impact for the Fleet Management Use Mix Alternative would be ***less than significant***.

Health Risks. There would be an increase of approximately 20 percent in offsite emissions from worker and delivery trips to and from the site along the offsite traffic routes for the Fleet Management Use Mix Alternative, compared to the proposed project or expanded streetscape variant. This is attributed to an increase in vehicle trips, including worker commute trips, patrons and vendors/deliveries to the site, and bus trips. However, $PM_{2.5}$ exhaust is slightly lower, by 2 percent, under the Fleet Management Use Mix Alternative than under the proposed project or expanded streetscape variant, because the increase in vehicles under the Fleet Management Use Mix Alternative results from buses rather than higher polluting diesel trucks (i.e., single-unit and tractor trailer trucks), as under the proposed project or expanded streetscape variant. This shift in the vehicle types would lower the $PM_{2.5}$ exhaust emissions. There would also be a decrease of about 23 percent in $PM_{2.5}$ exhaust and total $PM_{2.5}$ emissions related to parcel delivery for this alternative compared to parcel delivery for the proposed project or expanded streetscape variant. Additionally, total $PM_{2.5}$ emissions and exhaust $PM_{2.5}$ emissions generated on site would decrease compared to the proposed project or expanded streetscape variant due in large part to the reduction in total onsite diesel trucks by 18 percent (for total $PM_{2.5}$) and 47 percent (for exhaust $PM_{2.5}$).

Consequently, the cancer risk and the annual $PM_{2.5}$ concentration at the maximally exposed individual residential and worker receptors for the Fleet Management Use Mix Alternative would also decrease compared to those determined for the proposed project or expanded streetscape variant. The maximum lifetime cancer risk is estimated to be 3.14 per one million (23 percent lower than the proposed project) and 3.27 per one million (37 percent lower than the proposed project) for the residential and worker receptors, respectively. For the same reasons as the proposed project or expanded streetscape variant, noncancer chronic and acute health risks for the Fleet Management Use Mix Alternative would be well below the significance threshold. Annual $PM_{2.5}$ concentrations for the Fleet Management Use Mix Alternative are estimated to be 0.068 $\mu g/m^3$ and 0.159 $\mu g/m^3$ at the maximally exposed residential and worker receptors, respectively. As explained in Impact AQ-5, the health risk impacts associated with the proposed project or expanded streetscape variant do not exceed the project thresholds of significance. Therefore, because the Fleet Management Use Mix Alternative would result in reduced health risk impacts in comparison to the proposed project or expanded streetscape variant, and for the same reasons detailed in the discussion of Impact AQ-4 and Impact C-AQ-1, project and cumulative health impacts associated with the Fleet Management Use Mix Alternative's construction and long-term operations would be ***less than significant.***

Odors. Odors associated with construction and operational activities under the Fleet Management Use Mix Alternative would be similar to those under the proposed project or expanded streetscape variant. Therefore, for the same reasons discussed in Section 3.D, Air Quality, Impact AQ-5, of the draft EIR, the Fleet Management Use Mix Alternative would result in ***less-than-significant*** project and cumulative impacts related to the generation of odors that could adversely affect a substantial number of people.

IMPACT ANALYSIS – INITIAL STUDY TOPICS DETERMINED TO BE LESS THAN SIGNIFICANT WITH MITIGATION

The initial study (Appendix B) of the draft EIR concluded that the impacts of the proposed project or expanded streetscape variant would be less than significant with mitigation for the following environmental resource areas: cultural resources, tribal cultural resources, wind, and paleontological resources.

The Fleet Management Use Mix Alternative would have the same building configuration, massing, and foundation system as the proposed project or expanded streetscape variant. This alternative would have similar construction-related impacts to archeological, tribal and cultural, and paleontological resources as those under the proposed project or expanded streetscape variant. The same mitigation measures identified for the proposed project or expanded streetscape variant would be required for the Fleet Management Use Mix Alternative. Additionally, because the buildings would be the same height and have the same massing as those under the proposed project or expanded streetscape variant, the wind impacts would be similar for this alternative. The same wind mitigation measures that would be required for the proposed project or expanded streetscape variant would also be required for the Fleet Management Use Mix Alternative. These impacts would be ***less than significant with mitigation***.

IMPACT ANALYSIS – OTHER INITIAL STUDY TOPICS

The initial study (Appendix B) of this draft EIR concluded that the proposed project or expanded streetscape variant would have no impacts or less-than-significant impacts related to the following environmental resource areas: land use and planning, population and housing, GHG emissions, shadow, recreation, utilities and service systems, public services, biological resources, hydrology and water quality, hazards and hazardous materials, mineral resources, energy, agricultural and forestry resources, and wildfire.

The Fleet Management Use Mix Alternative would demolish the existing four single-story PDR buildings on site and construct two new three-story buildings (plus active roof). The combined building square footage of the Fleet Management Use Mix Alternative (2,160,000 square feet) would be the same as that of the proposed project (2,160,000 square feet). However, the allocation of space for PDR uses within the building footprint would be different. Unlike the proposed project, no wholesale and storage space would be provided; rather, space would be allocated for fleet management uses (50 percent) that are not proposed under the project. Additionally, the Fleet Management Use Mix Alternative does not include manufacturing and maker space or retail space.

As shown in Table 5-1 (p. 5-7), there would be a net increase of approximately 1,161 employees associated with the Fleet Management Use Mix Alternative, compared to 1,242 net new employees under the proposed project .[299] Because of the slight reduction of employees compared to the proposed project or expanded streetscape variant, there would be a similar, yet slightly reduced, impact associated with unplanned population, employment, and housing growth; displacement of people; or increased demand for recreation, utilities and service systems, and public services (discussed in the initial study [see Appendix B of this draft EIR]). These impacts on utilities and public services would be ***less than significant***, and similar to the proposed project or expanded streetscape variant. Impacts related to GHG emissions and energy also would be ***less than significant***, as reported for the proposed project or expanded streetscape variant. Although the

[299] For the purposes of calculating the number of employees, it is assumed that 2017 uses of the project site employed 735 workers. Therefore, the proposed project and Fleet Management Use Mix Alternative would result in a net increase in employment of approximately 1,896 employees and 1,161 employees, respectively, relative to 2017 conditions.

GHG emission levels and energy use associated with building operations would be similar to those under the proposed project or expanded streetscape variant, the elimination of manufacturing and maker space and refrigeration uses would eliminate associated potential GHG emissions. In addition, mobile-source GHG emissions and energy consumption would be less, because this alternative would result in 31 percent fewer daily person trips and 15 percent fewer vehicle trips than the proposed project or expanded streetscape variant, including a shift in fleet mix to fewer single-unit and tractor trailer trucks, and the fleet management uses would not require transportation refrigeration units (see earlier transportation and air quality analysis for the Fleet Management Use Mix Alternative under "Impact Analysis – EIR Topics").

Because the Fleet Management Use Mix Alternative would have the same building configuration and foundation system as the proposed project or expanded streetscape variant, impacts related to site-specific conditions would be the same in the areas of land use and planning, shadow, biological resources, hydrology and water quality, and hazards and hazardous materials. Similarly, it is not anticipated that the different PDR uses identified for this alternative would result in the use of significantly more water, different utilities, or hazardous materials compared to the proposed project or expanded streetscape variant. All of these impacts would be ***less than significant***, the same as concluded for the proposed project. or expanded streetscape variant

As with the proposed project or expanded streetscape variant, no impacts related to mineral resources, agricultural or forestry resources, or wildfire would occur under the Fleet Management Use Mix Alternative because there are no such resources or conditions in the project area.

5.C.4 Expanded Parcel Delivery Use Alternative

The Expanded Parcel Delivery Use Alternative, summarized in Table 5-1 (p. 5-7) and detailed below, assumes that the project sponsor would develop the project site with a mix of PDR uses different from that of the proposed project. The purpose of this alternative is to reduce air emissions from mobile sources and eliminate emissions from maker and manufacturing use would occur under the proposed project or expanded streetscape variant, and to aid decision makers in understanding the potential impacts related to a different PDR tenant use mix than that analyzed for the proposed project.

DESCRIPTION OF EXPANDED PARCEL DELIVERY USE ALTERNATIVE

The Expanded Parcel Delivery Use Alternative would demolish the existing four single-story PDR buildings on site and construct two new three-story buildings (plus active roof) in the same configuration used for the proposed project. The combined building square footage of the Expanded Parcel Delivery Use Alternative (2,160,000 square feet) is the same as that of the proposed project. Unlike the proposed project, this alternative would provide space for only one PDR use, consisting of parcel delivery service, including last-mile delivery, as shown in Table 5-1 (p. 5-7). The Expanded Parcel Delivery Use Alternative would not include ground-floor manufacturing and maker or retail spaces. The areas of the buildings identified for these uses in the proposed project (35,000 square feet of manufacturing and maker space and 8,400 square feet of retail) would instead be used for PDR support space to maximize the efficiency of each building's layout and internal circulation. Under the Expanded Parcel Delivery Use Alternative, planning code amendments for height district reclassification, associated zoning map amendments, and planning code amendments to adopt a Special Use District for the project site would be required, similar to the proposed project. The project approvals would reflect minimum/maximum square footage limits for the parcel delivery service use and would prohibit retail and manufacturing and maker uses.

The Expanded Parcel Delivery Use Alternative would include sustainability features similar to those of the proposed project, such as water- and energy-efficient designs, electrical docking stations, and an active rooftop with a solar array. Similar to the proposed project, the Expanded Parcel Delivery Use Alternative would include street, sidewalk, or and streetscape improvements; bicycle parking; and a TDM plan. Transportation and circulation changes and improvements under the Expanded Parcel Delivery Use Alternative would be the same as those under the proposed project, except that the on-street commercial loading zones on McKinnon Avenue would not be provided under this alternative. Additionally, this alternative could also include the street improvements that are described for the expanded streetscape variant.

IMPACT ANALYSIS – EIR TOPICS

Transportation and Circulation

The Expanded Parcel Delivery Use Alternative includes the same amount of development area as the proposed project or expanded streetscape variant. However, all of it would be allocated to parcel and last-mile delivery.

Travel Demand. Table 5-5 presents the net new person trips by way of travel and vehicle trips, under both the proposed project and the Expanded Parcel Delivery Use Alternative, for the weekday daily and a.m. and p.m. peak-hour conditions. Due to the reallocation of the manufacturing and maker, wholesale and storage, and retail uses to parcel and last-mile delivery (i.e., from 65 percent of all uses under the proposed project or expanded streetscape variant to 100 percent under the Expanded Parcel Delivery Use Alternative), the Expanded Parcel Delivery Use Alternative would result in about a 4 percent increase in daily vehicle trips, a 6 percent decrease in a.m. peak hour vehicle trips, and a 19 percent increase in p.m. peak hour vehicle trips in comparison to the proposed project or expanded streetscape variant (see Table 5-5).

Table 5-5 Net New Weekday Daily and A.M. and P.M. Peak Hour Travel Demand for Proposed Project and the Expanded Parcel Delivery Use Alternative

Proposed Project and Alternative	Net New Person Trips[1]			Net New Vehicle Trips		
	Daily	AM	PM	Daily	AM	PM
Proposed Project[2]	8,910	648	795	6,008	431	571
Expanded Parcel Delivery Use Alternative	7,438	481	773	6,262	405	678
Change from Proposed Project[3]	-1,472	-167	-22	254	-26	107
% Change from Proposed Project[3]	-17%	-26%	-3%	4%	-6%	19%

Source: Adavant Consulting/LCW Consulting, 2023 (see Appendix D)

Notes:

1. Person trips by all ways of travel.
2. Travel demand for the expanded streetscape variant is the same as for the proposed project.
3. Travel demand change in trips and percent change from the proposed project.

Construction. The Expanded Parcel Delivery Use Alternative would involve the same amount (i.e., 2,160,000 square feet) and duration (31 months) of construction activities as the proposed project or expanded streetscape variant. Therefore, construction-related transportation impacts of the Expanded Parcel Delivery Use Alternative would be ***less than significant***, which would be similar to the proposed project or expanded streetscape variant.

Potentially Hazardous Conditions and Accessibility. Transportation and circulation changes and improvements under the Expanded Parcel Delivery Use Alternative would be the same as those under the proposed project or expanded streetscape variant, except that the on-street commercial loading zones on McKinnon Avenue would not be provided under this alternative. Like the proposed project or expanded streetscape variant, the Expanded Parcel Delivery Use Alternative would be required to conform to city design standards and undergo review by city agencies, including the fire and police departments, if applicable. Therefore, for the same reasons discussed for the proposed project or expanded streetscape variant, impacts of the Expanded Parcel Delivery Use Alternative related to potentially hazardous conditions and accessibility would be ***less than significant***, which would be similar to the proposed project or expanded streetscape variant.

Transit Delay. Under the Expanded Parcel Delivery Use Alternative, there would be a modest change in the number of vehicle trips from those estimated under the proposed project or expanded streetscape variant. Specifically, under the Expanded Parcel Delivery Use Alternative there would be approximately 26 fewer vehicles during the a.m. peak hour and 107 more vehicles during the p.m. peak hour. The Expanded Parcel Delivery Use Alternative would result in more vehicle trips during the p.m. peak hour than the proposed project or expanded streetscape variant; however, similar to the proposed project or expanded streetscape variant, these additional vehicle trips would be distributed over numerous streets, many of which do not contain public transit service (e.g., Jerrold Avenue, Cesar Chavez Street, and Toland Street). The number of vehicles on streets farther from the project site that contain public transit would be slightly more under the Expanded Parcel Delivery Use Alternative than under the proposed project or expanded streetscape variant, and would be greater than the SF transportation guidelines screening criterion of 300 peak hour vehicle trips for projects that would not result in significant public transit delay effects. However, for the same reasons discussed in the qualitative assessment under Impact TR-4 for the proposed project, the Expanded Parcel Delivery Use Alternative would not result in substantial public transit delay. Therefore, transit delay impacts for the Expanded Parcel Delivery Use Alternative would be ***less than significant***, which would be similar to the proposed project or expanded streetscape variant.

Vehicle Miles Traveled. Similar to the proposed project or expanded streetscape variant, the Expanded Parcel Delivery Use Alternative would not be inconsistent with the criteria outlined in CEQA section 21099(b)(1), nor with the region's Sustainable Communities Strategy. In addition, the project site is in San Francisco's only Priority Production Area under the region's Sustainable Communities Strategy (Plan Bay Area), which prioritizes areas for economic development investments and protection of industrial businesses from competing land uses. Furthermore, the average daily VMT per capita calculated for the parcel and last-mile delivery use under the Expanded Parcel Delivery Use Alternative would be less than for the proposed project or expanded streetscape variant and below the VMT significance threshold. As described above, the Expanded Parcel Delivery Use Alternative would include most of the same transportation network changes and improvements as the proposed project or expanded streetscape variant, which fit within the general types of projects that would not substantially induce automobile travel. Therefore, the impact of the Expanded Parcel Delivery Use Alternative related to VMT and induced automobile travel would be ***less than significant***, which would be similar to the proposed project or expanded streetscape variant.

Loading. Similar to the proposed project or expanded streetscape variant, each building under the Expanded Parcel Delivery Use Alternative would include a combination of enclosed and partially enclosed spaces, with a multi-level vehicular system that provides staging, circulation, and logistics yard areas serving the proposed parcel delivery uses. In addition, the Expanded Parcel Delivery Use Alternative would include the same onsite loading docks accessed via curb cuts on Kirkwood Avenue as the proposed project or expanded streetscape variant. However, because this alternative would not include any ground-floor manufacturing and maker space or retail uses, it would not include the on-street commercial loading zones on McKinnon Avenue to accommodate demand generated from those uses. The Expanded Parcel Delivery Use Alternative would also provide the same on-street passenger loading zones on Rankin and Toland streets as the proposed project or expanded streetscape variant. Similar to the proposed project or expanded streetscape variant, the proposed onsite and on-street loading facilities for the Expanded Parcel Delivery Use Alternative would be adequate to accommodate the projected loading demand for this alternative. Therefore, impacts of the Expanded Parcel Delivery Use Alternative related to loading would be ***less than significant***, which would be similar to the proposed project or expanded streetscape variant.

Cumulative Analysis. For the same reasons discussed for the proposed project or expanded streetscape variant, no significant cumulative impacts regarding construction-related transportation impacts or operational impacts (i.e., potentially hazardous conditions, accessibility, transit delay, VMT, and loading) would occur under the Expanded Parcel Delivery Use Alternative. Therefore, cumulative transportation and circulation impacts with the Expanded Parcel Delivery Use Alternative would be ***less than significant***, which would be similar to the proposed project or expanded streetscape variant.

Noise and Vibration

Construction Noise and Vibration. Under the Expanded Parcel Delivery Use Alternative, noise- and vibration-generating construction activities and equipment would be the same as those analyzed for the proposed project or expanded streetscape variant. Therefore, similar to the proposed project or expanded streetscape variant, impacts generated by construction noise and vibration would be ***less than significant.***

Fixed-Source Noise. The Expanded Parcel Delivery Use Alternative would require HVAC systems to support the facility’s enclosed and partially enclosed areas. Although shifts in square footage of uses may redistribute the HVAC systems, the overall HVAC needs of the parcel delivery use and building spaces would be nearly identical to those required by the proposed project or expanded streetscape variant. The Expanded Parcel Delivery Use Alternative would increase the area of logistics yard uses by 9.8 percent, and would therefore require a slight increase in ventilation system capacity while conversely slightly reducing the necessary capacities of rooftop HVAC equipment. Because the design and capacity of the system would be similar to those under the proposed project or expanded streetscape variant, operational noise from fixed sources under the Expanded Parcel Delivery Use Alternative would exceed the article 29, section 2909(b) thresholds at the property plane. Mitigation Measures M-NO-3a and M-NO-3b, as detailed under Impact NO-3, would apply to the Expanded Parcel Delivery Use Alternative, as they would for the proposed project or expanded streetscape variant, and would reduce operational noise to below impact thresholds. This alternative would also require an emergency generator unit at each building that would be of similar capacity and tested on the same schedule as the proposed project or expanded streetscape variant. Similar to the proposed project or expanded streetscape variant, property plane noise impacts generated by emergency generator testing would be less than significant. In summary, fixed-source noise impacts associated with the HVAC units under Expanded Parcel Delivery Use Alternative would be ***less than significant with mitigation***, like the proposed project or expanded streetscape variant.

Mobile Source Noise. The Expanded Parcel Delivery Use Alternative would result in an increase in onsite and offsite operational traffic volumes by approximately 4 percent when compared with the proposed project or expanded streetscape variant. Increased traffic volumes generally correspond with increased traffic noise. However, the Expanded Parcel Delivery Use Alternative would only increase the number of cars and vans traveling to and from the site, while maintaining the same number of heavy truck trips and reducing the daily volumes of medium truck trips by approximately 21 percent. The notable reduction in medium truck trips would have a greater effect on overall traffic noise levels than the increase in cars and vans. As a result, the overall traffic noise levels generated by the Expanded Parcel Delivery Use Alternative at noise-sensitive land uses would be less than those predicted for the proposed project or expanded streetscape variant. Therefore, impacts from operational traffic noise at noise-sensitive land uses generated by the Expanded Parcel Delivery Use Alternative would be ***less than significant,*** the same significance determination as for the proposed project or expanded streetscape variant.

Cumulative Analysis. The Expanded Parcel Delivery Use Alternative would use the same construction equipment types, quantities, and approaches as the proposed project or expanded streetscape variant. Thus, for the same reasons as described for the proposed project or expanded streetscape variant, cumulative construction-related noise and vibration impacts resulting from the Expanded Parcel Delivery Use Alternative would be less than significant.

With respect to fixed sources of noise (i.e., the HVAC mechanical systems and emergency generators), under the Expanded Parcel Delivery Use Alternative, the operational noise from fixed sources would be approximately equal to the fixed-source operational noise for the proposed project or expanded streetscape variant. Thus, for the same reasons as described for the proposed project or expanded streetscape variant, cumulative noise impacts associated with fixed sources resulting from the Expanded Parcel Delivery Use Alternative would be less than significant.

As described in the mobile source noise analysis above, the Expanded Parcel Delivery Use Alternative would result in slightly lower traffic noise levels than those predicted for the proposed project or expanded streetscape variant; thus, the cumulative effect of traffic noise with this alternative and other cumulative projects would be less than the cumulative effect with the proposed project or expanded streetscape variant. Therefore, the overall cumulative construction and operational noise and vibration impacts associated with the Expanded Parcel Delivery Use Alternative would be ***less than significant***.

Air Quality

Conflict with Clean Air Plan. Because the Expanded Parcel Delivery Use Alternative and the proposed project or expanded streetscape variant would be the same in terms of floor area, number of buildings, and site plan improvements, the Expanded Parcel Delivery Use Alternative would result in construction emissions similar to those of the proposed project or expanded streetscape variant. Total operational space would be the same as under the proposed project or expanded streetscape variant, but the PDR use mix would be allocated entirely to parcel delivery, including last-mile use, with no manufacturing and maker space, ground-floor retail, or wholesale and storage use. This different mix of uses results in reduced operational emissions compared to the proposed project or expanded streetscape variant, including an approximately 28 percent reduction in the net increase in operational NO_X emissions.[300] However, like the proposed project or expanded streetscape variant, operational emissions under the Expanded Parcel

[300] The project's net increase in daily NO_X emission is 148.4 pounds per day. The Expanded Parcel Delivery Use Alternative would result in a net increase of 107.5 pounds per day of NO_X, or approximately 40.9 pounds per day less.

Delivery Use Alternative would still exceed significance thresholds for NO_X, resulting in a net increase of approximately 108 pounds per day or 19 tons per year of NO_X. For the same reasons discussed for the proposed project under Impact AQ-1 in Section 3.D, Air Quality, of the draft EIR, the Expanded Parcel Delivery Use Alternative would conflict with or obstruct implementation of an applicable air quality plan. Mitigation Measures M-AQ-3a through AQ-3i—as detailed under Impact AQ-3—would apply to the Expanded Parcel Delivery Use Alternative, as they would for the proposed project or expanded streetscape variant. These measures would reduce NO_X emissions to a level that would not exceed the thresholds of significance. These mitigation measures would further reinforce actions such as offroad equipment and transportation refrigeration unit electrification, and use of cleaner on-road vehicles, all of which align with the 2017 Clean Air Plan. With implementation of these mitigation measures, the Expanded Parcel Delivery Use Alternative would not conflict with the applicable air quality plan, and, like the proposed project or expanded streetscape variant, this impact under the Expanded Parcel Delivery Use Alternative would be ***less than significant with mitigation*.**

Construction Air Pollutant Emissions. As with the proposed project or expanded streetscape variant, the Expanded Parcel Delivery Use Alternative would demolish the existing four single-story PDR buildings and construct two new buildings in a configuration similar to the proposed project or expanded streetscape variant. As a result, construction activities would be the same as the proposed project or expanded streetscape variant, and would result in the same emissions. Development under the Expanded Parcel Delivery Use Alternative would be subject to the same requirements as the proposed project or expanded streetscape variant, such as the San Francisco Construction Dust Control Ordinance, and would pursue priority processing as a Type 3 Clean Construction Project, and use Tier 4 construction equipment. Therefore, construction-related emissions for the Expanded Parcel Delivery Use Alternative would be similar to those for the proposed project or expanded streetscape variant, and construction criteria air pollutants impacts under the Expanded Parcel Delivery Use Alternative would be ***less than significant.***

Operational Air Pollutant Emissions. The Expanded Parcel Delivery Use Alternative includes the same amount of development as the proposed project or expanded streetscape variant; however, all of the PDR development area gross square footage would be allocated for parcel and last-mile delivery uses, and ground-level retail and manufacturing and maker space would not be included. The number of transportation refrigeration units would increase slightly in comparison to the proposed project or expanded streetscape variant, because the parcel delivery use is anticipated to have a greater proportion of use requiring transportation refrigeration units than the warehousing/storage use that is included in the proposed project. In addition, the vehicle fleet mix for the Expanded Parcel Delivery Use Alternative would shift slightly to include a greater proportion of vans and fewer single-unit and tractor trailer trucks. Overall, operational emissions under the Expanded Parcel Delivery Use Alternative would be less than those under the proposed project or expanded streetscape variant. This alternative would result in a net increase in operational NO_X emissions that would be approximately 28 percent less than under the proposed project or expanded streetscape variant, but would still exceed the threshold of significance for NO_X.[301] Therefore, like the proposed project or expanded streetscape variant, the Expanded Parcel Delivery Use Alternative would result in a cumulatively considerable net increase in NO_X, a criteria air pollutant for which the project region is in nonattainment status, and this impact would be ***significant.*** Mitigation Measures M-AQ-3a through M-AQ-3i—as detailed under Impact AQ-3—would apply to the Expanded Parcel Delivery Use Alternative, as they would for the proposed project or expanded streetscape variant. These

[301] The project's net increase in daily NO_X emission is 148.4 pounds per day. The Expanded Parcel Delivery Use Alternative would result in a net increase of 107.5 pounds per day of NO_X, or approximately 40.9 pounds per day less.

measures would reduce NO_X emissions to a level that would not exceed thresholds of significance. Therefore, like the proposed project or expanded streetscape variant, with implementation of Mitigation Measures M-AQ-3a through M-AQ-3i, the Expanded Parcel Delivery Use Alternative would not result in a cumulatively considerable net increase in any criteria pollutant for which the project region is in nonattainment status under an applicable federal, state, or regional ambient air quality standard, and this impact for the Expanded Parcel Delivery Use Alternative would be ***less than significant with mitigation***.

Health Risks. Due to the increase in last-mile vehicle travel under the Expanded Parcel Delivery Use Alternative, there would be an increase of approximately 52 percent in offsite $PM_{2.5}$ exhaust and 53 percent in total $PM_{2.5}$ (inclusive of resuspended roadway dust) along the offsite circulation routes. $PM_{2.5}$ exhaust and total $PM_{2.5}$ from offsite worker and delivery trips for the Expanded Parcel Delivery Use Alternative are lower than those under the proposed project or expanded streetscape variant by 8 percent and 18 percent, respectively As a result of these changes in emissions for the Expanded Parcel Delivery Use Alternative, the cancer risk at both the maximally exposed individual residential and worker receptors would increase approximately 2 to 3 percent in comparison to the proposed project or expanded streetscape variant. The maximum cancer risk for the for the Expanded Parcel Delivery Alternative is estimated to be 4.84 per one million (a 3 percent increase from the proposed project or expanded streetscape variant) and 5.22 per one million (a 2 percent increase from the proposed project or expanded streetscape variant) at the maximally exposed residential and worker receptors, respectively. These maximum cancer risk values are below the significance threshold of an excess cancer risk of 7 per one million for receptors that are exposed to an excess cancer risk that meet the air pollutant exposure zone criteria.

Under the Expanded Parcel Delivery Use Alternative, annual $PM_{2.5}$ concentrations would increase slightly by about 1 percent at the maximally exposed individual worker receptor, and would increase by about 22 percent at the maximally exposed individual residential receptor, compared to the proposed project or expanded streetscape variant. Offsite parcel delivery would make up about 48 percent of the annual $PM_{2.5}$ concentrations at the maximally exposed individual residential receptor, which accounts for the increase in concentrations at this receptor. Annual $PM_{2.5}$ concentrations for the Expanded Parcel Delivery Alternative are estimated to be 0.098 $\mu g/m^3$ and 0.176 $\mu g/m^3$ at the maximumly exposed individual residential and worker receptor, respectively. These maximum annual average $PM_{2.5}$ concentrations are below the significance threshold of 0.2 $\mu g/m^3$ for receptors that are exposed to $PM_{2.5}$ concentrations that meet the air pollutant exposure zone criteria.

Although there is an increase in cancer risk and annual $PM_{2.5}$ concentrations under this alternative, these values remain below their respective thresholds of significance. Therefore, for the same reasons detailed in the discussion of Impact AQ-4 and Impact C-AQ-1, project and cumulative health impacts associated with the Expanded Parcel Delivery Use Alternative would be ***less than significant.***

Odors. Generation of odors associated with construction and operational activities under the Expanded Parcel Delivery Use Alternative would be similar to those under the proposed project or expanded streetscape variant. Therefore, for the same reasons discussed in Section 3.D, Air Quality, Impact AQ-5, of this draft EIR, the Expanded Parcel Delivery Use Alternative would result in ***less-than-significant*** project and cumulative impacts related to the generation of odors that could adversely affect a substantial number of people.

IMPACT ANALYSIS – INITIAL STUDY TOPICS DETERMINED TO BE LESS THAN SIGNIFICANT WITH MITIGATION

The initial study (Appendix B) of the draft EIR concluded that the impacts of the proposed project or expanded streetscape variant would be less than significant with mitigation for the following environmental resource areas: cultural resources, tribal cultural resources, wind, and paleontological resources.

The Expanded Parcel Delivery Use Alternative would have the same building configuration, massing, and foundation as the proposed project or expanded streetscape variant. This alternative would have similar construction-related impacts to archeological, tribal and cultural, and paleontological resources, and the same mitigation measures identified for the proposed project or expanded streetscape variant would be required for the Expanded Parcel Delivery Use Alternative. Because the buildings would be the same height and massing as those for the proposed project or expanded streetscape variant, the wind impacts would be similar for this alternative, and the same wind mitigation measures that would be required for the proposed project or expanded streetscape variant would also be required for the Expanded Parcel Delivery Use Alternative. These impacts would be ***less than significant with mitigation***.

IMPACT ANALYSIS – OTHER INITIAL STUDY TOPICS

The initial study (Appendix B) of this draft EIR concluded that the proposed project or expanded streetscape variant would have no impacts or less-than-significant impacts related to the following environmental resource areas: land use and planning, population and housing, GHG emissions, shadow, recreation, utilities and service systems, public services, biological resources, hydrology and water quality, hazards and hazardous materials, mineral resources, energy, agricultural and forestry resources, and wildfire.

As shown in Table 5-1 (p. 5-7), there would be a net increase of approximately 1,161 employees associated with the Expanded Parcel Delivery Use Alternative compared to 1,242 net new employees under the proposed project.[302] Because of the slight reduction of employees compared to the proposed project or expanded streetscape variant, there would be similar, yet slightly reduced, impacts associated with unplanned population, employment, and housing growth; displacement of people; or increased demand for recreation, utilities and service systems, and public services (discussed in the initial study [see Appendix B of this draft EIR]). These impacts under the Expanded Parcel Delivery Use Alternative would be ***no impact or less than significant***, similar to the proposed project or expanded streetscape variant. Impacts related to GHG emissions and energy also would be ***less than significant***, as reported for the proposed project or expanded streetscape variant. The GHG emission levels and energy use associated with building operations would be similar to those under the proposed project or expanded streetscape variant. Mobile-source GHG emissions and energy consumption would also be similar because this alternative would result in 17 percent fewer daily person trips, but 4 percent more vehicle trips than the proposed project or expanded streetscape variant (see earlier transportation and air quality analysis for the Expanded Parcel Delivery Use Alternative under "Impact Analysis – EIR Topics"). However, the elimination of manufacturing and maker uses would further reduce potential GHG emissions associated with this alternative.

Because the Expanded Parcel Delivery Use Alternative would have the same building configuration and foundation system as the proposed project or expanded streetscape variant, impacts related to site-specific

[302] For the purposes of calculating the number of employees, it is assumed that 2017 uses of the project site employed 735 workers. Therefore, the proposed project and Expanded Parcel Delivery Use Alternative would result in a net increase in employment of approximately 1,896 employees and 1,161 employees, respectively, relative to 2017 conditions.

conditions would be the same in the areas of land use and planning, shadow, biological resources, hydrology and water quality, and hazards and hazardous materials. Similarly, it is not anticipated that the different PDR uses identified for this alternative would result in the use of significantly more water, different utilities, or hazardous materials compared to the proposed project or expanded streetscape variant. All of these impacts would be ***less than significant***, the same as concluded for the proposed project or expanded streetscape variant.

As with the proposed project or expanded streetscape variant, ***no impacts*** related to mineral resources, agricultural or forestry resources, or wildfire would occur under the Expanded Parcel Delivery Use Alternative, because there are no such resources or conditions in the project area.

5.D Comparison of Alternatives and Environmentally Superior Alternative

5.D.1 Comparison and Summary of Impacts of Alternatives and Their Ability to Meet Project Objectives

Table 5-6 identifies the level of impact for the proposed project or expanded streetscape variant and each alternative (i.e., not applicable, no impact, less-than-significant impact, or less-than-significant impact with mitigation) and indicates whether the impact of the alternative would be the less than, greater than, or similar to that of the proposed project or expanded streetscape variant.

The ability of each to meet the project objectives are summarized in comparison to the proposed project in Table 5-1 (p. 5-7), and in the subsequent discussion.

NO PROJECT ALTERNATIVE

The No Project Alternative would not meet any of the project objectives, except for Objective 5 (site PDR uses in a dense infill setting to create employment near housing and reduce vehicle miles traveled for potential distribution uses by locating such uses in San Francisco proximate to multiple freeways, rather than traditional suburban locations), which the No Project Alternative meets, but to a lesser degree than the proposed project. The existing PDR buildings would remain on site, and no new PDR space would be provided; therefore, the No Project Alternative would not meet the underlying objective to develop a modern, flexible, and durable PDR facility for a diverse and evolving range of uses in a central urban environment. The No Project Alternative would not advance progress toward the city's long-standing goals to upgrade and expand PDR space, replace functionally outdated PDR space with first- and best-in-class facilities, use innovative design at a size and scale that accommodates a range of large and small PDR uses, or boost resiliency in the local supply chain. The project site would not be redeveloped to make efficient use of existing utilities, circulation, and complementary uses in the surrounding PDR-2 zoning district.

As detailed in Table 5-1 (p. 5-7), the No Project Alternative would have a total building floor area of 448,000 square feet, which is approximately one-fifth of the total building area of the proposed project, and would result in a net gain of 15 employees compared to the 1,242 of the proposed project. The No Project Alternative has a considerably smaller overall footprint, and would not provide an appreciable positive fiscal impact as it would not substantially change the existing buildings nor the workforce size required for the site. This alternative would contribute, but not as much as the proposed project would, to new jobs at a variety of experience levels; enhanced property values; property taxes; workers who will support direct and indirect local business growth in the Bayview; and employment near housing that would reduce VMT for potential distribution uses by locating such uses in San Francisco.

Table 5-6 Comparison of Environmental Impacts of the San Francisco Gateway Project to Impacts of the Alternatives

Environmental Impacts	San Francisco Gateway Project	No Project Alternative	Code-Compliant Alternative	Fleet Management Use Mix Alternative	Expanded Parcel Delivery Use Alternative
EIR TOPICS					
TRANSPORTATION AND CIRCULATION					
Impact TR-1: Construction of the San Francisco Gateway Project or variant would require a substantially extended duration or intense activity due to construction, but the secondary effects of that construction would not 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.	Less than significant (LTS)	Less than the proposed project (LTS)	Less than the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
Impact TR-2: Operation of the San Francisco Gateway Project or variant would not create potentially hazardous conditions for people walking, bicycling, or driving or public transit operations.	Less than significant (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
Impact TR-3: Operation of the San Francisco Gateway Project or variant would not interfere with accessibility of people walking or bicycling to and from the project site, and adjoining areas, or result in inadequate emergency access.	Less than significant (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
Impact TR-4: Operation of the San Francisco Gateway Project or variant would not substantially delay public transit.	Less than significant (LTS)	Less than the proposed project (LTS)	Less than the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
Impact TR-5: Operation of the San Francisco Gateway Project or variant would not cause substantial additional VMT or substantially induce automobile travel.	Less than significant (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
Impact TR-6: Operation of the San Francisco Gateway Project or variant would not result in a loading deficit.	Less than significant (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
Impact C-TR-1: The San Francisco Gateway Project or variant, in combination with cumulative projects, would not result in significant construction-related transportation impacts.	Less than significant (LTS)	Less than the proposed project (LTS)	Less than the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
Impact C-TR-2: The San Francisco Gateway Project or variant, in combination with cumulative projects, would not create potentially hazardous conditions.	Less than significant (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)

Environmental Impacts	San Francisco Gateway Project	No Project Alternative	Code-Compliant Alternative	Fleet Management Use Mix Alternative	Expanded Parcel Delivery Use Alternative
Impact C-TR-3: The San Francisco Gateway Project or variant, in combination with cumulative projects, would not interfere with accessibility.	Less than significant (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
Impact C-TR-4: The San Francisco Gateway Project or variant, in combination with cumulative projects, would not substantially delay public transit.	Less than significant (LTS)	Less than the proposed project (LTS)	Less than the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
Impact C-TR-5: The San Francisco Gateway Project or variant, in combination with cumulative projects, would not cause substantial additional VMT or substantially induce automobile travel.	Less than significant (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
Impact C-TR-6: The San Francisco Gateway Project or variant, in combination with cumulative projects, would not result in significant cumulative loading impacts.	Less than significant (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
NOISE AND VIBRATION					
Impact NO-1: Construction of the San Francisco Gateway Project or variant would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project area in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	Less than significant (LTS)	Less than the proposed project (LTS)	Less than the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
Impact NO-2: Construction of the San Francisco Gateway Project or variant would not generate excessive groundborne vibration or groundborne noise levels.	Less than significant (LTS)	No impact (NI)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
Impact NO-3: Operation of the San Francisco Gateway Project or variant would result in the generation of a substantial temporary or permanent increase in ambient noise levels in the project area in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	Less than significant with mitigation (LTSM)	Less than the proposed project (LTS)	Similar to the proposed project (LTSM)	Similar to the proposed project (LTSM)	Similar to the proposed project (LTSM)
Impact C-NO-1: Construction of the San Francisco Gateway Project or variant, in combination with construction of cumulative projects, would not result in the generation of a substantial temporary or permanent increase in ambient noise levels in excess of standards.	Less than significant (LTS)	Less than the proposed project (LTS)	Less than the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)

Environmental Impacts	San Francisco Gateway Project	No Project Alternative	Code-Compliant Alternative	Fleet Management Use Mix Alternative	Expanded Parcel Delivery Use Alternative
Impact C-NO-2: Construction of the San Francisco Gateway Project or variant, in combination with construction of cumulative projects, would not result in the generation of excessive groundborne vibration or groundborne noise levels.	Less than significant (LTS)	No Impact (NI)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
Impact C-NO-3: Operation of the San Francisco Gateway Project or variant, in combination with cumulative projects, would not result in the generation of a substantial temporary or permanent increase in ambient noise levels in excess of standards.	Less than significant (LTS)	Less than the proposed project (LTS)	Less than the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
AIR QUALITY					
Impact AQ-1: The San Francisco Gateway Project or variant could conflict with or obstruct implementation of the 2017 Clean Air Plan.	Less than significant with mitigation (LTSM)	Less than the proposed project (LTS)	Less than the proposed project (LTSM)	Less than the proposed project (LTS)	Similar to the proposed project (LTSM)
Impact AQ-2: Construction of the San Francisco Gateway Project or variant would not result in a cumulatively considerable net increase in a criteria air pollutant for which the project region is in nonattainment status under an applicable federal, state, or regional ambient air quality standard.	Less than significant (LTS)	Less than the proposed project (LTS)	Less than the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
Impact AQ-3: The San Francisco Gateway Project or variant would result in a cumulatively considerable net increase in a criteria air pollutant for which the project region is in nonattainment status under an applicable federal, state, or regional ambient air quality standard.	Less than significant with mitigation (LTSM)	Less than the proposed project (LTS)	Less than the proposed project (LTSM) ** M-AQ-3h and M-AQ-3i would not apply*	Less than the proposed project (LTS)	Similar to the proposed project (LTSM) **All Air Quality Mitigation Measures would apply*
Impact AQ-4: The San Francisco Gateway Project or variant would not result in emissions of fine particulate matter ($PM_{2.5}$) and toxic air contaminants (TACs) that would expose sensitive receptors to substantial pollutant concentrations.	Less than significant (LTS)	Less than the proposed project (LTS)	Less than the proposed project (LTS)	Less than the proposed project (LTS)	Greater than the proposed project (LTS)
Impact AQ-5: The San Francisco Gateway Project or variant would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	Less than significant (LTS)	Less than the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)

Environmental Impacts	San Francisco Gateway Project	No Project Alternative	Code-Compliant Alternative	Fleet Management Use Mix Alternative	Expanded Parcel Delivery Use Alternative
Impact C-AQ-1: The San Francisco Gateway Project or variant, in combination with existing conditions and cumulative projects, would result in a significant cumulative health risk impact. The proposed project's contribution would be less than cumulatively considerable.	Less than significant (LTS)	Less than the proposed project (LTS)	Less than the proposed project (LTS)	Similar to the proposed project (LTS)	Greater than the proposed project (LTS)
Impact C-AQ-2: The San Francisco Gateway Project or variant, in combination with cumulative projects, would not combine with other sources of emissions, such as those leading to odors, that would adversely affect a substantial number of people.	Less than significant (LTS)	Less than the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
INITIAL STUDY – LESS-THAN-SIGNIFICANT WITH MITIGATION TOPICS					
CULTURAL RESOURCES					
Impact CR-1: The San Francisco Gateway Project or variant would not cause a substantial adverse change in the significance of a historical resource as defined in section 15064.5, including those resources listed in article 10 or article 11 of the planning code.	No impact (NI)	Similar to the proposed project (NI)	Similar to the proposed project (NI)	Similar to the proposed project (NI)	Similar to the proposed project (NI)
Impact CR-2: The San Francisco Gateway Project or variant could cause a substantial adverse change in the significance of an archeological resource pursuant to section 15064.5.	Less than significant with mitigation (LTSM)	No impact (NI)	Similar to the proposed project (LTSM)	Similar to the proposed project (LTSM)	Similar to the proposed project (LTSM)
Impact CR-3: The San Francisco Gateway Project or variant could disturb human remains, including those interred outside of formal cemeteries.	Less than significant with mitigation (LTSM)	No impact (NI)	Similar to the proposed project (LTSM)	Similar to the proposed project (LTSM)	Similar to the proposed project (LTSM)
Impact C-CR-1: The San Francisco Gateway Project or variant, in combination with cumulative projects, could result in cumulative cultural resource impacts.	Less than significant with mitigation (LTSM)	No impact (NI)	Similar to the proposed project (LTSM)	Similar to the proposed project (LTSM)	Similar to the proposed project (LTSM)
TRIBAL CULTURAL RESOURCES					
Impact TCR-1: The San Francisco Gateway Project or variant could result in 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 (LTSM)	No impact (NI)	Similar to the proposed project (LTSM)	Similar to the proposed project (LTSM)	Similar to the proposed project (LTSM)

Environmental Impacts	San Francisco Gateway Project	No Project Alternative	Code-Compliant Alternative	Fleet Management Use Mix Alternative	Expanded Parcel Delivery Use Alternative
Impact C-TCR-1: The San Francisco Gateway Project or variant, in combination with cumulative projects, could result in cumulative cultural resource impacts.	Less than significant with mitigation (LTSM)	No impact (NI)	Similar to the proposed project (LTSM)	Similar to the proposed project (LTSM)	Similar to the proposed project (LTSM)
WIND					
Impact WI-1: The San Francisco Gateway Project or variant would create wind hazards in publicly accessible areas of substantial pedestrian use.	Less than significant with mitigation (LTSM)	No impact (NI)	Less than the proposed project (LTSM)	Similar to the proposed project (LTSM)	Similar to the proposed project (LTSM)
Impact C-WI-1: The San Francisco Gateway Project or variant, in combination with cumulative projects in the project site vicinity, could result in cumulative wind impacts.	Less than significant with mitigation (LTSM)	No impact (NI)	Less than the proposed project (LTSM)	Similar to the proposed project (LTSM)	Similar to the proposed project (LTSM)
GEOLOGY AND SOILS					
Impact GE-1: The San Francisco Gateway Project or variant would not directly or indirectly cause potential adverse effects related to the rupture of a known earthquake fault, strong seismic ground shaking, and seismic-related ground failure, including liquefaction, or landslides.	Less than significant (LTS)	No impact (NI)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
Impact GE-2: Construction and operation of the San Francisco Gateway Project or variant would not result in substantial erosion or loss of topsoil.	Less than significant (LTS)	No impact (NI)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
Impact GE-3: The project site is not located on a geologic unit or soil that is unstable, or that could become unstable as a result of the San Francisco Gateway Project or variant.	Less than significant (LTS)	No impact (NI)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
Impact GE-4: The San Francisco Gateway Project or variant would not create substantial direct or indirect risks to life or property as a result of being located on expansive soil.	Less than significant (LTS)	No impact (NI)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
Impact GE-5: The San Francisco Gateway Project or variant could directly or indirectly destroy a unique paleontological resource.	Less than significant with mitigation (LTSM)	No impact (NI)	Similar to the proposed project (LTSM)	Similar to the proposed project (LTSM)	similar to the proposed project (LTSM)
Impact C-GE-1: The San Francisco Gateway Project or variant, in combination with cumulative projects in the project site vicinity, would have less-than-significant cumulative impacts related to geology, soils, and seismicity.	Less than significant (LTS)	No impact (NI)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)

Environmental Impacts	San Francisco Gateway Project	No Project Alternative	Code-Compliant Alternative	Fleet Management Use Mix Alternative	Expanded Parcel Delivery Use Alternative
ALL OTHER TOPICS					
LAND USE AND PLANNING					
Impact LU-1: The San Francisco Gateway Project or variant would not physically divide an established community.	Less than significant (LTS)	No impact (NI)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
Impact LU-2: The San Francisco Gateway Project or variant would not cause a significant physical environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	Less than significant (LTS)	No impact (NI)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
Impact C-LU-1: The San Francisco Gateway Project or variant, in combination with cumulative projects, would not result in a significant cumulative impact related to land use and planning.	Less than significant (LTS)	No impact (NI)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
POPULATION AND HOUSING					
Impact PH-1: The San Francisco Gateway Project or variant would not induce substantial unplanned population growth beyond that projected by regional forecasts, either directly or indirectly.	Less than significant (LTS)	Less than the proposed project (LTS)	Less than the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
Impact PH-2: The San Francisco Gateway Project or variant would not displace substantial numbers of existing people or housing units, necessitating the construction of replacement housing outside of the Plan area.	Not applicable (NA)	Not applicable (NA)	Not applicable (NA)	Not applicable (NA)	Not applicable (NA)
Impact C-PH-1: The San Francisco Gateway Project or variant, in combination with cumulative projects, would not result in a significant cumulative impact related to population and housing.	Less than significant (LTS)	Less than the proposed project (LTS)	Less than the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
GREENHOUSE GAS EMISSIONS					
Impact C-GG-1: The San Francisco Gateway Project or variant 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 (LTS)	Less than the proposed project (LTS)	Less than the proposed project (LTS)	Less than the proposed project (LTS)	Similar to the proposed project (LTS)
SHADOW					
Impact SH-1: The San Francisco Gateway Project or variant would not create new shadow in a manner that substantially and adversely affects the use and enjoyment of publicly accessible open spaces.	Less than significant (LTS)	No impact (NI)	Less than the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)

Environmental Impacts	San Francisco Gateway Project	No Project Alternative	Code-Compliant Alternative	Fleet Management Use Mix Alternative	Expanded Parcel Delivery Use Alternative
Impact C-SH-1: The San Francisco Gateway Project or variant, in combination with cumulative projects in the project site vicinity, would result in less-than-significant cumulative shadow impacts.	Less than significant (LTS)	No impact (NI)	Less than the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
RECREATION					
Impact RE-1: The San Francisco Gateway Project or variant, would not increase the use of existing parks and recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated.	Less than significant (LTS)	No impact (NI)	Less than the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
Impact RE-2: The San Francisco Gateway Project or variant, would not include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.	No impact (NI)	Similar to the proposed project (NI)	Similar to the proposed project (NI)	Similar to the proposed project (NI)	Similar to the proposed project (NI)
Impact C-RE-1: The San Francisco Gateway Project or variant, in combination with cumulative projects in the vicinity of the project site, would result in less-than-significant cumulative impacts related to recreation.	Less than significant (LTS)	No impact (NI)	Less than the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
UTILITIES AND SERVICE SYSTEMS					
Impact UT-1: The San Francisco Gateway Project or variant would not require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities that could result in environmental effects beyond those evaluated throughout the initial study.	Less than significant (LTS)	Less than the proposed project (LTS)	Less than the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
Impact UT-2: The San Francisco Gateway Project or variant would not exceed the capacity of the Southeast Treatment Plant and would not require the construction of new or expansion of existing wastewater and stormwater treatment facilities.	Less than significant (LTS)	Less than the proposed project (LTS)	Less than the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
Impact UT-3: SFPUC has sufficient water supply available to serve the San Francisco Gateway Project or variant and future development during normal, dry, and multiple dry years.	Less than significant (LTS)	Less than the proposed project (LTS)	Less than the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)

Environmental Impacts	San Francisco Gateway Project	No Project Alternative	Code-Compliant Alternative	Fleet Management Use Mix Alternative	Expanded Parcel Delivery Use Alternative
Impact UT-4: The San Francisco Gateway Project or variant would not generate solid waste in excess of state or local standards, or in excess of capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals, and would comply with applicable waste management and reduction statutes and regulations related to solid waste.	Less than significant (LTS)	Less than the proposed project (LTS)	Less than the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
Impact C-UT-1: The San Francisco Gateway Project or variant, in combination with cumulative projects, would result in less-than-significant cumulative impacts on utilities and service systems.	Less than significant (LTS)	Less than the proposed project (LTS)	Less than the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
PUBLIC SERVICES					
Impact PS-1: The San Francisco Gateway Project or variant would not result in an increase in demand for police protection, fire protection, schools, or other services to an extent that would require new or physically altered fire, police, school, or other public facilities, the construction of which could result in significant environmental impacts.	Less than significant (LTS)	Less than the proposed project (LTS)	Less than the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
Impact C-PS-1: The San Francisco Gateway Project or variant would have a less-than-significant cumulative impact on public services.	Less than significant (LTS)	Less than the proposed project (LTS)	Less than the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
BIOLOGICAL RESOURCES					
Impact BI-1: The San Francisco Gateway Project or variant would not have a substantial adverse effect, either directly or indirectly through habitat modifications, on species or their habitat identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.	Less than significant (LTS)	No impact (NI)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
Impact BI-2: The San Francisco Gateway Project or variant would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	Less than significant (LTS)	No impact (NI)	Less than the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
Impact BI-3: The San Francisco Gateway Project or variant would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	No impact (NI)	No impact (NI)	No impact(NI)	No impact (NI)	No impact (NI)

Environmental Impacts	San Francisco Gateway Project	No Project Alternative	Code-Compliant Alternative	Fleet Management Use Mix Alternative	Expanded Parcel Delivery Use Alternative
Impact C-BI-1: The San Francisco Gateway Project or variant in combination with cumulative projects would not result in cumulative impacts to biological resources.	Less than significant (LTS)	No impact (NI)	Less than the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
HYDROLOGY AND WATER QUALITY					
Impact HY-1: The San Francisco Gateway Project or variant 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 (LTS)	Less than the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
Impact HY-2: The San Francisco Gateway Project or variant would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin or conflict with or obstruct implementation of a sustainable groundwater management plan.	Less than significant (LTS)	Less than the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
Impact HY-3: The San Francisco Gateway Project or variant would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would result in substantial erosion or siltation on site or off site; substantially increase the rate or amount of surface runoff in a manner that would result in flooding on site or off site; or impede or redirect flood flows.	Less than significant (LTS)	Less than the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
Impact C-HY-1: The San Francisco Gateway Project or variant, in combination with cumulative projects, would not result in cumulative impacts related to hydrology and water quality.	Less than significant (LTS)	Less than the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
HAZARDS AND HAZARDOUS MATERIALS					
Impact HZ-1: The San Francisco Gateway Project or variant would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials or 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 (LTS)	Less than the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)

Environmental Impacts	San Francisco Gateway Project	No Project Alternative	Code-Compliant Alternative	Fleet Management Use Mix Alternative	Expanded Parcel Delivery Use Alternative
Impact HZ-2: The San Francisco Gateway Project or variant would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.	Less than significant (LTS)	Less than the proposed project (LTS)	Less than the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
Impact C-HZ-1: The San Francisco Gateway Project or variant, in combination with cumulative projects, would not result in cumulative impacts related to hazards and hazardous materials.	Less than significant (LTS)	Less than the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)	Similar to the proposed project (LTS)
MINERAL RESOURCES					
Not applicable because mineral resources are not present at the project site, and therefore, there are no impacts on this resource and no mitigation is required.					
ENERGY					
Impact EN-1: The San Francisco Gateway Project or variant would not result in a significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation; nor would it conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	Less than significant (LTS)	Less than the proposed project (LTS)	Less than the proposed project (LTS)	Similar to the proposed project for construction (LTS) Less than the proposed project for mobile sources during operation (LTS)	Similar to the proposed project for construction (LTS) Less than the proposed project for mobile sources during operation (LTS)
Impact C-EN-1: The San Francisco Gateway Project or variant, in combination with cumulative projects, would not result in a significant cumulative impact related to energy resources.	Less than significant (LTS)	Less than the proposed project (LTS)	Less than the proposed project (LTS)	Similar to the proposed project for construction (LTS) Less than the proposed project for mobile sources during operation (LTS)	Similar to the proposed project for construction (LTS) Less than the proposed project for mobile sources during operation (LTS)

Environmental Impacts	San Francisco Gateway Project	No Project Alternative	Code-Compliant Alternative	Fleet Management Use Mix Alternative	Expanded Parcel Delivery Use Alternative
AGRICULTURE AND FORESTRY RESOURCES					
Not applicable, because agriculture and forestry resources are not present at the project site, and therefore, there are no impacts on these resources and no mitigation required.					
WILDFIRE					
Not applicable, because wildfire risks are not present at the project site, and therefore, no there are no impacts related to wildfire and no mitigation required.					

The No Project Alternative would not include sustainability features proposed under the project, such as a rooftop solar array, water- and energy-efficient designs, and electrical docking stations. Therefore, the No Project Alternative would not develop a project with infrastructure that facilitates carbon-efficient vehicle fleets and operations as cost-effective technology becomes available.

The No Project Alternative would not include street, sidewalk, or streetscape improvements; bicycle parking; or a TDM plan. Therefore, the No Project Alternative would not meet the project objective of creating a safe and compelling streetscape accessible by multiple modes of transportation, including bicycles and pedestrians.

CODE-COMPLIANT ALTERNATIVE

The Code-Compliant Alternative would replace the existing PDR buildings with modern facilities. The Code-Compliant Alternative would advance progress toward the city's long-standing goals to upgrade and expand PDR space and would boost resiliency in the local supply chain (although each to a somewhat lesser extent than the proposed project). Because the size and scale of the Code-Compliant Alternative would be reduced from the proposed project and the ground-floor manufacturing and maker space would be eliminated, this alternative would only partially meet the objective of using innovative design at a size and scale that accommodate an adaptable range of large and small PDR uses. The project site would be redeveloped to make efficient use of existing utilities, circulation, and complementary uses in the surrounding PDR-2 zoning district. In this respect, the Code-Compliant Alternative would meet or partially meet most of the project objectives, including meeting the underlying objective to develop a modern, flexible, and durable PDR facility for a diverse and evolving range of uses in a central urban environment.

There would be a net increase of approximately 507 employees associated with the Code-Compliant Alternative, compared to 1,242 employees under the proposed project. Because fewer jobs would be created and the scale of development and operations would be smaller, the Code-Compliant Alternative would meet, but not to the same extent as the proposed project, the objective of providing a positive fiscal impact by creating jobs at a variety of experience levels, enhancing property values, generating property taxes, introducing workers who will support direct and indirect local business growth in the Bayview, or creating employment near housing that would reduce VMT for potential distribution uses by locating such uses in San Francisco.

The Code-Compliant Alternative would include sustainability features proposed under the project, such as water- and energy-efficient designs and electrical docking stations. The Code-Compliant Alternative would include a substantially reduced rooftop solar array. Therefore, the Code-Compliant Alternative would use carbon-efficient construction techniques to develop a project with infrastructure that facilitates carbon-efficient vehicle fleets and operations as cost-effective technology becomes available, but to a lesser extent than the proposed project.

The Code-Compliant Alternative would include street, sidewalk, and streetscape improvements; bicycle parking; and a TDM plan similar to the proposed project. Therefore, the Code-Compliant Alternative would meet the project objective of creating a safe and compelling streetscape accessible by multiple modes of transportation, including bicycles and pedestrians.

FLEET MANAGEMENT USE MIX ALTERNATIVE

The Fleet Management Use Mix Alternative would meet most of the project objectives. It would meet the underlying objective develop a modern, flexible, and durable PDR facility for a diverse and evolving range of uses in a central urban environment, although eliminating wholesale and storage and manufacturing and maker uses would somewhat limit the diversity of uses, ability for the facility to evolve to a range of PDR uses, and ability to use innovative design at a size and scale that accommodate a range of large and small PDR uses. The Fleet Management Use Mix Alternative would replace the existing PDR buildings with first- and best-in-class facilities. The Fleet Management Use Mix Alternative would advance progress toward the city's long-standing goals to upgrade and expand PDR space, and boost resiliency in the local supply chain. The project site would be redeveloped to make efficient use of existing utilities, circulation, and complementary uses in the surrounding PDR-2 zoning district.

The Fleet Management Use Mix Alternative would generate approximately 81 fewer employees than the proposed project (1,161 compared to 1,242) and result in a scale of development and operations similar to the proposed project. Therefore, the Fleet Management Use Mix Alternative would achieve, to an extent similar to that of the proposed project, the objective of providing a positive fiscal impact by creating jobs at a variety of experience levels; enhancing property values; generating property taxes; introducing workers who will support direct and indirect local business growth in the Bayview; or creating employment near housing that would reduce VMT for potential distribution uses by locating such uses in San Francisco.

The Fleet Management Use Mix Alternative would include sustainability features proposed under the project, such as a rooftop solar array, water- and energy-efficient designs, and electrical docking stations. Therefore, the Fleet Management Use Mix Alternative would use carbon-efficient construction techniques to develop a project with infrastructure that facilitates carbon-efficient vehicle fleets and operations as cost-effective technology becomes available. In addition, the Fleet Management Use Mix Alternative would include street, sidewalk, or streetscape improvements; bicycle parking; and a TDM plan. Therefore, the Fleet Management Use Mix Alternative would meet the project objective of creating a safe and compelling streetscape accessible by multiple modes of transportation, including bicycles and pedestrians.

EXPANDED PARCEL DELIVERY USE ALTERNATIVE

The Expanded Parcel Delivery Use Alternative would meet most of the project objectives. The Expanded Parcel Delivery Use Alternative would replace the existing PDR buildings with first- and best-in-class facilities. The Expanded Parcel Delivery Use Alternative would only provide PDR space for parcel delivery service, and therefore would not fully meet the underlying objective of developing a flexible PDR facility for a diverse and evolving range of uses or use innovative design at a size and scale that accommodate a range of large and small PDR use. However, the Expanded Parcel Delivery Use Alternative would advance progress toward the city's long-standing goals to upgrade and expand PDR space, and boost resiliency in the local supply chain. The project site would be redeveloped to make efficient use of existing utilities, circulation, and complementary uses in the surrounding PDR-2 zoning district.

The Expanded Parcel Delivery Use Alternative would generate approximately 81 fewer employees than the proposed project (1,161 compared to 1,242) and result in a scale of development and operations similar to that of the proposed project. Therefore, the Expanded Parcel Delivery Use Alternative would achieve, to an extent similar to that of the proposed project, the objective of providing a positive fiscal impact by creating jobs at a variety of experience levels; enhancing property values; generating property taxes; introducing workers who will support direct and indirect local business growth in the Bayview; or creating employment near housing that would reduce VMT for potential distribution uses by locating such uses in San Francisco.

The Expanded Parcel Delivery Use Alternative would include sustainability features proposed under the project, such as a rooftop solar array, water- and energy-efficient designs, and electrical docking stations. Therefore, the Expanded Parcel Delivery Use Alternative would use carbon-efficient construction techniques to develop a project with infrastructure that facilitates carbon-efficient vehicle fleets and operations as cost-effective technology becomes available.. In addition, the Expanded Parcel Delivery Use Alternative would include street, sidewalk, or streetscape improvements; bicycle parking; and a TDM plan. Therefore, the Expanded Parcel Delivery Use Alternative would meet the project objective of creating a safe and compelling streetscape accessible by multiple modes of transportation, including bicycles and pedestrians.

5.D.2 Environmentally Superior Alternative

The CEQA Guidelines require the identification of an environmentally superior alternative to the proposed project (section 15126.6[e]). Based on the analysis and comparison of the impacts of the alternatives presented above, the No Project Alternative would be the environmentally superior alternative. As described above, the No Project Alternative would substantially lessen the severity of impacts identified for the proposed project in all resource topic areas due to the continuation of existing PDR land uses. The No Project Alternative would avoid the following significant impacts, along with the mitigation measures required of the proposed project to reduce those impacts to a less-than-significant level:

- Project and cumulative adverse effects on cultural resources, tribal cultural resources, and paleontological resources
- Substantial increase in noise above ambient noise levels
- Cumulatively considerable net increase in criteria air pollutants for which the region is in nonattainment with ambient air quality standards and thereby also conflict with or obstruction of implementation of the 2017 Clean Air Plan
- Project and cumulative wind hazards in publicly accessible areas of substantial pedestrian use

CEQA Guidelines section 15126.6(e)(2) provides that if the "no project" alternative is the environmentally superior alternative, the EIR should also identify an environmentally superior alternative among the other alternatives. As described above in Section 5.C.3, the Fleet Management Use Mix Alternative (p. 5-26) would offer a substantial reduction in air pollutant emissions, particularly for NO_X, and health risks compared to the proposed project. Because of the change in the PDR uses for this alternative, this alternative would reduce peak hour traffic volumes by 17 to 30 percent and further reduce VMT below the less-than-significant impact reported for the proposed project. Notably, the reduction in parcel delivery, including last-mile, services under this alternative relative to the proposed project would lessen the air pollutant emissions associated with transportation refrigeration units and the number of single-unit and tractor trailer trucks, which all contribute substantially to the NO_X levels. Additionally, this alternative would eliminate the manufacturing and maker use that would emit 35 pounds of NO_X daily and 4.6 tons annually under the proposed project. As a result, the Fleet Management Use Mix Alternative would result in operational emissions of NO_X that would not exceed the air district's significance threshold for this air pollutant (i.e., 54 pounds per day, compared to the proposed project, which would result in 148 pounds per day). Also, because buses would replace the heavier vehicle classes (i.e., the single-unit and tractor trailer trucks) identified for the proposed project, the Fleet Management Use Mix Alternative would result in lower lifetime cancer risks for residences and workers and $PM_{2.5}$ concentrations at the maximally exposed individual residential and worker receptors[303] than the already less-than-significant impacts under the proposed project. Due to the reduced NO_X emissions from the Fleet Management Use Mix Alternative, unmitigated NO_X emissions would not exceed the air district's significance thresholds and no mitigation measures would be required.

Although the transportation impacts were not significant under the proposed project or expanded streetscape variant, the fixed-source noise impacts would still require mitigation to attenuate noise levels from the HVAC systems, and the wind hazard impacts would still require mitigation to reduce wind speeds at the northwestern corner of the project site. Under the Fleet Management Use Mix Alternative, these impacts would be similar to or less than those identified for the proposed project. Similarly, the significant impacts on underground resources (i.e., archeological, tribal cultural, and paleontological resources) and the associated mitigation measures under the Fleet Management Use Mix Alternative would not differ from those identified for the proposed project. Considering these effects and the substantial reductions in criteria air pollutants and health risks, the Fleet Management Use Mix Alternative would be the environmentally superior alternative. In addition, this alternative would meet all of the proposed project objectives, but some to a lesser extent.

5.E Alternatives Considered but Rejected

Potential project alternatives were considered as part of the alternatives screening process for the draft EIR. As stated in CEQA Guidelines section 15126.6(f)(1), factors that may be considered when a lead agency is assessing the feasibility of alternatives include:

> *… site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site.*

The following discussion describes several alternatives that were considered by the planning department but were ultimately rejected for the factors cited above or because they did not reduce the significant impacts identified for the proposed project. After further consideration of the five alternatives discussed in the following sections, it was determined that they would not be feasible, would not substantially meet most of the project objectives, or would not avoid or lessen potentially significant adverse impacts that were identified for the proposed project or expanded streetscape variant. Therefore, these alternatives have been rejected as viable alternatives.

5.E.1 Alternative Site in San Francisco

This alternative assumes construction of new PDR buildings with the same square footage and mix of uses as the proposed project but at an alternate location in San Francisco, outside of the Bayview neighborhood. This alternative would include space for the main types of PDR uses described in Section 2.D.2, Proposed Project Uses (p. 2-20). These uses could consist of manufacturing and maker spaces; wholesale and storage;

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303 See Appendix F, Air Quality Supporting Information, in the section analyzing the air quality effects of the alternatives.

parcel delivery service, including last-mile delivery; and retail space. Development of a similar scale of PDR uses would require site characteristics, as determined by the project sponsor, including:

- being generally flat and rectangular or square in configuration;
- having minimum horizontal length of approximately 500 feet on one side of the parcel (to allow for vehicle ramping for the multi-level PDR facility);
- located in areas of the city with other compatible uses (such as light or heavy manufacturing and buffered from residential areas);
- zoned for core PDR uses (such as PDR-2 or other PDR zoning);
- having no significant legal use restrictions (such as on land designated by the Port of San Francisco); and
- having a convenient surrounding street network, including adequate access to one or more freeways with multiple entrance/exit points.

As stated in San Francisco Planning Commission Resolution 20738,[304] "…using the power of zoning and land use, the City (of San Francisco), its Planning Commission and (Planning) Department and other government agencies, individuals, and private organizations have intentionally advanced policies aligned with white supremacy goals to segregate, displace, dispossess and extract wealth from Black communities, the American Indian community, and other communities of color." In San Francisco, as in many other cities, low-income households and people of color are more likely to live in neighborhoods with environmental hazards, such as toxic groundwater, polluting industrial activities, congested freeways, and hazardous and solid waste facilities. In large part, this is the direct result of racial covenants, redlining, urban renewal and other discriminatory programs that have historically restricted where people of color may live.[305] As a result, there is a substantial amount of land in the Bayview Hunters Point neighborhood that is zoned for more intensive industrial and manufacturing activities and that excludes residential uses, so that nearest residential uses are approximately 400 feet from the project site. In contrast, mixed use zoning allows residential development in most other parts of San Francisco. Alternative sites that could accommodate the proposed project without potentially adversely affecting residential uses would be limited, except in other PDR-zoned areas.

Outside the Bayview neighborhood, zoning for PDR uses is limited to an area generally between U.S. 101 and Division Street on the north and 18th and 19th streets on the south, and between Mission and Shotwell streets on the west and Seventh Street and Potrero Avenue on the east, in the northeastern portion of the Mission Community Plan Area and the northwestern corner of the Showplace Square-Potrero Hills Community Plan Area. This area is zoned PDR-1-G or PDR-1-D, which permit less-intensive uses than the PDR-2 zoning of the project site. Only the PDR-2 zoning district explicitly states that light industrial uses may be conducted entirely within an enclosed structure and may require trucking activity multiple times per day, including trucks with up to 18 wheels or more.[306] There is a site at 900 7th Street that was proposed for parcel

[304] City and County of San Francisco Planning Commission, Resolution No. 20738, Centering Planning on Racial and Social Equity., Racial & Social Equity Initiative, Case Number: 2016-003351CWP, adopted June 11, 2020, https://sfplanning.org/sites/default/files/documents/admin/R-20738_Centering_Planning_on_Racial_and_Social_Equity.pdf

[305] San Francisco Planning Department. Housing Element 2022 Update. January 2023, https://sfplanning.s3.amazonaws.com/archives/sfhousingelement.org/files/Housing_Element_2022_Update.pdf, accessed July 12, 2023

[306] City and County of San Francisco, Zoning Code, Section 210.3 PDR Districts, *https://codelibrary.amlegal.com/codes/san_francisco/latest/sf_planning/0-0-0-20123*, accessed May 29, 2023.

delivery, last mile uses, similar to the proposed project, but the site is 5.8 acres, has a 58-foot height limit, and a maximum building floor area of less than 1.1 million square feet, and thus could not accommodate the proposed project which is approximately double the size in terms of proposed square footage. Even if the proposed project were to occupy this site, the proposed project at this site would not substantially reduce mobile source NO_X emissions, because this site is only approximately two miles from the project site. Additionally, this site is across the street from the 888 7th Street condominiums and a senior care facility, resulting in potentially greater health risk impacts compared to the proposed project. No parcels meeting these siting criteria and allowable uses in accordance with their zoning were identified.

Further, this alternative would not substantially reduce air emissions, including the project's contributions to emissions of criteria pollutants for which the region is in nonattainment (NO_X), because the trip distances and rates to and from the site for single-unit and tractor-trailer trucks—which contribute a majority of the NO_X emissions—and other vehicle categories serving the development would likely be similar to those of the proposed project, even if another site in the city were identified. As a result, an alternative site in the city would have a minor increase or reduction in vehicle miles traveled, and compared to the proposed project would not substantively change the NO_X emissions. For these reasons, this alternative is not carried forward for further evaluation.

5.E.2 Alternative Site outside of San Francisco, but within the Bay Area

This alternative assumes construction of new PDR buildings with the same combined square footage and analyzed tenant use mix as the proposed project but at an alternate location outside of San Francisco, but within the Bay Area. This alternative would include space for the main types of PDR uses described in Section 2.D.2 of Chapter 2 (p. 2-20). These uses could consist of manufacturing and maker spaces; wholesale and storage; parcel delivery service, including last-mile delivery; and retail space. This alternative would not meet most of the project objectives, particularly those related to furthering long-standing goals to expand PDR space in the city, reducing vehicle miles traveled for distribution uses, revitalizing underutilized land, and promoting employment opportunities in the Bayview neighborhood. Many cities outside of San Francisco, such as South San Francisco, Oakland, Hayward, and Fremont, have large sites that can accommodate PDR services and are also close to the regional road network.

However, the PDR uses in the city also include production-type firms that invest in more technology-intensive production and have higher value added per employee than other cities in the Bay Area.[307] San Francisco offers access to a specialized market and labor force, attracting businesses that traditionally have been able to pay employees more to be in the city. The printing industry is an example where firms in the city have invested in technology and new production methods, such as laser scanners and desktop publishing. Historical data collected on these industry trends showed that, in 1992, value-added per employee in the San Francisco printing industry was $65,700 compared to $58,200 for California as a whole. For apparel firms, the value added per employee in 1992 was $72,000 in San Francisco compared to $41,000 for the state. Other production businesses in the city (e.g., metal fabricators, caterers, and furniture makers) tend to produce short runs of specialized goods with a significant design component rather than standardized, mass produced items. These businesses serve a market of custom made, locally produced goods, and rely heavily on skilled and creative workers, specialized capital equipment, and technology.

[307] San Francisco Planning Department, Industrial Land in San Francisco: Understanding Production, Distribution, and Repair, 2002, *https://sfplanning.org/resource/industrial-land-san-francisco-production-distribution-and-repair-pdr*.

Proximity to customers is valued to facilitate quick turn-around times and continuous feedback.[308] Additionally, the San Francisco location affords proximity and access to markets, employees, and contractors who are able to fulfill orders on short notice, and retail outlets.[309] With respect to accessibility to employees, last-mile delivery uses benefit from a nearby blue-collar workforce with transit services. The project site is accessible via Muni, which provides connections to BART and Caltrain. Other jurisdictions may also have ready workforces, but the transit service may be less accessible and therefore, less likely to reduce overall vehicle miles traveled. Finally, sites outside San Francisco to the east or north face the logistical issues that are associated with bridge crossings and toll roads. These "barriers" introduce variables that can adversely affect delivery times, reliability, and costs.[310] Thus, there is a competitive advantage for PDR sites in San Francisco, and locations outside San Francisco would not provide the same benefits nor serve the project objectives as well.

Although there are likely multiple sites in Bay Area communities that could feasibly provide space for the proposed project, the ability to substantially reduce air pollutant emissions and also avoid other potentially significant impacts, including land use compatibility and VMT, would be speculative. Because of the uncertainty regarding substantial reductions of significant impacts identified for the proposed project, and because of the inability to meet most project objectives, this alternative is not carried forward for further evaluation.

5.E.3 Expanded Maker Space Use Mix

This alternative assumes demolition of the existing four single-story PDR buildings on site and construction of two new three-story buildings (plus active roof) with the same combined square footage assumed for the proposed project. This alternative would also include space for the main types of PDR uses described in Section 2.D.2 of Chapter 2 (p. 2-20); however, a greater percentage of the PDR space would be allocated as maker space. As shown on Figure 2.D-9 (p. 2-21), the manufacturing and maker uses envisioned for the proposed project are typically smaller, local businesses, including "incubator-type" businesses[311] that typically have space requirements under 20,000 square feet and often in the range of 2,000 to 6,000 square feet. A project alternative that significantly expanded the amount of space dedicated solely to smaller manufacturing and maker tenants would not likely be supported by market conditions, based on the project sponsor's familiarity with leasing trends for PDR facilities in San Francisco and the Bay Area. Furthermore, depending on the types of maker space, businesses such as apparel screen printing or others with stationary source equipment requirements can be substantial sources of NO_X emissions.[312] Therefore, the ability of this alternative to substantially reduce air pollutant emissions and avoid other potentially significant impacts, would be speculative. For these reasons, this alternative is not carried forward for further evaluation.

5.E.4 Expanded Wholesale/Storage Use Mix

This alternative assumes demolition of the existing four single-story PDR buildings on site and construction of two new three-story buildings (plus active roof) with the same combined square footage assumed for the proposed project. This alternative would also include space for the main types of PDR uses described in

[308] Ibid.
[309] Ibid.
[310] Langan Engineering & Environmental Services, Memorandum to Ken Sun re Urban E-commerce Distribution Facility Selection Criteria, February 26, 2021.
[311] "Incubator-type businesses" include organizations that provide targeted resources and services to assist development of startup and fledgling companies.
[312] Bay Area Air Quality Management District, personal communication, Example TAC Profiles for Maker Space Uses, September 11, 2019.

Section 2.D.2 of Chapter 2 (p. 2-20). These uses could consist of manufacturing and maker spaces, parcel and last-mile delivery service, and wholesale/storage, as well as ground-floor retail space. This alternative would have the same square footage of maker space (3 percent) and ground-floor retail (0.4 percent) as the proposed project, but with less space for parcel delivery and more space for wholesale/storage use. Two variants of this mix were considered: one variant considered a scenario with 32 percent of the PDR space allocated to parcel and last-mile delivery use and 65 percent allocated to wholesale/storage use; the second considered a scenario with an approximately even split of 49 percent of the PDR space allocated to parcel and last-mile delivery use and approximately 49 percent allocated to wholesale/storage use. Based on the same methodology as the proposed project, the average daily VMT per capita for both variants of this alternative would be greater than that for the proposed project; however, because the project site is in San Francisco's Priority Production Area, this alternative would not be inconsistent with the criteria outlined in CEQA section 21099(b)(1), would include features similar to those of other developments in the area, and this alternative would not result in substantial additional VMT (i.e., VMT impacts would be less than significant). Based on projections of criteria air pollutants, particularly for NO_X (presented in the alternatives analysis section of Appendix F,), this alternative would increase emissions in comparison to those under the unmitigated proposed project (or streetscape variant) by approximately 3 to 15 pounds per day. In particular, the mobile source emissions associated with the mix and types of vehicles for this alternative (both variants) were slightly greater than those of the proposed project, and no impacts were identified that would be decreased from the proposed project. In addition, further variations of this Expanded Wholesale/ Storage Use Mix Alternative were determined to similarly result in an increase in mobile source emissions as a result of the fleet mix and related mobile source emissions. Finally, this alternative would not reduce any of other significant impacts of the project that could be reduced to less than significant with mitigation, including impacts to cultural, tribal and paleontological resources, noise from fixed-source equipment, and wind hazards. Therefore, this alternative was not considered for further analysis.

5.E.5 Phased Project Operations

This alternative assumes demolition of the existing four single-story PDR buildings on site and construction of two new three-story buildings (plus active roof) with the same combined square footage assumed for the proposed project. This alternative would also include space for the main types of PDR uses described in Section 2.D.2, Proposed Project Uses (p.2-20). This alternative was considered as an approach to address potentially significant NOX emissions by restricting the tenancy in the second building to those with lower emissions, particularly of NOX. However, a strategy of restricting tenancy to a later date in time in which emissions would be lower is also a strategy that could be employed as part of Mitigation Measure M-AQ-3i, the Operational Emissions Management Plan. Therefore, the concepts of this alternative are already encompassed within the mitigation measures identified in this EIR for the proposed project. With implementation of all of the proposed project's mitigation measures, the proposed project would have less-than-significant air quality impacts. For these reasons, this alternative is not carried forward for further evaluation.

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CHAPTER 6
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