DRAFT ENVIRONMENTAL IMPACT REPORT

INFINITE 131 PROJECT

CITY OF SOUTH SAN FRANCISCO, CALIFORNIA STATE CLEARINGHOUSE NO. 2023110023

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Acronyms and Abbreviations

ABAG	Association of Bay Area Governments
ADA	Americans with Disabilities Act
ADT	average daily traffic
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model Improvement Committee Modeling System
ALUCP	Airport Land Use Compatibility Plan
AMRR	Archaeological Monitoring Results Report
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
BCDC	Bay Conservation and Development Commission
BMPs	best management practices
BTP-H	Business Technology Park High
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officer's Association
CARB	California Air Resources Board
CARE	Community Air Risk Evaluation
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CHSC	California Health and Safety Code
City	City of South San Francisco
СМР	Congestion Management Plan
CNEL	community noise equivalent level
CNPS	California Native Plant Society
CREC	controlled recognized environmental conditions
CRHR	California Register of Historical Resources
dB	decibel
dBA	A-weighted decibel
dBC	C-weighted decibel
DOAS	direct outside air system
DPM	diesel particulate matter
EA	environmental assessment

EIR	environmental impact report
EIS	environmental impact statement
EMU	electric multiple unit
EO	executive orders
EPA	U.S. Environmental Protection Agency
EV	electric vehicle
EVSE	electric-vehicle supply equipment
FAA	Federal Aviation Administration
FAR	floor area ratio
FHSZ	Fire Hazard Severity Zone
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
General Plan	Shape SSF 2040 General Plan
GHG	greenhouse gas
GIS	geographic information system
GVWR	gross vehicle weight rating
GWP	global warming potential
HABS	Historic American Building Survey
HAER	Historic American Engineering Record
HALS	Historic American Landscape Survey
НАР	hazardous air pollutants
НСР	habitat conservation plan
HFC	hydrofluorocarbon
HRA	health risk assessment
HVAC	heating, ventilation, and air-conditioning
Hz	Hertz
IPCC	Intergovernmental Panel on Climate Change
ITE	Institute of Transportation Engineers
JPB	Joint Powers Board
LCFS	low-carbon fuel standard
L _{dn}	day-night level
LEED	Leadership in Energy and Environmental Design
L _{eq}	equivalent sound level
LID	low-impact development
L _{max}	maximum sound level
L _{min}	minimum sound level
LOS	level of service
L _{xx}	percentile-exceeded sound level
MEI	maximally exposed individual

MIH	Mixed Industrial High
MPO	metropolitan planning organizations
MRP	Municipal Regional Permit
MTC	Metropolitan Transportation Commission
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCP	Natural community conservation plan
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NOC	Notice of Completion
NOD	Notice of Determination
NOP	Notice of Preparation
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRHP	National Register of Historic Places
NWIC	Northwest Information Center
OEHHA	Office of Environmental Health Hazard Assessment
ОНР	Office of Historic Preservation
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Administration
РСВ	polychlorinated biphenyl
PCE	Peninsula Clean Energy
PFC	perfluorocarbons
PG&E	Pacific Gas and Electric
PM	particulate matter
PPV	peak particle velocity
PRC	Public Resources Code
PV	photovoltaic
R&D	research and development
RMS	root-mean-square
ROG	reactive organic gas
ROW	right-of-way
RPS	Renewables Portfolio Standard
RTP	regional transportation plan
RWQCB	Regional Water Quality Control Board
SAFE	Safer Affordable Fuel Efficient
SCAQMD	South Coast Air Quality Management District
SCS	sustainable communities strategy

sound equivalent level
square feet
San Francisco Bay Area Basin
San Francisco International Airport
San Francisco Public Utilities Commission
State Historic Preservation Officer
State Implementation Plan
short-lived climate pollutants
Sacred Lands File
sound-level meter
San Mateo County Environmental Health
San Mateo Countywide Pollution Prevention Program
slab-on-grade
slab-on-metal-deck
Southern Pacific Railroad
South San Francisco
South San Francisco Fire Department
South San Francisco Police Department
South San Francisco Unified School District
stormwater pollution prevention plan
toxic air contaminants
Transportation Demand Management
Transportation Impact Analysis
transit-oriented development
U.S. Fish and Wildlife Service
U.S. Geological Survey
vibration decibel level
Very High Fire Hazard Severity Zone
vehicle miles traveled
volatile organic compounds
Water Emergency Transportation Authority
Water Quality Control Plant
water supply assessment
Water Shortage Contingency Plan

This chapter summarizes the proposed project, which comprises buildout allowed under the proposed Infinite 131 Project (proposed project); outlines the purpose of this environmental impact report (EIR); summarizes the environmental review process; and describes the organization of the EIR.

1.1 Project Summary

US 131 Terminal Court Owner, LLC (project sponsor), is proposing construction and operation of the Infinite 131 Project (proposed project), which would include demolition of approximately 126,750 square feet (sf) of industrial and operational uses that are currently occupied by the Golden Gate Produce Terminal, along with approximately 116,572 sf of open-air structures (e.g., loading docks, trash compactor areas), on a 17.67-acre site (i.e., the project site). In its place, the proposed project would construct approximately 1.7 million sf of research-and-development (R&D) uses and amenities within seven buildings, ranging from one to six stories, along with two parking garages and additional surface parking. The approximately 17.67-acre project site comprises one parcel at 131 Terminal Court in the city of South San Francisco, identified as assessor's parcel number (APN) 015-113-210. The project site outside the footprints of the existing buildings is covered with asphalt and concrete paving, with minimal surrounding landscaping and no trees. Terminal Court and a large Park N' Fly surface parking lot is north of the project site, a large surface parking lot and U.S. 101 (known as Bayshore Freeway) are adjacent to the eastern portion of the project site, a navigable slough¹ that feeds into San Bruno Canal is south of the project site, and several mixed industrial and commercial buildings and San Mateo Avenue are west of the project site. In addition, the project site is approximately 1 mile west of San Francisco Bay and 0.30 mile west of a portion of the San Francisco Bay Trail that runs along San Bruno Canal. The southern project site also includes a portion of the shoreline band jurisdiction of the San Francisco Bay Conservation and Development Commission (BCDC) adjacent to the navigable slough.

The proposed project would include the construction of new R&D and amenity uses with a maximum anticipated total building area of up to approximately 1.7 million square feet. Specifically, the proposed project would demolish all existing on-site uses and construct seven buildings (I131S A, I131S B, I131S C, I131S D, I131N A, and 131N B), collectively referred to as the I131N and I131S buildings, and a day-care center with approximately 1,632,000 square feet of R&D uses and approximately 72,050 square feet of amenity uses. Building heights would range from one to six stories, with the maximum building height being 113 feet, 6 inches. In addition, the proposed project would include two parking garages, associated with the I131N and I131S buildings, as well as surface parking. The I131N parking garage would be approximately 551,631 square feet and approximately 100 feet tall. It would include three levels of below-grade parking as well as nine

¹ The navigable slough is a remnant tidal channel that cuts through a commercial district in the city of South San Francisco. The slough is connected to San Francisco Bay. (ESA. 2019. *Navigable Slough Flood Management Study, Prepared for County of San Mateo, City of South San Francisco, and City of San Bruno*. Available: https://oneshoreline.org/wp-content/uploads/2020/06/Navigable-Slough-Flood-Management-Study.pdf. Accessed: April 12, 2023).

levels of above-grade parking. The I131S parking garage would be approximately 453,034 square feet and include two levels of below-grade parking. In total, the proposed project would provide approximately 2,976 parking spaces. The proposed buildings would be tied together through a cohesive network of landscaping and open space. Two central courtyards would be located along the interior of the project site and framed by the shape of the I131N and I131S buildings to prioritize pedestrian- and bike-friendly connections. The proposed project would also include associated utility and circulation improvements. In addition, it would require amendments to the City of South San Francisco (City) Shape SSF 2040 General Plan (General Plan), Lindenville Specific Plan (Specific Plan), and City Zoning Code to change the existing land use and zoning designations from Mixed Industrial High (MIH) to Business Technology Park High (BTP-H) and allow development of the R&D campus. The proposed project would require off-site transportation and circulation improvements to accommodate the traffic that would be generated. Such improvements would include new traffic signals, crosswalks, sidewalks, bikeways, and driveway connections along Terminal Court, Shaw Road, and/or Produce Avenue.

In addition to the General Plan, Specific Plan, and City Zoning Code amendments required for the proposed project, additional amendments would be required to redesignate five parcels north of the project site across Terminal Court at 120 Terminal Court, 196 Produce Avenue, 160 Produce Avenue, and 140 Produce Avenue (APNs 015-113-350, 015-113-290, 015-113-340, 015-113-330, 015-113-320). The five off-site redesignation parcels are currently designated as MIH under the General Plan, Specific Plan, and City Zoning Code but would be redesignated to BTP-H, consistent with the proposed land use and zoning for the project site. The five parcels cover approximately 7.28 acres and currently comprise a large Park N' Fly surface parking lot and a Shell gas station. The purpose of the off-site redesignation parcels is to ensure that future development is cohesive and consistent with the development proposed as part of the project. Because the project sponsor does not own the five off-site redesignation parcels, the proposed project would not include the construction of any new uses or any other type of development within the five parcels as part of redesignation; the existing uses would be maintained. Therefore, no direct impacts on the environment would occur. However, the analysis in the Draft EIR will evaluate the reasonably foreseeable indirect impacts that could result from the proposed off-site redesignation parcels. Future development within the five parcels, should it occur, would be subject to additional environmental review in accordance with the California Environmental Quality Act (CEQA).

1.2 Purpose and Intended Uses of the EIR

This EIR has been prepared by the Planning Division of the City of South San Francisco, the Lead Agency for the proposed project, in compliance with the provisions of CEQA and the CEQA Guidelines (California Public Resources Code Section 21000 et seq., and California Code of Regulations Title 14, Section 15000 et seq.; CEQA Guidelines). The lead agency is the public agency that has the principal responsibility for carrying out or approving a project.

As stated in CEQA Guidelines Section 15121(a), an EIR is an informational document intended to inform public agency decision-makers and the public of the significant environmental effects of a project, identifying possible ways to minimize the significant effects, and describe reasonable alternatives to the project. The degree of specificity required in an EIR should "correspond to the degree of specificity involved in the underlying activity which is described in the EIR" (CEQA Guidelines Section 15146). This EIR assesses potentially significant impacts as defined in CEQA

Guidelines Section 15382 as substantial, or potentially substantial, adverse changes 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 significance.

The purpose of this EIR is to assess and disclose the potential environmental impacts associated with the adoption and implementation of the proposed project, as described above, and determine corresponding mitigation measures as necessary. The project consists of construction of the proposed Infinite 131 Project, construction of off-site transportation and circulation improvements to accommodate traffic generated by the Infinite 131 Project, and redesignation and rezoning of five parcels north of the site for the Infinite 131 Project (collectively, the proposed project). The EIR will provide a project-level analysis of the proposed Infinite 131 Project as well as the off-site transportation and circulation improvements, pursuant to Section 15161 of the CEQA Guidelines, and a program-level analysis of redesignation and rezoning of the five off-site parcels, pursuant to Section 15168 of the CEQA Guidelines. The EIR may be relied on by other agencies, including the San Francisco BCDC as a responsible agency pursuant to Section 15381 of the CEQA Guidelines, for purposes of approving aspects of the proposed project within the agencies' respective jurisdictions.

Before any discretionary project approvals may be granted for the proposed project, the South San Francisco City Council must certify that the EIR was completed in compliance with CEQA, that the decision-making body reviewed and considered the information in the final EIR, and that the EIR reflects the City's independent judgment and analysis, and make any other findings required by law. EIR adequacy is defined in CEQA Guidelines Section 15151, which states "[a]n EIR should be prepared with a sufficient degree of analysis to provide decision- makers with information which enables them to make a decision which intelligently takes account of environmental consequences."

CEQA requires that public agencies approve projects only after all feasible means available have been employed to substantially lessen the significant environmental effects of such projects. City decision-makers will use the certified EIR, along with other information and public processes, to determine whether to approve, modify, or disapprove the proposed project, and to require any feasible mitigation measures as conditions of project approval.

1.3 Incorporation by Reference

CEQA allows information from other public documents by reference. This EIR incorporates by reference information or analysis from the following adopted plans and supporting environmental documents, which were developed by the City as part of its planning process.

- Shape SSF 2040 General Plan (General Plan)—adopted October 2022; amended September 2023
- Draft Program Environmental Impact Report General Plan Update, Zoning Code Amendments, and Climate Action Plan, City of South San Francisco, San Mateo County, California (General Plan EIR)—June 2022; State Clearinghouse No. 20210120064
- Final Environmental Impact Report General Plan Update, Zoning Code Amendments, and Climate Action Plan, City of South San Francisco, San Mateo County, California (General Plan EIR)—September 2022; State Clearinghouse No. 20210120064
- Lindenville Specific Plan (Specific Plan)—adopted September 2023
- Lindenville Specific Plan Addendum (Specific Plan Addendum)—September 2023

As required by CEQA Guidelines Section 15150, where an EIR or initial study uses incorporation by reference, the incorporated part of the reference shall be briefly summarized or described. Where information from the above-listed documents is incorporated into this EIR, the incorporated information is briefly summarized or described in corresponding sections throughout Chapter 4, *Environmental Setting, Impacts, and Mitigation*.

Copies of these documents are available to the public at these locations:

City of South San Francisco Planning Division 315 Maple Avenue South San Francisco, CA 94080 City of South San Francisco City Clerk 400 Grand Avenue South San Francisco, CA 94080

City of South San Francisco Library (Reference Desk) 901 Civic Campus Way South San Francisco, CA 94080

Electronic copies are available at:

- Shape SSF 2040 General Plan and General Plan EIR: https://shapessf.com/
- Lindenville Specific Plan: https://shapessf.com/plan-lindenville/
- Lindenville Specific Plan Addendum: https://weblink.ssf.net/WebLink/Browse.aspx?id= 550747&dbid=0&repo=SSFDocs

1.4 Environmental Review Process

The environmental review process for the proposed project includes a number of steps: publication and circulation of a Notice of Preparation (NOP) for public comment, 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 by the Lead Agency (City of South San Francisco). These steps are described below.

1.4.1 Notice of Preparation

The Planning Division issued an NOP of an EIR for the proposed project on November 1, 2023, in compliance with Title 14, Sections 15082(a), 15103, and 15375 of the California Code of Regulations. The NOP review period commenced on November 1, 2023, and concluded on December 8, 2023. A scoping meeting was held on November 28, 2023. The Planning Division received eight comment letters from interested parties during the public review and comment period. The Planning Division has considered the comments made by the public in preparation of the EIR for the proposed project. The NOP, and comments received on the NOP, are provided in Appendix A of this EIR.

Comments on the NOP raised several issues, as listed under the respective categories and summarized below.

Biological Resources

- Description of the vegetation and trees to be removed and the introduction of light and glare
- Description of habitats and potential species' occurrences, particularly San Francisco garter snake
- Impacts on riparian zones and recommendations for riparian setbacks

Cultural Resources and Tribal Cultural Resources

• Compliance with Assembly Bill 52 and Senate Bill 18 requirements

Geology and Soils

• Project impacts related to liquefaction hazards and ground shaking

Hazards and Hazardous Materials

- Consistency with the Federal Aviation Administration (FAA) Airspace Review
- Consistency with San Francisco International Airport's Airport Land Use Compatibility Plan (ALUCP)

Hydrology and Water Quality

- Project impacts related to floodplains and stormwater runoff and treatment
- Preparation of a site management plan

Land Use and Planning

• Consistency with the San Francisco International Airport ALUCP.

Noise

• Consistency with the San Francisco International Airport ALUCP noise and safety compatibility policies

Transportation and Circulation

- Travel demand, bicyclist, and pedestrian impact methodology
- Mitigation measure recommendations

Utilities

- Compliance with Pacific Gas and Electric (PG&E) gas and electric facility requirements
- Review of PG&E requirements, including any easements and facilities on the project site

1.4.2 Draft Environmental Impact Report

This draft EIR has been prepared on behalf of the City of South San Francisco, the lead agency, in accordance with CEQA. It provides an analysis of the physical environmental impacts of construction and operation of the proposed project as well as the project's cumulatively considerable contribution to environmental impacts from foreseeable cumulative development in the project vicinity and the City as a whole. It considers all environmental topic areas in Appendix G of the CEQA Guidelines and takes into consideration NOP comments.

An Initial Study was prepared prior to the EIR.² After a review of the preliminary analysis in the Initial Study (see Appendix B), consultation with City staff members, and a review of the comments received during the scoping process, it was determined that the following environmental topics would be addressed in Chapter 4, *Environmental Impact Analysis*, of this EIR:

- Section 4.2, Air Quality
- Section 4.3, *Cultural Resources*
- Section 4.4, Greenhouse Gas Emissions
- Section 4.5, Noise and Vibration
- Section 4.6, *Transportation and Circulation*

It was determined in the Initial Study that the following potential environmental effects of the proposed project would be less than significant or would have no impact regarding the following topics, which are therefore not studied further in this EIR: aesthetics, agricultural and forestry resources, biological resources, energy, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, population and housing, public services, recreation, tribal cultural resources, utilities and service systems, and wildfire. Each of these topic areas is addressed in the Initial Study (see Appendix B). Because these impacts have been adequately addressed in the Initial Study, no additional analysis is included in this EIR.

Hard copies of the draft EIR, all documents referenced in this draft EIR, and the distribution list for the draft EIR are available at the Planning Division, 315 Maple Avenue, South San Francisco, CA 94080; at the Main Library at 901 Civic Campus Way; the Grand Avenue Library at 306 Walnut Avenue; and the City Clerk's Office at 400 Grand Avenue.

The draft EIR is available for viewing or downloading at https://weblink.ssf.net/weblink/ Browse.aspx?dbid=0 under the Planning, Environmental Reports folder.

How to Comment on the Draft Environmental Impact Report

The City, on June 20, 2024, filed a Notice of Completion (NOC) with the State Clearinghouse, indicating that this draft EIR has been completed and is available for review and comment. This draft EIR will be available for review by the public and interested parties, agencies, and organizations for a review period of at least 45 days, as required by California law. Reviewers should focus on the document's adequacy in identifying and analyzing the proposed project's significant effects on the environment and ways in which the significant effects of the proposed project might be avoided or mitigated (California Code of Regulations Section 15024[a]).

² CEQA Guidelines Section 15063(c)(3) states that one purpose of an Initial Study is to "[a]sist the preparation of an EIR, if one is required, by: (A) Focusing the EIR on the effects determined to be significant, (B) Identifying the effects determined not to be significant, (C) Explaining the reasons for determining that potentially significant effects would not be significant, and (D) Identifying whether a program EIR, tiering, or another appropriate process can be used for analysis of the project's environmental effects."

The 45-day review period for the draft EIR is from June 20, 2024, to August 5, 2024. Comments should be submitted in writing during this review period to:

By email: billy.gross@ssf.net

For comments sent via email, please include "EIR Comments: Infinite 131Terminal Court Project" in the subject line and the name and physical address of the commenter in the body of the email.

By mail:

Billy Gross, Principal Planner Department of Economic and Community Development City of South San Francisco 315 Maple Avenue South San Francisco, California 94080 Comments may also be sent via email to: billy.gross@ssf.net

All comments on environmental issues received during the public comment period will be considered and addressed in the final EIR.

There will be a public hearing before the Planning Commission during the 45-day public review and comment period for this draft EIR to solicit oral comments on the adequacy and accuracy of information presented in this draft EIR. The public hearing on this draft EIR has been scheduled before the Planning Commission for August 1, 2024.

1.4.3 Final Environmental Impact Report

Following the close of the draft EIR public review and comment period, the City will prepare responses to comments, which will contain a summary of comments submitted during the public hearing and a copy of all written comments received on the draft EIR as well as the City's responses to significant environmental points raised in the review and consultation process and any necessary changes to the text. Responses to comments will be prepared and published in a final EIR. The final EIR will be available to all commenting agencies at least 10 days prior to the certification hearing, in accordance with CEQA requirements. The South San Francisco City Council, as the decision-making body for this project, following review and recommendation by the Planning Commission, will review the final EIR documents and will determine whether or not the final EIR provides a full and adequate appraisal of the project and its alternatives.

The City Council will review the final EIR for adequacy and certify that the EIR has been completed in compliance with CEQA and that it reflects the City's independent judgment pursuant to the requirements of CEQA Guidelines Section 15090. The City will consider certification of the final EIR and then consider the approvals required for implementation of the project separately for approval or denial. Findings on the feasibility of avoiding or reducing the project's significant environmental effects will be made and, if necessary, a Statement of Overriding Considerations will be prepared, balancing the benefits achieved by the proposed project against unavoidable environmental impacts, should the City choose to approve the project with remaining significant impacts that cannot be avoided.

A Notice of Determination (NOD) will be prepared and filed with the State Clearinghouse if the City approves the project.³ The NOD will include a description of the project, the date of approval, and an indication of whether Findings and Statements of Overriding Considerations were prepared. The NOD will also provide the address where the EIR and record of project approval are available for review.

1.5 Report Organization

This EIR is organized into the following chapters.

- Chapter 1, *Introduction*, summarizes the purpose and organization of the EIR and the environmental review process.
- Chapter 2, *Executive Summary*, summarizes the proposed project and environmental consequences that would result from the implementation of the project (including significant and unavoidable impacts that cannot be mitigated to a level of less than significant, impacts reduced to a level of less than significant through mitigation, and impacts determined not to be significant), the alternatives to the proposed project that were analyzed, and a summary table of the project impacts and mitigation measures.
- Chapter 3, *Project Description*, describes the existing setting, the project applicant objectives, the proposed project, and required approvals and actions, including those of the agencies involved in the actions.
- Chapter 4, *Environmental Setting, Impacts, and Mitigation*, begins with Section 4.1, *Approach to Environmental Analysis*, which presents the methodology for environmental analysis, including a list of baseline projects and cumulative projects. Sections 4.2 through 4.6 are devoted to a particular environmental topic. Each section describes the environmental setting and regulatory framework, provides an analysis of the potential environmental impacts of the proposed project as well as the off-site redesignation parcels to reduce significant impacts. The following topics are analyzed:
 - Air Quality (Section 4.2)
 - Cultural Resources (Section 4.3)
 - Greenhouse Gas Emissions (Section 4.4)
 - Noise and Vibration (Section 4.5)
 - Transportation and Circulation (Section 4.6)
- Chapter 5, *Alternatives*, summarizes three alternatives to the proposed project as well as the comparative environmental consequences and benefits of each alternative. The No-Project Alternative and two additional alternatives are analyzed, the BTP-M Alternative and the Increased Office Space Alternative. This chapter also identifies the environmentally superior alternative and discusses any alternatives that were considered for analysis in the EIR but rejected, then gives the reasons for their rejection.

³ As discussed in Chapter 3, *Project Description*, certain portions of the off-site improvements included under the proposed project are located within the jurisdictions of other agencies (i.e., City of San Bruno and BART), and would be subject to separate approval by these jurisdictions.

- Chapter 6, *Other CEQA Considerations*, contains a discussion of mandatory findings of significance (including cumulative impacts), growth-inducing impacts, effects that were found not to be significant (including Initial Study findings), significant impacts that cannot be avoided, significant irreversible environmental changes, areas of known controversy, and project-related issues that have not been resolved.
- Chapter 7, *Report Preparers*, identifies the lead agency, organizations, and individuals consulted during preparation of this EIR. In addition, the project sponsor team and the consultants working on the EIR are identified.

Appendices to this EIR are as follows:

- Appendix A Notice of Preparation (NOP) and Comments Received on the NOP
- Appendix B Initial Study
- Appendix C Air Quality and Greenhouse Gas Technical Report
- Appendix D Air Quality and Greenhouse Gas Modeling Files
- Appendix E Built-Environment Resources Study
- Appendix F Tribal Outreach Materials
- Appendix G Noise Technical Report
- Appendix H Transportation Impact Assessment
- Appendix I TDM Plan
- Appendix J Biological Species Database Searches
- Appendix K Arborist Report
- Appendix L Bird-Safe Design Strategy
- Appendix M Preliminary Geotechnical Investigation
- Appendix N Phase I and Phase II Environmental Site Assessments
- Appendix 0 Water Supply Assessment

This environmental impact report (EIR) has been prepared in accordance with the provision of the California Environmental Quality Act (CEQA) to evaluate the potential impacts of the proposed Infinite 131 Project (proposed project), including the redesignation of the five off-site parcels (off-site redesignation parcels), in the City of South San Francisco, San Mateo County, California. As required by Section 15123 of the CEQA Guidelines, this summary chapter is intended to highlight major areas of importance in the environmental analysis. Following the summary description of the proposed project, **Table 2-1**, **p. 2-4**, presents a summary of the environmental impacts of the proposed project and feasible mitigation measures identified to reduce significant impacts. Following the summary table is a description of the alternatives to the proposed project that are addressed in this EIR, including a description of the environmentally superior alternative. The final subsection in this chapter is a summary of environmental issues to be resolved and areas of known controversy.

2.1 Summary Description

This EIR analyzes the potential environmental impacts that could result from implementation of the proposed project, which includes development of a research-and-development (R&D) campus as well as general plan, specific plan, and zoning code amendments to redesignate five off-site parcels. The project sponsor is US 131 Terminal Court Owner, LLC; the City of South San Francisco (City) is the Lead Agency for the proposed project under CEQA. The EIR provides a project-level analysis of the potential effects on the environment that could occur from implementation of the proposed project.

The proposed project would redevelop a 17.67-acre site at 131 Terminal Court, which is 1 mile west of San Francisco Bay, approximately 1 mile northwest of San Francisco International Airport (SFO), and 0.30 mile west of a portion of the San Francisco Bay Trail that runs along San Bruno Canal. The project site is bounded by industrial and commercial uses to the north, east, and west and a navigable slough that feeds into San Bruno Canal to the south. The southern part of the project site also includes a portion of the shoreline band jurisdiction of the San Francisco Bay Conservation and Development Commission (BCDC) adjacent to the navigable slough.

The 17.67-acre project site, which encompasses one parcel (Assessor's Parcel Number 015-113-210), is currently occupied by the Golden Gate Produce Terminal, a produce market, and associated surface parking. The site consists of two warehouse buildings and a smaller administrative building, totaling approximately 126,750 square feet (sf). In addition, the site is also developed with approximately 116,572 sf of open-air structures, including loading docks and trash compactors, associated with operations at the Golden Gate Produce Terminal. The existing warehouse and administrative buildings were constructed by 1962, the loading dock adjacent to the east warehouse building was constructed between 1981 and 1987, and a large free-standing loading dock was constructed between 2002 and 2005. There are approximately 475 existing employees on the project site. The project site outside the existing building footprints is covered with asphalt and concrete paving, with minimal surrounding landscaping and no trees.

The proposed project would demolish approximately 126,750 sf of industrial and operational uses that are currently occupied by the Golden Gate Produce Terminal, along with approximately 116,572 sf of open-air structures (e.g., loading docks, trash compactor areas), on a 17.67-acre site (i.e., the project site). In its place, the proposed project would construct approximately 1.7 million sf of R&D uses and amenities within seven buildings, ranging from one to six stories, along with two parking garages and additional surface parking. Landscaping would also be provided. The proposed project would require general plan, specific plan, and zoning code amendments to change the existing land use and zoning designations from Mixed Industrial High (MIH) to Business Park High (BTP-H) and allow development of the R&D campus. In addition, five Technology parcels north of the project site at 120 Terminal Court, 196 Produce Avenue, 160 Produce Avenue, and 140 Produce Avenue (off-site redesignation parcels), which are currently designated and zoned as MIH, would also seek general plan, specific plan and zoning code amendments to be redesignated as BTP-H. However, the proposed project would not include the construction of any new uses as part of redesignation of these parcels. The off-site redesignation parcels are north of the project site, across Terminal Court, at 120 Terminal Court, 196 Produce Avenue, 160 Produce Avenue, and 140 Produce Avenue (APNs 015-113-350, 015-113-290, 015-113-340, 015-113-330, 015-113-320). The off-site redesignation parcels currently comprise a large Park N' Fly surface parking lot and a Shell gas station. Collectively, the off-site redesignation parcels cover approximately 7.28 acres.

The proposed project would require approval of certain entitlements from the City and other agencies to enable its development, including, but not limited to, general plan, specific plan, zoning map, and zoning text amendments; design review; subdivision map approval; Transportation Demand Management (TDM) Plan approval; and a development agreement. In addition to these amendments, the proposed project would also include additional amendments to the general plan, specific plan and City Zoning Code to redesignate the five parcels north of the project site, across Terminal Court, at 120 Terminal Court, 196 Produce Avenue, 160 Produce Avenue, and 140 Produce Avenue. If the requested project entitlements are approved by the City, construction of the proposed project would be implemented over time and in a phased approach, with full project buildout anticipated in 2031. Eight phases are anticipated, with construction on the southern portion of the project site beginning in March 2026 and ending in October 2028 and construction on the northern portion of the project site beginning in November 2028 and ending in May 2031.

Refer to Chapter 3, *Project Description*, of this EIR for a detailed description of the project components and required governmental approval.

2.2 Infinite 131 Project Impacts and Mitigation Measures

Table 2-1 provides an overview of the following:

- Environmental impacts with the potential to occur as a result of the proposed project;
- Level of significance of the environmental impacts before implementation of any applicable mitigation measures;
 - NI: No Impact
 - LTS: Less than Significant
 - LTSM: Less than Significant with Mitigation

- PS: Potentially Significant
- o SUM: Significant and Unavoidable with Mitigation
- Mitigation measures that would avoid or reduce significant environmental impacts; and
- The level of significance for each impact after the mitigation measures are implemented.

A detailed description of project impacts and mitigation measures are discussed in Chapter 4, *Setting, Impacts, and Mitigation Measures*, of this document.

Table 2-1. Summary of Project Impacts and Mitigation Measures

	Level of Significance before		Level of Significance after
Air Quality	Mitigation	Recommended Mitigation Measures	Mitigation
Impact AQ-1: The project would not conflict with or obstruct implementation of the applicable air quality plan.	LTS	None required.	LTS
Impact AQ-2: The project would result in a cumulatively considerable net increase in a criteria pollutant for which the project region is classified as	PS	Mitigation Measure MM-AQ-1: Require Low-VOC Coatings during Project Operation. The project sponsor shall require contractors, as a	SUM
nonattainment under an applicable federal or state ambient air quality standard.		condition of contract, to reduce construction-related fugitive ROG emissions by ensuring that low-VOC coatings with a VOC content of 50 grams per liter or less are used during operation.	
		Mitigation Measure MM-AQ-2: Require Low-VOC Cleaning Supplies.	
		The project sponsor shall provide educational resources for tenants concerning zero- or low-VOC cleaning products. Prior to receipt of any certificate of final	
		occupancy, the project sponsor shall work with the City of South San Francisco to develop the electronic	
		correspondence to be distributed by email to new commercial tenants regarding a requirement to purchase cleaning products that generate less than the typical VOC	
		emissions. Mitigation Measure MM-AQ-3: Require Use of Zero- Emission Landscape Equipment.	
		The project sponsor shall provide educational resources for tenants concerning zero-emission landscape	
		contract, shall require all tenants to use only electric landscaping equipment throughout project operation to reduce ROG, NO _x , PM ₁₀ , and PM _{2.5} emissions.	

City of South San Francisco

Potential Environmental Impacts	Level of Significance before Mitigation	Recommended Mitigation Measures	Level of Significance after Mitigation
Impact AQ-3: The project would expose sensitive receptors to substantial pollutant concentrations.	PS	Mitigation Measure MM-AQ-4: Implement Construction Mitigation Measures to Reduce Dust Emissions.	SUM
		The project sponsor shall require all construction contractors to implement the dust-reducing measures listed below, which are based on BAAQMD's Basic Best Management Practices for Construction-Related Fugitive Dust Emissions but include more stringent measures to obtain greater reductions. The project sponsor shall provide documentation to the City of South San Francisco that the construction measures have been reflected in all construction contracts prior to the commencement of project construction activities.	
		 All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, unpaved access roads) shall be watered at least three times per day. 	
		• All haul trucks transporting soil, sand, or other loose material off-site shall be covered.	
		• All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per month. The use of dry power sweeping is prohibited.	
		• All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.	
		• All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading, unless seeding or soil binders are used.	
		 All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph. 	
		• All trucks and equipment, including their tires, shall be washed off prior to leaving the site.	

Potential Environmental Impacts	Level of Significance before Mitigation	Recommended Mitigation Measures	Level of Significance after Mitigation
		 Unpaved roads providing access to sites located 100 feet or further from a paved road shall be treated with a 6- to 12-inch layer of compacted layer of wood chips, mulch, or gravel. Publicly visible sign shall be posted with the name and telephone number of the person to contact at the City regarding dust complaints. That person shall respond and take corrective action within 48 hours. The air district's general air pollution complaints number shall also be visible to ensure compliance with applicable regulations. 	
Impact C-AQ-1: The project, inclusive of the off-site redesignation parcels, together with the cumulative projects identified, would not conflict with or obstruct implementation of the applicable air quality plan.	LTS	None required.	LTS
Impact C-AQ-2: The project, inclusive of the off-site redesignation parcels, together with the cumulative projects identified, would result in a cumulatively considerable net increase in a criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.	PS	Implement Mitigation Measures AQ-1 through AQ-3, above.	SUM
Impact C-AQ-3: The project, inclusive of the off-site redesignation parcels, together with the cumulative projects identified, would expose sensitive receptors to substantial pollutant concentrations.	PS	Implement Mitigation Measures AQ-4, above.	SUM

Level of Significance before Mitigation	Decommonded Mitigation Macquine	Level of Significance after Mitigation
Mitigation	Recommended Mugation Measures	Mitigation
PS	Mitigation Measure MM-CULT-1: Prepare Documentation in the Likeness of the Historic American Building Survey (HABS) in Consultation with Interested Parties Documentation and recordation of a historical resource that will be demolished shall reduce the loss of local history by preserving the history of the resource and its role within the region's historical context for the public's benefit and understanding. The applicant shall consult interested third parties and qualified professionals to prepare HABS-like documentation for the CRHR- and NRHP-eligible building on the project site proposed for demolition. Using the format and standards defined by NPS (which administers the HABS program), the applicant shall complete written and photographic documentation of the significant and character-defining features of the property prior to construction. This documentation shall minimize impacts by capturing and preserving a description of the property's significance, occupant and development history, and physical characteristics associated with the resource. In recent years, due to the large volume of submissions generated by environmental mitigation requirements, NPS and the National Archives have issued directives, indicating that they will not accept formal submissions under the HABS, Historic American Landscape Survey (HALS), and Historic American Engineering Record (HAER) programs unless the resource being documented is a rare, unusual, or exceptionally high-quality example of its type. Therefore, documentation at a similar level and formatting—HABS- like, with standard photography, written narrative, measured drawings—shall supplement documentation	SUM
	and approval. Instead, the prepared documentation shall be	
	Level of Significance before Mitigation	Level of Significance before MitigationRecommended Mitigation MeasuresPSMitigation Measure MM-CULT-1: Prepare Documentation in the Likeness of the Historic American Building Survey (HABS) in Consultation with Interested Parties Documentation and recordation of a historical resource that will be demolished shall reduce the loss of local history by preserving the history of the resource and its role within the region's historical context for the public's benefit and understanding. The applicant shall consult interested third parties and qualified professionals to prepare HABS-like documentation for the CRHR- and NRHP-eligible building on the project site proposed for demolition. Using the format and standards defined by NPS (which administers the HABS program), the applicant shall complete written and photographic documentation of the significant and character-defining features of the property prior to construction. This documentation shall minimize impacts by capturing and preserving a description of the property's significance, occupant and development history, and physical characteristics associated with the resource. In recent years, due to the large volume of submissions generated by environmental mitigation requirements, NPS and the National Archives have issued directives, indicating that they will not accept formal submissions under the HABS, Historic American Engineering Record (HAER) programs unless the resource being documented is a rare, unusual, or exceptionally high-quality example of its type. Therefore, documentation at a similar level and formatting—HABS- like, with standard photography, written narrative, measured drawings—shall supplement documentation standards without formal submission to NPS for review and approval. Instead, the prepared documentation shall be

	Level of Significance before		Level of Significance after
Potential Environmental Impacts	Mitigation	Recommended Mitigation Measuresprepared informally for distribution to local repositories or reuse in interpretive or educational programs.Educational media, such as print materials, websites, or digital publications, shall be prepared from the HABS-level documentation and donated to interested local repositories, such as the City of South San Francisco Public Library System or the Historical Society of South San Francisco (specifically, the Historical Society Museum Collections). Educational media may incorporate written, photographic, and archival documentation (e.g., informal HABS-level documentation undertaken with NPS standards); oral history interviews; videos; or animation to tell the story of the affected resource's contribution to the broad patterns of local history and cultural heritage 	Mitigation
		The Interpretive Signage and/or Interpretation Program shall be developed in coordination with professionals who meet the Secretary of the Interior's Professional Qualification Standards in History or Architectural History.	
		The interpretive signage and/or interpretation program shall include details regarding the proposed locations for the signage and/or program materials and the design of the visual components of the interpretive signage and/or interpretation program. The Interpretive Signage Plan and/or Public Interpretation Program shall not include cost analysis or specifications for the fabrication or installation of interpretative signage and/or interpretative program materials.	

Potential Environmental Impacts	Level of Significance before Mitigation	Recommended Mitigation Measures	Level of Significance after Mitigation
		The Interpretive Signage Plan and/or Public Interpretation Program shall be reviewed and approved by the City prior to the issuance of a demolition permit for the proposed project. No further discretionary review or approvals are anticipated to be required by the City to implement the Interpretive Signage Plan and/or Public Interpretation Program. Implementation of the Interpretive Signage Plan and/or Public Interpretation Program shall include the following elements:	
		Permanent Signage: The permanent interpretive signage shall include a minimum of two and a maximum of four permanent interpretive markers or signs that interpret South San Francisco's industrial heritage and include a history of the land uses previously located within the project site. The signs shall describe the industries that operated within the project site, namely, the Golden Gate Produce Terminal, and provide a written or visual narrative that places these companies within the context of the city's industrial development. The permanent signage shall use relevant historic photos, historic maps, and company archival materials (such as logos) to illustrate the narrative where feasible, given the availability and publication permission of the images. The signs shall be located in the interior and exterior of the proposed amenity building and/or at its adjacent courtyard within the project site. They shall be visible to both project site tenants and the general public (e.g., through an accessible and specific area or route through the grounds or buildings made legally available to the general public). Potential locations for permanent signage include the north courtyard, the south courtyard (and adjacent large-event/recreational space), the lobby entrance, and the proposed day-care facility. Permanent signage may also be incorporated into the perimeter path, promenade, or infinite loop. No more than	

Detential Environmental Impacts	Level of Significance before Mitigation	Decommonded Mitigation Measures	Level of Significance after Mitigation
rotentiai Environmentai Impacts	mugation		mugation
		half of the signs may be located in lobbies or other public	
		spaces that are inside buildings. The permanent signs shall	
		be instaned prior to issuance of the first certificate of	
		occupaticy. In addition, a secondary location shall be	
		nroduce distribution history and for current farmer's	
		markets.	
		Public Interpretation Program: The Public Interpretation	
		Program, including, but not limited to, self-guided walking	
		tours, short-format films, or murals and public art, shall	
		include materials that interpret South San Francisco's	
		industrial heritage and include a history of the land uses	
		previously located within the project site. The Public	
		Interpretation Program shall describe the industries that	
		operated within the project site, namely, the Golden Gate	
		Produce Terminal, and provide a written or visual narrative	
		that places these companies within the context of the city's	
		industrial development. The Public Interpretation Program	
		shall use relevant historic photos, historic maps, and	
		company archival materials (such as logos) to illustrate the	
		narrative where leasible, given the availability and	
		Interpretation Program shall be located in the interior and	
		avtorior of the proposed amonity building and its adjacent	
		courtward within the project site. It shall be visible to both	
		nroject site tenants and the general nublic Potential	
		locations for interpretative program materials include the	
		north courtvard, the south courtvard (and adjacent large-	
		event/recreational space), the lobby entrance, and the	
		proposed day-care facility. Interpretative program	
		materials could also be incorporated into the perimeter	
		path, promenade, or infinite loop. No more than half of the	
		Public Interpretation Program locations may be displayed	
		in lobbies or other public spaces that are inside buildings.	
		The Public Interpretation Program shall be installed prior	

City of South San Francisco

Potential Environmental Impacts	Level of Significance before Mitigation	Recommended Mitigation Measures	Level of Significance after Mitigation
		to the issuance of the first certificate of occupancy. In addition, a secondary location shall be sourced for a potential interpretation program with ties to local produce distribution history and/or current farmer's markets.	
Impact CULT-2: The project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.	PS	 Mitigation Measure MM-CULT-3: Train Workers to Respond to the Discovery of Cultural Resources A qualified archaeologist shall be retained to conduct cultural resources awareness training to all project personnel, prior to the start of construction. A qualified professional archaeologist is one that meets the Secretary of the Interior's Professional Qualification Standards in archaeology, as promulgated in Code of Federal Regulations (CFR), Title 36. The qualified archaeologist should note the names of all personnel who attend the cultural resources awareness training and email the information to the City for its records. The training shall include basic information about the types of artifacts that might be encountered during construction activities and procedures to follow in the event of a discovery. The training shall be provided for any additional personnel added to the project, even after the initiation of construction and ground-disturbing activities. Mitigation Measure MM-CULT-4: Retain a Qualified Archaeologist to Perform Construction Monitoring, Evaluate Uncovered Archaeological Features, and Mitigate Potential Disturbance for Identified Significant Resources at the Project Site. An archaeological monitor shall be onsite to monitor all construction-related ground disturbing activities. The archaeological monitor shall be onsite to monitor all construction-related ground disturbing activities. The archaeological monitor shall be onsite to monitor all construction-related ground disturbing activities. The archaeological monitoring, treatment, and evaluation of discoveries should be overseen by a qualified archaeologist who meets the Secretary of the Interior's Standards for Archaeology and is experienced in archaeological resource identification in the Bay Area. The 	LTSM

	Level of Significance before		Level of Significance after
Potential Environmental Impacts	Mitigation	Recommended Mitigation Measures	Mitigation
		archaeological monitor should identify archaeological remains that might be exposed by equipment during ground-disturbing construction activities. The monitor should observe all excavation activities associated with trenching, as well as inspect backdirt piles for evidence of pre-European contact, historical, or other culturally sensitive materials. If it is safe to do so, the monitor should inspect the sidewalls of trenches and pits as they are exposed. If warranted by their observations, the monitor should be empowered to temporarily halt or redirect construction to examine soils or inspect the potential resources. Archaeological monitors shall collect photographs and maintain notes (including documentation of stratigraphy and culturally sterile soils) and complete daily monitoring logs. The monitoring logs shall record the daily activities, including project locations and times, stratigraphic information, and findings of archaeological monitoring activities. An Archaeological Monitoring Results Report (AMRR) shall be prepared at the conclusion of ground-disturbing activities. The AMRR would include an introduction, regulatory context, monitoring methods, and findings. Daily monitoring logs, monitoring photographs, and figures depicting monitoring locations would be provided as appendices to the report.	
Impact C-CULT-1: The whole project, inclusive of the off-site redesignation parcels, together with the cumulative projects identified, would not result in a cumulatively considerable contribution to significant cumulative impacts on historical resources.	LTS	None required.	LTS

Potential Environmental Impacts	Level of Significance before Mitigation	Recommended Mitigation Measures	Level of Significance after Mitigation
Impact C-CULT-2: The project, inclusive of the off-site redesignation parcels, together with the cumulative projects identified, would not result in a cumulatively considerable contribution to significant cumulative impacts on archaeological resources and human remains.	PS	Implement Mitigation Measures MM-CULT-3 and MM-CULT-4 , above.	LTSM
Greenhouse Gas Emissions			
Impact GHG-1: The project would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	LTS	None required.	LTS
Impact GHG-2: The project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	LTS	None required.	LTS
Noise			
Impact NOI-1: The project would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies.	LTS	None required.	LTS
Impact NOI-2: The project would not generate excessive ground-borne vibration or ground-borne noise levels.	PS	Mitigation Measure NOI-1: Protect adjacent structures from construction-generated vibration. For construction with heavy ground-disturbing equipment that occurs within 13 feet of neighboring buildings, a construction vibration control plan shall be required to mitigate potential construction vibration impacts. The project sponsor shall incorporate into construction specifications for the proposed project a requirement for the construction contractor(s) to use all feasible means to avoid damage to adjacent and nearby buildings. Such methods to help reduce vibration-related damage effects may include maintaining a safe distance between the construction site and the potentially affected building (e.g.,	LTSM
	Level of Significance before		Level of Significance after
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Potential Environmental Impacts	Mitigation	Recommended Mitigation Measures	Mitigation
Potential Environmental Impacts	Mitigation	 Recommended Mitigation Measures at least 13 feet for large earth-disturbing equipment) or using smaller and less-vibration-intensive equipment in proximity to the potentially affected building. In the event that vibration-generating construction activity is required within 13 feet of nearby older buildings similar to "historic and some old buildings," the construction contractor shall implement a monitoring program to minimize damage to adjacent buildings and ensure that any such damage is documented and repaired. If required, the monitoring program shall include the following components: Prior to the start of any ground-disturbing activity within 13 feet of adjacent buildings, the construction contractor shall engage a structural engineer or other professional with similar qualifications to document and photograph the existing conditions of potentially affected buildings within 13 feet of proposed vibratory-generating construction activities. Based on the construction and condition of the resource(s), the consultant shall also establish a standard maximum vibration level that will not be exceeded at nearby buildings, based on existing conditions, character-defining features, soil conditions, and anticipated construction practices. A common standard is a peak particle velocity of 0.25 inch per second for "historic and some old buildings," as shown in Table 5-1. To ensure that vibration levels do not exceed the established standard, the project sponsor shall monitor vibration levels at each structure and prohibit vibratory construction activities that converts uvibration levels at each structure and prohibit vibratory construction activities that converts uvibration levels at each structure and prohibit vibratory construction activities that converts uvibration levels at each structure and prohibit vibratory construction activities that 	Mitigation

Potential Environmental Impacts	Level of Significance before Mitigation	Recommended Mitigation Measures	Level of Significance after Mitigation
		 Should vibration levels be observed in excess of the selected standard, construction shall be halted and alternative construction techniques put in practice, to the extent feasible. When vibration-intensive activity (e.g., heavy earth-disturbing equipment) occurs within 13 feet of a building, the structural engineer shall conduct an inspection of the building for damage within 7 days of that activity. If inspections determine that no damage occurred, the 7-day period may be increased to 30 days for that activity. Should damage to adjacent buildings occur, the building(s) shall be remediated to their preconstruction condition at the conclusion of ground-disturbing activity on the site. Should all ground-disturbing construction activity occur 13 feet or more from the nearest existing structure, this monitoring plan shall not be required. 	
Impact C-NOI-1: The project, inclusive of the off-site redesignation parcels, together with the cumulative projects identified, would not result in generation of 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.	LTS	None required.	LTS
Impact C-NOI-2: The project, inclusive of the off-site redesignation parcels, together with the cumulative projects identified, would not result in generation of excessive ground-borne vibration or ground-borne noise levels.	LTS	None required.	LTS

Potential Environmental Impacts	Level of Significance before Mitigation	Recommended Mitigation Measures	Level of Significance after Mitigation
Transportation	0	~	0
Impact TRANS-1: The project would conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicyclist, and pedestrian facilities.	PS	 Mitigation Measure TRANS-1: Advanced Implementation of Transportation Improvements Identified in General Plan, Lindenville Specific Plan, and Active South City Plan The project shall implement and/or fund, as indicated below, the following improvements identified in the General Plan, Lindenville Specific Plan, and Active South City Plan: 1. Signalization of the U.S. 101 Off-ramp/Produce Avenue and U.S. 101 On-ramp/Produce Avenue/Terminal Court Intersections: The project shall implement two new traffic signals along Produce Avenue to improve traffic operations, safety, and bicycle and pedestrian access to the project site. The traffic signals shall be located at the intersections of the U.S. 101 on-ramp/Produce Avenue/Terminal Court. The traffic signals shall be accompanied by changes to lane configurations, sidewalks, crosswalks, and bicycle facilities identified by the City to achieve consistency with adopted plans and policies. 2. Redesign of the Produce Avenue/San Mateo Avenue/Airport Boulevard Intersection: The project shall implement a redesign of the Produce Avenue/San Mateo Avenue/Airport Boulevard Intersection to improve traffic operations, safety, and bicycle, pedestrian, and transit access to the project site. A partial redesign of this intersection is already funded by the 100 Produce, 124 Airport, and 40 Airport projects, which will include removal of slip lanes on the northeast, northwest, and southwest corners. The project's redesign shall include the reconfiguration of turning lanes, improvements to pedestrian and bicycle facilities, and the addition of bus stops and shelters for SamTrans Route 292, as identified by the City. 	SUM

Potential Environmental Impacts	Level of Significance before Mitigation	Recommended Mitigation Measures	Level of Significance after Mitigation
		 Construction of a Class IV Separated Bikeway from Baden Avenue to Terminal Court via Airport Boulevard and Produce Avenue: The project shall implement a Class IV separated bikeway on Produce Avenue and Airport Boulevard from Baden Avenue to Terminal Court, connecting the Caltrain station to the project site. This bikeway would close existing gaps between the project site, Caltrain station, and downtown South San Francisco, enabling continuous bicycle travel separated from auto and truck traffic. Improvements would include construction of a two-way facility along the west side of Produce Avenue from Terminal Court to Airport Boulevard/San Mateo Avenue, transitioning to a pair of one-way facilities through the Caltrain crossing to Baden Avenue. Signalization of the San Mateo Avenue/Shaw Road/Tanforan Avenue Intersection: The project shall implement a new traffic signal at the intersection of San Mateo Avenue/Shaw Road/Tanforan Avenue. This traffic signal would facilitate access to the project site via Shaw Road while reducing potential for multimodal conflicts. The traffic signal shall be accompanied by accessible sidewalk and curb ramp upgrades at the intersection/sidewalk modifications at the adjacent San Mateo Avenue/South Linden Avenue intersection. Engineering Study of a New Southbound U.S. 101 Off- ramp Connecting to the Utah Avenue Overpass: The project shall fund an engineering study of a new southbound U.S. 101 off-ramp connecting to the proposed Utah Avenue overpass. as envisioned in the general plan and Lindenville Specific Plan. The engineering study shall be led by the City. As currently envisioned, the overpass would not include a southbound off-ramp. A second off-ramp would 	

Potential Environmental Impacts	Level of Significance before Mitigation	Recommended Mitigation Measures	Level of Significance after Mitigation
		 facilitate more direct access to the overpass and address long-term queueing concerns. The off-ramp would be accompanied by a new street connection between Utah Avenue and Produce Avenue north of the project site. 6. Engineering Study and Fair-share Contribution toward a New Trail Crossing of U.S. 101 South of the Project Site: The project shall fund an engineering study for a new Class I shared-use path crossing of U.S. 101 to connect the Bay Trail with Shaw Road. The engineering study shall be led by the City. An engineering study of the planned U.S. 101 crossing has not yet occurred, and a preferred alternative alignment has not been determined. The engineering study will consider potential trail crossing alignments, incorporate the preferred alternative alignment into its site plan, and quantify a fair-share contribution toward construction of the crossing. 	
		The mitigation shall be completed by the applicant prior to the project receiving a certificate of occupancy. If the City implements these improvements in advance of the project's construction, the project shall reimburse the City for the cost of construction. If another development implements these improvements and/or engineering studies prior to the project's construction, the project shall be responsible for a fair-share reimbursement of construction costs to the developer leading these improvements. This funding will ensure that transportation facilities serving the project site are appropriately sized to handle multimodal travel demand associated with the project, as envisioned in each plan.	
Impact TRANS-2: The project would not conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b).	LTS	None required.	LTS

	Level of Significance		Level of Significance
Potential Environmental Impacts	before Mitigation	Recommended Mitigation Measures	after Mitigation
Impact TRANS-3: The project would substantially increase hazards due to a geometric design feature or incompatible uses.	PS	Implement Mitigation Measure TRANS-1, above.	SUM
Impact TRANS-4: The project would not result in inadequate emergency access.	LTS	None required.	LTS
Impact C-TR-1: The project, inclusive of the off-site redesignation parcels, together with the cumulative projects identified, would conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.	PS	Implement Mitigation Measure TRANS-1 above.	SUM
Impact C-TR-2: The project, inclusive of the off-site redesignation parcels, together with the cumulative projects identified, would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b).	LTS	None required.	LTS
Impact C-TR-3: The project, inclusive of the off-site redesignation parcels, together with the cumulative projects identified, would substantially increase hazards due to a geometric design feature or incompatible uses.	PS	Implement Mitigation Measure TRANS-1 above.	SUM
Impact-C-TR-4: The project, inclusive of the off-site redesignation parcels, together with the cumulative projects identified would not result in inadequate emergency access.	LTS	None required.	LTS
Aesthetics (refer to Section 6.4, Effects Found Not to Be	<i>e significant,</i> and tl	ne Initial Study [Appendix B])	
a. Have a substantial adverse effect on a scenic vista?	LTS	None required.	LTS
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	NI	None required.	NI
c. In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly	LTS	None required.	LTS

City of South San Francisco

		Level of Significance before		Level of Significance after
Pot	ential Environmental Impacts	Mitigation	Recommended Mitigation Measures	Mitigation
	accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			
d.	Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	LTS	None required.	LTS
Agr	iculture and Forestry Resources (refer to Section	n 6.4, Effects Foun	d Not to Be Significant, and the Initial Study [Appendix B])	
a.	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non- agricultural use?	NI	None required.	NI
b.	Conflict with existing zoning for agricultural use or a Williamson Act contract?	NI	None required.	NI
c.	Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code Section 12220[g]), timberland (as defined by Public Resources Code Section 4526), or timberland zoned for timberland production (as defined by Government Code Section 51104[g]).	NI	None required.	NI
d.	Result in the loss of forestland or conversion of forestland to non-forest use?	NI	None required.	NI
e.	Involve other changes in the existing environment that, due to their location or nature, could result in non-agricultural use or the conversion of forestland to non-forest use?	NI	None required.	NI

Potential Environmental Impacts	Level of Significance before Mitigation	Recommended Mitigation Measures	Level of Significance after Mitigation
Biological Resources (refer to Section 6.4, Effects For	und Not to Be Sign	<i>ificant</i> , and the Initial Study [Appendix B])	8
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special- status species in local or regional plans, policies, or regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	LTS	Mitigation Measure BIO-1: Special-status Species, Migratory Birds, and Nesting Birds (from the General Plan EIR). Special-status species are those listed as endangered, threatened, or rare or candidates for listing by the U.S. Fish and Wildlife Service (USFWS) and/or California Department of Fish and Wildlife (CDFW) or designated as Rare Plant Rank 1B or 2B species by the California Native Plant Society (CNPS). This designation also includes CDFW Species of Special Concern and Fully Protected Species. Applicants or sponsors of projects on sites where potential special-status species, migratory birds, or nesting birds are present shall retain a qualified biologist to conduct a focused survey, per applicable regulatory agency protocols, to determine whether such species occur on a given project site. The project applicant or sponsor shall ensure that, if development of occupied habitat must occur, species impacts shall be avoided or minimized; if required by a regulatory agency or the CEQA process, any loss of wildlife habitat or individual plants shall be fully compensated on the site. If off-site mitigation is necessary, it shall occur within the South San Francisco Planning Area whenever possible, with priority given to existing habitat mitigation banks. Habitat mitigation shall be accompanied by a long-term management plan and monitoring program prepared by a qualified biologist and include provisions for the protection of mitigation lands in perpetuity through the establishment of easements and adequate funding for maintenance and monitoring.	LTSM

		Level of Significance		Level of Significance
ъ.		before		after
Pot	ential Environmental Impacts	Mitigation	Recommended Mitigation Measures	Mitigation
b.	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	LTS	None required.	LTS
C.	Have a substantial adverse effect on federally protected wetlands, as defined by Section 404 of the Clean Water Act (including, but not limited to, marshes, vernal pools, coastal areas) through direct removal, filling, hydrological interruption, or other means?	LTS	None required.	LTS
d.	Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	LTS	Implement Mitigation Measure BIO-1, above.	LTSM
e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	LTS	None required.	LTS
f.	Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?	NI	None required.	LTS
Ene	rgy (refer to Section 6.4, Effects Found Not to Be S	<i>Significant</i> , and th	e Initial Study [Appendix B])	
a.	Result in potentially significant environment impact due to the wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?	LTS	None required.	LTS
b.	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	LTS	None required.	LTS

Pot	ential Environmental Impacts	Level of Significance before Mitigation	Recommended Mitigation Measures	Level of Significance after Mitigation
Geo	logy and Soils (refer to Section 6.4, Effects Found	Not to Be Signific	ant, and the Initial Study [Appendix B])	
a.	Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42	LTS	None required.	LTS
	i. Strong seismic ground shaking?	LTS	None required.	LTS
	ii. Seismically related ground failure, including liquefaction?	LTS	None required.	LTS
	iii. Landslides?	LTS	None required.	LTS
	iv. Result in substantial soil erosion or the loss of topsoil?	LTS	None required.	LTS
c.	Be located on a geologic unit or soil that is unstable as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	LTS	None required.	LTS
d.	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	LTS	None required.	LTS
e.	Have soils that would be incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	NI	None required.	NI

		Level of Significance before		Level of Significance after
f.	Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	PS	Network and provide states Mitigation Measure GEO-6 (from the General Plan EIR): Applicants, owners, and/or sponsors of all future development or construction projects shall be required to perform or provide paleontological monitoring for all proposed excavations in the Colma Formation and Merced Formation, including those buried in the shallow subsurface below Quaternary deposits, due to high paleontological sensitivity for significant resources in these areas. Should significant paleontological resources (e.g., bones, teeth, well-preserved plant elements) be unearthed by the future project construction crew, the project activities shall be diverted at least 15 feet from the discovered paleontologist has assessed such discovered resources; if deemed significant, such resources shall be salvaged in a timely manner. The applicant/owner/ sponsor of said project shall be responsible for diverting project work and providing the assessment, including retaining a professional vertebrate paleontologist for such purpose. Collected fossils shall be deposited by the applicant/owner/sponsor in an appropriate repository (e.g., University of California Museum of Paleontology [UCMP], California Academy of Sciences) where the collection shall be properly curated and made available for future research.	LTSM
Haz	ards and Hazardous Materials (refer to Section (6.4, Effects Found	Not to Be Significant, and the Initial Study [Appendix B])	
a.	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	LTS	None required.	LTS
b.	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	LTS	None required.	LTS

		Level of Significance		Level of Significance
Pot	ential Environmental Impacts	before Mitigation	Recommended Mitigation Measures	after Mitigation
C.	Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	NI	None required.	NI
d.	Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?	LTS	None Required.	LTS
e.	For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area?	LTS	None Required.	LTS
f.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	LTS	None Required.	LTS
g.	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	NI	None required.	NI
Hyd	rology and Water Quality (refer to Section 6.4, E	Effects Found Not t	o Be Significant, and the Initial Study [Appendix B])	
a.	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	LTS	None required.	LTS
b.	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	LTS	None required.	LTS

Pot	ential Environmental Impacts	Level of Significance before Mitigation	Recommended Mitigation Measures	Level of Significance after Mitigation		
c.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would:	LTS	None required.	LTS		
	i. Result in a substantial erosion or siltation on- or off-site;	LTS	None required.	LTS		
	ii. Substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site;	LTS	None required.	LTS		
	iii. 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	LTS	None required.	LTS		
	.iv. Impede or redirect floodflows?	LTS	None required.	LTS		
d.	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	LTS	None required.	LTS		
e.	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	LTS	None required.	LTS		
Land Use (refer to Section 6.4, Effects Found Not to Be Significant, and the Initial Study [Appendix B])						
a.	Physically divide an established community?	LTS	None required.	LTS		
b.	Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	LTS	None required.	LTS		

		Level of Significance		Level of Significance
Pot	ential Environmental Impacts	before Mitigation	Recommended Mitigation Measures	after Mitigation
Mir	neral Resources (refer to Section 6.4, Effects Foun	d Not to Be Signi	ficant, and the Initial Study [Appendix B])	migution
a.	Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?	NI	None required.	LTS
b.	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	NI	None required.	LTS
Pop	oulation and Housing (refer to Section 6.4, Effects	Found Not to Be	<i>Significant</i> , and the Initial Study [Appendix B])	
a.	Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	LTS	None required.	LTS
b.	Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	NI	None required.	NI
Puł	olic Services (refer to Section 6.4, <i>Effects Found N</i>	ot to Be Significa	nt, and the Initial Study [Appendix B])	
a.	Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services: i. Fire protection? ii. Police protection? Iii. Schools? Iv. Parks? Other Public Eacilities?	LTS	None required.	LTS

Pote	ntial Environmental Impacts	Level of Significance before Mitigation	Recommended Mitigation Measures	Level of Significance after Mitigation
a.	Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of	LTS	None required.	LTS
b.	the facility would occur or be accelerated? Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical	LTS	None required.	LTS
Trib	effect on the environment?	ts Found Not to R	e Significant and the Initial Study [Annendix B])	
a.	Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe and that is	LTS	None required.	LTS
	i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources, as defined in Public Resources Code Section 5020.1(k), or	LTS	None required.	LTS
	ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	LTS	None required.	LTS

Pote	ential Environmental Impacts	Level of Significance before Mitigation	Recommended Mitigation Measures	Level of Significance after Mitigation			
a.	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, the construction or relocation of which could cause significant environmental environment?	LTS	None required.	LTS			
b.	Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	LTS	None required.	LTS			
C.	Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	LTS	None required.	LTS			
d.	Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	LTS	None required.	LTS			
e.	Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	LTS	None required.	LTS			
Wild	Wildfire (refer to Section 6.4, <i>Effects Found Not to Be Significant</i> , and the Initial Study [Appendix B])						
a.	Substantially impair an adopted emergency response plan or emergency evacuation plan	NI	None required.	NI			
b.	Due to slopes, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	NI	None required.	NI			

Potential Environmental Impacts		Level of Significance before Mitigation	Recommended Mitigation Measures	Level of Significance after Mitigation
C.	Require the installation or maintenance of associated infrastructure, such as roads, fuel breaks, emergency water sources, power lines, or other utilities, that may exacerbate fire risk or result in temporary or ongoing impacts on the environment?	NI	None required.	NI
d.	Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	NI	None required.	NI

2.2.1 Alternatives

CEQA Guidelines Section 15126.6 requires an EIR to evaluate the No Project Alternative and a reasonable range of alternatives to the project that would feasibly attain most of the project's basic objectives, but that would also avoid or substantially reduce any identified significant environmental impacts of the project. As summarized in Table 2-1, the proposed project would result in significant and unavoidable impacts related to air quality, cultural resources, and transportation.

As described in Chapter 5, *Alternatives*, three alternatives are evaluated in this EIR:

- Alternative A—No Project Alternative
- Alternative B—Business Technology Park-Medium (BTP-M) Alternative
- Alternative C—Increased Office Space (80 Percent Office/20 Percent Lab) Alternative

As also described in Chapter 5, the EIR also evaluated, but ultimately rejected four alternatives that were considered by the City but rejected as infeasible during the scoping and environmental review process. The alternatives evaluated in detail in Chapter 5, *Alternatives*, of this EIR are summarized below.

2.2.1.1 Alternative A: No Project Alternative

As required by CEQA Guidelines Section 15126.6(e), Chapter 5, *Alternatives* included evaluation of a "no project" alternative.

Under Alternative A—No Project Alternative, the project would not be implemented. No demolition of existing structures, i.e., warehouse buildings, administrative building, or open-air structures would occur. No new R&D or amenity buildings would be built, nor would any parking garages. Existing land uses would remain unchanged and in their current physical state. No new open space, curbs, or sidewalks would be constructed and there would be no improvements to pedestrian and bicyclist circulation and access. No new restaurant space, outdoor terraces, conference space, or daycare center would be constructed. Existing General Plan and Specific Plan land use designations and zoning districts would be maintained. Alternative A would not preclude potential future development at the project site with a range of land uses that are permitted under existing land use policies at the Project Site. Permitted uses under the existing MIH land use designation and zoning allow for development of a wide range of warehousing, manufacturing, processing, service commercial, and storage and distribution uses. As required under the MIH designation, truck docks, loading areas, and service areas must be located at the rear or interior side of buildings and must be screened so that they are not visible from surrounding public streets, including highways.

2.2.1.2 Alternative B: BTP-M Alternative

Alternative B—BTP-M Alternative would develop the proposed project in accordance with the requirements for the BTP-M zoning designation, resulting in a floor area ratio (FAR) of 1.0 instead of a FAR of 2.0, as allowed under the BTP-H zoning designation. Consequently, there would be a reduction in the amount of floor area for R&D and amenity uses as well as the number of project-generated employees. With the reduction in FAR, maximum building heights under Alternative B would be reduced to 57 feet, or three stories, compared to the maximum heights that would be

developed under the proposed project (approximately 114 feet, or six stories). The amount of new development would be reduced to approximately 768,440 sf compared to approximately 1,7040,050 sf under the proposed project. As a result, Alternative B would result in the generation of approximately 1,708 employees compared to the approximately 3,787 employees that would be generated under the proposed project.

The site plan for Alternative B would be similar to that of the proposed project but at a reduced scale. However, all other proposed uses (e.g., the conference space, fitness center, restaurant, and day care) would continue to be incorporated as part of the alternative to a reduced extent and would be accessible from a network of interconnected pathways as well as the central courtyards. In addition, the overall design of Alternative B would be similar to that of the proposed project and would incorporate two central courtyards along the interior of the project site that would be framed by the proposed buildings to prioritize pedestrian and bike-friendly connections and outdoor amenities. Alternative B would also achieve a Leadership in Energy and Environmental Design (LEED) Gold rating for building design and construction as well as WELL v2 Core certification. Furthermore, the TDM program, which would be implemented to reduce the amount of traffic generated by the alternative, would be similar to that for the proposed project.

As mentioned above, Alternative B would not change the permitted uses that would be allowed to occur under the project or the footprint of proposed buildings; however, it would change the intensity at which they would occur due to the reduced intensity and, consequently, building height (57 feet, or three stories). Alternative B would still include R&D, conference, fitness center, restaurant, and day-care uses. Specifically, Alternative B would involve approximately 734,500 sf of new R&D uses and 33,940 sf of amenity uses, instead of 1,632,000 sf of R&D uses and 72,050 sf of amenity uses as proposed under the project. However, because Alternative B would result in less building area for R&D and amenity uses and fewer employees, the amount of parking would be reduced. With the reduction in required parking spaces, Alternative B would eliminate two levels of below-grade parking, resulting in only one below-grade level of parking.

Utility improvements associated with Alternative B would be similar to those described for the proposed project. The project site is serviced by existing water, wastewater, stormwater, electricity, telecommunications, and waste and recycling services. New on-site facilities would be connected to new services through the installation of new localized connections. Any expansion or increase in the capacity of off-site infrastructure would occur as required by utility providers. Street improvements along Terminal Court and the right-of-way connection to Shaw Road would include new curbs, landscaping, and sidewalks.

The construction activities and the types of construction equipment used for Alternative B would be similar to those under the proposed project; however, there would be a few key differences. The construction schedule for Alternative B may be substantially shorter than the proposed project and would occur over approximately 46 months, or approximately 4 years. In addition, Alternative B would require less ground disturbance compared to the proposed project with the reduction in the underground parking.

The existing land use and zoning designation on the site is MIH. Therefore, Alternative B would still require a general plan amendment, specific plan amendment, zoning map and text amendment, TDM plan approval, design review, tentative map approval, and development agreement. Alternative B would also require standard City engineering, building, and fire permits, along with other agency approvals (e.g., California Department of Transportation, Bay Area Regional Water Quality Control Board, Bay Area Air Quality Management Agency (BAAQMD), City/County Association of Governments Airport Land Use Commission, Federal Aviation Administration, and Bay Conservation and Development Commission).

Under Alternative B, the five off-site redesignation parcels that are currently designated as MIH under the general plan, specific plan, and City Zoning Code would be redesignated to BTP-M, consistent with the proposed land use and designation for the alternative. This would ensure that future development would be cohesive and consistent with the development proposed under Alternative B. Alternative B would not include the construction of any new uses on the off-site redesignation parcels.

2.2.1.3 Alternative C: Increased Office Space (80 Percent Office/20 Percent R&D)

Generally, R&D uses in the city include a mix of lab and office spaces. Alternative C—the Increased Office Space Alternative, would develop the project site with the same total building area that would be developed under the proposed project, approximately 1,704,050 sf, but the total buildout would comprise approximately 80 percent office uses and no more than 20 percent lab uses. Alternative C would reduce the amount of floor area for lab uses as well as the number of lab and amenity employees compared with the proposed project, resulting in approximately 876 employees. However, there would be more total on-site employees under this alternative due to the increase in office space. Alternative C would result in approximately 3,072 office employees. The number of day-care employees (i.e., nine) would remain the same under Alternative C as with the proposed project. Therefore, there would be a total of 3,957 total employees on the project site under Alternative C compared to 3,787 total employees under the proposed project.

The site plan for Alternative C would be similar to that of the proposed project but with internal building reconfigurations to account for the reduced amount of lab space and an increase in the amount of office space. However, all other proposed uses (e.g., the conference space, fitness center, restaurant, and day care) would remain the same and would be accessible from a network of interconnected pathways as well as the central courtyards. Because the building footprints would be the same, all footprint-based impacts would be the same as those of the proposed project. The maximum building height, approximately 114 feet, would be the same as under the proposed project. In addition, the overall design of Alternative C would be similar to that of the proposed project and would incorporate two central courtyards along the interior of the project site that would be framed by the proposed buildings to prioritize pedestrian and bike-friendly connections and outdoor amenities.

The landscape and circulation features under Alternative C would be similar to those the proposed project would incorporate. This would include providing approximately 115,130 sf of open space in the courtyards, which would be publicly accessible, and provide space for outdoor work, recreation, and socializing through the use of seat walls, paved areas, turf, as well as shade structures. Alternative C would also achieve LEED Gold rating for building design and construction as well as WELL v2 Core certification. Furthermore, the TDM program, which would be implemented to reduce the amount of traffic generated by the Alternative, would be similar to that for the proposed project. However, because Alternative C would result in less building area for lab uses and fewer lab employees, but additional office area with more office employees, the amount of parking would increase. The proposed project in total would provide 2,976 parking

spaces. Alternative C would provide 3,843 total parking spaces. The additional parking would be accommodated in the underground parking garage under the I131S building by adding one additional level of underground parking.

Utility improvements associated with Alternative C would be similar to those described for the proposed project. The project site is serviced by existing water, wastewater, stormwater, electricity, telecommunications, and waste and recycling services. New on-site facilities would be connected to new services through the installation of new localized connections. Any expansion or increase in the capacity of off-site infrastructure would occur as required by utility providers. Street improvements along Terminal Court and the right-of-way connection to Shaw Road would include new curbs, landscaping, and sidewalks. Alternative C would also provide pedestrian pathways along the exterior and throughout the interior of the project site to provide connections between the buildings and the courtyards.

Overall, the construction activities and the types of equipment used for Alternative C would be similar to those for the proposed project. In addition, construction and demolition activities within the project site would be similar to those under the proposed project. Construction activities under Alternative C would be slightly reduced compared to the proposed project and would occur over an approximately four-and-a-half-year construction period instead of an approximately five years under the proposed project.

As for anticipated approvals, Alternative C would still require a general plan amendment, specific plan amendment, zoning map and text amendment, TDM plan approval, design review, tentative map approval, and development agreement. Alternative C would also require standard City engineering, building, and fire permits, along with other agency approvals (e.g., California Department of Transportation, Bay Area Regional Water Quality Control Board, BAAQMD, City/County Association of Governments Airport Land Use Commission, Federal Aviation Administration, and Bay Conservation and Development Commission).

Under Alternative C, the five off-site redesignation parcels that are currently designated as MIH under the general plan, specific plan, and City Zoning Code would be redesignated to BTP-H, consistent with the proposed land use and designation for the alternative. This would ensure that future development would be cohesive and consistent with the development proposed under Alternative C. Alternative C would not include the construction of any new uses on the off-site redesignation parcels.

2.2.2 Environmentally Superior Alternative

CEQA Guidelines Section 15126.6(e)(2) requires identification of an environmentally superior alternative (the alternative that has the fewest significant environmental impacts) from among the other alternatives evaluated if the proposed project has significant impacts that cannot be mitigated to a less-than-significant level. If Alternative A, the No Project Alternative, is found to be the environmentally superior alternative, the EIR must identify an environmentally superior alternative among the other alternatives.

As evaluated in Chapter 5, *Alternatives*, of this EIR, Alternative C—Increased Office Space Alternative, would not avoid any of the significant and unavoidable impacts of the proposed project. In fact, Impact TRANS-1, TRANS-3, C-TRANS-1, and C-TRANS-3 would be increased in severity under this alternative. Therefore, Alternative C is not the environmentally superior alternative. Alternative B—BTP-M Alternative, would reduce but would not avoid all of the project's significant and unavoidable impacts. Alternative B also would not result in any new significant and unavoidable impacts. Therefore, Alternative B is the environmentally superior alternative.

2.2.3 Areas of Known Controversy and Issues to Be Resolved

The City of South San Francisco Planning Division of the Economic and Community Development Department (Planning Division), issued a Notice of Preparation (NOP) of an EIR for the proposed Infinite 131 project on November 1, 2023, in compliance with Title 14, Sections 15082(a), 15103, and 15375 of the California Code of Regulations. The NOP review period commenced on November 1, 2023, and concluded on December 8, 2023, and a scoping meeting was held on November 28, 2023. One commenter submitted questions at the meeting. The Planning Division received eight comment letters from public agencies and interested parties during the public review and comment period. Comments received during the scoping process include those related to biological resources, cultural resources and tribal cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, transportation, and utilities. The Planning Division has considered the comments made by the public in preparation of the EIR for the proposed project. A copy of the NOP and all comments received on the NOP are provided in Appendix A.

3.1 **Project Overview**

US 131 Terminal Court Owner, LLC (project sponsor), is proposing construction and operation of the Infinite 131 Project (proposed project), which would include demolition of approximately 126,750 square feet (sf) of industrial and operational uses that are currently occupied by the Golden Gate Produce Terminal, along with approximately 116,572 sf of open-air structures (e.g., loading docks, trash compactor areas), on a 17.67-acre site (i.e., the project site). In its place, the proposed project would construct approximately 1.7 million sf of research-and-development (R&D) uses and amenities within seven buildings, ranging from one to six stories, along with two parking garages and additional surface parking. Landscaping would also be provided. The proposed project would require general plan, specific plan, and zoning code amendments to change the existing land use and zoning designations from Mixed Industrial High (MIH) to Business Technology Park High (BTP-H) and allow development of the R&D campus. In addition, five parcels north of the project site at 120 Terminal Court, 196 Produce Avenue, 160 Produce Avenue, and 140 Produce Avenue (off-site redesignation parcels), which are currently designated and zoned as MIH, would also seek general plan, specific plan and zoning code amendments to be redesignated as BTP-H. However, the proposed project would not include the construction of any new uses as part of redesignation of these parcels.

3.2 Project Location and Physical Setting

The approximately 17.67-acre project site comprises one parcel at 131 Terminal Court in the city of South San Francisco (Figure 3-1). The project site is identified as assessor's parcel number (APN) 015-113-210. Surrounding land uses include industrial and commercial uses. Specifically, Terminal Court and a large Park N' Fly surface parking lot is north of the project site, a large surface parking lot and U.S. 101 (known as Bayshore Freeway) are adjacent to the eastern portion of the project site, a navigable slough¹ that feeds into San Bruno Canal is south of the project site, and several mixed industrial and commercial buildings and San Mateo Avenue are west of the project site. The project site is approximately 1 mile west of San Bruno Canal. The southern part of the project site also includes a portion of the shoreline band jurisdiction of the San Francisco Bay Conservation and Development Commission (BCDC) adjacent to the navigable slough. In addition, the project site is approximately 1 mile northwest of San Francisco International Airport (SFO).

¹ The navigable slough is a remnant tidal channel that cuts through a commercial district in the city of South San Francisco. The slough is connected to San Francisco Bay. (ESA. 2019. *Navigable Slough Flood Management Study, Prepared for County of San Mateo, City of South San Francisco, and City of San Bruno*. Available: https://oneshoreline.org/wp-content/uploads/2020/06/Navigable-Slough-Flood-Management-Study.pdf. Accessed: April 12, 2023).



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Figure 3-1 Project Location Map

Access to the project site is provided via Terminal Court from Produce Avenue. The topography of the project site is relatively flat, approximately 6 feet above mean sea level.² There is little to no onsite landscaping, and there are no existing trees on the project site.³

The project site is currently occupied by the Golden Gate Produce Terminal, a produce market facility, and associated surface parking. The project site consists of two warehouse buildings and a smaller administrative building, totaling approximately 126,750 sf. In addition, the site is also developed with approximately 116,572 sf of open-air structures, including loading docks and trash compactors, associated with operations of the Golden Gate Produce Terminal. The existing warehouse and administrative buildings were constructed by 1962, the loading dock adjacent to the east warehouse building was constructed between approximately 1981 and 1987, and a large free-standing loading dock was constructed between approximately 2002 and 2005. There are approximately 475 existing employees on the project site. The project site outside the existing building footprints is covered with asphalt and concrete paving, with minimal surrounding landscaping and no trees.

The off-site redesignation parcels are north of the project site, across Terminal Court, at 120 Terminal Court, 196 Produce Avenue, 160 Produce Avenue, and 140 Produce Avenue (APNs 015-113-350, 015-113-290, 015-113-340, 015-113-330, 015-113-320). The off-site redesignation parcels currently comprise a large Park N' Fly surface parking lot and a Shell gas station. Collectively, the off-site redesignation parcels cover approximately 7.28 acres.

3.3 Existing Land Use and Zoning Designations

The city of South San Francisco is organized as several geographic areas, referred to as *planning sub-areas*, including the Lindenville Planning Sub-Area, as identified in the *Shape SSF 2040 General Plan* (General Plan) adopted in October 2022. The project site and the off-site redesignation parcels are located in the Lindenville Planning Sub-Area, an approximately 400-acre area in the central southern portion of the city between U.S. 101 and South Spruce Avenue, adjacent to the Downtown Sub-Area. The Lindenville Planning Sub-Area comprises largely industrial, business, food processing, manufacturing, and warehousing uses. The General Plan's Planning Sub-Areas Element does not impose density or height standards separate from those found in the General Plan's Land Use Element. According to the General Plan, the Lindenville Planning Sub-Area aims to preserve business and industrial uses while strengthening its economic base, which includes a large number of small businesses and a high share of area jobs, by retaining a large portion of its land area for service, transportation, and industrial uses.⁴

The Lindenville Specific Plan (Specific Plan), adopted in September 2023, establishes the planning framework for the Lindenville Planning Sub-Area. Under the Specific Plan, both the project site and off-site redesignation parcels are designated as MIH, which allows for development of a wide range of warehousing, manufacturing, processing, service commercial, and storage and distribution uses. Figure 3-2 illustrates the existing land use designations for the project site, the off-site redesignation parcels, and the surrounding area under the Lindenville Specific Plan.

² Haley & Aldrich, Inc. 2022. *ASTM Phase I Environmental Site Assessment 131 Terminal Court, South San Francisco*. April 2022.

³ HMH Engineers. 2022. *Terminal 131 Certified Tree Inventory*. July 27, 2022.

⁴ City of South San Francisco. 2022. *2040 General Plan*. Available: https://shapessf.com/wp-content/uploads/ 2022/11/SSFGPU_PDFPlan_FinalPlan_Resolution_11082022.pdf. Accessed: March 15, 2023.



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Figure 3-2 Existing General Plan Land use Designations The project site and off-site redesignation parcels are designated in the City of South San Francisco's (City's) Zoning Code as MIH. As established in the City's Zoning Code, the maximum building height allowed under the existing MIH zoning designation is 65 feet. The base maximum permitted floor area ratio (FAR) under the MIH zoning designation is 0.4, but increases may be permitted, up to a total FAR of 2.0, for all permitted uses. However, R&D facilities under this zoning designation may have a maximum allowed FAR of 0.5, provided they follow the requirements of the City's Community Benefits Program, as outlined in Chapter 20.395 of the City's Municipal Code. In addition, as required under the MIH designation, truck docks, loading areas, and service areas must be located at the rear or interior side of buildings and must be screened so that they are not visible from surrounding public streets, including highways. However, as described in more detail below in Section 3.7, *General Plan, Specific Plan, and Zoning Code Amendments*, the proposed project would require General Plan, Specific Plan, and zoning amendments.

Figure 3-3 illustrates the existing zoning designations for the project site, the off-site redesignation parcels, and the surrounding area.

3.4 Project Objectives

The project sponsor identified the following objectives for the proposed project:

- Redevelop the property with R&D, biotechnology, and office uses in a secure and integrated campus setting.
- Create an iconic, inspiring, and dynamic gateway presence along U.S. 101 with high visibility.
- Incorporate a building and landscape design that sets a unique identity within the city.
- Utilize a shifting and articulated building massing that creates visual, desirable, and usable amenities, including outdoor terraces for tenants.
- Provide an activated landscape area that, in addition to being pedestrian friendly, encourages walking and biking, interaction, and collaboration and provides a wide range of opportunities for wind-protected outdoor activities.
- Integrate sustainable strategies to advocate an energy-efficient and performative design, including water-saving strategies.
- Provide a highly efficient and flexible workplace with daylight for interior spaces and outward views of the surrounding areas.
- Provide a positive fiscal impact on the local economy through the creation of jobs, enhancement of property values, support for local transportation infrastructure, and the generation of property taxes and development fees.
- Provide well-designed, flexible buildings and floor plates that can accommodate a variety of tenants to ensure the proposed project will be responsive to market conditions and demands.

3.5 Project Components

The project proposes demolition of all existing uses on the project site (i.e., warehouse buildings, administrative building, open-air structures) and construction of R&D uses and an on-site amenity space. Overall, the proposed project would construct approximately 1.7 million sf of new



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Figure 3-3 Existing Zoning Designation

uses across seven buildings. As detailed in Table 3-1, this breaks down to approximately 1,632,000 sf of R&D uses and approximately 72,050 sf of amenity uses. The buildings would be tied together through landscaping and open space to create a sustainable campus environment with improved pedestrian and bicyclist circulation and access, as depicted in Figure 3-4. Building heights would range from one to six stories, with the maximum building height being 113 feet, 6 inches. In addition, the proposed project would include two parking garages, associated with the I131N building and I131S building. The I131N parking garage would be approximately 551,631 sf in area and approximately 100 feet tall. It would include three below-grade levels of parking as well as nine levels of above-grade parking. The I131S parking garage would be approximately 453,034 sf in area and include two levels of below-grade parking.

Building	R&D (sf)	Conference (sf)	Fitness Center (sf)	Restaurant (sf)	Day Care (sf)	Total (sf)	Maximum Heightª
11315	824,000	4,000	0	2,000	0	830,000	6 stories (113 feet, 6 inches)
I131S (amenity building)	0	13,000	20,000	17,000	0	50,000	2 stories (32 feet, 0 inches)
I131N	808,000	4,000	0	8,000	0	820,000	6 stories (113 feet, 6 inches)
Day-care Center	0	0	0	0	4,050	4,050	1 story (16 feet, 0 inches)
Total	1,632,000	21,000	20,000	27,000	4,050	1,704,050	113 feet, 6 inches

Table 3-1	. Summary	of F	Proposed	Land	Uses
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Notes:

^{a.} The building height is measured to the top of rooftop appurtenances.

The I131S A, I131S B, and I131S C buildings, collectively referred to as the I131S building, would have a total area of approximately 830,000 sf and be six stories tall, or approximately 114 feet. The I131S building would include entrance lobbies on the ground floor, with R&D uses across all building levels. In addition, approximately 4,000 sf of conference space and 2,000 sf of restaurant/cafe space would also be located on the ground floor of the building. The I131S building would incorporate outdoor terraces on multiple levels of the proposed buildings for use by building tenants. In addition , the proposed project would incorporate an approximately 50,000 sf amenity building, the I131S amenity building, which would be located in the central courtyard adjacent to the I131S building. The amenity building would be two stories (approximately 32 feet), with approximately 17,000 sf of conference space. The proposed fitness center would be available for use by the public and the proposed project's tenants.

The I131N building (i.e., buildings I131N A and I131N B) would be north of the site and immediately adjacent to the I131S building. The I131N building would have an area of approximately 820,000 sf and be six stories tall, or approximately 114 feet. The I131N building



∖I∠ ∕ICF would also include 808,000 sf of R&D uses that would be spread out across all levels of the proposed buildings. The ground floor of the I131N building would include a lobby, approximately 4,000 sf of conference space, and 8,000 sf of restaurant/cafe space. In addition, the I131N building would also incorporate outdoor terraces on multiple levels for use by building tenants.

The proposed project would provide a day-care center north of the I131N parking garage in the northwestern portion of the project site. The day-care center would have an area of approximately 4,050 sf and be one story, or approximately 16 feet. In addition to the proposed day-care center building, approximately 4,950 sf of outdoor play areas would be provided and protected with fencing; the surrounding landscaping and trees would be minimal. The proposed day-care center would have nine employees and accommodate up to 50 children. It would be operational Monday through Friday and be open to employees of the proposed project as well as the public.

A total of twenty-four 500-kilowatt (kW) emergency generators would be provided on the project site, which would be used in the event of power grid failure. Of the 24 generators, 18 of them would be located outdoors, at grade, and in service yards in acoustic enclosures. The remaining six emergency generators would be located inside of the I131N building on the ground floor in a separate generator room. Generators would be tested monthly, most likely on weekends or during non-business operating hours. Generator testing would take place within designated hours when noise restrictions are not an issue.

The upper floors of the proposed I131N and I131S buildings, not including the amenity building (i.e., I131S D) and day-care center, would provide direct views to San Francisco Bay, Sign Hill Park, San Bruno Mountain, and the hills west of Interstate 280; views of the landscaped courtyards below would also be provided. As stated previously, the buildings would be linked together through a cohesive network of landscaping and open space. The two central landscaped courtyards would be located along the interior of the project site and framed by the shape of the proposed I131N and I131S buildings to prioritize pedestrian- and bike-friendly connections as well as outdoor amenities. The proposed project would include approximately 115,130 sf of open space in the courtyards, which would be publicly accessible, providing space for outdoor work, recreation, and socializing through the use of seat walls, paved areas, turf, as well as shade structures.

3.5.1 Site Access, Circulation, and Parking

As depicted in Figure 3-4, vehicular access to the project site would be provided via a driveway on Terminal Court and a right-of-way connection from the southwestern portion of the project site to Shaw Road, to the south, through an existing access easement. Internal roads would be configured to circle the I131N building and the entire project site in a loop formation, providing access to buildings, parking, and on-site amenities. The proposed project would provide a total of 2,976 parking spaces. The I131N parking garage would be west of the I131N A and I131N B buildings. It would include 1,378 parking spaces in three levels of below-grade parking and nine levels of above-grade parking, along with 20 surface parking spaces. The I131S parking garage would be located beneath the I131S building. It would provide 1,538 parking spaces, along with 40 surface parking spaces.

Approximately six surface parking spaces and 50 garage parking spaces would be Americans with Disabilities Act (ADA) compatible. In addition, per the California Green Building Standards Code, commonly referred to as CALGreen, approximately 45 percent of the total number of parking spaces (i.e., approximately 1,339 spaces) would be electric-vehicle (EV) capable to accommodate future installation of EV chargers. Of the approximately 1,339 spaces, 33 percent (or approximately 442 spaces) would be provided with EV charging stations.

Street improvements along Terminal Court and the right-of-way connection to Shaw Road would include new curbs, landscaping, and sidewalks. The proposed project would also include pedestrian pathways along the exterior and throughout the interior of the project site to provide connections between the buildings and the courtyards. A total of 176 bicycle parking spaces would be provided throughout the site, consisting of 149 long-term bicycle parking spaces and 27 short-term bicycle parking spaces. The short-term bicycle parking spaces would be located near the lobby entrances to the proposed buildings. The long-term bicycle parking spaces, as well as showers, would be provided on the ground floor of the I131N and I131S buildings and within a bicycle storage room in the parking garage.

Dedicated access to the project site for emergency vehicles would be provided via Terminal Court and the Shaw Road connection. The proposed project would allow emergency vehicle access to all buildings through the proposed roadway network within the project site. The project site would include 20- to 26-foot-wide fire lanes around the perimeter of the project site, providing access to each building, as well as the I131N parking garage.

Although not proposed as part of the project, the project sponsor may, in the future, purchase up to 2 acres of undetermined industrial zoned land fronting San Mateo Boulevard and build an aboveground parking structure to serve the proposed project. This land could provide an additional access and/or egress point to the project site for a more dispersed traffic flow. Such an improvement, if pursued, would be subject to California Environmental Quality Act (CEQA) review. It is not evaluated as part of the proposed project.

3.5.2 Transportation Demand Management

The proposed project would require submittal of a Transportation Demand Management (TDM) plan to the Planning Division for review and approval as part of the entitlement process, per the requirements of the City Municipal Code and General Plan. A TDM plan is intended to reduce the amount of traffic generated by new development, manage congestion, and promote the efficient use of the existing transportation network through the adoption of TDM measures and ongoing monitoring and reporting in accordance with the City's TDM Ordinance (Chapter 20.400). The proposed project's TDM plan lays out measures to reduce peak-hour travel demand and encourage alternative modes of transportation to reduce single-occupant vehicle use. The specific measures are still preliminary but are anticipated to include:

- **On-site Amenities for Bicycle and Pedestrian Access**—The project would provide new connections and on-site circulation paths with pedestrian walkways between all core buildings, bicycle routes through the site, and a new trail along the navigable slough that would connect to Shaw Road. The project would provide short-term and long-term bicycle parking spaces in various locations throughout the project site, bicycle repair areas, and showers and changing rooms.
- Shuttle Service to Caltrain and Bay Area Rapid Transit (BART) The TDM Plan would provide first-/last-mile shuttle service to the San Bruno BART station and South San Francisco Caltrain station.

- **Carpooling and Vanpooling Programs and Parking** The TDM Plan would ensure that employer tenants would offer carpool and vanpool programs that would include subsidies or other monetary incentives, dedicated carpool and vanpool parking, as well as ride-matching services to help facilitate shared trips. Elements of the carpool program, such as ride-matching, would be provided in partnership with Commute.org.
- **Telecommuting and Flexible Work Schedules** The TDM Plan would encourage employers to allow telecommuting at least one day per week to reduce the overall number of trips. In addition, when employees commute to work, employers would encourage flexible work schedules to shift travel outside of peak hours.
- **Fully Subsidized Transit Passes** The TDM Plan would offer transit passes or subsidies, which would be implemented through either a direct voucher program provided by the property manager or through lease terms that would obligate employers to provide subsidies.
- **Other TDM Plan Features** The TDM Plan would include a range of features, such as on-site amenities, including dining, fitness, and conference facilities, as well as active transportation gap closures and transit capital improvements.

As required by the South San Francisco Municipal Code, the TDM Plan would include requirements for monitoring and auditing the performance of the measures, which may be revised or amended as needed to meet TDM performance objectives. Implementation of the TDM Plan would be monitored annually and adjusted accordingly, if necessary, in order to meet required alternative-use goals. Leases for all tenants would include provisions regarding the mandatory TDM measures and appointment of a TDM coordinator, who may be shared among multiple tenants.

3.5.3 Lighting

Lighting would include canopy-mounted linear lighting as well as linear LED uplight-type wallmounted units on the exterior of the buildings and at building entrances. Exterior pole-mounted fixtures would be provided in open space areas, vehicular circulation areas, and other hardscaped areas. In addition, low-level pedestrian lighting would be provided along pedestrian pathways and the terrace areas. All exterior lighting would conform to the City Zoning Code, Section 20.300.009, *Lighting and Illumination*.

3.5.4 Building Design and Sustainability Features

As stated previously, the proposed project would be designed so that the buildings would be tied together through landscaping and open space. Specifically, the proposed project would incorporate two central courtyards located along the interior of the project site and framed by the shape of the I131N and I131S buildings to prioritize pedestrian- and bike-friendly connections and the available outdoor amenities. In addition, the proposed amenities, including the day-care center, fitness center, restaurant/cafe, conference rooms, and lobbies, on the ground-floor level of each of the R&D buildings would be accessible from a network of interconnected pathways as well as through the central courtyards.

As depicted in Figure 3-5, the proposed buildings would have primarily glass façades, thereby bringing an abundance of natural light into each building. Building exteriors would also incorporate combinations of unitized curtain walls, glass storefronts, and aluminum panels to



Source: SteelWave and SOM LLP, 2023



Figure 3-5 Rendering from U.S. 101 (Bayshore Freeway)

evoke a modern aesthetic. The proposed buildings would have metal-panel parapets to screen the rooftop mechanical equipment. The I131N parking garage would be constructed out of materials similar to those on the proposed buildings, including perforated metal panels, aluminum panels, painted concrete, and clear glazed glass.

The proposed project would incorporate sustainability features to reduce energy consumption, water consumption, and waste generation. In addition, it would achieve, at a minimum, a Leadership in Energy and Environmental Design (LEED), version 4.1, Building Design and Construction (BD+C) Core and Shell Gold rating as well as WELL v2 Core certification.⁵ Proposed sustainability measures would include an all-electric building design; on-site renewable energy in the form of rooftop photovoltaic (PV) panels; a high-performance building envelope and heating, ventilation, and air-conditioning (HVAC) systems; ultra-efficient WaterSense-labeled flush and flow fixtures; low-water demand native and/or adapted vegetation with efficient irrigation systems; on-site recycling and composting facilities; and EV charging infrastructure. Proposed design elements, such as pedestrian circulation improvements, bicycle parking, and TDM measures, would encourage alternative forms of transportation. In addition, the proposed project would be designed to be consistent with the City's Municipal Code and CALGreen. For construction and demolition, 100 percent of all inert solids (i.e., building materials) and 65 percent of non-inert solids (i.e., all other materials) would be recycled as required by the City under Chapter 15.60 of the City's Municipal Code.

The proposed project would also be designed to conserve resources and protect water quality through the management of stormwater runoff using low-impact development (LID) methods, where feasible. This approach implements engineered controls to allow stormwater filtering, storage, and flood control. Bioretention basins, flow-through planters, Silva Cell units, and other site design features to manage stormwater runoff flows and reduce stormwater pollution would be located throughout the project site.

3.5.5 Landscaping

As discussed above, there are no trees on the project site and little to no vegetation. All vegetation would be removed prior to project construction. The proposed project would include a landscape plan to compensate for the removal of vegetation and enhance the overall development. The landscape plan would include planting trees on-site, in accordance with the City Tree Preservation Ordinance (Chapter 13.30). Upon project buildout, 659 trees would be provided within the courtyard areas, surface parking lot, and along the roadways. Landscaped areas would include a mix of native and adapted vegetation with a low water demand; a minimum of 80 percent would be native vegetation. The proposed trees and all other landscaping would be planted in compliance with City regulations.

⁵ The WELL Building Standards are performance-based building standards for measuring and monitoring features within the built environment that may affect human health through air, water, light, and other concepts. The standards provide ways for buildings to be designed to improve human comfort and enhance health and wellness within the built environment.

3.5.6 Employees

Upon project completion, there would be a total of 3,787 employees, consisting of approximately 3,778 R&D employees and nine day-care center employees.⁶ The net increase in on-site employment would amount to approximately 3,312 employees.

3.5.7 Utilities

The project site is serviced from existing public-utility easements for water, wastewater, stormwater, electricity, telecommunications, and waste and recycling services. New on-site facilities would be connected to new services through the installation of new localized connections. Any expansion or increase in the capacity of off-site infrastructure would occur as required by the utility providers. Detailed descriptions of the proposed utility infrastructure are provided below.

3.5.7.1 Water Supply

The city is served by the California Water Service Company (Cal Water). Specifically, the city is in the service area of Cal Water's South San Francisco District, which includes South San Francisco, Colma, a small portion of Daly City, and Broadmoor. The Cal Water South San Francisco District utilizes both groundwater from the Westside Basin as well as imported surface water purchased from the San Francisco Public Utilities Commission (SFPUC).

On-site water system improvements would include the pipes, valves, fire hydrants, meters and submeters, and backflow preventers needed to serve the proposed uses. The proposed project would include an extension to the 12-inch public main in Terminal Court. The extension would loop around the site and provide connections to building laterals for domestic water and fire water, irrigation, and fire hydrant needs. The proposed project assumes a 4-inch private lateral for domestic water and an 8-inch (minimum) pipe for the private fire lateral. The main points of connection for the water line would be the new 8-inch water main that would be implemented as part of development at 101 Terminal Court, adjacent to the project site, and the existing 12-inch public water main in Terminal Court. An option that would loop into a Shaw Road connection is being explored as well. However, such an option is not part of the project evaluated in the environmental impact report (EIR) and therefore would be subject to future CEQA review if pursued.

3.5.7.2 Wastewater

The City owns and maintains the sanitary sewer system and related infrastructure within public rights-of-way. The collected wastewater is conveyed to the South San Francisco Water Quality Control Plant (WQCP) adjacent to San Francisco Bay on Colma Creek. Proposed sewer system improvements would include a new 18-inch sanitary sewer main through the southwest corner of the site to a 21-inch main on Shaw Road to support the proposed project. Proposed on-site sewer pipes would be between 4 and 18 inches in diameter.

⁶ The estimated number of employees is based on data provided by the project applicant, which assumes that average square footage per R&D employee would be 450, consistent with the General Plan EIR employee generation rate assumptions. The estimated number of employees associated with the proposed restaurant and fitness center is accounted for in the estimate of the number of employees associated with the proposed R&D uses.
3.5.7.3 Stormwater

The City owns and maintains the storm drainage infrastructure within public rights-of-way. For most of the project site, storm drain lines would follow the existing drainage pattern and outfall into the adjacent slough. Oversized underground pipes would treat water, help store water, and control flows prior to discharge to the adjacent slough. On the northern portion of the site, smaller areas would drain to the City's municipal separate storm sewer system on Terminal Court. On-site storm drain improvements would include the installation of bioretention ponds, flow-through planters, and Silva Cell units to provide LID treatment on the project site. The proposed stormwater pipes would be between 6 and 12 inches in diameter. New connections would connect to an existing 12-inch storm drain main in Terminal Court.

3.5.7.4 Dry Utilities

Pacific Gas and Electric (PG&E) provides both electricity and natural gas services to the city. As a California Public Utilities Commission-regulated public utility in the state of California, PG&E owns, operates, and maintains above- and belowground electric and natural gas facilities in the city, including substations. The city is also served by both wired and wireless telecommunications from numerous providers, including AT&T, Comcast, Viasat, and T-Mobile.⁷ The project proposes the installation of new connections for dry utility service. All electrical and telecommunication utilities would be connected to existing electrical and telecommunication utilities. The proposed project would not include any new connections for natural gas, which would not be used by the project.

3.5.7.5 Solid Waste

The South San Francisco Scavenger Company and Blue Line Transfer provide solid waste disposal services citywide, including garbage and recycling services.⁸ The South San Francisco Scavenger Company transports all solid waste to the Blue Line Transfer facility at 500 East Jamie Court where solid waste is processed, treated, and transported to other disposal facilities. The Blue Line Transfer facility has a permitted capacity of 2,400 tons per day.⁹ Any trash remaining after the usable materials have been separated at the transfer facility are transported to the Corinda Los Trancos (Ox Mountain) Sanitary Landfill or the Newby Island Sanitary Landfill.

The project site would continue to be served by the South San Francisco Scavenger Company and Blue Line Transfer. State law requires the collection of trash in three separate streams: waste, mixed recycling, and compost, in accordance with the requirements of Assembly Bill (AB) 341, AB 1826, and Senate Bill (SB) 1383. The City requires further separation of mixed recycling into paper, containers, and cardboard.

⁷ BroadBandNow. 2023. Business Internet Providers in South San Francisco, California. Available: https://broadbandnow.com/business/California/South-San-Francisco. Accessed: April 12, 2023.

⁸ South San Francisco Scavenger Company. n.d. *About Us*. Available: https://ssfscavenger.com/about-us/. Accessed: June 3, 2024.

⁹ California Department of Resources Recycling and Recovery. 2024. *Blue Line MRF and TS*. Available: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1598?siteID=3259. Accessed: June 3, 2024.

The proposed project would comply with City requirements. Trash from the proposed buildings would be collected in five different streams, including waste, recyclables, and compostable materials. Recyclable materials would be further sorted into paper, container, and cardboard types of materials. The proposed project would have two central trash locations per building, for a total of four. The trash areas would be adjacent to the loading areas and connected to the service elevators.

3.6 Project Construction

The proposed project would be constructed in eight phases, including demolition of the warehouse buildings, administrative building, and open air structures. After receipt of the building permit, construction of the proposed project is anticipated to take approximately 5 years, with construction on the southern portion of the project site beginning in March 2026 and ending in October 2028 and construction on the northern portion of the project site beginning in November 2028 and ending in May 2031. The phases of construction would consist of (1) rough grading and site demolition, (2) deep foundation installation, (3) foundation installation, (4) superstructure construction, (5) building enclosure construction, (6) interior buildout, (7) sitework, and (8) final building inspections.

Demolition, grading, and excavation would generate approximately 40,214 cubic yards (cy) of material, including removed fencing, building materials, concrete, soil, and asphalt. In addition, during demolition and grading, approximately 70,000 cy of soil would be imported for site preparation.¹⁰ The proposed project would excavate to a depth of approximately 3 to 7 feet below the ground surface for utility work. The average level of the project site is 6 feet above sea level. The maximum depth of excavation would be 5 feet below sea level for the sanitary sewer main upgrade.

The haul route for demolition materials would be U.S. 101, with trucks traveling from the project site either northbound or southbound. Trucks using the northbound haul route would exit the project site, travel from Produce Avenue to Mitchell Avenue, then continue to South Airport Boulevard and the on-ramp located off the boulevard. Trucks using the southbound haul route would exit the project site, then make a right turn from Terminal Court to the Produce Avenue on-ramp. The haul route for deliveries or trucks returning to the project site would be in the opposite direction.

The hours of construction would be stipulated by the City Building Division. The project contractor would be required to comply with Section 8.32.050 of the City Municipal Code (i.e., the City Noise Ordinance), which includes regulations related to noise generated by construction. Project construction would typically occur Monday through Friday between 8:00 a.m. and 8:00 p.m., although some work is anticipated to occur on Saturdays between 9:00 a.m. and 8:00 p.m. or on Sundays between 10:00 a.m. and 6:00 p.m. Approximately 172 instances of nighttime or early-morning construction work may occur (e.g., drilling work, steel erection, concrete pouring). Drilling and steel erection, with use of a crane, may begin as early as 5:00 a.m. to 6:00 a.m. The drilling and crane work would take place during these early morning hours over an estimated 40 days and 105 days, respectively. Concrete pouring may occur during nighttime or early-morning hours, with approximately 5 nights of concrete pours potentially starting between 12:00 a.m. and 2:00 a.m. and an additional 22 nights between 4:00 a.m. and 6:00 a.m. Construction is not anticipated to occur on legal holidays.

¹⁰ To provide a conservative estimate, the analysis of construction impacts on air quality, noise, and transportation in Sections 4.2, *Air Quality*; 4.5, *Noise and Vibration*; and 4.6, *Transportation and Circulation*, assume that 170,000 cy of soil would be imported.

Project construction would use, on average, approximately 1,303,405 gallons (or 4 acre-feet) of water per year over the approximately 5-year construction period. Dewatering may be required during project construction, depending on the weather at the time of construction. A stormwater pollution prevention plan (SWPPP) would be implemented during project construction. Furthermore, an approximately 15-foot buffer would be incorporated between construction work areas in the southern portion of the project site and the top of the bank at the navigable slough.

3.7 General Plan, Specific Plan, and Zoning Code Amendments

As described above, the project site is currently designated as MIH under the General Plan, Lindenville Specific Plan, and City Zoning Code. In order to construct and operate the proposed project, a General Plan, Specific Plan, and City Zoning Code amendment would be required to redesignate the site as BTP-H. The BTP-H land use designation allows for high-density corporate headquarters, R&D facilities, and office uses. More specifically, the General Plan describes the permitted uses for BTP-H as incubator research, prototype manufacturing, testing, repairing, packaging, publishing, and printing, along with office and R&D uses. Warehousing, distribution, manufacturing, retail services, personal services, and grocery and hotel uses are also permitted under this designation. The BTP-H land use designation was created to encourage campus-like environments for offices, R&D facilities, and corporate headquarters.

As currently written, City Zoning Code Section 20.040.009.A.4, Excluded from Floor Area in Calculating FAR, states that active ground-floor uses in a new mixed-use or nonresidential development east of 101 and in the T4C, T4M, and T5C zoning districts can be excluded from FAR calculations, provided that the nonresidential uses are active and open to the general public. Excluded uses from FAR calculations in these zoning districts include, but are not limited to, childcare facilities, personal services, retail establishments, full-service or limited-service restaurants, and similar active uses. The proposed project would amend City Zoning Code Section 20.040.009.A.4 to add BTP-H zoning districts within the Lindenville Planning Sub-Area to the covered zoning districts so that the proposed day-care center would be excluded from FAR calculations. With this amendment, the proposed project would be within the allowable FAR for the BTP-H zoning designation, as described in more detail in the following paragraph.

As established in the City Zoning Code, under the BTP-H zoning designation, the maximum surface area covered by structures (i.e., lot coverage) is limited to 60 percent, with a minimum of 15 percent of the site made up of landscaping. The base maximum permitted FAR under the BTP-H zoning designation is 0.5, but increases may be permitted, up to a total FAR of 2.0, for uses such as R&D facilities or development meeting specific TDM, off-site improvement, or design standards. In addition, the zoning ordinance provides specific exceptions to FAR limitations for projects, based on a Community Benefits Program (see City Municipal Code Chapter 20.395). The proposed project would have a FAR of 2.0, consistent with the requirements of the BTP-H zoning designation.

In addition to the above General Plan and City Zoning Code amendment for the Infinite 131 project site, the proposed project would include additional amendments to the General Plan, Specific Plan and City Zoning Code to redesignate five parcels north of the project site, across Terminal Court, at 120 Terminal Court, 196 Produce Avenue, 160 Produce Avenue, and 140 Produce Avenue (APNs 015-113-350, 015-113-290, 015-113-340, 015-113-330, 015-113-320).

The five off-site redesignation parcels are currently designated as MIH under the General Plan, Specific Plan and City Zoning Code; they would be redesignated BTP-H, consistent with the proposed land use and zoning designation for the project site. Further, the redesignation of these parcels would be consistent with Specific Plan Policy LU-5.2, *Golden Gate Produce Terminal and Park N' Fly sites*, which encourages parcel assemblage of the Park N' Fly site (160 Produce Avenue) and the Golden Gate Produce Terminal site (131 Terminal Court) to encourage developers to create a master plan and an appropriate environmental analysis for office and R&D uses on the site. As stated above, the five parcels total approximately 7.28 acres and currently comprise a large Park N' Fly surface parking lot and a Shell gas station.

The purpose of the off-site redesignation parcels is to ensure that future development is cohesive and consistent with the development proposed as part of the project. Because the project sponsor does not own the five off-site redesignation parcels, the proposed project would not include the construction of any new uses on the off-site redesignation parcels. Therefore, no direct impacts on the environment would occur. However, the analysis in Chapter 4 of the EIR evaluates the reasonably foreseeable indirect impacts that could result from the proposed off-site redesignation parcels. Future development within the five parcels would be subject to environmental review in accordance with CEQA, potentially tiering from the analysis for the off-site redesignation parcels in the EIR.

Figure 3-6 and Figure 3-7 illustrate the proposed land use and zoning designations for the project site, off-site redesignation parcels, and the surrounding area.

3.8 Required Permits and Approvals

Implementation of the proposed project would require certain entitlements and approvals from the City and other agencies. The EIR may be relied upon by other agencies, including, but not limited to, the San Francisco BCDC, a responsible agency pursuant to Section 15381 of the CEQA Guidelines, for purposes of issuing proposed project approvals within the agencies' respective jurisdictions. Table 3-2 lists the entitlements and approvals, which would be subject to review and approval by the City and other agencies, required for the proposed project.



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Figure 3-6 Proposed General Plan Amendments



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Figure 3-7 Proposed Zoning Code Amendments

Agency	Permit/Review Required
City of South San Francisco	Planning Commission and City Council:
	General Plan Amendments
	Specific Plan Amendments
	Zoning Code Amendments
	Design Review
	TDM Plan Approval
	Subdivision Map
	Development Agreement
	Engineering Division:
	• Grading Permit(s)
	• Encroachment Permit(s)
	Site Plan Check
	• Hauling Permit(s)
	Building Division:
	• Building Permit(s)
	Certificate of Occupancy
	Other:
	Fire Lode Compliance
California Department of Transportation*	Encroachment Permit
California Regional Water Quality Control Board*	Clean Water Act Section 402 National Pollutant Discharge Elimination System General Construction Stormwater Permit and Stormwater Pollution Prevention Plan
Bay Area Air Quality Management District	Stationary-Source Permit (Authority to Construct and Permit to Operate) for Generators or Similar Equipment
City/County Association of Governments, Airport Land Use Commission	Determination of Consistency with the Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport
Federal Aviation Administration	Notice of Proposed Construction and Alteration and Federal Aviation Administration Determination per Code of Federal Regulations Title 14, Part 77.9
Bay Conservation and Development Commission*	Permit for Work in the shoreline band pursuant to McAteer- Petris Act Government Code Sections 66600 to 66684

Table 3-2. Required Permits and Approvals for the Proposed Project

*A responsible agency.

4.1 Approach to Environmental Analysis

4.1.1 Introduction to Analysis

This section describes the type of environmental analysis in each environmental topic section of this chapter, as well as the format, for the Infinite 131 Project (proposed project); the effect of Public Resources Code Section 21099 on the scope of the California Environmental Quality Act (CEQA) analysis for the project; and the general approach to establishing the baseline setting and evaluating project-level and cumulative impacts in this environmental impact report (EIR).

4.1.2 Type of CEQA Analysis

This EIR is a project-level EIR that also provides a program-level analysis of the potential effects on the environment that could occur from implementation of the proposed project, which comprises the buildout allowed for the proposed project and the associated off-site redesignation parcels. For each CEQA environmental topic evaluated, the EIR presents separate analyses for the impacts of the (i) proposed project and (ii) the associated off-site redesignation parcels.

Potential impacts associated with construction and operation of the proposed project, as well as construction of the off-site transportation and circulation improvements needed to accommodate traffic generated by the proposed project, are analyzed at a project level in this EIR. These components of the proposed project have been developed with the level of certainty necessary to allow detailed analysis of the environmental impacts associated with their implementation. The level of detail in this EIR for an analysis of the environmental impacts associated with the proposed project matches the level of detail available in the draft plans for the proposed project, per CEQA Guidelines Section 15146. Additional studies pertaining to air quality, noise, transportation, and other areas have been prepared for this EIR to provide detailed Information about the project's potential impacts on the environment.

Potential impacts associated with redesignating the off-site redesignation parcels are assessed programmatically because no developments have been proposed in the area. Rather, the parcels would be redesignated as Business Technology Park High (BTP-H), consistent with the zoning designation for the project site, to facilitate future development consistent with the uses proposed for the project site. Future projects proposed at the off-site redesignation parcels would be required to prepare additional environmental documentation in order to comply with CEQA. They would also be subject to the programmatic mitigation measures identified in this EIR.

This EIR serves as a single CEQA document that will provide environmental clearance for the proposed project, which includes (i) adoption of the proposed project and (ii) approval and implementation of the off-site redesignation parcels. As such, this EIR is intended to provide the environmental review needed under CEQA to support all necessary approvals and entitlements for implementation of the proposed project while also serving as a program-level document for the off-site redesignation parcels.

In December 2015, the California Supreme Court found that "CEQA generally does not require an analysis of how existing environmental conditions will impact a project's future users or residents," unless the project "could exacerbate hazards that are already present." The Supreme Court identified several exceptions to this general rule in which CEQA could apply to impacts of the environment on a project. These are statutory provisions in CEQA that specifically require consideration of impacts of the environment, such as consideration of projects near airports, school construction projects, and statutory exemptions from housing and transit priority projects (*California Building Industry Assoc. v. Bay Area Air Quality Management District* (2015), 62 Cal. 4th 369). None of these exceptions apply to the proposed project; as such, this EIR does not draw significance conclusions for those topics for which the environment could have an effect on the project.

4.1.3 Format of the Environmental Analysis

Sections 4.2 through 4.6 address the physical environmental effects of the proposed project on the required CEQA environmental topics, as follows:

- Section 4.2, Air Quality
- Section 4.3, Cultural Resources
- Section 4.4, Greenhouse Gas Emissions
- Section 4.5, Noise and Vibration
- Section 4.6, *Transportation and Circulation*

Sections 4.2 through 4.6 each contain the following subsections: *Environmental Setting, Regulatory Framework*, and *Impacts and Mitigation Measures*, described below. In accordance with CEQA Guidelines Section 15128, the preliminary analysis provided in the Initial Study (Appendix B) determined that development of the proposed project would not result in significant impacts related to the following environmental topics: aesthetics, agricultural and forestry resources, biological resources, energy, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, population and housing, public services, recreation, tribal cultural resources, utilities and service systems, and wildfire. Consequently, these issues are not examined further in this EIR but are discussed briefly in Chapter 6, Section 6.4, *Effects Found Not to Be Significant.* The analyses of these topics are provided in the Initial Study, which is included in Appendix B to this EIR.

As stated above, this EIR compares the potential environmental impacts of the proposed project with the baseline environmental conditions that were in existence at the time the Notice of Preparation (NOP) was published (November 2023). In some cases, in accordance with CEQA Guidelines Section 15125(a), it is appropriate to use a different baseline to identify project impacts to account for circumstances that can change during the course of the environmental review, such as changes since publication of the NOP or completion of the Initial Study. However, even though time has passed since issuance of the NOP for the proposed project, circumstances related to existing conditions at the project site, as well as the proposed project overall, have not changed so as to require using a different baseline or otherwise altering the conclusions of the Initial Study. Therefore, the conclusions reached in the Initial Study are still applicable, and further analysis of the environmental topics that were scoped out in the Initial Study is not required.

4.1.3.1 Environmental Setting

The *Environmental Setting* subsections in Sections 4.2 through 4.6 describe the existing conditions at the project site, inclusive of the off-site redesignation parcels, and in the project vicinity as they relate specifically to a particular environmental topic. The existing conditions that serve as the baseline for the analysis of environmental impacts are described in Section 4.1.4.

4.1.3.2 Regulatory Framework

The *Regulatory Framework* subsections in Sections 4.2 through 4.6 describe the federal, state, regional, and local regulatory requirements that are directly applicable to the environmental topic.

4.1.3.3 Impacts and Mitigation Measures

The *Impacts and Mitigation Measures* subsections in Sections 4.2 through 4.6 describe the physical environmental impacts of the proposed project for each topic as well as any mitigation measures that could reduce potentially significant impacts to less-than-significant levels. This subsection begins with a listing of the significance criteria used to assess the severity of the environmental impacts for a particular topic, based on the checklist in CEQA Guidelines Appendix G. Environmental topic sections also include a topic-specific "approach to analysis," explaining the parameters, assumptions, and data used in the analysis.

Under the "Impact Evaluation" discussion, the impact analysis for each topic begins with an impact statement that reflects the applicable significance criteria. Each impact statement is keyed to a subject area abbreviation (e.g., AQ for Air Quality) and an impact number (e.g., 1, 2, 3) for a combined alpha-numeric code (e.g., Impact AQ-1, Impact AQ-2, Impact AQ-3). When potentially significant impacts are identified, mitigation measures are presented, if feasible, to avoid, eliminate, or reduce significant adverse impacts of the proposed project. Each mitigation measure is numbered according to the impact under which it falls (e.g., Mitigation Measure AQ-1 to mitigate Impact AQ-1, Mitigation Measure AQ-2 to mitigate Impact AQ-2). If more than one mitigation measure is required for an impact, it is numbered consecutively with an alpha-numeric code (e.g., Mitigation Measure AQ-1a, Mitigation Measure AQ-1b).

Each impact statement describes the impact that would occur after mitigation (if applicable). The level of significance of the impact is indicated in parentheses at the end of the impact statement, based on the following:

- *No Impact* No adverse physical changes to (or impacts on) the environment are expected.
- *Less than Significant* An impact that would not exceed the defined significance criteria or would be eliminated or reduced to a less-than-significant level through compliance with existing local, state, and federal laws and regulations.
- *Less than Significant with Mitigation* An impact that would be reduced to a less-thansignificant level through implementation of the identified mitigation measures.
- **Significant and Unavoidable** An impact that exceeds the defined significance criteria and cannot be reduced to a less-than-significant level through compliance with existing local, state, and federal laws and regulations and/or implementation of all feasible mitigation measures.

In accordance with CEQA Guidelines Section 15130, the potential for the proposed project to result in significant cumulative impacts when combined with other current and future projects is described in a separate subsection following the project analysis. Cumulative impact statements are numbered consecutively for each impact statement with an alpha-numeric code, signifying that it is a cumulative impact (e.g., Impact C-AQ-1).

4.1.4 Approach to Baseline Setting

Project development characteristics are typically compared to characteristics of the existing physical environment to isolate impacts caused by the project on its surroundings. In other words, the existing condition (also referred to as the *environmental setting*) is normally the baseline against which the project's impacts are measured to determine whether impacts would be significant. Compliance with existing laws, regulations, and policies, including the City of South San Francisco's (City's) standard conditions of approval, are assumed to be part of the baseline setting against which the project's incremental impacts are assessed. The "Environmental Setting" subsection of each topic describes existing conditions on and around the project site. These existing conditions are ordinarily established as of the date when the NOP was published (November 2023).

4.1.5 Approach to Cumulative Impact Analysis

Cumulative impacts are two or more individual effects that, when considered together, are considerable or capable of compounding or increasing environmental impacts. The individual effects may be changes resulting from a single project or changes from a number of separate projects. Cumulative impacts are the impacts of a project in combination with other closely related past, present, and reasonably foreseeable and probable future projects (CEQA Guidelines Section 15355 [a][b]). The following factors are considered in determining the level cumulative analysis:

- Similar Environmental Impacts A relevant project contributes to effects on resources that would also be affected by a proposed project. A relevant future project is defined as one that is "reasonably foreseeable," such as a project with an application on file at the approving agency or a project with approved funding.
- **Geographic Scope and Location** A relevant project is within the geographic area where effects could combine. The geographic scope varies on a resource-by-resource basis. For example, the geographic scope for evaluating cumulative effects on air quality consists of the affected air basin, while the geographic scope for evaluating cumulative effects on traffic typically consists of the roadways within the region that could carry additional vehicles as a result of the net new vehicle miles traveled associated with a proposed project.
- **Timing and Duration of Implementation** The timing of effects associated with activities for a relevant project (e.g., short-term construction or demolition, long-term operations) would most likely coincide with the timing of the related effects of a proposed project.

CEQA Guidelines Section 15130(b)(1) sets forth two primary approaches for the analysis of cumulative impacts. The analysis can be based on (1) a list of past, present, or probable future projects with related impacts that could combine with those of a proposed project or (2) a summary of projections contained in a general plan or related planning document. The cumulative impact analysis in the Initial Study checklist generally employs either a list-based approach or a projections approach, depending on which approach appropriately captures the cumulative context for the individual resource topic being analyzed. Cumulative analyses for topics that tend to be highly

localized (e.g., biological resources, cultural resources, geology and soils) use a list-based approach, which includes anticipated nearby future projects in the project vicinity (i.e., within approximately 0.5 mile of the project site). Other impacts can affect existing conditions on a citywide or regional scale (e.g., air quality, greenhouse gas emissions, public services, population growth). These topics employ a projections approach for evaluating cumulative impacts.

Cumulative Projects within 0.5-Mile Radius

The projects used for the list-based approach are listed below and mapped in Figure 4.1-1. Generally, these are projects for which applications had been filed with the City as of publication of the NOP for the proposed project (November 1, 2023) and/or projects that the City has otherwise determined are reasonably foreseeable. The projects outlined below are within a 0.5-mile radius of the project site.

- 1. **101 Terminal Court:** Construction of approximately 696,000 square feet of research-anddevelopment (R&D)/amenity uses within two six-story buildings, along with a seven-story parking garage and landscaping on an 8.69-acre site (*entitled September 2023; construction date to be determined*).
- 2. **124 Airport Boulevard and 100 Produce Avenue:** Construction of a seven-story residential building with 294 apartments on a 2.56-acre site at 124 Airport Boulevard and a seven-story residential building with 186 apartments on a 1.56-acre site at 100 Produce Avenue (*entitled January 2022; construction date to be determined*).
- 3. **40 Airport Boulevard**: Construction of an eight-story residential building with 292 units and two levels of parking on a 1.63-acre site (*entitled August 2022; construction date to be determined*).
- 4. **7 South Linden Avenue**: Construction of a five-story residential building with 558 apartment units on a 4.22-acre site (*entitled March 2023; construction date to be determined*).
- 5. **Railroad Avenue Townhomes**: Construction of a residential project consisting of 73 townhomes on a 2.04-acre site (*currently under review*).
- 6. **100 East Grand Avenue**: Construction of a new R&D campus, consisting of a 10-story building, an eight-story building, and an eight-story parking garage on a 5.04-acre site (*entitled October 2022; construction date to be determined*).
- 7. **120 East Grand Avenue**: Construction of a new R&D campus, consisting of an 11-story building, a five-story building, an amenity building, and a five-story parking garage on a 4.5-acre site (*entitled May 2023; construction date to be determined*).
- 8. **175 Sylvester Road**: Construction of a new R&D campus, consisting of one 10-story building, one 8-story building, and one 9-level parking garage on a 4.74-acre site (*currently under review*).
- 9. **Southline Master Plan Project (located at 30 Tanforan Avenue):** Construction of six office/R&D buildings (up to seven stories high) totaling approximately 2.8 million square feet, along with development of a parking garage, below-grade parking, site amenities, and open space and landscaping on a 26-acre site (*Phase I entitled July 2022 and currently under construction; completion date to be determined*).



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Figure 4.1-1 Cumulative Project Locations

Cumulative Projects within City of South San Francisco

For purposes of the cumulative analysis regarding historic resources, fire protection, police protection, library services, and childcare services, the list of reasonably foreseeable projects has been expanded beyond a 0.5-mile radius to include all reasonably foreseeable development within the city limits because the city is the cumulative context for those environmental topics. According to the Shape SSF 2040 General Plan Update EIR (General Plan EIR) and the Lindenville Specific Plan Addendum (Specific Plan Addendum), reasonably foreseeable development in the city by 2040 will include residential, mixed, and non-residential uses, along with other types of uses. As shown in Table 4.1-1, if total buildout under the Shape SSF 2040 General Plan (General Plan) and Lindenville Specific Plan were to occur, it would result in a projected 59,296,988 square feet of non-residential/mixed/other uses, 38,960 residential units, 137,809 employees, and 107,205 residents.

	General Plan (2040 buildout)ª	Lindenville Specific Plan (plus addendum) ^b	Total Buildout (general plan plus Lindenville)
Non-Residential/Mixed/Other Uses (sf)	58,988,056	308,932	59,296,988 sf
Residential (dwelling units)	38,959 units	1 unit	38,960 units
Employment (employees)	137,557	252	137,809 employees
Population (residents)	107,203	2	107,205 residents

Table 4.1-1. Total Buildout Projected under the General Plan and Lindenville Specific Plan

Sources:

^{a.} First Carbon Solutions. 2022. Draft Program Environmental Impact Report, General Plan Update, Zoning Code Amendments, and Climate Action Plan, City of South San Francisco, San Mateo County, California. State Clearinghouse Number 2021020064.

^{b.} David J. Powers & Associates, Inc. 2023. *Lindenville Specific Plan Addendum*. Available: Lindenville Specific Plan (ssf.net). Accessed: September 14, 2023.

sf = square feet

Other Cumulative Projects

Although it is outside a 0.5-mile radius of the project site, the Bayhill Specific Plan and Tanforan projects are reasonably foreseeable large development projects in San Bruno. Given the scale of the Bayhill Specific Plan and Tanforan projects, as well as the potential for both projects to share certain overlapping local and regional transportation infrastructure, the Bayhill Specific Plan and Tanforan projects have been added to the cumulative traffic model used in the cumulative transportation analysis in Section 4.6, *Transportation and Circulation*. As such, the Bayhill Specific Plan and Tanforan projects are also included in the cumulative analysis of mobile-source air emissions in Section 4.2, *Air Quality*, and the cumulative analysis of traffic-generated noise in Section 4.5, *Noise and Vibration*, both of which include cumulative traffic volumes.

10. **Bayhill Specific Plan:** The Bayhill Specific Plan would allow for the development of up to 2.46 million net new square feet of office uses and up to 573 multi-family residential units on a 92.2-acre site. The first phase of development, referred to as the Phase I development, would construct two new buildings with 440,000 square feet of office space, along with a subgrade parking structure and transportation and circulation improvements. (*Phase I entitled July 2022 and currently under construction; anticipated construction completion date: 2028*)

11. **Tanforan Project:** The Tanforan Project would redevelop a 44-acre site, which is currently occupied by The Shops at Tanforan Shopping Center. In its place, the Tanforan Project would construct a transit-oriented, mixed-use village with approximately 250,000 square feet of new and relocated retail space; approximately 1,000 multi-family residential units; approximately 711,000 square feet of life sciences laboratory and office uses; an approximately 14,500-square foot amenity building; and a parking garage. In addition, the existing Century at Tanforan movie theater would be remodeled and incorporated into the project; the existing Target store would be relocated to a new retail building in the western portion of the project site. *(currently under review)*

In addition to adjusting for the Bayhill Specific Plan and Tanforan projects, the forecasts for cumulative transportation conditions were adjusted to reflect other reasonably foreseeable projects that could affect cumulative traffic, including operation of 12 trains per hour in each direction during peak periods along the Caltrain railroad corridor, a reasonably foreseeable condition that could result with the California High-Speed Rail Project (described below) and the Caltrain business plan's adopted service vision (i.e., operating eight trains per hour in each direction during peak periods).

For purposes of the cumulative noise and vibration analysis in Section 4.5, *Noise and Vibration*, three additional projects were considered in the cumulative analysis, given their proximity to the project site and their potential to combine with the proposed project and result in cumulative noise and vibration impacts. These projects are the Caltrain Peninsula Corridor Electrification Project, which would include cosntruction along the Caltrain right-of-way (ROW) and increase the number of trains along the ROW; the California High-Speed Rail Project, which would include the installation of four quadrant safety gates at the Linden Avenue crossing, approximately 0.20 mile west of the project site, and also increase the number of trains along the ROW; and the US Highway 101/Produce Avenue Interchange Project, which would include a new U.S. 101 overcrossing extending from the Utah Avenue/South Airport Boulevard intersection to San Mateo Avenue.

- 12. **Caltrain Peninsula Corridor Electrification Project:** The project consists of converting Caltrain from diesel-hauled to electric-multiple-unit (EMU) trains for service between the 4th and King Street station in the city of San Francisco and the Tamien station in the city of San José, a total distance of 51 miles. The project would require the installation of 130 to 150 single-track miles of overhead contact system for the distribution of electrical power to the new electric rolling stock (*currently under construction; anticipated completion date: fall 2024*).
- 13. **California High-Speed Rail Project:** Phase I of the high-speed rail system would extend from the city of San Francisco to the city of Los Angeles; this is currently scheduled for completion by 2033. Specifically, the section from San Francisco to San José, which would be in proximity to the project site, would include approximately 43 to 49 miles of mixed existing train infrastructure and new high-speed rail infrastructure, passing through San Francisco, San Mateo, and Santa Clara Counties. This segment would include installation of four quadrant safety gates at the Linden Avenue crossing, approximately 0.20 mile west of the project site, and increase the number of trains along the ROW. (*Final EIR/Environmental Impact Statement (EIS) for the San Francisco to San José segment was certified and approved by the California High-Speed Rail Authority's Board of Directors in August 2022; anticipated construction date: 2033)*
- 14. **US Highway 101/Produce Avenue Interchange Project:** The project would include a new U.S. 101 overcrossing, extending from the Utah Avenue/South Airport Boulevard intersection to San Mateo Avenue (referred to as the Utah Avenue extension). The intersections at South

Airport Boulevard/Utah Avenue and San Mateo Avenue/Utah Avenue would be reconstructed to include turning lanes and connect to the new overcrossing. The Airport Boulevard/Produce Avenue/San Mateo Avenue intersection would be reconfigured. The project would include bike lanes and sidewalks on the overcrossing and signalized crosswalks and bike lanes at the affected intersections (*Final EIR/Environmental Assessment (EA) with Finding of No Significant Impact was released by the California Department of Transportation (Caltrans) in February 2023 and approved by the California Transportation Commission in March 2023; construction date to be determined*).

4.2 Air Quality

4.2.1 Introduction

This section evaluates the potential significance of air quality impacts related to the construction and operation of the Infinite 131 Project (proposed project), including the redesignation of the five parcels north of the project site (off-site redesignation parcels). This section also describes the existing conditions at the project site and off-site redesignation parcels, and the regulatory framework for this analysis. The impacts of the proposed project are analyzed at a project level, while the impacts of the off-site redesignation parcels are generally analyzed at a program level. Impacts resulting from implementation of the proposed project, as well as impacts resulting from the off-site redesignation measures, where applicable), are described, including cumulatively considerable contributions to significant cumulative impacts. Relevant technical documentation used in this analysis includes air quality modeling files and calculations (Appendix D) as well as an air quality and greenhouse gas technical report (Appendix C).

Issues identified in response to the Notice of Preparation (NOP) (Appendix A) were considered in preparing this analysis. No questions or concerns related to air quality were raised in the responses to the NOP.

4.2.2 Environmental Setting

The *Environmental Setting* subsections below (i.e., Section 4.2.2.1, *Project Site*, and Section 4.2.2.2, *Off-Site Redesignation Parcels*) describe the existing conditions as they relate specifically to air quality. The regional setting is identical for both the project site and the off-site redesignation parcels because both are located within the same geographical region; therefore, they share the same regional characteristics, such as climate and other environmental factors, that could influence air quality.

4.2.2.1 Project Site

Topography and Meteorology

Although the primary factors that determine air quality are the locations of air pollutant sources and the pollutants emitted from those sources, meteorological conditions and topography are also important factors. 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. Unique geographic features throughout the state define 15 air basins with distinctive regional climates. The air quality study area for the proposed project is on the San Francisco Peninsula in the San Francisco Bay Area Air Basin (SFBAAB).

The peninsula region of the San Francisco Bay Area extends from the area northwest of San José to the Golden Gate. The Santa Cruz Mountains, part of the Pacific Coast Ranges, extend up the center of the peninsula, with elevations exceeding 2,000 feet at the south end, then gradually decreasing to 500 feet in South San Francisco where the mountain range terminates. On the west side of the mountains lie small coastal towns, such as Half Moon Bay and Pacifica, that, due to coastal ocean upwelling and northwest winds, experience a high incidence of cool, foggy weather in the summer.

On the east side of the mountain range lie the larger cities. Cities in the southeastern peninsula experience warmer temperatures and few foggy days because the marine layer, with an average depth of 1,700 feet, is blocked by the 2,000-foot ridge to the west. At the north end of the peninsula lies San Francisco. Because most of the topography of San Francisco is below 200 feet, the marine layer is able to flow across most of the city, making its climate cool and windy.

The Santa Cruz Mountains exhibit a partial blocking effect in South San Francisco, which keeps summertime maximum temperatures slightly higher than they are on the coast. For example, in Half Moon Bay and San Francisco, average maximum daily summertime temperatures are in the mid-60s, while maximum temperatures for South San Francisco range from 65 degrees Fahrenheit (°F) to 75°F.¹ Conversely, large temperature gradients are not seen in the minimum temperatures. Average minimum temperatures at Half Moon Bay are about 43°F in winter and 50°F to 52°F in summer. The east peninsula, near South San Francisco, reports winter minimum temperatures of 40°F and summer minimum temperatures of 52°F to 55°F.²

Annual average wind speeds range from 5 to 10 miles per hour (mph) throughout the peninsula. The tendency is for the higher wind speeds to be found along the peninsula's west coast. However, winds on the east side can also be high in certain areas because low-lying areas in the mountain range, at San Bruno Gap and Crystal Springs Gap, commonly allow the marine layer to pass across the peninsula.

The prevailing winds are westerly along the peninsula's west coast. Individual sites can show significant differences, however. For example, Fort Funston, in western San Francisco County, shows a southwest wind pattern, while Pillar Point in San Mateo County, to the south, shows a northwest wind pattern. Sites on the east side of the mountains also show a westerly pattern, although their wind patterns are influenced by local topographic features. That is, a rise in elevation of a few hundred feet will induce a flow around a feature instead of over it during stable atmospheric conditions. This can change the wind pattern by as much as 90 degrees over short distances. On mornings without a strong pressure gradient, areas on the east side of the peninsula often experience an easterly flow in the surface layer, induced by an upslope flow on east-facing slopes and the bay breeze. The bay breeze is rarely seen after noon because the stronger sea breeze dominates the flow pattern.

On the peninsula, there are two important gaps in the Santa Cruz Mountains. The larger of the two is the San Bruno Gap, extending from Fort Funston on the ocean side to San Francisco International Airport on the bay side. Because the gap is oriented in the same northwest-to-southeast direction as the prevailing winds, and because the elevations along the gap are under 200 feet, marine air is easily able to penetrate into the bay.

The other gap in the Santa Cruz Mountains is the Crystal Springs Gap, along Highway 92 in the area between Half Moon Bay and San Carlos. The low point is 900 feet; however, elevations of 1,500 feet are found north and south of the gap. As the sea breeze strengthens on summer afternoons, the gap permits maritime air to pass across the mountains. Its cooling effect is commonly experienced from San Mateo to Redwood City.

¹ National Oceanic and Atmospheric Administration. 2023. *NOWData*. NOAA Online Weather Data. Available: https://www.weather.gov/wrh/Climate?wfo=mtr. Accessed: June 7, 2023.

² Ibid.

Rainfall amounts on the east side of the peninsula are somewhat lower than on the west side, with San Francisco and Redwood City reporting an average of 19.5 inches per year. On the west side, Half Moon Bay reports 25 inches per year. Areas in the Santa Cruz Mountains are significantly higher, especially west of the ridge line, due to induced condensation from orographic lifting, proximity to a moisture source, and fog drip.

Air pollution potential is highest along the southeastern portion of the peninsula. This area is protected from the high winds and fog associated with the marine layer. Emissions density is relatively high, and pollutant transport from upwind sites is possible. In San Francisco, to the north, pollutant emissions are high, but winds are generally strong enough to carry the pollutants away before they can accumulate.

Criteria Air Pollutants

The discussion below summarizes the primary and secondary criteria air pollutants of key concern. In general, primary pollutants are directly emitted into the atmosphere, and secondary pollutants are formed by chemical reactions in the atmosphere.

Ozone

Ozone, the main ingredient in urban smog, is not emitted directly into the air but, rather, created by chemical reactions between hydrocarbons and nitrogen oxides (NO_X), both byproducts of the internal-combustion engine, in the presence of sunlight. Reactive organic gases (ROGs), as defined by the California Air Resources Board (CARB), include all hydrocarbons, except those exempted by CARB, that contribute to smog formation, whereas volatile organic compounds (VOCs), as defined by the U.S. Environmental Protection Agency (EPA), include all hydrocarbons, except those exempted by EPA. Generally speaking, ROGs and VOCs are similar but not identical; although the terms are used interchangeably, ROG is used for purposes of this analysis. There are no separate National Ambient Air Quality Standards (NAAQS) or California Ambient Air Quality Standards (CAAQS) for ROG. Carcinogenic forms of ROGs are toxic air contaminants (TACs) (e.g., benzene).

ROGs consists of compounds made up primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicles is the major source of hydrocarbons. Other sources of ROGs are emissions associated with the use of paints and solvents, the application of asphalt paving, and the use of household consumer products, such as aerosols.

The two major forms of NO_X are nitric oxide (NO) and nitrogen dioxide (NO₂). NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperatures and/or high pressure. NO₂ is an irritating, reddish-brown gas formed by the combination of NO and oxygen. In addition to serving as an integral participant in ozone formation, NO_X also directly acts as an acute respiratory irritant and increases susceptibility to respiratory pathogens.

Ozone poses a higher risk to those who already suffer from respiratory diseases (e.g., asthma), children, older adults, and people who are active outdoors. Exposure to ozone at certain concentrations can make breathing more difficult, cause shortness of breath and coughing, inflame and damage the airways, aggregate lung diseases, increase the frequency of asthma attacks, and cause chronic obstructive pulmonary disease. Studies show associations between short-term ozone exposure and nonaccidental mortality, including deaths from respiratory issues. Studies also suggest that long-term exposure to

ozone may increase the risk of respiratory-related deaths.³ The concentration of ozone at which health effects are observed depends on an individual's sensitivity, level of exertion (i.e., breathing rate), and duration of exposure. Studies show large individual differences in the intensity of symptomatic responses, with one study finding no symptoms to the least-responsive individual after a 2-hour exposure to 400 parts per billion of ozone and a 50 percent decrease in forced airway volume in the most responsive individual. Although the results vary, evidence suggests that sensitive populations (e.g., asthmatics) may be affected on days when the 8-hour maximum ozone concentration reaches 80 parts per billion.⁴

In addition to human health effects, ozone has been tied to crop damage, typically in the form of stunted growth, leaf discoloration, cell damage, and death. Ozone can also act as a corrosive or oxidant, resulting in property damage, along with the degradation of rubber products and other materials.

Carbon Monoxide

Carbon monoxide (CO) is a colorless, odorless, and toxic gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. CO is considered a local pollutant because it tends to accumulate in the air locally. The primary adverse health effect associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation. Exposure to CO at high concentrations can also cause fatigue, headaches, confusion, dizziness, and chest pain. There are no ecological or environmental effects for ambient CO.⁵

Particulate Matter

Particulate matter (PM) consists of finely divided solids or liquids, such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulates are now recognized: respirable coarse particles with an aerodynamic diameter of 10 micrometers or less, or PM_{10} , and respirable fine particles with an aerodynamic diameter of 2.5 micrometers or less, or $PM_{2.5}$. Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. However, wind on arid landscapes also contributes substantially to local particulate loading. PM is considered both a local and a regional pollutant.

Particulate pollution can be transported over long distances and may adversely affect humans, especially people who are naturally sensitive or susceptible to breathing problems (i.e., asthmatics). Numerous studies have linked PM exposure to premature death in people with preexisting heart or lung disease. Other symptoms of exposure may include nonfatal heart attacks, irregular heartbeats, aggravated asthma, decreased lung function, and increased respiratory symptoms. Depending on composition, PM₁₀ and PM_{2.5} can also affect water quality and acidity, deplete soil nutrients, damage sensitive forests and crops, affect ecosystem diversity, and contribute to acid rain.⁶

³ EPA. 2022. *Health Effects of Ozone in the General Population*. Available: https://www.epa.gov/ozone-pollutionand-your-patients-health/health-effects-ozone-general-population. Accessed: December 15, 2023.

⁴ EPA. 2022. *Health Effects of Ozone Pollution*. Available: https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution. Accessed: December 15, 2023.

⁵ CARB. 2019. *Carbon Monoxide & Health*. Available: https://ww2.arb.ca.gov/resources/carbon-monoxide-and-health. Accessed: December 15, 2023.

⁶ EPA. 2022. *Health and Environmental Effects of Particulate Matter (PM)*. Available: https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm. Accessed: December 15, 2023.

Sulfur Dioxide

Sulfur dioxide (SO₂) is a colorless, irritating gas with a rotten egg smell, primarily formed from the combustion of fossil fuels containing sulfur. SO₂ is considered a local pollutant because it tends to accumulate in the air locally. High concentrations of SO₂ can result in temporary breathing impairment for asthmatic children and adults who are active outdoors. Short-term exposure of asthmatic individuals to elevated SO₂ levels during moderate activity may result in breathing difficulties that can be accompanied by symptoms like wheezing, chest tightness, or shortness of breath. Other effects that have been associated with longer-term exposures to high concentrations of SO₂, in conjunction with high levels of PM, include aggravation of existing cardiovascular disease, respiratory illness, and alterations in lung defenses. SO₂ also is a major precursor to PM_{2.5}, which is a significant health concern and a main contributor to poor visibility (see also the discussion of health effects of PM, above).

Lead

Lead is a naturally existing metal that can be a constituent of air, water, and the biosphere. Lead is considered a local pollutant because it tends to accumulate in the air locally. This highly toxic metal, used for many years in everyday products, has been found to lead to a range of health effects, from behavioral problems and learning disabilities to seizures and death. Effects on children's nervous systems are one of the primary health risk concerns from lead. When lead is present in high concentrations, children can even suffer irreversible brain damage and death. Children 6 years old and under are most at risk because their bodies are growing quickly.

Since the 1980s, lead has been phased out in gasoline, reduced in drinking water, reduced in industrial air pollution, and banned or limited in consumer products. Gasoline-powered automobile engines were a major source of airborne lead through the use of leaded fuels; however, the use of leaded fuel has been mostly phased out. Since then, ambient lead levels have dropped dramatically.

Other Criteria Pollutants

CARB has also established CAAQS for hydrogen sulfide (H₂S), sulfates, vinyl chloride, and visibilityreducing particles. These pollutants are not addressed by federal standards. Below is a summary of these pollutants and a description of their physical properties, health and other effects, sources, and the extent of the problems.

Hydrogen sulfide emissions often are associated with geothermal activity, oil and gas production, refining, sewage treatment plants, and confined animal-feeding operations. H₂S in the atmosphere would most likely oxidize into SO₂, which can lead to acid rain. At low concentrations, H₂S may cause dizziness, headaches, and irritation to the eyes, mucous membranes, and respiratory system. In high concentrations, H₂S is extremely hazardous (i.e., 800 parts per million can cause death), especially in enclosed spaces. The Occupational Safety and Health Administration (OSHA) has primary responsibility for regulating workplace exposure to H₂S.

Sulfates are another particulate product that results from the combustion of sulfur-containing fossil fuels; however, the majority of ambient sulfates are formed in the atmosphere. When SO₂ comes in contact with oxygen, it precipitates out into sulfates. Data collected in the Mojave Desert Air Basin have demonstrated that levels of sulfates are significantly lower than the health standards. The health effects associated with SO₂ and sulfates, more commonly known as sulfur oxides, include respiratory illnesses, decreased pulmonary disease resistance, and aggravation of cardiovascular diseases. When acidic pollutants and particulates are also present, SO₂ tends to have an even more toxic effect. Increased PM

derived from SO₂ emissions also contributes to impaired visibility. In addition to particulates, sulfur trioxide and sulfate ions are precursors to acid rain; sulfur oxides and NO_x are the leading precursors to acid rain, which can lead to corrosion on human-made structures and acidification in water bodies.

Visibility-reducing particles consist of PM generated from a variety of natural and human-made sources. These can vary greatly in shape, size, and chemical composition. Some haze-causing particles (e.g., windblown dust and soot) are directly emitted into the air, whereas others are formed in the air from the chemical transformation of gaseous pollutants (e.g., sulfates, nitrates, organic carbon particles), which are the major constituents of fine PM. These fine particles, caused largely by the combustion of fuel, can travel hundreds of miles and cause visibility impairment. California has been labeled "unclassified" for visibility—CARB has not established a method for measuring visibility with the precision and accuracy needed to designate areas attainment or nonattainment.

Vinyl chloride is a colorless, sweet-smelling gas at ambient temperature. Landfills, publicly owned treatment works, and polyvinyl chloride production facilities are the major identified sources of vinyl chloride emissions in California. Polyvinyl chloride can be fabricated into several products, such as pipes, pipe fittings, and plastics. In humans, epidemiological studies of occupationally exposed workers have linked vinyl chloride exposure to development of liver angiosarcoma, a rare cancer, and have suggested a relationship between exposure and lung and brain cancers.

Local Criteria Pollutant Monitoring Data

A number of ambient air quality monitoring stations are located in the SFBAAB to monitor progress toward air quality standards attainment of the NAAQS and the CAAQS. There are no monitoring stations in South San Francisco, but there is one monitoring station in San Francisco at 10 Arkansas Street, which is approximately 8 miles from the project site. Recent air quality monitoring results from the nearest monitoring station (Arkansas Street in San Francisco) are summarized in Table 4.2-1. The data represent air quality conditions from the last 3 years with a complete dataset available (2020–2022). As indicated in Table 4.2-1, the Arkansas Street monitoring station has experienced infrequent violations of state and federal air quality standards during this time period.

Pollutant Standards	2020	2021	2022
Ozone			
Maximum 1-hour concentration (ppm)	0.088	0.074	0.070
Maximum 8-hour concentration (ppm)	0.055	0.054	0.060
Number of days standard exceeded ^b			
CAAQS 1-hour standard (> 0.09 ppm)	0	0	0
CAAQS 8-hour standard (> 0.070 ppm)	0	0	0
NAAQS 8-hour standard (> 0.075 ppm)	0	0	0
Carbon Monoxide (CO)			
Maximum 8-hour concentration (ppm)	1.6	0.9	1.0
Maximum 1-hour concentration (ppm)	1.8	1.2	1.5
Number of days standard exceeded ^b			
NAAQS 8-hour standard (> 9 ppm)	0	0	0
CAAQS 8-hour standard (> 9.0 ppm)	0	0	0
NAAQS 1-hour standard (> 35 ppm)	0	0	0
CAAQS 1-hour standard (> 20 ppm)	0	0	0

Pollutant Standards	2020	2021	2022
Nitrogen Dioxide (NO2)			
State maximum 1-hour concentration (ppb)	47	49	46
State second-highest 1-hour concentration (ppb)	47	42	43
Annual average concentration (ppb)	8	7	8
Number of days standard exceeded ^b			
CAAQS 1-hour standard (180 ppb)	0	0	0
Particulate Matter (PM ₁₀) ^a			
National maximum 24-hour concentration ($\mu g/m^3$)	102.3	32.2	34.2
National second-highest 24-hour concentration $\mu g/m^3$)	58.0	26.4	28.5
State maximum 24-hour concentration $\mu g/m^3$)	105.0	33.0	36
State second-highest 24-hour concentration $\mu g/m^3$)	59.0	27.0	30
National annual average concentration $\mu g/m^3$)	12.0	8.2	7.7
State annual average concentration (µg/m ³)	23.3	16.1	*
Number of days standard exceeded ^b			
NAAQS 24-hour standard (> 150 µg/m ³)	0	0	0
CAAQS 24-hour standard (> 50 µg/m ³)	2	0	0
Particulate Matter (PM _{2.5})			
National maximum 24-hour concentration ($\mu g/m^3$)	147.3	22.4	29.0
National second-highest 24-hour concentration ($\mu g/m^3$)	123.1	21.7	29.0
State maximum 24-hour concentration (µg/m ³)	147.3	22.4	29.0
State second-highest 24-hour concentration ($\mu g/m^3$)	123.1	21.7	29.0
National annual average concentration (µg/m ³)	10.5	7.1	6.7
State annual average concentration (µg/m ³)	10.5	*	6.8
Number of days standard exceeded ^b			
NAAQS 24-hour standard (> 35 μ g/m ³)	8	0	0

Source: California Air Resources Board. 2021. *iAdam Air Quality Data Statistics*. Available: https://www.arb.ca.gov/ adam/. Accessed: January 9, 2024.; U.S. Environmental Protection Agency. 2021. *Monitor Values Report*. Available: https://www.epa.gov/outdoor-air-quality-data/monitor-values-report. Accessed: December 15, 2023.

^a Data for particulate matter (PM₁₀) were unavailable from the Redwood City monitoring station or anywhere else in San Mateo County; therefore, the data were taken from the San José – Jackson Street monitoring station in Santa Clara County.

^b An exceedance is not necessarily a violation.

CAAQS = California Ambient Air Quality Standards; NAAQS = National Ambient Air Quality Standards; ppm = parts per million; ppb = parts per billion; $\mu g/m^3$ = micrograms per cubic meter; * = data not available.

Attainment Designations

Local monitoring data, as included in Table 4.2-1, are used to designate areas as nonattainment, maintenance, attainment, or unclassified areas for the NAAQS and the CAAQS. The four designations are further defined as follows:

- **Nonattainment**. Assigned to areas where monitored pollutant concentrations violate the standard in question.
- **Maintenance**. Assigned to areas where monitored pollutant concentrations exceeded the standard in question in the past but are no longer in violation of that standard.

- Attainment. Assigned to areas where pollutant concentrations meet the standard in question over a designated period of time.
- **Unclassified**. Assigned to areas where data are inadequate for determining whether a pollutant is violating the standard in question.

Table 4.2-2 summarizes the attainment status for San Mateo County with regard to the NAAQS and the CAAQS. For ozone and $PM_{2.5}$, the county is in nonattainment for the federal standards, while, for PM_{10} , the county is in nonattainment for the state standard only.

Criteria Pollutant	Federal Designation	State Designation
Ozone (8-hour)	Marginal Nonattainment	Nonattainment
СО	Attainment	Attainment
PM ₁₀	Attainment	Nonattainment
PM _{2.5}	Moderate Nonattainment	Nonattainment
NO ₂	Attainment	Attainment
SO ₂	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	(No Federal Standard)	Attainment
Hydrogen Sulfide	(No Federal Standard)	Unclassified
Visibility	(No Federal Standard)	Unclassified

Table 4.2-2. Federal and State Attainment Status for San Mateo County

Source: California Air Resources Board. 2022. Maps of State and Federal Area Designations. Available:

https://ww2.arb.ca.gov/ resources/documents/maps-state-and-federal-area-designations. Accessed: December 15, 2023.; U.S. Environmental Protection Agency. 2023. *Current Nonattainment Counties for All Criteria Pollutants.* Available: https://www3.epa.gov/airquality/greenbook/ancl.html. Accessed: January 9, 2024.

CO = carbon monoxide; NO₂ = nitrogen dioxide; PM_{2.5} = particulate matter with a diameter less than or equal to 2.5 microns; PM₁₀ = particulate matter with a diameter less than or equal to 10 microns; SO₂ = sulfur dioxide.

Toxic Air Contaminants

Although ambient air quality standards have been established for criteria pollutants, no ambient standards exist for TACs. Many pollutants are identified as TACs because of their potential to increase the risk of developing cancer or because of their acute or chronic health risks. For TACs that are known or suspected carcinogens, CARB has consistently found that there are no levels or thresholds below which exposure is risk free. Individual TACs vary greatly in the risks they present. At a given level of exposure, one TAC may pose a hazard that is many times greater than another. TACs are identified and their toxicity studied by Office of Environmental Health Hazard Assessment (OEHHA).

Diesel Particulate Matter

Diesel particulate matter (DPM) is generated by diesel-fueled equipment and vehicles. Within the Bay Area, the Bay Area Air Quality Management District (BAAQMD) has found that, of all controlled TACs, emissions of DPM are responsible for about 85 percent of the total ambient cancer risk.⁷ Short-term

⁷ BAAQMD. 2023. *CEQA Thresholds and Guidelines Update*. April. Available: https://www.baaqmd.gov/ plans-andclimate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines. Accessed: December 15, 2023.

exposure to DPM can cause acute irritation (e.g., eye, throat, and bronchial), neurophysiological symptoms (e.g., lightheadedness and nausea), and respiratory symptoms (e.g., cough and phlegm). EPA has determined that diesel exhaust is "likely to be carcinogenic to humans by inhalation."⁸

Type II Laboratory Toxic Air Contaminants

According to the health risk assessment (HRA) conducted by Yorke Engineering for the University of California, Davis 2017 Long-Range Development Plan, a Type II general biological sciences laboratory is known to emit a variety of TAC emissions.⁹ These TAC emissions would occur from the use of the different solvents, preservatives, acids, and other chemicals typically found in a laboratory setting.

Naturally Occurring Asbestos

Asbestos is the name given to several naturally occurring fibrous silicate minerals. Before the adverse health effects of asbestos were identified, asbestos was widely used as insulation and fireproofing in buildings; however, it can still be found in some older buildings. It is also found in its natural state in rock or soil. The inhalation of asbestos fibers into the lungs can result in a variety of adverse health effects, including inflammation of the lungs, respiratory ailments (e.g., asbestosis, which is scarring of lung tissue that results in constricted breathing), and cancer (e.g., lung cancer and mesothelioma, which is cancer of the linings of the lungs and abdomen).

Odors

Offensive odors can be unpleasant and lead to citizen complaints to local governments and air districts. According to the *Air Quality and Land Use Handbook*, land uses associated with odor complaints typically include sewage treatment plants, landfills, recycling facilities, manufacturing plants, and agricultural operations.¹⁰ CARB provides recommended screening distances for siting new receptors near existing odor sources.

Locations of Sensitive Receptors

Error! Bookmark not defined.Sensitive land uses are generally considered to include those where exposure to pollutants could result in health-related risks for sensitive individuals, including children and the elderly. Per BAAQMD, typical receptors include residential dwellings; places of business; schools, colleges, and universities; day-care centers; hospitals; temporary housing, shelters, or encampments; detention centers or correctional facilities; and senior-care facilities.¹¹ Parks and playgrounds are also considered sensitive receptors.

⁸ U.S. Environmental Protection Agency. 2003. *Diesel Engine Exhaust* (CASRN N.A.). February 28. Available: https://cfpub.epa.gov/ncea/iris/iris_documents/documents/subst/0642_ summary.pdf#nameddest=woe. Accessed: December 15, 2023.

⁹ Yorke Engineering. 2018. Health Risk Assessment for the University of California, Davis: 2017 Long-Range Development Plan. Available: https://ucdavis.app.box.com/s/uc2zwm2hmfgou618dme9 wt04bqkal6qk. Accessed: December 15, 2023.

¹⁰ California Air Resources Board. 2005. Air Quality and Land Use Handbook: A Community Health Perspective. April. Available: https://files.ceqanet.opr.ca.gov/221458-6/attachment/UNr-g159CW-r0G4DR8q6da NdAKT3RJTd8gGQCfz4wqFfl-eNdZNQEqjf8tfls1x6Gsae7YqpXwtFIZBd0. Accessed: December 15, 2023.

¹¹ Bay Area Air Quality Management District. 2023. *California Environmental Quality Act Air Quality Guidelines.* Appendix E: Recommended Methods for Screening and Modeling Local Risks and Hazards. April. Available: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa-guidelines-2022/appendix-erecommended-methods-for-screening-and-modeling-local-risks-and-hazards_final-pdf.pdf?rev=b8917a27345 a4a629fc18fc8650951e4&sc_lang=en. Accessed: February 7, 2024.

Sensitive receptors located near the project site include on-site and off-site sensitive receptor populations. Worker and daycare areas within 1,000 feet of the project site were modeled on a grid with 20-meter (65.6-foot) spacing. Figure 4.2-1 depicts the off-site and on-site sensitive receptor locations that were modeled in the HRA.

4.2.2.2 Off-Site Redesignation Parcels

Since the off-site redesignation parcels are located within the same region as the project site, the environmental setting would be the same as what is described above in Section 4.2.2.1 *Project Site*.

4.2.3 Regulatory Framework

This section provides a summary of the air quality plans and policies of the City of South San Francisco (City), along with those of regional, state, and federal agencies that have policy and regulatory control over the project site.

4.2.3.1 Federal

National Ambient Air Quality Standards

EPA has been charged with implementing national air quality programs. EPA's air quality mandates draw primarily from the federal Clean Air Act (CAA), which was enacted in 1963. The most recent major amendments were made by Congress in 1990. The CAA required EPA to establish the NAAQS for six common air pollutants that are found all over the United States; these are referred to as criteria air pollutants. EPA has established primary and secondary NAAQS for the following criteria air pollutants: ozone, CO, NO₂, SO₂, PM₁₀, PM_{2.5}, and lead. The NAAOS are shown in Table 4.2-3. The primary standards protect public health; secondary standards protect public welfare. The CAA also required each state to prepare a State Implementation Plan (SIP) for attaining and maintaining the NAAQS. The federal CAA Amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures for reducing air pollution. California's SIP is modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations for the air basins, as reported by their jurisdictional agencies. EPA is responsible for reviewing all SIPs to determine whether they conform to the mandates of the CAA and its amendments and whether implementation would achieve air quality goals. SIPs are not single documents. They are a compilation of new and previously submitted plans, programs (e.g., monitoring, modeling, permitting), district rules, state regulations, and federal controls. State law makes CARB the lead agency for all purposes related to the SIP. Local air districts and other agencies, such as the Bureau of Automotive Repair and the Department of Pesticide Regulation, prepare SIP elements and submit them to CARB for review and approval. CARB forwards SIP revisions to EPA for approval and publication in the *Federal Register*. Code of Federal Regulations Title 40, Chapter I, Part 52, Subpart F, Section 52.220, lists all items included in the California SIP. At any one time, several California submittals are pending EPA approval. ¹² If EPA determines a SIP is inadequate, the agency may prepare a federal implementation plan that imposes additional control measures. If an approvable SIP is not submitted or implemented within the mandated time frame, sanctions may be applied to transportation funding as well as stationary air pollution sources in the air basin. California is not currently subject to a federal implementation plan.¹³

¹² California Air Resources Board. n.d. *California State Implementation Plans*. Available: https://ww2.arb.ca.gov/ our-work/programs/california-state-implementation-plans/about. Accessed: May 3, 2024.

¹³ U.S. Environmental Protection Agency. 2023. *Basic Information About Air Quality FIPs*. Available: https://www.epa.gov/ air-quality-implementation-plans/basic-information-about-air-quality-fips. Accessed: May 29, 2024.



Figure 4.2-1 Sensitive Receptors

	Averaging California		National S	tandards ^a
Criteria Pollutant	Time	Standards	Primary	Secondary
Ozone	1 hour	0.09 ppm	None ^b	None ^b
	8 hours	0.070 ppm	0.070 ppm	0.070 ppm
Particulate matter (PM ₁₀)	24 hours	50 μg/m ³	150 μg/m ³	150 μg/m ³
	Annual mean	20 μg/m ³	None	None
Fine particulate matter (PM _{2.5})	24 hours	None	35 μg/m ³	35 μg/m ³
	Annual mean	12 μg/m ³	12.0 μg/m ³	15 μg/m ³
Carbon monoxide (CO)	8 hours	9.0 ppm	9 ppm	None
	1 hour	20 ppm	35 ppm	None
Nitrogen dioxide (NO ₂)	Annual mean	0.030 ppm	0.053 ppm	0.053 ppm
	1 hour	0.18 ppm	0.100 ppm	None
Sulfur dioxide (SO ₂) ^c	Annual mean	None	0.030 ppm	None
	24 hours	0.04 ppm	0.014 ppm	None
	3 hours	None	None	0.5 ppm
	1 hour	0.25 ppm	0.075 ppm	None
Lead	30-day average	1.5 μg/m ³	None	None
	Calendar quarter	None	1.5 μg/m ³	1.5 μg/m ³
	3-month average	None	0.15 μg/m ³	0.15 μg/m ³
Sulfates	24 hours	25 μg/m³	None	None
Visibility-reducing particles	8 hours	d	None	None
Hydrogen sulfide (H ₂ S)	1 hour	0.03 ppm	None	None
Vinyl chloride	24 hours	0.01 ppm	None	None

Table 4.2-3. National and California	Ambient Air Quality	/ Standards
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Source: CARB. 2016. Ambient Air Quality Standards. Available: https://ww2.arb.ca.gov/sites/default/files/2020-07/aaqs2.pdf. Accessed: December 15, 2023.

^{a.} National standards are divided into primary and secondary standards. *Primary standards* are intended to protect public health, whereas *secondary standards* are intended to protect public welfare and the environment.

^{b.} The federal 1-hour standard of 12 parts per hundred million was in effect from 1979 through June 15, 2005. The revoked standard is referenced because it was employed for such a long period and is a benchmark for SIPs.

^{c.} The annual and 24-hour NAAQS for SO₂ applied for only 1 year after designation of the new 1-hour standard in those areas that were previously in nonattainment for the 24-hour and annual NAAQS.

^{d.} The CAAQS for visibility-reducing particles is defined by an extinction coefficient of 0.23 per kilometer—visibility of 10 miles or more due to particles when relative humidity is less than 70 percent.¹⁴

CAAQS = California Ambient Air Quality Standards; NAAQS = National Ambient Air Quality Standards; ppm = parts per million; μ g/m³ = micrograms per cubic Meter.

¹⁴ CARB. 2021. Visibility-Reducing Particles & Health. Available: https://ww2.arb.ca.gov/resources/visibilityreducing-particles-and-health. Accessed: December 15, 2023.

Corporate Average Fuel Economy Standards for Light-Duty Passenger Vehicles

The National Highway Traffic Safety Administration (NHTSA) Corporate Average Fuel Economy (I) standards require substantial improvements in fuel economy and reductions in emissions of criteria air pollutants and precursors, as well as greenhouse gases (GHGs), from all light-duty vehicles sold in the United States.¹⁵ On August 2, 2018, NHTSA and EPA proposed an amendment to the fuel efficiency standards for passenger cars and light trucks and established new standards for model years 2021 through 2026. On September 19, 2019, NHTSA and EPA issued a final action on the One National Program Rule, which is considered Part One of the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule and a precursor to the proposed fuel efficiency standards, withdrawing California's CAA preemption waiver to set state-specific standards.¹⁶ EPA reinstated California's authority under the CAA to implement its own GHG emissions standards and sales mandate regarding zero-emission vehicles on March 9, 2022.¹⁷ On December 19, 2021, NHTSA finalized its vehicle efficiency standards rule to reach a projected industry-wide target of 40 miles per gallon by 2026, an approximately 25 percent increase over the prior SAFE rule.¹⁸

Emission Standards for On-Road Heavy-Duty Vehicles

EPA has established a series of increasingly strict emission standards for new heavy-duty bus and truck engines. Emissions from heavy-duty trucks are managed by regulations and emission limits implemented at the federal, state, and local levels. In December 2000, EPA signed the Heavy-Duty Highway Rule, which reduces emissions from on-road, heavy-duty diesel trucks by establishing a series of increasingly strict emission standards for new engines. Manufacturers were required to produce new diesel vehicles that meet PM and NO_X emission standards, beginning with model year 2007; the phase-in period was 2007 to 2010. The phase-in was based on a percentage-of-sales basis, with 50 percent from 2007 to 2009 and 100 percent in 2010. Requirements apply to engines installed in vehicles with a gross vehicle weight rating (GVWR) above 14,000 pounds as well as some engines installed in vehicles with a GVWR between 8,500 and 14,000 pounds.

Emission Standards for Non-Road Diesel Engines

To reduce emissions from non-road diesel equipment, EPA established a series of increasingly strict emission standards for new non-road diesel engines, referred to as *off-road diesel engines*. Tier 1 standards were phased in on newly manufactured equipment from model years 1996 through 2000, depending on the engine horsepower category. Tier 2 standards were phased in on newly manufactured equipment from 3 standards were

¹⁵ National Highway Transportation Safety Administration. 2021. Corporate Average Fuel Economy Preemption. Available: https://www.nhtsa.gov/sites/nhtsa.gov/files/documents/cafe_preemption_nprm_04222021_1.pdf. Accessed: December 15, 2023.

¹⁶ The One National Program Rule enables EPA and NHTSA to provide nationwide uniform fuel economy and GHG vehicle standards by 1) clarifying that federal law preempts state and local tailpipe GHG standards, 2) affirming NHTSA's statutory authority to set nationally applicable fuel economy standards, and 3) withdrawing California's CAA preemption waiver to set state-specific standards.

¹⁷ California, 22 other states, the District of Columbia, and two cities filed suit against Part One of the SAFE Vehicles Rule on September 20, 2019 (*California et al. v. United States Department of Transportation et al.*, 1:19cv-02826, U.S. District Court for the District of Columbia). On December 12, 2021, NHTSA repealed the SAFE Vehicles Rule, Part One.

¹⁸ EPA and NHTSA published final rules to amend and establish national carbon dioxide (CO₂) and fuel economy standards on April 30, 2020 (Part Two of the SAFE Vehicles Rule) (85 *Federal Register* 24174). The revised rule changes the national fuel economy standards for light-duty vehicles from 46.7 to 40.4 miles per gallon in future years. California, 22 other states, the District of Columbia filed a petition for review of the final rule on May 27, 2020.

phased in on newly manufactured equipment from model years 2006 through 2008. Tier 4 standards, which require advanced emission-control technology, were phased in from model years 2008 through 2015.

Hazardous Air Pollutants and Toxic Air Contaminants

TACs, or, in federal parlance, hazardous air pollutants (HAPs), are a defined set of airborne pollutants that may pose a present or potential hazard to human health. A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or serious illness or pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health, even at low concentrations.

A wide range of sources, from industrial plants to motor vehicles, emit TACs. The health effects associated with TACs are quite diverse and generally assessed locally rather than regionally. TACs can cause long-term health effects, such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage, or short-term acute affects, such as watery eyes, respiratory irritation (a cough), runny nose, throat pain, and headaches.

For evaluation purposes, TACs are separated into carcinogens and noncarcinogens, based on the nature of the physiological effects associated with exposure to the pollutant. Carcinogens are assumed to have no safe threshold below which health impacts would not occur. This contrasts with criteria air pollutants for which acceptable levels of exposure can be determined and for which ambient standards have been established (Table 4.2-3). The cancer risk from TACs is expressed as the excess cancer cases per million exposed individuals, typically over a lifetime of exposure.

4.2.3.2 State

CARB is the agency responsible for coordinating and overseeing state and local air pollution control programs in California and implementing the California Clean Air Act (CCAA). The CCAA required CARB to establish the CAAQS. Specifically, the CCAA established the CAAQS for the same criteria air pollutants for which EPA established the NAAQS, along with sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing PM. The CAAQS are summarized in Table 4.2-3. In most cases, the CAAQS are more stringent than the NAAQS. The differences in the NAAQS and the CAAQS are generally explained by the health-effects studies considered during the standard-setting process and the interpretation of the studies. In addition, the CAAQS incorporate a margin of safety to protect sensitive individuals.

In California, EPA has delegated the authority to prepare SIPs to CARB, which, in turn, has delegated that authority to individual air districts. Traditionally, CARB has established air quality standards, maintained oversight authority in air quality planning, developed programs for reducing emissions from motor vehicles, developed air emission inventories, collected air quality and meteorological data, and approved SIPs. The CCAA requires all local air districts in the state to endeavor to attain and maintain the CAAQS by the earliest date practical. It specifies that local air districts should focus particular attention on reducing emissions from transportation and area-wide sources. The CCAA substantially adds to the authority and responsibilities of the air districts. Specifically, it designates air districts as lead air quality planning agencies, requires air districts to prepare air quality plans, and grants air districts the authority to implement transportation control measures. The CCAA also emphasizes the control of "indirect and area-wide sources" of air pollutant emissions and gives local air pollution control districts explicit authority to regulate indirect sources of air pollution and establish traffic control measures.

Truck and Bus Regulation

To reduce emissions of NO_x and other criteria pollutants, as well as DPM, from diesel-fueled vehicles, CARB adopted the Truck and Bus Regulation in 2008. This regulation applies to any diesel-fueled vehicle, as well as any dual-fuel or alternative-fuel diesel vehicle, that travels on public highways, in yard trucks with on-road engines, or in yard trucks with off-road engines used for agricultural operations. It also applies to school buses and vehicles with a GVWR above 14,000 pounds. The purpose of the regulation is to require nearly all trucks and buses registered in the state to have a 2010 or newer engine by 2023. Compliance schedules have been established for lighter vehicles (GVWR of 14,000–26,000 pounds) and heavier vehicles (GVWR of more than 26,001 pounds).¹⁹ As of January 1, 2020, only vehicles that meet the requirements of the Truck and Bus Regulation are allowed to register with the California Department of Motor Vehicles.

Carl Moyer Program

The Carl Moyer Memorial Air Quality Standards Attainment Program (Carl Moyer Program) is a voluntary program that offers grants to owners of heavy-duty vehicles and equipment. The program is a partnership between CARB and the local air districts throughout the state to reduce air pollution emissions from heavy-duty engines. The air districts administer the Carl Moyer Program locally.

Toxic Air Contaminants

California regulates TACs primarily through the Tanner Act (Assembly Bill [AB] 1807) and the Hot-Spots Act (AB 2588). The Tanner Act (AB 1807) created California's program to reduce exposures to air toxics. CARB defines TACs as air pollutants that may cause or contribute to an increase in mortality or serious illness or pose a present or potential hazard to human health. CARB has formally identified more than 200 substances and groups of substances as TACs.²⁰ Direct exposure to these pollutants has been shown to cause cancer, birth defects, damage to the brain and nervous system, and respiratory disorders. The Hot-Spots Act (AB 2588) supplements the AB 1807 program by requiring a statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks. OEHHA is required to develop guidelines for HRAs under the Air Toxics Hot-Spots Program. These guidelines provide the scientific basis for the values used to assess the risk associated with exposure to emissions from facilities and new sources.²¹

In August 1998, CARB identified particulate emissions from diesel-fueled engines as TACs. In September 2000, CARB approved a comprehensive diesel risk reduction plan to reduce emissions from both new and existing diesel-fueled engines and vehicles. As an ongoing process, CARB reviews air contaminants and identifies those classified as TACs. CARB also continues to establish new programs and regulations to control TACs, including DPM, as appropriate.

CARB has adopted diesel exhaust control measures and more stringent emissions standards for various transportation-related mobile sources of emissions, including transit buses and off-road diesel equipment (e.g., tractors, generators). Over time, the replacement of older vehicles will result

¹⁹ CARB. 2021. *Frequently Asked Questions: CARB Truck Rule Compliance Required for DMV Registration*. Available: https://ww3.arb.ca.gov/msprog/truckstop/pdfs/sb1_faqeng.pdf. Accessed: December 15, 2023.

²⁰ CARB. 2022. CARB-Identified Toxic Air Contaminants. Available: https://ww2.arb.ca.gov/resources/ documents/carb-identified-toxic-air-contaminants. Accessed: December 15, 2023.

²¹ Office of Environmental Health Hazard Assessment. 2015. Air Toxics Hot Spots Program Guidance Manual for the Preparation of Risk Assessments. February. Available: https://oehha.ca.gov/ media/downloads/crnr/ 2015guidancemanual.pdf. Accessed: December 2022.

in a vehicle fleet that produces substantially lower levels of TACs. Mobile-source emissions of TACs (e.g., benzene, 1,3-butadiene, DPM) have been reduced significantly over the last decade and will be reduced further in California through a progression of regulatory measures (e.g., low-emission vehicle, clean fuel, and Phase II reformulated gasoline regulations) and control technologies. It is expected that DPM concentrations will continue to decline. Adopted regulations are also expected to continue to reduce formaldehyde emissions emitted by cars and light-duty trucks. As emissions are reduced, it is expected that risks associated with exposure to the emissions will also be reduced.

CARB developed multiple air toxic control measures to address specific mobile- and stationarysource categories that can have an impact on the public health of communities. The measures focused on reducing public exposure to DPM and TACs from mobile sources, such as commercial trucks, buses, solid waste collection vehicles, and cargo handling equipment at ports. The Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling (California Code of Regulations [CCR] Title 13, Section 2485) requires heavy-duty trucks with a GVWR greater than 10,000 pounds not to idle the primary engine for more than 5 minutes at any given time or operate an auxiliary power system for more than 5 minutes within 100 feet of a restricted area.

4.2.3.3 Local

Bay Area Air Quality Management District

At the local level, the responsibilities of air quality districts include overseeing stationary-source emissions, approving permits, maintaining emissions inventories, maintaining air quality stations, overseeing agricultural burning permits, and reviewing air quality–related sections of environmental documents required by the California Environmental Quality Act (CEQA). The air quality districts are also responsible for establishing and enforcing local air quality rules and regulations that address the requirements of federal and state air quality laws and ensuring that the NAAQS and the CAAQS are met.

The proposed project falls under the jurisdiction of BAAQMD, which has local air quality jurisdiction over projects in the SFBAAB, including San Mateo County. BAAQMD developed advisory emissions thresholds to assist CEQA lead agencies in determining the level of significance of a project's emissions; the thresholds are outlined in BAAQMD's 2022 *California Environmental Quality Act Air Quality Guidelines* (CEQA Air Quality Guidelines).²² In April 2023, BAAQMD released updated CEQA Air Quality Guidelines; however, the emissions thresholds specified in the updated guidelines are the same as those in the 2017 guidelines.²³ BAAQMD has also adopted air quality plans to improve air quality, protect public health, and protect the climate; these include the 2017 Clean Air Plan: Spare the Air, Cool the Climate (2017 Clean Air Plan).²⁴

The 2017 Clean Air Plan, adopted by BAAQMD on April 19, 2017, updates the prior 2010 Bay Area ozone plan and outlines feasible measures to reduce ozone; provides a control strategy to reduce PM, air toxics, and GHGs in a single integrated plan; and establishes the emissions control measures to be adopted or implemented. The 2017 Clean Air Plan contains the primary goals outlined below; consistency with these goals is evaluated in this section.

²² Bay Area Air Quality Management District. 2023. *California Environmental Quality Act Air Quality Guidelines*. Available: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa-guidelines-2022/ceqa-guidelines-chapter-0-cover-page-pdf.pdf?la=en. Accessed: May 9, 2023.

²³ Ibid.

²⁴ Bay Area Air Quality Management District. 2017. *Final 2017 Clean Air Plan.* Adopted: April 19. Available: https://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_proposed-final-cap-vol-1-pdf.pdf?la=en. Accessed: December 15, 2023.

- **Protect Air Quality and Health at the Regional and Local Scale**. Attain all state and national air quality standards, and eliminate disparities among Bay Area communities in the cancer health risk from TACs.
- **Protect the Climate**. Reduce Bay Area GHG emissions to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050. The 2017 Clean Air Plan is the most current applicable air quality plan for the air basin. Consistency with this plan is the basis for determining whether the project would conflict with or obstruct implementation of an air quality plan.

In addition to air quality plans, BAAQMD also adopts rules and regulations to improve existing and future air quality. The proposed project may be subject to the district rules outlined below.

- Regulation 2, Rule 2 (New Source Review)—This regulation contains requirements for best available control technology and emission offsets.
- Regulation 2, Rule 5 (New Source Review of TACs)—This regulation outlines guidance for evaluating TAC emissions and their potential health risks.
- Regulation 6, Rule 1 (PM)—This regulation restricts emissions of PM darker than a 1 on the Ringlemann Chart to less than 3 minutes in any 1 hour.
- Regulation 7 (Odorous Substances). This regulation establishes general odor limitations on odorous substances and specific emission limitations on certain odorous compounds.
- Regulation 8, Rule 3 (Architectural Coatings). This regulation limits the quantity of ROG in architectural coatings.
- Regulation 9, Rule 6 (NO_X Emissions from Natural Gas–Fired Boilers and Water Heaters). This regulation limits emissions of NO_X generated by natural gas–fired boilers.
- Regulation 9, Rule 8 (Stationary Internal-Combustion Engines). This regulation limits emissions of NO_x and CO from stationary internal-combustion engines of more than 50 horsepower.
- Regulation 11, Rule 2 (Hazardous Pollutants Asbestos Demolition, Renovation, and Manufacturing). This regulation, which incorporates EPA's asbestos National Emissions Standards for Hazardous Air Pollutants regulations, controls emissions of asbestos to the atmosphere during demolition, renovation, and transport activities.

4.2.3.4 City of South San Francisco

The following air quality-related goals from the *Shape South San Francisco 2040 General Plan* (General Plan)²⁵ are applicable to the proposed project:

Goal CR-6: A city prepared for the combined impacts of extreme heat and poor air quality.

Goal LU-1: Create complete neighborhoods where residents can access most of their everyday needs within a short walk, bike, or transit trip.

Goal CHEJ-3: South San Francisco neighborhoods near highways and industrial uses have improved air quality.

²⁵ City of South San Francisco. 2022. Shape South San Francisco 2040. Available: https://shapessf.com/. Accessed: December 15, 2023.

Goal ES-1: The City supports nature in South San Francisco to encourage healthy ecosystems, improve air and water quality, improve public health, and adapt to a changing climate.

Goal MOB-3: South San Francisco proactively manages traffic and parking demand.

Goal MOB-4: South San Francisco's land use and transportation actions reduce vehicle miles traveled (VMT) and greenhouse gas emissions.

Goal PE-4: Infrastructure investments support job access and job growth and address climate hazards affecting South San Francisco businesses.

Goal SA-3: The City promotes new residential, mixed-use, and employment uses to add business patrons and residents and create a sustainable and thriving downtown while maintaining a scale and character that is complementary to existing uses.

Goal SA-27: There are safe, comfortable, and accessible pedestrian and bicycle facilities that connect people to downtown, El Camino, and East of 101.

4.2.3.5 Lindenville Specific Plan

The following air quality–related goals from the Lindenville Specific Plan²⁶ are applicable to the proposed project:

Goal DD-1: The Mixed-Use Neighborhood, South Spruce Avenue Corridor, and South Linden Avenue Arts and Makers District have a network of safe, walkable streets and pathways to access key destinations and open spaces.

Goal DD-3: New developments in Lindenville provide healthy places for people to live and work by mitigating potential noise, air quality, and odor impacts from industrial land uses, U.S. 101 and Interstate 380, and aircraft.

Goal MOB-1: Multi-modal travel options are readily available and offer equal levels of comfort.

Goal MOB-2: There are high-quality connections to downtown, El Camino, East of 101, and regional destinations for all modes.

Goal MOB-3: Lindenville's transportation offerings and streetscape design support a vibrant mixed-use district.

Goal I-1: The development, management, and maintenance of infrastructure in Lindenville is driven by the ability to optimize the efficiency and effectiveness of each system and achieve the performance required to meet the City's sustainability goals.

Goal I-2: Lindenville invests in sustainable and resilient infrastructure and practices to illustrate leadership.

Goal I-5: The City increases reliance on local energy systems to ensure adequate utility provisioning for new potential users.

²⁶ City of South San Francisco. 2023. *Lindenville Specific Plan.* Available: https://shapessf.com/wp-content/uploads/ 2023/10/LindenvilleSP_CompleteFinalPlan_1023_23.pdf. Accessed: January 12, 2024.

4.2.4 Impacts and Mitigation Measures

This section describes the impact analysis related to air quality for the proposed project, including the off-site redesignation parcels. It describes the methods and thresholds used to determine whether an impact would be significant. Measures to mitigate (i.e., avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion, when necessary.

4.2.4.1 Significance Criteria

Based on Appendix G of the CEQA Guidelines, the proposed project would have a significant air quality impact if it would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is classified as 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.

4.2.4.2 Regional Project-Generated Criteria Pollutant Emissions (Ozone Precursors and Regional Particulate Matter)

This analysis first considers whether the proposed project would conflict with the most recent air quality plan.²⁷ Specifically, the impact analysis evaluates whether the project would support the primary goals of the 2017 Clean Air Plan, including applicable control measures, and whether it would disrupt or hinder implementation of any control measures. Secondly, the calculated regional criteria pollutant emissions are compared to BAAQMD's project-level thresholds.²⁸ BAAQMD's thresholds, as summarized in Table 4.2-4, are recommended by the agency to evaluate the significance of a project's regional criteria pollutant emissions. According to BAAQMD, projects with emissions in excess of the thresholds shown in Table 4.2-4 would be expected to have a significant cumulative impact on regional air quality because an exceedance of the thresholds is anticipated to contribute to NAAQS and CAAQS violations.

Adverse health effects induced by regional criteria pollutant emissions generated by the proposed project (ozone precursors and PM) would be highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, the number and character of exposed individuals [e.g., age, gender]). For these reasons, ozone precursors (ROG and NO_x) contribute to the formation of ground-borne ozone on a regional scale. Emissions of ROG and NO_x generated in one area may not equate to a specific ozone concentration in that same area. Similarly, some types of particulate pollution may be transported over long distances or formed through atmospheric reactions. As such, the magnitudes and locations of

²⁷ Bay Area Air Quality Management District. 2017. *Final 2017 Clean Air Plan*. Adopted April 19. Available: https://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_proposed-final-cap-vol-1-pdf.pdf?la=en. Accessed: December 15, 2023.

²⁸ BAAQMD. 2023. CEQA Thresholds and Guidelines Update. April. Available: https://www.baaqmd.gov/ plans-andclimate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines. Accessed: December 15, 2023.

specific health effects from exposure to increased ozone or regional PM concentrations are the product of emissions generated by numerous sources throughout a region as opposed to a single individual project. Moreover, exposure to regional air pollution does not guarantee that an individual will experience an adverse health effect; there are large individual differences in the intensity of symptomatic responses to an air pollutant. These differences are influenced, in part, by the underlying health condition of an individual, which cannot be known. Nonetheless, emissions generated by the proposed project could increase photochemical reactions and the formation of tropospheric ozone and secondary PM, which, at certain concentrations, could lead to increased incidences of specific health consequences, such as various respiratory and cardiovascular ailments. As discussed previously, air districts develop region-specific CEOA thresholds of significance in consideration of existing air quality concentrations and attainment designations under the NAAOS and CAAQS. The NAAQS and CAAQS are informed by a wide range of scientific evidence that demonstrates there are known safe concentrations of criteria pollutants. Accordingly, the proposed project would expose receptors to substantial regional pollution if any of the thresholds summarized in Tables 4.2-4 are exceeded.

Analysis	Thresholds
Regional Criteria Pollutants	Reactive Organic Gases: 54 pounds/day
(Construction)	Nitrogen Oxides: 54 pounds/day
	Particulate Matter: 82 pounds/day (exhaust only); compliance
	with best management practices (fugitive dust)
	 Fine Particulate Matter: 54 pounds/day (exhaust only);
	compliance with best management practices (fugitive dust)
Regional Criteria Pollutants	Reactive Organic Gases: Same as construction
(Operations)	Nitrogen Oxides: Same as construction
	Particulate Matter: 82 pounds/day
	Fine Particulate Matter: 54 pounds/day
Source: BAAQMD. 2023. CEQA Thresh	nolds and Guidelines Update. April. Available: https://www.baaqmd.gov/ plans-and-

Table 4.2-4. BAAQMD Project-Level Reg	ional Criteria Pollutant Emissions Thresholds
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4.2-20alifornialifornia-environmental-quality-act-ceqa/updated-ceqa-guidelines. Accessed: December 15, 2023.

4.2.4.3 Localized Project-Generated Criteria Pollutant Emissions (Carbon Monoxide and Particulate Matter) and Air Toxics (Diesel Particulate Matter)

Localized pollutants generated by a project can be deposited near the emissions source, potentially affecting the nearby population. Although these pollutants dissipate with distance, emissions from individual projects can result in direct and material health impacts on adjacent sensitive receptors. The localized pollutants of concern that would be generated by the project are CO, PM, and DPM. The applicable thresholds for each pollutant are described below.

Carbon Monoxide

Heavy traffic congestion can contribute to high levels of CO. Individuals exposed to such "hot spots" may have a greater likelihood of developing adverse health effects. BAAOMD has adopted screening criteria that provide a conservative indication of whether project-generated traffic would cause a potential CO hot spot. If the screening criteria are not met, a quantitative analysis, through site-
specific dispersion modeling of project-related CO concentrations, would not be necessary. A project would not cause localized violations of the CAAQS for CO if the BAAQMD's CO screening criteria, summarized below, are met.²⁹

- The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.
- The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., a tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).
- The project would be consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, the regional transportation plan, and local congestion management agency plans.

BAAQMD does not consider construction-generated CO to be a significant pollutant of concern because construction activities typically do not generate substantial quantities of this particular pollutant.³⁰

Particulate Matter

BAAQMD adopted an incremental $PM_{2.5}$ concentration-based significance threshold in which a "substantial" contribution at the project level for an individual source is defined as total (i.e., exhaust and fugitive) $PM_{2.5}$ concentrations exceeding 0.3 microgram per cubic meter ($\mu g/m^3$). In addition, BAAQMD considers projects to have a cumulatively considerable $PM_{2.5}$ impact if sensitive receptors are exposed to $PM_{2.5}$ concentrations from local sources within 1,000 feet, including existing sources, project-related sources, and reasonably foreseeable future sources, that exceed 0.8 $\mu g/m^3$.³¹

Diesel Particle Matter

DPM has been identified as a TAC. It is particularly concerning because long-term exposure can lead to cancer, birth defects, and damage to the brain and nervous systems. BAAQMD has adopted incremental cancer and hazard thresholds to evaluate receptor exposure to single sources of DPM emissions. The "substantial" DPM threshold defined by BAAQMD is exposure of a sensitive receptor to an individual emissions source, resulting in an excess cancer risk level of more than 10 in 1 million or a non-cancer (i.e., chronic or acute) hazard index greater than 1.0. BAAQMD also considers projects to have a cumulatively considerable DPM impact if they contribute to DPM emissions that, when combined with cumulative sources within 1,000 feet of sensitive receptors, result in excess cancer risk levels of more than 100 in 1 million or a hazard index greater than 10..³²

Asbestos

BAAQMD considers a project to have a significant impact if it does not comply with the applicable regulatory requirements outlined in BAAQMD's Regulation 11, Rule 2.

²⁹ Ibid.

³⁰ Ibid.

³¹ Ibid.

³² Ibid.

Odors

BAAQMD and CARB have identified several types of land uses as being commonly associated with odors, such as landfills, wastewater treatment facilities, and animal processing centers.^{33,34} BAAQMD's CEQA Air Quality Guidelines recommend that project analyses identify the locations of existing and planned odor sources and include policies to reduce potential odor impacts in the project area.³⁵

4.2.4.4 Approach to Analysis

Methodology

Criteria pollutant emissions generated by construction activities were quantified using the California Emissions Estimator Model (CalEEMod), version 2022.1.³⁶ Assumptions related to construction activity and scheduling (i.e., construction phase start and end dates) were based on project-specific information provided by the project sponsor as well as model defaults where project-specific information was not available.

Construction

Construction of the south and north buildings would occur in separate stages but begin with a demolition/abatement phase that would involve construction activities on the entirety of the project site. Construction on the southern portion of the project site would occur during eight phases.

- Phase 1: Rough grading/site demolition (includes site clearing, shoring, grading, mass excavation),
- Phase 2: Deep foundations,
- Phase 3: Foundations,
- Phase 4 Superstructure,
- Phase 5: Building enclosure,
- Phase 6: Interior buildout,
- Phase 7: Sitework, and
- Phase 8: Start-up/building commissioning and final inspections.

Immediately following the completion of construction on the southern portion of the project site, construction on the northern portion would begin, with the same phases.

Each phase would have a discrete start and end date. Based on input from the project sponsor, the analysis assumes that construction would occur 5 days a week, Monday through Friday. The construction assumptions for the project are summarized below. In addition, the data used in the construction analysis are provided in Appendix D of this environmental impact report (EIR).

³³ Ibid.

³⁴ California Air Resources Board. 2005. Air Quality and Land Use Handbook: A Community Health Perspective. April. Available: https://files.ceqanet.opr.ca.gov/221458-6/attachment/UNr-g159CW-r0G4DR8q6daNdAKT 3RJTd8gGQCfz4wqFfl-eNdZNQEqjf8tfls1x6Gsae7YqpXwtFIZBd0. Accessed: December 15, 2023.

³⁵ BAAQMD. 2023. *CEQA Thresholds and Guidelines Update*. April. Available: https://www.baaqmd.gov/ plans-andclimate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines. Accessed: December 15, 2023.

³⁶ California Air Pollution Control Officers Association. 2022. *California Emissions Estimator Model*. Version 2022.1. Available: https://www.caleemod.com/. Accessed: December 15, 2023.

- Heavy-Duty Construction Equipment. The project sponsor provided information regarding the number of pieces of equipment, fuel type, engine tier, and hours per day for each phase of construction. Some equipment would be electrically powered, including the scissor lifts and manlifts. All construction equipment would be equipped with a Tier 4 Final engine, except for electrical equipment, which does not produce direct emissions. In addition, a diesel-powered drill rig would have a Tier 3 engine.
- **Construction Workers' Vehicle Trips**. Calculations of emissions from workers' vehicles were based on the CalEEMod default number for daily workers per phase, the number of trips per day (i.e., two one-way trips per worker), trip length (i.e., 12 miles one way), and fleet mix (e.g., light-duty autos and light-duty trucks).³⁷ Emissions were calculated in CalEEMod, which uses Emissions Factor 2021 (EMFAC2021).³⁸
- **Construction Vendor Truck Trips**. Calculations of emissions from vendors' trucks were based on the number of daily vendors per phase, as provided by the project sponsor; the number of trips per day (i.e., two one-way trips), trip length (i.e., 8 miles one way), and fleet mix (e.g., heavy-heavy duty trucks, medium-heavy-duty trucks), then calculated in CalEEMod.
- **Construction Haul Truck Trips**. Calculations of emissions from haul trucks were based on the total number of haul trucks per phase, as provided by the project sponsor, for the rough grading/site demolition, deep foundations, foundations, superstructure, and building enclosure phases. Trip lengths and fleet mix (e.g., heavy-heavy duty trucks) were also considered. The total number of truck trips for each construction phase was calculated by multiplying the number of daily trips by the number of days for the construction phase.
- **Paving**. Paving activities would result in emissions of ROG from off-gassing. Each day, 0.5 acre on the project site would be paved during the sitework phase, resulting ultimately in a total paved area of about 71 acres.
- Architectural Coating. Architectural coating activities would also result in emissions of ROG from off-gassing. The activities would take place during the building enclosure and interior buildout phases.
- **Earthmoving**. Earthmoving activities would result in emissions of PM dust. Earthmoving would involve grading a maximum of 1.5 acres per day during the first phase (rough grading/site demolition) and 0.25 acre per day during the sitework phase. Soil would be both exported and imported during the rough grading/site demolition phase.
- **Demolition**. Demolition and removal of the existing structure would result in emissions of PM dust. A maximum of 25,000 sf of the existing structure would be demolished per day and exported off-site during the demolition phase.

³⁷ Ibid.

³⁸ CARB. 2021. *EMFAC2021 Web Database*. Version 1.0.1. Available: https://www.arb.ca.gov/emfac/. Accessed: December 15, 2023.

It was assumed that BAAQMD Basic Construction Mitigation Measures³⁹ would be implemented. The measures applicable to the proposed project are as follows:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, unpaved access roads) shall be watered three times per day. ⁴⁰
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
- All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
- Unpaved roads providing access to sites located 100 feet or more from a paved road shall be treated with a 6- to 12-inch layer of compacted layer of wood chips, mulch, or gravel.
- Publicly visible signs shall be posted with the telephone number and name of the person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The air district's general air pollution complaints number shall also be visible to ensure compliance with applicable regulations.

Operations

Operations of the project would generate emissions of ROG, NO_X, PM₁₀, and PM_{2.5} that could result in long-term air quality effects. Existing uses at the project site generate emissions of the same pollutants. The methodologies used to estimate criteria pollutant emissions resulting from operation of the project as well as existing uses are described below.

Criteria pollutant emissions from motor vehicles associated with development of the project were evaluated using CalEEMod, which uses emission factors from EMFAC2021, along with estimates of VMT provided by the transportation consultants for the project.

For operational energy use, CalEEMod estimates criteria pollutant emissions from the on-site combustion of natural gas but not from electricity consumption. The project sponsor provided electricity consumption estimates for the proposed uses; CalEEMod default values were used for the existing uses. Because existing uses on the site are all electric and the proposed buildings would be all electric, there would be no direct energy-related emissions.

³⁹ BAAQMD. 2023. CEQA Thresholds and Guidelines Update. April. Available: https://www.baaqmd.gov/ plans-andclimate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines. Accessed: December 15, 2023.

⁴⁰ Although this specific measure in BAAQMD's CEQA Guidelines indicates that watering would occur twice daily, this analysis modeled emissions that were based on watering three times daily. As explained on subsequent pages, increased watering is warranted to further reduce PM_{2.5} emissions.

Area-source emissions would result from the reapplication of architectural coatings as part of ongoing building maintenance, the use of consumer products, and the use of landscaping equipment. CalEEMod default values were used for both the proposed uses and existing uses.

Stationary-source emissions would result from the testing of 24 diesel-powered emergency generators with a 671-horsepower rating. Each generator was assumed to operate 150 hours per year during scheduled testing.

Health Risk Analysis

An HRA was prepared to quantify the levels of exposure from emissions of TACs and PM_{2.5} at sensitive receptors and future on-site receptors from both project construction and operation. The HRA methods are described below. All HRA modeling assumptions and results can be found in Appendix D.

DPM and PM_{2.5}

The project would generate DPM and PM_{2.5} emissions during construction and operations. Because the project would introduce DPM and PM_{2.5} emissions in an area near existing sensitive receptors, an HRA was conducted in accordance with BAAQMD guidelines. The HRA uses the most recent air dispersion model, the American Meteorological Society/Environmental Protection Agency Regulatory Model Improvement Committee Modeling System (AERMOD) (version 23132),⁴¹ from EPA; the cancer and chronic risk assessment values for DPM provided by OEHHA; and assumptions for model inputs recommended in BAAQMD's *Air Quality Guidelines,* Appendix E.⁴² The HRA, which applies the most recent guidance and calculation methods from OEHHA's *Air Toxics Hot Spots Program Guidance Manual for the Preparation of Risk Assessments,* consists of three parts: an emissions inventory, air dispersion modeling, and risk calculations.⁴³ A description of each part is provided below.

Emissions Inventory

The emissions inventory includes DPM and PM_{2.5} emissions from construction and operations. During construction, off-road equipment and on-road trucks would generate DPM emissions. The construction PM_{2.5} inventory consists of PM_{2.5} emissions from equipment, fugitive dust generated from the on-site movement of soil, and exhaust from trucks and construction workers' vehicles on roadways.

The operational DPM inventory includes $PM_{2.5}$ emissions from testing the emergency generators. The operational $PM_{2.5}$ inventory consists of $PM_{2.5}$ emissions from diesel sources, fugitive dust from vehicles traveling to and from the site on roadways, and exhaust from vehicles, both gasoline and diesel powered, traveling to and from the site.

⁴¹ U.S. Environmental Protection Agency. 2023. American Meteorological Society/Environmental Protection Agency Regulatory Model Improvement Committee Modeling System (AERMOD). Version 23132. Available: https://www.epa.gov/scram/air-quality-dispersion-modeling-preferred-and-recommended-models#aermod. Accessed: February 22, 2024.

⁴² BAAQMD. 2023. *Air Quality Guidelines.* Appendix E: Recommended Methods for Screening and Modeling Local Risks and Hazards. Available: https://www.baaqmd.gov/~/media/files/ planning-and-research/ceqa/ceqa-guidelines-2022/appendix-e-recommended-methods-for-screening-and-modeling-local-risks-and-hazards_final-pdf.pdf?rev=b8917a27345a4a629fc 18fc8650951e4&sc_lang=en. Accessed: February 7, 2024.

⁴³ Office of Environmental Health Hazard Assessment. 2015. Air Toxics Hot Spots Program Guidance Manual for the Preparation of Risk Assessments. February. Available: https://oehha.ca.gov/ media/downloads/crnr/2015guidancemanual.pdf. Accessed: December 2022.

Air Dispersion Modeling

The HRA used EPA's AERMOD model to model annual average DPM and PM_{2.5} concentrations at existing and future on-site receptors. Modeling inputs, including emission rates and source characteristics (e.g., release height, stack diameter, plume width), were based on guidance provided by OEHHA, BAAQMD, and the South Coast Air Quality Management District (SCAQMD).⁴⁴

The project site is located near the San Francisco International Airport monitoring station, which collects meteorological data. The AERMET data, provided by BAAQMD, represents 2013 through 2017 monitoring.⁴⁵

Construction

On-site construction emissions from off-road equipment were characterized as a polygon area source that outlines the footprint of the two different development areas (Infinite 131 South and North). A release height of 5.0 meters represented exhaust emissions, and a release height of 0.9 meter represented on-site fugitive dust emissions. The release height represents the height above the ground at which pollutants are emitted. On-road travel emissions from haul and vendors' trucks (for DPM and PM_{2.5}) as well as construction workers' vehicles (for PM_{2.5}) were characterized as line volume sources with a release height of 3.4 meters. Line volume sources represent a series of individual volumes sources.

To account for the plume rise associated with mechanically generated air turbulence from construction emissions for the AERMOD run, the initial vertical dimension of the area source was modeled at 4.7 meters for exhaust and 0.8 meter for fugitive dust; for the line volume sources, the initial vertical dimension was 3.2 meters. Plume rise is the height that pollutants rise above a release height. For exhaust, plume rise occurs because of the temperature of the exhaust gas and because exhaust gas temperatures can be high, which causes the plume to rise. For dust, plume rise accounts for the mechanical entrainment of dust in the wheels of equipment and trucks. Emissions from off-road equipment were assumed to be generated throughout the construction footprint. Emissions from off-site trucks were modeled along the road segments adjacent to the construction footprint.

Modeling Domain and Receptor Network

The modeling of emissions from construction activities was based on typical construction hours and days (i.e., 8 hours per day, 5 days per week). The urban dispersion option was used in the analysis because the project site is in an urban area. In addition, the surrounding areas are developed with buildings and paved surfaces that can influence how pollutants are dispersed in the area.

Off-site sensitive receptors were modeled in AERMOD at individual work sites in all directions within at least 1,000 feet of the project site using a 20- by 20-meter receptor grid. Worker receptors are locations where people work; these include indoor and outdoor areas, along with commercial/

⁴⁴ Certain information necessary for modeling, such as source parameters (e.g., source heights), is not available from BAAQMD but is provided by SCAQMD. These parameters do not depend on a project's geographic location and are appropriate for use in areas outside of SCAQMD's jurisdiction.

⁴⁵ Bay Area Air Quality Management District. 2022. AERMOD-Ready Meteorological Data. November. Available: https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/ceqa-tools/ceqamodeling-data. Accessed: December 2022.

industrial areas that are currently zoned or planned to be zoned for manufacturing, light or heavy industry, office uses, or retail activity. On-site sensitive receptors were modeled at the locations of the future buildings in the two different development areas. Worker receptors were modeled at the Infinite 131 South building because it could be complete and operational prior to completion of the Infinite 131 North building. Receptors were given a height of 1.5 meters to represent the average human breathing zone, consistent with BAAQMD guidance.⁴⁶

Operations

Operations would generate DPM and PM_{2.5} from vehicle travel and the testing of the twenty-four 671-horsepower EPA Tier 3 emergency generators. For the PM_{2.5} analysis, on-road travel emissions from delivery trucks, buses, and other vehicles accessing the site were characterized as line-volume sources, with release heights of 0.9 meter for fugitive dust emissions and 3.4 meters for exhaust emissions. To account for plume rise associated with mechanically generated air turbulence from operational emissions for the AERMOD run, the initial vertical dimension for the line-volume sources was set as 3.2 meters for exhaust and 0.8 meter for fugitive dust.

Similar to construction, the urban dispersion option considered the project site's characteristics. Offsite sensitive receptors were modeled in AERMOD at individual work sites in all directions within 1,000 feet of the project site using a 20- by 20-meter receptor grid. On-site sensitive receptors were modeled at the locations of the future buildings in the two different areas. Day-care receptors were modeled for the day-care building; worker receptors were modeled for the buildings in I131N and I131S. Receptors were given a height of 1.5 meters to represent the average human breathing zone, consistent with BAAQMD guidance.⁴⁷

Health Risk Exposure Estimation

The risk calculations incorporate OEHHA's age sensitivity factors, which account for increased sensitivity to carcinogens during early-in-life exposure. The approach for estimating cancer risk from long-term inhalation, including exposure to carcinogens, requires calculating a range of potential doses and multiplying by cancer potency factors in units corresponding to the inverse dose to obtain a range of cancer risks. For cancer risk, the risk for each age group is calculated using the appropriate daily breathing rates, age sensitivity factors, and exposure durations. The cancer risks calculated for individual age groups are summed to estimate the cancer risk for each receptor. Chronic cancer and chronic and acute hazard risks were calculated using values from OEHHA's 2015 HRA guidance.⁴⁸

⁴⁶ Bay Area Air Quality Management District. 2023. Air Quality Guidelines Appendix E: Recommended Methods For Screening and Modeling Local Risks and Hazards. Available: https://www.baaqmd.gov/~/media/files/planningand-research/ceqa/ceqa-guidelines-2022/appendix-e-recommended-methods-for-screening-and-modelinglocal-risks-and-hazards_final-pdf.pdf?rev=b8917a27345a4a629fc18fc8650951e4&sc_lang=en. Accessed: February 7, 2024.

⁴⁷ Ibid.

⁴⁸ Office of Environmental Health Hazard Assessment. 2015. *Air Toxics Hot Spots Program Guidance Manual for the Preparation of Risk Assessments*. February. Available: https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf. Accessed: April 15, 2021.

4.2.4.5 Topics Evaluated in the Initial Study

The Initial Study for the proposed project (Appendix B) found that the topic listed below would result in no impact. Therefore, this topic was excluded from further review in the EIR and is not discussed in this section.

Odors. Offensive odors rarely cause physical harm, but they can be unpleasant and lead to considerable distress among the public. This distress often generates citizen complaints to local governments and air districts. According to CARB's 2005 *Air Quality and Land Use Handbook*, land uses associated with odor complaints typically include sewage treatment plants, landfills, recycling facilities, manufacturing plants, and agricultural operations.⁴⁹ BAAQMD's Regulation 7 (Odorous Substances) establishes general odor limitations for odorous substances and specific emissions limitations for certain odorous compounds.

The proposed project would be constructed on land that has been designated Business Technology Park-High. The project, an R&D center, is a land use that is not typically associated with odor complaints, according to CARB's *Air Quality and Land Use Handbook*. During construction, dieselpowered equipment, exhaust from haul vehicles, and architectural coatings may generate temporary odors. During operations, emergency generator testing may also result in temporary odors. Both equipment- and generator-related odors would be temporary and would dissipate rapidly as a function of distance. Compared with existing odor sources in the vicinity of the project site, including the industrial land uses, odors from project operations would be similar to current conditions. The proposed project would comply, as applicable, with BAAQMD's Regulation 7, which limits emissions of odorous compounds from all non-exempt entities within BAAQMD's jurisdiction. Accordingly, construction and operation of the project is not expected to create objectionable odors that would affect a substantial number of people. Therefore, *no impact* would occur. No further study is needed.

4.2.4.6 Impact Evaluation

Impact AQ-1: The project would not conflict with or obstruct implementation of the applicable air quality plan. (*Less than Significant*)

Project

Consistency with the Bay Area 2017 Clean Air Plan

As described above, the current air quality attainment plan for the SFBAAB is BAAQMD's 2017 Clean Air Plan, which defines control strategies to reduce emissions and ambient concentrations of air pollutants; safeguards public health by reducing exposure to air pollutants that pose the greatest health risk, with an emphasis on protecting the communities most heavily affected by air pollution; and reduces GHG emissions to protect the climate. According to the BAAQMD CEQA Air Quality Guidelines, the determination of 2017 Clean Air Plan consistency should consider the following for project-level analyses.

⁴⁹ California Air Resources Board. 2005. Air Quality and Land Use Handbook: A Community Health Perspective. April. Available: https://files.ceqanet.opr.ca.gov/221458-6/attachment/UNr-g159CW-r0G4DR8q6daNdAKT 3RJTd8gGQCfz4wqFfl-eNdZNQEqjf8tfls1x6Gsae7YqpXwtFIZBd0. Accessed: December 15, 2023.

Does the project support the primary goals of the air quality plan?

The primary goals of the 2017 Clean Air Plan are to:

- **Protect Air Quality and Health at the Regional and Local Scale**: Attain all state and national air quality standards and eliminate disparities among Bay Area communities in the cancer health risk from TACs; and
- **Protect the Climate**: Reduce Bay Area GHG emissions to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050.

The proposed project would support the primary goals of the 2017 Clean Air Plan because it would redevelop a site with two-story industrial buildings and a large parking lot and densify the area through the construction of multi-story R&D buildings. Furthermore, the nearest bus stop is within 0.5 mile, at Herman Street and Pacific Avenue, which would encourage future employees to use public transportation.

The proposed project would include other features that would support a sustainable building design and a reduction in GHG emissions. Specifically, the proposed project would install a photovoltaic (PV) roof canopy and implement all required measures from the City's TDM Ordinance. The proposed project's implementation of the TDM measures, as shown in Table 4.6-5, would include measures such as transit pass subsidies, carpool and vanpool program coordination, on-site pedestrian-oriented amenities, and other measures. The proposed project would also be consistent with the voluntary EV parking requirements from CALGreen Tier 2, which would result in more EV parking spaces than is mandatory. These project attributes would directly support the 2017 Clean Air Plan's goals to protect public health and reduce GHG emissions because they would result in fewer vehicle trips and miles traveled and thus fewer emissions of criteria pollutants, ozone precursors, and GHGs. Furthermore, the proposed project would comply with all applicable City and state measures, including Title 24, Part 6, of the California Energy Code, the baseline standard requirements for energy efficiency.

Does the project include applicable control measures from the air quality plan?

To meet the primary goals, the 2017 Clean Air Plan recommends specific control measures and actions. These control measures are grouped into various categories that include stationary-source measures, mobile-source measures, and transportation control measures. The 2017 Clean Air Plan recognizes that community design dictates individual travel mode and that a key long-term control strategy to reduce emissions of criteria pollutants, air toxics, and GHGs from motor vehicles is to channel future Bay Area growth into vibrant urban communities where goods and services are close at hand and people have a range of viable transportation options. To that end, the 2017 Clean Air Plan includes control measures that are aimed at reducing air pollution in the SFBAAB.

The proposed project would support TR9, Bicycle and Pedestrian Access and Facilities, because it would improve conditions for walking and biking by providing on-site bicycle racks/lockers, providing long-term bicycle racks for workers, and orienting buildings to be sidewalk-facing, with multiple pedestrian entrances. In addition, the proposed project would support TR22, Construction, Freight, and Farming Equipment, because all off-road construction equipment associated with the project would include either electric or equipped with Tier 3 or Tier 4 engines.

The proposed project would also support TR2, Trip Reduction Programs, because it would comply with the City's Transportation Demand Management (TDM) ordinance to reduce operational VMT and related criteria pollutants, along with air toxics and GHG emissions.

Finally, the proposed project would support TCM-D3, Local Land Use Strategies, because it would replace an existing parking structure and two-story industrial buildings with an employment center located within 0.5 mile of the nearest bus stop, at Herman Street and Pacific Avenue. This would encourage future employees to use public transportation.

Does the project disrupt or hinder implementation of any air quality plan control measures?

The proposed project does not hinder implementation of any control measures in the 2017 Clean Air Plan. Rather, the project supports and includes TR9, Bicycle and Pedestrian Access; TR2, Trip Reduction Programs; and TCM-D3, Local Land Use Strategies. Other control measures are not applicable to the project, such as those involving stationary sources or those that are policies for BAAQMD to adopt. Although the measures are not applicable, the project would not hinder the measures from being implemented.

Conclusion

Based on the discussion above, the proposed project would support the primary goals of the 2017 Clean Air Plan, would incorporate all applicable control measures, and would not disrupt or hinder implementation of any control measures. Thus, the proposed project would not conflict with or obstruct implementation of the 2017 Clean Air Plan. This impact would be *less than significant*, and no mitigation is required.

Off-Site Redesignation Parcels

The five off-site redesignation parcels are currently designated as Mixed Industrial High (MIH) under the General Plan, Specific Plan, and City Zoning Code. However, they would be redesignated Business Technology Park High (BTP-H), consistent with the proposed land use and zoning designation for the project site. The MIH designation currently allows for development of a wide range of warehousing, manufacturing, processing, service commercial, and storage and distribution uses. The redesignation would allow for high-density corporate headquarters, research-and-development (R&D) facilities, and office uses. More specifically, the General Plan and Specific Plan describe the permitted uses for BTP-H as incubator research, prototype manufacturing, testing, repairing, packaging, publishing, and printing, along with office and R&D uses. Warehousing, distribution, manufacturing, retail services, personal services, and grocery and hotel uses are also permitted under this designation. The proposed project does not include the construction of any new uses on the off-site redesignation parcels.

Although no construction or development is currently proposed at the off-site parcels, the potential impacts that could occur at these sites if development were to occur are discussed herein. The baseline for this evaluation is the existing zoning of the site, which, as noted above, currently allows for industrial-type uses. If R&D uses are developed instead of industrial uses, there would likely be fewer potential conflicts with the 2017 Clean Air Plan. R&D facilities, which typically have fewer heavy machinery and processes that emit pollutants compared to industrial uses, could lead to a reduction in emissions of harmful air pollutants. This transition aligns with the 2017 Clean Air Plan to protect health and the regional and local scale. A key aspect of the 2017 Clean Air Plan is the promotion of denser uses near transit. The proposed project is located in an urban area and would provide first-mile/last-mile transit connections. By encouraging employees to use public

transit, the proposed project could contribute to reducing vehicle emissions and improving air quality. Thus, the redesignation of parcels aligns with the goals of the 2017 Clean Air Plan, because R&D facilities are more likely to successfully implement control measures from the plan. As such, the future uses would not conflict with or obstruct implementation of the 2017 Clean Air Plan. This impact would be *less than significant*, and no mitigation is required.

Whole Project

As described above, the proposed project would support the primary goals of the 2017 Clean Air Plan, would incorporate all applicable control measures, and would not disrupt or hinder implementation of any control measures. Thus, the proposed project would not conflict with or obstruct implementation of the 2017 Clean Air Plan. In addition, the off-site redesignation parcels would align with the goals of the 2017 Clean Air Plan more so than the uses currently allowed under existing zoning. Therefore, the whole project would not conflict with or obstruct implementation of the applicable air quality plan. This impact would be **less than significant**, and no mitigation is required.

Impact AQ-2: The project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is classified as nonattainment under an applicable federal or state ambient air quality standard. (*Significant and Unavoidable*)

Project

Construction Impacts

Project construction has the potential to create air quality impacts through the use of heavy-duty construction equipment, along with construction workers' vehicle trips, on-road truck trips, paving operations, and the application of architectural coatings. In addition, fugitive dust emissions would result from removal of the existing structures and earthmoving activities. However, emissions may vary substantially, depending on the level of activity, length of the individual construction activity, the types of equipment, number of personnel, and soil moisture content.

Construction-related emissions for the proposed project have been calculated using the methods described above. To evaluate construction emissions, it was assumed that the BAAQMD's fugitive dust control measures would be implemented, as required for all development occurring within BAAQMD's jurisdiction, as well as the City's standard conditions of approval.⁵⁰ Estimated construction emissions for the project assume implementation of the measures, as summarized by year in Table 4.2-5. Emissions are presented for each year of construction to capture the sum of emissions from the multiple activity categories occurring within the same year.

As shown in Table 4.2-5, below, emissions would be below the BAAQMD threshold for all pollutant emissions for all years. As noted above, best management practices during construction activities would be implemented in accordance with BAAQMD guidelines as well as the City's standard conditions of approval.

⁵⁰ The City's standard conditions of approval related to dust include Condition 12 ("The construction and permitted use on the property shall be so conducted as to reduce to a minimum any noise vibration or dust resulting from the operation"), and Condition 15 ("Prior to any on-site grading, a grading permit shall be obtained from the City Engineer").

Construction Year				
(and building)	ROG	NOx	PM ₁₀ Exhaust	PM _{2.5} Exhaust
2026 (I131S)	2	18	< 1	< 1
2027 (I131S)	20	14	< 1	< 1
2028 (I131S & I131N)	8	9	< 1	< 1
2029 (I131N)	8	16	< 1	< 1
2030 (I131N)	19	12	< 1	< 1
2031 (I131N)	2	3	< 1	< 1
BAAQMD threshold	54	54	82	54
Exceeds threshold?	No	No	No	No

Table 4.2-5. Average Daily Construction Criteria Pollutant Emissions from the Proposed Project (pounds per day)^{a,b}

^{a.} Emissions are rounded to the nearest whole number.

^{b.} The modeling output files are included in Appendix D of this EIR.

Operational Impacts

The proposed project would result in stationary-source emissions from operation of 24 emergency diesel generators, which would be used in the event of power grid failure. The generators would use Tier 2 engines. Mobile-source emissions would be generated from daily employee trips to and from the project site. Area-source emissions would occur from the use of consumer products, architectural coatings, and landscaping equipment. Lastly, laboratory operations would emit fugitive ROG emissions. Daily unmitigated operational emissions are shown in Table 4.2-6 and compared to the applicable BAAQMD thresholds.

The net effect of the proposed project is determined by calculating operational emissions from the existing land uses to be replaced by the proposed project and subtracting those from the proposed project's estimated operational emissions. Table 4.2-6 shows existing land use emissions, the proposed project's unmitigated emissions, and the difference between the two, which is the net effect of the proposed project.

As shown in Table 4.2-6, below, unmitigated daily ROG emissions from the proposed project would exceed BAAQMD's threshold, but no other pollutants would exceed the thresholds. For ROG, the threshold would be exceeded by approximately 37 pounds per day. Area-source emissions, as shown in Table 4.2-6, contribute the largest quantity of emissions (51 pounds per day). These emissions are primarily from the use of consumer products, such as cleaning products, within the buildings. Other area sources of ROG emissions include landscaping equipment and off-gassing from architectural coatings (i.e., paint). Mobile, stationary, and laboratory sources generate lesser quantities of ROG emissions but still contribute to the exceedance. To reduce emissions of ROG, the project sponsor would need to implement the mitigation measures **MM-AQ-1**, **2**, and **3**, which would require low-VOC coatings during project operation, low-VOC cleaning supplies, and use of zero-emission landscape equipment.

With implementation of these measures ROG emissions would be reduced because the products used, such as coatings and cleaning products, would result in less off-gassing of ROG compared to typical products. In addition, ROGs and other pollutants from combustion associated with landscaping equipment would be eliminated through the use of zero-emission equipment.

Source	ROG	NOx	PM ₁₀	PM _{2.5}
Existing Land Uses				
Area sources	< 1	—	—	—
Energy sources ^c	—	—	—	—
Mobile sources	2	2	4	1
Total Existing	2	2	4	1
Unmitigated Proposed Pro	oject			
Area sources	51	—	—	—
Energy sources ^d	—	—	—	—
Mobile sources	19	18	73	19
Stationary sources	11	30	2	2
Laboratory sources	12	—	—	—
Vegetation	< -1	<-1	< -1	< -1
Total Project	<u>93</u>	48	74	20
Net Project Emissions	<u>91</u>	46	70	19
BAAQMD threshold	54	54	82	54
Exceeds threshold?	Yes	No	No	No

Table 4.2-6. Average Daily Net Operational Criteria Pollutant Emissions (pounds per day)^{a,b,c}

^{a.} Emissions are rounded to the nearest whole number.

^{b.} The modeling output files are included in Appendix D of this EIR.

^{c.} Exceedances of the thresholds are underlined.

^{d.} Because existing uses on the site are all electric and the proposed buildings would be all electric, there would be no direct energy-related emissions

Table 4.2-7 shows existing land use emissions as well as the project's emissions with MM-AQ-1, Require Low-VOC Coatings during Project Operation; MM-AQ-2, Require Low-VOC Cleaning Supplies; and MM-AQ-3, Require Use of Zero Emission Landscape Equipment, implemented. As shown in Table 4.2-7, below, net emissions of ROG would still exceed BAAQMD's threshold with the measure implemented. Area sources would still contribute approximately 36 pounds of ROG per day, which is the majority of ROG emissions. Total ROG emissions would be approximately 22 pounds per day above the threshold, and there are no additional measures to reduce these emissions further. As such, operation of the proposed project would generate ROG emissions in excess of BAAQMD's numeric thresholds. This impact would be *significant and unavoidable*, and implementation of mitigation measures MM-AQ-1, 2, and 3 would be required.

Off-Site Redesignation Parcels

The five off-site redesignation parcels are currently designated as MIH under the General Plan, Specific Plan, and City Zoning Code. However, they would be redesignated BTP-H, consistent with the proposed land use and zoning designation for the project site. The MIH designation currently allows for development of a wide range of warehousing, manufacturing, processing, service commercial, and storage and distribution uses. The redesignation would allow for high-density corporate headquarters, R&D facilities, and office uses. More specifically, the General Plan and Specific Plan describe the permitted uses for BTP-H as incubator research, prototype manufacturing, testing, repairing, packaging, publishing, and printing, along with office and R&D uses. Warehousing, distribution, manufacturing, retail services, personal services, and grocery and hotel uses are also permitted under this designation. The project does not include the construction of any new uses on the off-site redesignation parcels.

Source	ROG	NOx	PM10	PM _{2.5}
Existing Land Uses				
Area sources	< 1	—	—	—
Energy sources ^c	—		—	—
Mobile sources	2	2	4	1
Total Existing	2	2	4	1
Mitigated Proposed Project	t			
Area sources	36	—	—	—
Energy sources ^c			—	—
Mobile sources	19	18	73	19
Stationary sources	11	30	2	2
Laboratory sources	12		—	—
Vegetation	< -1	< -1	<-1	< -1
Total Project	<u>78</u>	48	74	20
Net Project Emissions	<u>76</u>	46	70	19
BAAQMD threshold	54	54	82	54
Exceeds threshold?	Yes	No	No	No

 Table 4.2-7. Average Daily Net Operational Criteria Pollutant Emissions with Measures

 Implemented (pounds per day)^{a,b,c}

^{a.} Emissions are rounded to the nearest whole number.

^{b.} The modeling output files are included in Appendix D of this EIR.

^{c.} Exceedances of the thresholds are underlined.

While no construction or development is currently proposed at the off-site parcels, the potential impacts if development were to occur at these sites are discussed here. The baseline for this evaluation is the existing zoning of the site, which, as noted above, currently allows for industrial-type uses. If R&D uses are developed instead of industrial uses, there may be potential increases in criteria pollutants that exceed the BAAOMD's thresholds of significance. Exceedances could also occur under existing zoning; however, the causes of the exceedances would differ. For industrial uses, for example, there would likely be fewer emissions from employee vehicle trips, consumer products, and landscaping emissions relative to an R&D facility; however, an industrial facility could result in higher process emissions from stationary combustion sources on-site. It is not possible to definitively conclude which type of use would result in higher emissions, because that conclusion is highly dependent on the specific uses that would have been constructed under existing zoning and would be constructed under the rezoning. Similarly, construction emissions may differ between existing zoning and the rezoning of the off-site parcels. As with proposed project, emissions during operations could exceed the BAAQMD's thresholds of significance at R&D facilities if the off-site parcels are rezoned; however, such exceedances could also occur under the existing zoning. Because the magnitude of emissions exceedances from the rezoning, relative to the existing zoning, cannot be known at this time, it is conservatively assumed that the off-site redesignation could result in a cumulatively considerable net increase of criteria pollutants for which the project region is classified as nonattainment. This impact would be *significant and unavoidable*. Mitigation measures similar to those required for the proposed project may reduce emissions, but emissions could remain significant.

Whole Project

As described above, the off-site redesignation of parcels could potentially generate criteria pollutant emissions that are greater than the pollutants associated with the existing uses. Therefore, the offsite redesignation parcels could result in a cumulatively considerable net increase of criteria pollutants for which the project region is classified as nonattainment. As shown in Table 4.2-7, the proposed project net emissions of ROG would exceed BAAQMD's threshold with mitigation measures implemented, and there are no additional measures to reduce these emissions further. As such, operation of the proposed project would generate ROG emissions in excess of BAAQMD's numeric thresholds. Therefore, the whole project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is classified as nonattainment under an applicable federal or state ambient air quality standard. This impact would be *significant and unavoidable*, and the following mitigation is required.

Mitigation Measure MM-AQ-1: Require Low-VOC Coatings during Project Operation.

The project sponsor shall require contractors, as a condition of contract, to reduce constructionrelated fugitive ROG emissions by ensuring that low-VOC coatings with a VOC content of 50 grams per liter or less are used during operation.

Mitigation Measure MM-AQ-2: Require Low-VOC Cleaning Supplies.

The project sponsor shall provide educational resources for tenants concerning zero- or low-VOC cleaning products. Prior to receipt of any certificate of final occupancy, the project sponsor shall work with the City of South San Francisco to develop the electronic correspondence to be distributed by email to new commercial tenants regarding a requirement to purchase cleaning products that generate less than the typical VOC emissions.

Mitigation Measure MM-AQ-3: Require Use of Zero-Emission Landscape Equipment.

The project sponsor shall provide educational resources for tenants concerning zero-emission landscape equipment. The project sponsor, as a condition of contract, shall require all tenants to use only electric landscaping equipment throughout project operation to reduce ROG, NO_X, PM₁₀, and PM_{2.5} emissions.

Impact AQ-3: The project would expose sensitive receptors to substantial pollutant concentrations. (*Significant and Unavoidable*)

Project

Criteria Air Pollutants

Adverse health effects induced by regional criteria pollutants, such as ozone precursors and PM, generated by the project are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, the number and character of exposed individuals [e.g., age, gender]). Ozone precursors (ROG and NO_X) contribute to the formation of ground-borne ozone on a regional scale. Emissions of ROG and NO_X generated in one area may not equate to a specific ozone concentration in that same area. Similarly, some types of particulate pollution may be transported over long distances or formed through atmospheric reactions. As such, the magnitude and locations of specific health effects from exposure to increased ozone or regional PM concentrations are the product of emissions generated by numerous sources throughout a region as opposed to a single individual project. Moreover, exposure to regional air pollution does not guarantee that an individual will experience

an adverse health effect. As discussed above, there are large individual differences in the intensity of symptomatic responses to air pollutants. These differences are influenced, in part, by the underlying health condition of an individual, which cannot be known.

Models and tools have been developed to correlate regional criteria pollutant emissions to potential community health impacts. Although models are capable of quantifying ozone and secondary PM formation and associated health effects, these tools were developed to support regional planning and policy analysis and have limited sensitivity to small changes in criteria pollutant concentrations induced by individual projects.

As discussed above, BAAQMD's regional thresholds consider existing air quality concentrations and attainment or nonattainment designations under the NAAQS and CAAQS. The NAAQS and CAAQS are informed by a wide range of scientific evidence that demonstrates that there are known safe concentrations of criteria pollutants. Although BAAQMD recognizes that air quality is a cumulative problem, it considers projects that generate criteria pollutant and ozone precursor emissions that fall below the thresholds to be minor in nature; therefore, such projects would not adversely affect air quality to the extent that the health-protective NAAQS or CAAQS would be exceeded.

Regional emissions generated by a project could increase photochemical reactions and the formation of tropospheric ozone and secondary PM, which, at certain concentrations, could lead to increased incidences of specific health consequences. The project would result in ROG emissions that would exceed the thresholds of significance; thus, the criteria pollutant applicable to potential health effects would be ozone because ROG is considered an ozone precursor that results in ozone formation after being emitted. Ozone is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving ROG (and NO_X) in the presence of sunlight.

Quantitative analysis of health outcomes resulting from emissions from a large project in San José has demonstrated that the individual project contribution toward health outcomes is minimal relative to background occurrences. For that project, the highest emissions of ROG, NO_X, PM₁₀, and PM_{2.5} were 389 pounds per day, 258 pounds per day, 237 pounds per day, and 56 pounds per day, respectively, which are substantially higher levels of emissions compared with the proposed project's emissions.⁵¹ The health outcomes for the project in San José were found to be a very small proportion of background incidences; thus, any health outcomes for the proposed project would very likely be even smaller and much less than the background occurrences.⁵²

Diesel Particulate Matter and Localized PM_{2.5}

DPM is a carcinogen emitted by diesel internal-combustion engines. Project-related construction activities would generate DPM (i.e., PM₁₀ exhaust from diesel vehicles)⁵³ from off-road equipment and heavy-duty trucks. PM_{2.5} exhaust and fugitive dust emissions would be generated from off-road equipment, on-site material movement, and on-road travel by heavy-duty trucks and workers' vehicles. Operational sources of PM_{2.5} exhaust and fugitive dust emissions would be generated by emergency generators and employees' vehicles.

⁵² Ibid.

⁵¹ ESA. 2019. Navigable Slough Flood Management Study, Prepared for County of San Mateo, City of South San Francisco, and City of San Bruno. Available: https://oneshoreline.org/wp-content/uploads/2020/06/ Navigable-Slough-Flood-Management-Study.pdf. Accessed: April 12, 2023.

⁵³ Per BAAQMD guidance, PM₁₀ exhaust is used as a surrogate for DPM.

Health impacts from exposure to DPM include cancer risks and chronic non-cancer risks. The HRA for the proposed project, which was conducted using the methods described above, includes an evaluation of annual concentrations of DPM emissions and PM_{2.5} emissions from exhaust and fugitive dust sources. Table 4.2-8 presents the maximum construction and operational health risks resulting from exposure to DPM and PM_{2.5} for worker and day-care receptors within 1,000 feet of the project site. Annual PM_{2.5} concentrations are also presented. For worker receptors, the cancer risk values reflect an exposure duration of 5 years for construction and 20 years for operations. For future day-care receptors who will be on-site after construction is completed, the cancer risk values represent 5 years of operations.

Receptor Type	Cancer Risk (cases per million)ª	Hazard Index: Non-Cancer Chronic Risk ^b	Hazard Index: Non-Cancer Acute Risk ^b	Annual PM _{2.5} Concentrations (μg/m³) ^b
Worker (cancer risk MEI) ^c	9.8	0.10	0.01	0.40
Worker (PM _{2.5} concentration MEI)	4.9	0.10	0.01	0.49
Day care (cancer risk MEI)	3.2	0.01	0.01	0.06
Day care (PM _{2.5} concentration MEI)	2.7	0.01	0.01	0.07
BAAQMD significance threshold	10	1.0	1.0	0.3
Exceeds threshold?	No	No	No	Yes

Table 4.2-8. Estimated Project-Level Health Risk Results

Notes:

 μ g/m³ = micrograms per cubic meter; PM_{2.5} = particulate matter with an aerodynamic diameter of 2.5 or less

^{a.} For worker receptors, the evaluation of cancer risk was modeled for an exposure duration of 5 years for construction and 20 years for operation. For day-care receptors, the evaluation of cancer risk was modeled for an exposure duration of 5 years for operation.

^{b.} Non-cancer chronic hazard index and annual PM_{2.5} concentrations were based solely on annual construction and operational emissions. Non-cancer acute hazard index concentrations were based on 1-hour operational emissions.

c. MEI = maximally exposed individual

As shown in Table 4.2-8, the cancer risk and the hazard index values would not exceed BAAQMD thresholds for either worker or day-care receptors. The highest cancer risk, 9.8 cases per million, which would occur during construction at the locations of worker receptors, would be below the threshold of 10 cases per million. The highest hazard index value (0.1) would also occur during construction at the locations of worker receptors and be well below the threshold of 1.0. However, annual PM_{2.5} concentrations would exceed the BAAQMD threshold of 0.3 μ g/m³. The highest value would be approximately 0.5 μ g/m³, which would be the result of dust and exhaust generated during construction that could affect workers. For day-care receptors, the PM_{2.5} concentrations are much lower because those receptors would be exposed only to operational sources of PM_{2.5}, which would generate fewer emissions than construction sources at the locations of day-care receptors. Accordingly, sensitive worker receptors would be exposed to substantial concentrations of PM_{2.5} during construction. To reduce PM_{2.5} concentrations during construction, the project sponsor would need to implement mitigation measure **MM-AQ-4** outlined below, which would require construction mitigation measures to reduce dust emissions.

Table 4.2-9 presents the maximum construction and operational health risks resulting from exposure to DPM and PM_{2.5} for worker and day-care receptors within 1,000 feet of the project site with the implementation of the measures to reduce fugitive dust emissions during construction.

Receptor Type	Cancer Risk (cases per million)ª	Hazard Index: Non-Cancer Chronic Risk ^b	Hazard Index: Non-Cancer Acute Risk ^b	Annual PM _{2.5} Concentrations (μg/m³) ^b
Worker (cancer risk MEI)¢	9.8	0.10	0.01	0.31
Worker (PM _{2.5} concentration MEI)	2.4	0.01	0.01	0.46
Day care (cancer risk MEI)	3.2	0.01	0.01	0.06
Day care (PM _{2.5} concentration MEI)	2.7	0.01	0.01	0.07
BAAQMD significance threshold	10	1.0	1.0	0.3
Exceeds threshold?	No	No	No	Yes

Table 4.2-9. Estimated Project-Level Health Risk Results with Measures Implemented

Notes:

 μ g/m³ = micrograms per cubic meter; PM_{2.5} = particulate matter with an aerodynamic diameter of 2.5 or less

^{a.} For worker receptors, the evaluation of cancer risk was modeled for an exposure duration of 5 years for construction and 20 years for operation. For day-care receptors, the evaluation of cancer risk was modeled for an exposure duration of 5 years for operation.

^{b.} Non-cancer chronic hazard index and annual PM_{2.5} concentrations were based solely on annual construction and operational emissions. Non-cancer acute hazard index concentrations were based on 1-hour operational emissions.

c. MEI = maximally exposed individual

Although the emissions modeling includes implementation of construction mitigation measures to reduce dust, as shown in Table 4.2-9, PM_{2.5} emissions would result in concentrations that could nevertheless exceed the BAAQMD threshold. Without implementation of dust reduction measures, the maximum PM_{2.5} concentration, as shown in Table 4.2-8, would result from construction activities; however, with the reduction measures implemented, construction concentrations would be reduced and the annual concentration during operations would become the maximum value. The worker receptor MEI for operational PM_{2.5} is located at a different location than for construction PM_{2.5}. The primary reason for the exceedance is the proximity of worker receptors to sources of PM_{2.5} from project operations (on-road vehicle trips to and from the site). The worker receptors who would be exposed to the PM_{2.5} concentration exceedance would be those at the adjacent site east of the Infinite 101 site. The distance between workers at the adjacent site and operations of the proposed project would be minimal and would not allow pollutant concentrations to disperse. As such, exceedance of the threshold would be largely due to the proximity of the receptors. No additional measures have been identified to avoid this exceedance. This impact would be *significant and unavoidable*, and implementation of mitigation measure MM-AQ-4 would be required.

Laboratory TACs

Project buildings could have wet laboratory uses that could, depending on the specific use, generate emissions at building vents. Although the exact emissions and TACs that could occur are unknown, examples of common TACs from laboratories include benzene, t-butyl alcohol, chloroform, ethanol, and formaldehyde. The precise use of the new laboratory space is unknown at this time; however, this assessment conservatively assumes that 50 percent of the new buildings could have laboratories with up to 816,000 sf of wet laboratory space. However, during the permitting phase of development, new stationary TAC sources would be required to comply with BAAQMD rules and regulations, thereby ensuring compliance with best available control technology for toxics (if appropriate). The regulations could include emissions limits and/or emissions control technologies

appropriate for the specific source. Operational emissions of laboratory-generated TACs are included in the health risk results shown in Table 4.2-8. Such emissions would not expose sensitive receptors to substantial pollutant concentrations.

Localized Carbon Monoxide Impacts

Continuous engine exhaust may elevate localized CO concentrations, resulting in hot spots. Receptors exposed to these CO hot spots may have a greater likelihood of developing adverse health effects. CO hot spots are typically observed at heavily congested intersections where a substantial number of gasoline-powered vehicles idle for prolonged durations throughout the day. The BAAQMD's screening criteria for CO hot spots is 44,000 vehicles per hour at affected intersections and 24,000 vehicles per hour at affected intersections where vertical or horizontal mixing is limited (i.e., a tunnel).

To use BAAQMD's quantitative screening criteria for evaluating CO hot spots, a project must be consistent with an applicable congestion management program (CMP). The project would not conflict with the applicable CMP because none of the study intersections are part of the CMP network. Thus, BAAQMD quantitative screening values are used to evaluate the project's potential to create CO hot spots.

Peak-hour traffic volume data for intersections in the project area, as provided by the traffic engineers and included in Appendix D, indicate that traffic volumes at all intersections would be below both the 44,000- and 24,000-vehicle-per-hour criteria. As a result, the additional vehicle trips associated with the project would not result in a localized violation of the CAAQS for CO.

Asbestos

Asbestos is a naturally occurring mineral that was previously used in building construction because of its heat resistance and strong insulating properties. Exposure to asbestos, however, has been shown to cause many disabling and fatal diseases, including lung cancer, mesothelioma, and pleural plaques. Demolition of the existing hardscape (i.e., asphalt and concrete) as well as buildings on the project site may expose workers and nearby receptors to asbestos if the material was used during construction of the original hardscape and buildings. However, the construction contractor would be required to comply with BAAQMD Regulation 11, Rule 2, Asbestos, Demolition, Renovation, and Manufacturing. The purpose of this rule is to control emissions of asbestos to the atmosphere during demolition and building renovation. Because the contractor would be required to control asbestos emissions according to BAAQMD regulations, receptors would not be exposed to substantial asbestos risks.

Off-Site Redesignation Parcels

The five off-site redesignation parcels are currently designated as MIH under the General Plan, Specific Plan, and City Zoning Code. However, they would be redesignated BTP-H, consistent with the proposed land use and zoning designation for the project site. The MIH designation currently allows for development of a wide range of warehousing, manufacturing, processing, service commercial, and storage and distribution uses. The redesignation would allow for high-density corporate headquarters, R&D facilities, and office uses. More specifically, the General Plan and Specific Plan describe the permitted uses for BTP-H as incubator research, prototype manufacturing, testing, repairing, packaging, publishing, and printing, along with office and R&D uses. Warehousing, distribution, manufacturing, retail services, personal services, and grocery and hotel uses are also permitted under this designation. The proposed project does not include the construction of any new uses on the off-site redesignation parcels. While no construction or development is currently proposed at the off-site parcels, the potential impacts if development were to occur at these sites are discussed here. The baseline for this evaluation is the existing zoning of the site, which, as noted above, currently allows for industrial-type uses. If R&D uses are developed instead of industrial uses, there may be potential exposure of sensitive receptors to substantial pollutant concentrations. Exposure of sensitive receptors to pollutant concentrations could also occur under existing zoning; however, the primary pollutant sources and corresponding impacts would differ. For industrial uses under existing zoning, for example, TAC emissions could occur from stationary sources of combustion or fugitive emissions sources on -site that could result in significant cancer risks at existing receptors. As noted above for the proposed project, cancer risks would be below the applicable threshold; however, PM_{2.5} concentrations would exceed the threshold due to vehicle trips generating dust. If the off-site parcels are redesignated to allow for R&D uses, the relatively higher vehicle volumes associated with R&D facilities could result in PM_{2.5} concentration exceedances, which would be a different type of impact than could occur under the existing zoning (i.e., a significant cancer risk). Alternatively, the type of impact could be the same for both R&D uses and existing zoning uses.

Because the exact type and magnitude of impacts from the rezoning, relative to the existing zoning, cannot be known at this time, it is conservatively assumed that the off-site redesignation could expose sensitive receptors to substantial pollutant concentrations. Therefore, the off-site redesignation parcels portion of this proposed project could expose sensitive receptors to substantial pollutant concentrations. This impact would be *significant and unavoidable*. Mitigation measures similar to those required for the proposed project may reduce emissions and thus pollutant concentrations, but the impact could remain significant.

Whole Project

As described above, the off-site redesignation parcels could expose sensitive receptors to substantial pollutant concentrations. As shown in Table 4.2-9, PM_{2.5} emissions from the project would result in concentrations that would exceed the BAAQMD threshold, even with implementation of MM-AQ-4. No additional measures have been identified to avoid this exceedance. Therefore, the whole project would result in an impact related to the exposure of sensitive receptors to substantial pollutant concentrations. This impact would be *significant and unavoidable*, and the following mitigation measure is required.

Mitigation Measure MM-AQ-4: Implement Construction Mitigation Measures to Reduce Dust Emissions.

The project sponsor shall require all construction contractors to implement the dust-reducing measures listed below, which are based on BAAQMD's Basic Best Management Practices for Construction-Related Fugitive Dust Emissions but include more stringent measures to obtain greater reductions. The project sponsor shall provide documentation to the City of South San Francisco that the construction measures have been reflected in all construction contracts prior to the commencement of project construction activities.

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, unpaved access roads) shall be watered at least three times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per month. The use of dry power sweeping is prohibited.

- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading, unless seeding or soil binders are used.
- All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
- All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
- Unpaved roads providing access to sites located 100 feet or further from a paved road shall be treated with a 6- to 12-inch layer of compacted layer of wood chips, mulch, or gravel.
- Publicly visible signs shall be posted with the name and telephone number of the person to contact at the City regarding dust complaints. That person shall respond and take corrective action within 48 hours. The air district's general air pollution complaints number shall also be visible to ensure compliance with applicable regulations.

4.2.4.7 Cumulative Impacts

The cumulative geographic context for regional air quality is the SFBAAB. The cumulative geographic context for health risks is the immediate vicinity of the project site (i.e., within 1,000 feet).

Impact C-AQ-1: The project, inclusive of the off-site redesignation parcels, together with the cumulative projects identified, would not conflict with or obstruct implementation of the applicable air quality plan. (*Less than Significant*)

As discussed under Impact AQ-1, the proposed project would not conflict with the 2017 Clean Air Plan implementation. The purpose of the 2017 Clean Air Plan is to improve regional air quality in the air basin; therefore, the analysis and less-than-significant finding under Impact AQ-1 is inherently cumulative. For these reasons, the proposed project in combination with past, present, and reasonably foreseeable future projects would not result in a significant cumulative impact related to air quality plan consistency. The cumulative impact would be *less than significant*. No mitigation is required.

Impact C-AQ-2: The project, inclusive of the off-site redesignation parcels, together with the cumulative projects identified, would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. (*Significant and Unavoidable*)

As discussed above, BAAQMD has identified project-level thresholds to evaluate criteria pollutant impacts (Table 4.2-4). In developing these thresholds, BAAQMD considers levels at which project emissions are cumulatively considerable. As noted in BAAQMD's guidelines:

In developing thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts on the region's existing air quality conditions. Therefore, additional analysis to assess cumulative impacts is unnecessary.

Exceedances of project-level thresholds would be cumulatively considerable, and the cumulative impact would be significant. As discussed under Impact AQ-2, construction of the proposed project would not generate ROG, NO_X, or PM emissions in excess of BAAQMD's numeric thresholds. In addition, operation of the proposed project would not generate NO_X or PM emissions in excess of BAAQMD's numeric thresholds. However, the proposed project would generate ROG in excess of BAAQMD's daily operational threshold. Implementation of Mitigation Measure AQ-1, *Require Low-VOC Coatings during Project Operation*, Mitigation Measure AQ-2, *Require Low-VOC Cleaning Supplies*, and Mitigation Measure AQ-3, *Require Use of Zero-Emission Landscape Equipment*, would reduce ROG emissions; however, the impact would not be reduced to a less-than-significant level (see Table 4.2-7). Accordingly, the proposed project's contribution to a cumulative criteria pollutant emissions impact would be *significant and unavoidable*.

Impact C-AQ-3: The project, inclusive of the off-site redesignation parcels, together with the cumulative projects identified, would expose sensitive receptors to substantial pollutant concentrations. (*Significant and Unavoidable*)

According to BAAQMD's CEQA Air Quality Guidelines, combined risk levels should be determined for all TAC sources within 1,000 feet of a project site and compared to BAAQMD's cumulative health risk thresholds.⁵⁴

Existing TAC sources and the proposed project's construction emissions could contribute to a cumulative health risk for sensitive receptors near the project site. BAAQMD's inventory of stationary health risks was used to estimate the level of health risk from existing stationary sources in combination with the proposed project's contributions. Geographic information system (GIS) raster files provided by BAAQMD were used to estimate roadway and railway emissions.⁵⁵ The methods used to estimate project-related TAC emissions and health risks are described above under *Methodology*, with further details in Appendix C.

The results of the cumulative impact assessment are summarized in Table 4.2-10, which shows the health risk values for the proposed project's maximally affected receptors as well as the health risk contributions from existing sources. The results in Table 4.2-10 include implementation of measures to reduce dust emissions during construction, as described above, and the table is divided into separate sections for the two types of receptors as well as health risks and PM_{2.5} concentrations. If one worker receptor, for example, experiences the highest cancer risk, the full modeling results for that receptor are presented in the table. However, if a different worker receptor experiences the highest PM_{2.5} concentration, the full modeling results for that receptor are also presented. The sum of the proposed project's health risk values and existing background health risk values is compared to BAAQMD cumulative thresholds. Additional data on individual background contributions from existing sources are included in Appendix D.

⁵⁴ BAAQMD. 2023. CEQA Thresholds and Guidelines Update. April. Available: https://www.baaqmd.gov/ plans-andclimate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines. Accessed: December 15, 2023.

⁵⁵ BAAQMD. 2023. *Air Quality Guidelines. Appendix E: Recommended Methods for Screening and Modeling Local Risks and Hazards*. Available: https://www.baaqmd.gov/~/media/files/ planning-and-research/ceqa/ceqa-guidelines-2022/appendix-e-recommended-methods-for-screening-and-modeling-local-risks-and-hazards_final-pdf.pdf?rev=b8917a27345a4a629fc 18fc8650951e4&sc_lang=en. Accessed: February 7, 2024.

Maximally Affected Receptor for Worker Cancer Risk						
Source	Cancer Risk (per million)	Non-Cancer Chronic Hazard Index	Non-Cancer Acute Hazard Index	Annual PM2.5 Concentration (μg/m ³)		
Existing Sources						
Stationary sources	7	0.01	< 0.01	8.73		
Roadway sources	13	0.05	< 0.01	0.35		
Rail sources	13	< 0.01	< 0.01	0.02		
Existing Total	33	0.06	< 0.01	9.09		
Project Sources						
Construction (5-year exposure duration) plus operation (20-year exposure duration)	10	0.10	0.01	0.31		
Existing plus Project						
Existing plus construction	43	0.15	0.01	9.40		
BAAQMD cumulative thresholds	100	10	10	0.8		
Exceeds thresholds?	No	No	No	Yes		
Maximally Affected Receptor for V	Vorker PM _{2.5} Con	centration				
Existing Sources						
Stationary sources	8	0.03	< 0.01	8.72		
Roadway sources	24	0.09	< 0.01	0.71		
Rail sources	14	< 0.01	< 0.01	0.02		
Existing Total	46	0.13	< 0.01	9.45		
Project Sources						
Construction (5-year exposure duration) + Operation (20-year exposure duration)	2	0.01	0.01	0.46		
Existing plus Project						
Existing plus construction	48	0.14	0.01	9.91		
BAAQMD cumulative thresholds	100	10	10	0.8		
Exceeds thresholds?	No	No	No	Yes		
Maximally Affected Receptor for Day-Care Cancer Risk						
Source	Cancer Risk (per million)	Non-Cancer Chronic Hazard Index	Non-Cancer Acute Hazard Index	Annual PM _{2.5} Concentration (μg/m ³)		
Existing Sources						
Stationary sources	9	0.04	< 0.01	9.3		
Roadway sources	9	0.03	< 0.01	0.21		
Rail sources	18	< 0.01	< 0.01	0.02		
Existing Total	36	0.07	< 0.01	9.53		

Table 4.2-10. Cumulative Health Risks at Maximally Affected Receptors with Measures Implemented

Project Sources						
Operation (5-year exposure duration)	3	0.01	0.01	0.06		
Existing plus Project						
Existing plus construction	39	0.09	0.01	9.59		
BAAQMD cumulative thresholds	100	10	10	0.8		
Exceeds thresholds?	No	No	No	Yes		
Maximally Affected Receptor for Day-Care PM _{2.5} Concentration						
Existing Sources						
Stationary sources	11	0.05	< 0.01	8.72		
Roadway sources	9	0.03	< 0.01	0.24		
Rail sources	18	< 0.01	< 0.01	0.02		
Existing Total	39	0.09	< 0.01	8.98		
Project Sources						
Operation (5-year exposure duration)	3	0.01	0.01	0.07		
Existing plus Project						
Existing plus construction	42	0.10	0.01	9.05		
BAAQMD cumulative thresholds	100	10	10	0.8		
Exceeds thresholds?	No	No	No	Yes		

Notes:

Totals may not add up because of rounding.

 μ g/m³ = micrograms per cubic meter; PM_{2.5} = particulate matter with an aerodynamic diameter of 2.5 or less

As shown in Table 4.2-10, existing stationary, roadway, and railway sources in combination with the proposed project would not exceed BAAQMD cumulative thresholds for cancer risk or the hazard index. The highest values for cancer risk and the hazard index are 51 in 1 million and 0.23, respectively, for the maximally affected receptor, well below the BAAQMD cumulative thresholds of 100 in 1 million for cancer risk and 10 for the hazard index. However, annual PM_{2.5} concentrations would exceed BAAQMD's cumulative threshold of 0.8 μ g/m³ for both types of receptors. The highest value for existing plus project-related PM_{2.5} concentrations would be approximately 9.91 μ g/m³ at the maximally affected worker receptor, although other analyzed maximally affected receptors (i.e., the maximally affected worker receptors for health risks) would also be exposed to an exceedance of BAAQMD's cumulative threshold of 0.8 μ g/m³. Accordingly, worker and day-care sensitive receptors would be exposed to substantial cumulative concentrations of PM_{2.5}.

The primary reason for the exceedances is the high level of ambient PM_{2.5} emissions generated by two facilities within 1,000 feet of the project site, the Granite Rock Company at 1321 Lowrie Avenue and Central Concrete Supply at 1305 San Mateo Avenue, even though the maximally affected receptors would be at least 860 feet from the two facilities. The contribution from the project would be substantially less than the contribution from the existing stationary sources; however, as discussed for project-level impacts, the contribution of the project alone would exceed BAAQMD's project-level threshold. Therefore, the health risks associated with TACs emitted by the proposed project in combination with health risks associated with existing TAC sources would result in a cumulatively considerable local health risk at worker and day-care receptors near the project site.

To reduce PM_{2.5} concentrations during construction, the project sponsor would need to implement mitigation measure **MM-AQ-4**, which would Require Construction Mitigation Measures to Reduce Dust Emissions. However, PM_{2.5} levels would continue to exceed threshold levels. For these reasons, the proposed project, in combination with other past, present, and reasonably foreseeable future projects, would result in a significant cumulative impact. The proposed project's contribution to the cumulative impact would be *significant and unavoidable*.

4.3 Cultural Resources

4.3.1 Introduction

This section evaluates the potential significance of cultural resources impacts related to the construction and operation of the Infinite 131 Project (proposed project), including the redesignation of the five parcels north of the project site (off-site redesignation parcels). This section also describes the existing conditions at the project site and off-site redesignation parcels, and the regulatory framework for this analysis. The impacts of the proposed project are analyzed at a project level, while the impacts of the off-site redesignation parcels are generally analyzed at a program level. Impacts resulting from implementation of the proposed project, as well as impacts resulting from the off-site redesignation parcels (and mitigation measures, where applicable), are described, including cumulatively considerable contributions to significant cumulative impacts. Appendix E discusses the methodologies used to assess the significance level of impacts related to cultural resources in detail in the *Final Built-Environment Resources Preliminary Study for the Infinite 131 Project* and the *Final Archaeological Resources Study for the Infinite 131 Project*. The *Final Archaeological Resources Study for the Infinite 131 Project* is confidential and not for public release because it contains the locations of archaeological sites. Distribution and access should be restricted to those with a need to know.

Issues identified in response to the Notice of Preparation (NOP) (Appendix A) were considered in preparing this analysis, including those pertaining to Assembly Bill (AB) 52 and Senate Bill (SB) 18 requirements. These issues are addressed throughout Section 4.3, *Cultural Resources*, of the draft environmental impact report (EIR), as well as Section 3.18, *Tribal Cultural Resources*, of the Initial Study (Appendix B).

Pursuant to Public Resources Code (PRC) Section 21061 and California Environmental Quality Act (CEQA) Guidelines Section 15150, this analysis incorporates by reference information in the Shape SSF 2040 General Plan Update EIR (General Plan EIR), the Lindenville Specific Plan Addendum (Specific Plan Addendum), and AECOM's 2021 *Historical Resources Evaluation Report, US 101/Produce Avenue Overcrossing Project, City of South San Francisco, San Mateo County, California, South San Francisco*. Where information is incorporated by reference, that information is briefly described or summarized (CEQA Guidelines Section 15150[c]). Refer to Chapter 1 of this EIR for the location where the General Plan EIR and Specific Plan Addendum are available for public inspection.

4.3.2 Environmental Setting

This section provides a discussion of the existing conditions related to cultural resources on the project site. Because of the relationship between cultural resources and tribal cultural resources, some information presented in this discussion is also relevant to tribal cultural resources and therefore referenced in Section 3.18, *Tribal Cultural Resources*, of the Initial Study (see Appendix B). In addition, the results of tribal consultation under AB 52 and SB 18 are summarized in Section 4.3.4.2, *Approach to Analysis*, for reference.

The project site is in the Coast Ranges physiographic province, which is characterized by a series of northwest-to-southeast-trending mountain ranges and valleys. It is situated along the eastern margin of an uplifted ridge whose southern extent includes the Santa Cruz Mountains. Although the

topography of the project site vicinity was largely shaped by tectonic deformation, several geologic trends during the period of human occupation have resulted in substantial sedimentary deposition and shoreline change in the vicinity. These trends include eustatic sea-level rise, which resulted in the establishment of widespread tidal flats and tidal marshes in the project site vicinity, and large-scale anthropogenic landscape alterations.

4.3.2.1 Precontact Setting

Studies of the archaeology and the precontact history of the Bay Area have been taking place since the early 20th century. Early investigators, such as Nels Nelson, Max Uhle, W.E. Schenk, and L. Loud, focused primarily on excavating the shell mounds that lined the shores of San Francisco Bay, eventually investigating and recording more than 425 of them. These investigations were exclusively focused on one resource type (shell mounds) and relied on informal and unsystematic methods.¹ From the early to mid-20th century, the role of universities in local archaeological inquiry increased. With this inquiry, the focus on a wider range of resource types increased, and more rigorous and systematic methodologies were adopted. Academic research continues to play a role in archaeological inquiry in the Bay Area. With the adoption of a range of environmental and cultural resource regulations in the mid-20th century, including the National Historic Preservation Act, archaeological inquiry in the region has been increasingly driven by regulatory compliance. This work, which is performed by professionally trained and qualified archaeologists, makes up a significant portion of the precontact archaeological record in the Bay Area.²

The cultural chronology of the Bay Area has been summarized by numerous reviewers.^{3,4,5,6,7,8} These summaries have divided the precontact cultural sequence into multiple phases or periods, which are delineated by changes in regional patterns of land use, subsistence, and tool types over time. The most recent chronologies encompass a time period that ranges from around 13,500 calibrated years before present (cal BP) to around 170 cal BP. This section uses the precontact cultural chronology proposed by Beardsley⁹ to help describe patterns in precontact cultural development in the Bay Area. The sequence incudes four periods, which are identified below. However, these periods are academic constructs and do not necessarily reflect Native American viewpoints.

¹ Lightfoot, K. and E. Luby. 2002. Late Holocene in the San Francisco Bay Area: Temporal Trends in the Use and Abandonment of Shell Mounds in the East Bay. In Catalysts to Complexity: The Late Holocene on the California Coast, edited by J. Erlandson and T. Jones, pp. 263-281. Institute of Archaeology, University of California, Los Angeles.

² Morrato, M. J. 1992. CRM in California: Retrospect on 25 Years of Progress. Proceedings of the Society for California Archaeology.

³ Beardsley. 1948. Cultural Sequences in Central California archaeology. American Antiquity 14:1–28.

⁴ Heizer, R.F. 1941. The Direct-Historical Approach in California Archaeology. American Antiquity 7, no. 2.

⁵ Heizer, R. F. and F. Fenenga. 1939. Archaeological Horizons in Central California. American Anthropologist 41:378-399.

⁶ Lillard et al. 1939. An Introduction to the Archaeology of Central California. Sacramento Junior College, Department of Anthropology, Bulletin 2.

⁷ Lillard and Purves. 1936. The Archeology of the Deer Creek-Cosumnes Area. California. Sacramento Junior College, Department of Anthropology Bulletin No. 1.

⁸ Schenck and Dawson. 1929. Archaeology of the Northern San Joaquin Valley. University of California Publications of American Archaeology and Ethnology 25(4):289–413.

⁹ Beardsley. 1948. Cultural Sequences in Central California archaeology. American Antiquity 14:1–28.

The following summary presents the prehistory of the Bay Area by the geologic time segments:

- Terminal Pleistocene (13,500–11,600 cal BP)
- Early Holocene (11,600–7700 cal BP)
- Middle Holocene (7700–3800 cal BP)
- Late Holocene (3800 cal BP onward), with further divisions of the Late Holocene based on recent data.

Terminal Pleistocene (13,500–11,600 cal BP)

Traditionally, it was thought that the earliest human inhabitants of North America were highly mobile terrestrial hunters. Commonly referred to as the Clovis, these people used intricate bone and stone technology. On the West Coast of North America, Clovis assemblages are characterized by a wide but sparse distribution of isolated tools and caches, dated to between 12,800 and 12,500 BP.^{10,11} However, over the last few decades, along the western coasts of North and South America, several archaeological sites and sets of human remains have been documented in island and mainland coastal contexts that date to the same period as the Clovis.¹² These discoveries have forced researchers to reconsider how early humans migrated to the Americas and their land use strategies, with a greater emphasis placed on coastal environments.

In the south coastal region of California, the earliest evidence of human occupation has been found on the Channel Islands.¹³ For example, in addition to the set of human remains dated to around 13,000 years ago on Santa Rosa Island, an archaeological site dating to around 11,600 cal BP has been documented on San Miguel Island. The site contains numerous fish and shellfish remains, indicating an emphasis on marine resources.¹⁴ Although no archaeological sites from earlier than 5080 BP (Stanford Man) have been documented in the San Francisco Bay Area, it is inferred that the absence of sites is largely a function of long-term trends in sea-level rise, shoreline erosion, and localized subsidence in the region,¹⁵ which are likely to have obscured and/or destroyed early coastal sites with datable materials.

Early Holocene (11,600–7700 cal BP)

The Early Holocene landscape of central California is characterized by semi-mobile hunters and gatherers who exploited a wide range of food resources from marine, lacustrine, and terrestrial contexts.¹⁶ However, the sample of precontact archaeological sites in the Bay Area is limited; therefore, it most likely represents an incomplete picture of local precontact land use during this period.

¹⁰ Meltzer, D. J. 2004. Peopling of North America. In Developments in Quaternary Science Volume 1, The Quaternary Period in the United States, A. R. Gillespie, S. C. Porter, and B. F. Atwater (eds.). Elsiever, Amsterdam, The Netherlands.

¹¹ Erlandson, J. T. Rick, T. Jones, and J. Porcasi. 2007. One if by Land, Two if by Sea: Who Were the First Californians? In California Prehistory: Colonization, Culture, and Complexity, Terry L. Jones and Kathryn Klar, pp. 53-62. Altamira Press, Walnut Creek, CA.

¹² Ibid.

¹³ Rick, T. C., J. M. Erlandson, and R. L. Vellanoweth. 2001. Paleocoastal Marine Fishing on the Pacific Coast of the Americas: Perspectives from Daisy Cave, California. American Antiquity 66:595–614.

¹⁴ Ibid.

¹⁵ Byrd et al. 2010. Archaeological Research Design and Treatment Plan for the Transit Center District Plan Area, San Francisco, California. Prepared for R. Dean, Major Environmental Analysis, San Francisco Planning Department, San Francisco, CA.

¹⁶ Erlandson, J. T. Rick, T. Jones, and J. Porcasi. 2007. One if by Land, Two if by Sea: Who Were the First Californians? In California Prehistory: Colonization, Culture, and Complexity, Terry L. Jones and Kathryn Klar, pp. 53-62.

The six dated Early Holocene sites in or near the Bay Area consist of two sites at Los Vaqueros Reservoir in the East Bay (CCO-696 and CCO-637), the Blood Alley Site (SCL-178) in the Coyote Narrows of the Santa Clara Valley, SCR-177 at Scott's Valley in the Santa Cruz Mountains, the BART woman (SFR-28), and the Transbay Man.^{17,18} All of these sites were recovered from buried terrestrial contexts.¹⁹

Middle Holocene (7700–3800 cal BP)

The Middle Holocene is characterized by a diverse range of habitation sites and artifact assemblages, suggesting higher population levels, more complex adaptive strategies, and longer seasonal occupation compared with the Early Holocene.²⁰ Several isolated human burials, including two on the San Francisco Peninsula (SFR-28 and SMA-273), have also been dated to the Middle Holocene.²¹

The artifact assemblages include ground stones; side-notched dart points; cobble-based chopping, scraping, and pounding implements; and shell beads and ornaments.^{22,23} Type N grooved rectangular *Olivella* beads are present at the San Bruno Mountain mound site (SMA-40) along the eastern edge of San Pablo Bay.²⁴ These beads are well dated to the Middle Holocene across a large region, from the northwestern Great Basin to San Clemente Island. They indicate the presence of an extensive regional sphere of interaction.^{25,26,27}

¹⁷ Cartier, Robert. 1989. Scotts Valley Chronology and Temporal Stratigraphy. *Proceedings of the Society for California Archaeology*, 2:81-111.

¹⁸ WSA. 2018. Final Archaeological Resources Report fort the Transbay Transit Terminal and Ramp Demolition, Utility Relocation, and New Transit Center Foundation Excavation. Volume 1. Prepared for URS and the Transbay Joint Powers Authority. November.

¹⁹ Rosenthal, Jeffrey S., and Jack Meyer. 2000. A Middle Holocene Olivella Wall-Bead Assemblage from Central California. Society for California Archaeology Newsletter 34(4):27–28.

²⁰ Byrd et al. 2010. Archaeological Research Design and Treatment Plan for the Transit Center District Plan Area, San Francisco, California. Prepared for R. Dean, Major Environmental Analysis, San Francisco Planning Department, San Francisco, CA.

²¹ Ibid.

²² Fitzgerald. 1993. Archaic Milling Cultures of the Southern San Francisco Bay Region. Edited by Gary S. Breschni and Trudy Haversat. *Coyote Press Archives of California Prehistory*, No. 35. Coyote Press, Salinas, CA.

²³ Meyer and Rosenthal. 1998. An Archaeological Investigation of Artifacts and Human Remains from CA-CCO-637, Los Vaqueros APE, Contra Costa County, California. Anthropological Studies Center, Sonoma State University Academic Foundation, Rohnert Park, CA. Submitted to the Contra Costa Water District, Concord, CA. Copies available from Northwest Information Center, Department of Anthropology, Sonoma State University, Rohnert Park, CA.

²⁴ Clark, M. R. 1998. Evaluative Archaeological Investigations at the San Bruno Mountain Mound Site, CA-SMA-40, South San Francisco, California. Holman and Associates, San Francisco. Submitted to Terrabay Development. Copies available from the Northwest Information Center, Department of Anthropology, Sonoma State University, Rohnert Park, CA.

²⁵ Byrd, B. and L. M. Raab. 2007. Prehistory of the Southern Bight: Models for a New Millennium. In California Prehistory: Colonization, Culture, and Complexity, Terry L. Jones and Kathryn Klar, pp. 215-228. Altamira Press, Walnut Creek, CA.

²⁶ Vellanoweth, R. L. 2001. AMS Radiocarbon Dating and Shell Bead Chronologies: Middle Holocene Trade and Interaction in Western North America. In *Journal of Archaeological Science* 28:941–950.

²⁷ Byrd et al. 2010. Archaeological Research Design and Treatment Plan for the Transit Center District Plan Area, San Francisco, California. Prepared for R. Dean, Major Environmental Analysis, San Francisco Planning Department, San Francisco, CA.

Late Holocene (3800–170 cal BP)

The Late Holocene is generally divided into the following five main time slices: Early (4500/3800–2450 cal BP), Early-Middle Transition (2450–2050 cal BP), Middle (2050–900 cal BP), Middle-Late Transition (900–700 cal BP), and Late (700–170 cal BP).

The chronology detailed above includes sites studied from around the greater Bay Area. Although this information in indeed helpful, a closer, more detailed look at the archaeology of the San Francisco Peninsula will inform the current study. By understanding past investigations and the larger context, areas where further data is needed can be identified.

There are more than 200 documented Late Holocene sites in the Bay Area. The Early Period of the Late Holocene marks the establishment of a number of large shell mounds. Several prominent sites along the bay margins, including University Village (SMA-77) and the San Bruno Mound (SMA-40), have produced particularly early dates, including dates from the end of the Middle Holocene;²⁸ only one site, SFR-4, is dated to 300 years.²⁹ These sites have yielded stemmed and short broad-leaf projectile points, square-based knife blades, unshaped and cylindrical mortars, and cylindrical pestles. Burials throughout the Early Period of the Late Holocene were often flexed and frequently contained grave offerings. Grave offerings often included obsidian originating east of the Sierra Nevada and from Napa County,³⁰ which suggests that an extensive trade network had been established by this time.³¹

The Middle Period of the Late Holocene is characterized by greater settlement permanence (either sedentary or multi-seasonal occupation), mound building, and increased social complexity and ritual elaboration.³² Some male burials yielded thousands of shell beads. Isotopic analyses of human bone and food remains indicate that terrestrial (faunal) resources were exploited more than shellfish, and the use of the acorn also increased.^{33,34,35,36}

²⁸ Milliken, Randall, Richard T. Fitzgerald, Mark G. Hylkema, Randy Groza, Tom Origer, David G. Bieling, Alan Leventhal, Randy S. Wiberg, Andrew Gottsfield, Donna Gillette, Viviana Bellifemine, Eric Strother, Robert Cartier, and David A. Fredrickson. 2007. Punctuated Culture Change in the San Francisco Bay Area. In California Prehistory: Colonization, Culture, and Complexity, Terry L. Jones and Kathryn Klar, pp. 99-123. Altamira Press, Walnut Creek, CA.

²⁹ DeGeorgey, A. 2016. Archaeological Research Design and Treatment Plan (ARDTP) Van Ness Corridor Transit Improvement Project. Prepared for San Francisco Municipal Transportation Authority.

³⁰ Hughes, R. and R. Milliken. 2007. Prehistoric Material Conveyance. Tidal Marsh, Oak Woodlands, and Cultural Fluorescence in the Southern San Francisco Bay Region. In California Prehistory: Colonization, Culture, and Complexity, Terry L. Jones and Kathryn Klar, pp. 259-272. Altamira Press, Walnut Creek, CA.

³¹ Byrd et al. 2010. Archaeological Research Design and Treatment Plan for the Transit Center District Plan Area, San Francisco, California. Prepared for R. Dean, Major Environmental Analysis, San Francisco Planning Department, San Francisco, CA.

³² Milliken, Randall, Richard T. Fitzgerald, Mark G. Hylkema, Randy Groza, Tom Origer, David G. Bieling, Alan Leventhal, Randy S. Wiberg, Andrew Gottsfield, Donna Gillette, Viviana Bellifemine, Eric Strother, Robert Cartier, and David A. Fredrickson. 2007. Punctuated Culture Change in the San Francisco Bay Area. In California Prehistory: Colonization, Culture, and Complexity, Terry L. Jones and Kathryn Klar, pp. 99-123. Altamira Press, Walnut Creek, CA.

³³ Bartelink. 2006. Resource Intensification in Precontact Central California: A Bioarchaeological Perspective on Diet and Health Patterns among Hunter-Gatherers from the Lower Sacramento Valley and San Francisco Bay. Ph.D. dissertation, Department of Anthropology, Texas A&M University, College Station, TX.

³⁴ Bickel. 1978. Changing Sea Levels along the California Coast: Anthropological Implications. *Journal of California Anthropology* 5(1):6–20.

³⁵ Wohlgemuth, E. 2004. The Course of Plant Food Intensification in Native Central California. Ph.D. dissertation, Department of Anthropology, University of California, Davis.

³⁶ Byrd et al. 2010. Archaeological Research Design and Treatment Plan for the Transit Center District Plan Area, San Francisco, California. Prepared for R. Dean, Major Environmental Analysis, San Francisco Planning Department, San Francisco, CA.

4.3.2.2 Ethnographic Setting

The project site was traditionally inhabited by the Urebure people.³⁷ The Urebure spoke the Ramaytush dialect of the Costanoan language. The Costanoan languages are part of the larger Utian language family, which is part of a larger language family, the Penutian language, with languages and dialects spoken by groups of Native Americans across California, Oregon, and Washington.³⁸ The territory of the Ohlone people, who were referred to as the Costanoans by the Spanish because they lived along the coast, extended from the Golden Gate to just below Carmel. They also occupied several inland valleys.³⁹

Land Use

At the time of contact, South San Francisco was a coastal prairie. The Urebure, a single village group, occupied the San Bruno Creek area south of San Bruno Mountain. Mission records indicate that the "Captain of San Bruno," said to be from "Urebure and other places," and 43 villagers were baptized at Mission San Francisco (SFR-B 35,40). By the end of 1785, the group was entirely absorbed into the mission.⁴⁰ Lands extending from the present city of Millbrae to the present city of South San Francisco were included in a Mexican land grant patented in 1826.

The Urebure fished in San Bruno and Colma Creek in winter and spring for king salmon and trout, which spawn in fresh water. The coastline would have been a prime area for beach strawberries (*Fragaria chiloensis*) in spring, harbor seals year-round, and oysters, abalone, and macoma in winter.

Resource Collection

As with other Ohlone tribelets, the Urebure were primarily hunters and gatherers. They hunted terrestrial game, such as mule deer, tule elk, pronged antelope, and mountain lion. Traps were set for smaller game, such as rabbit and quail. Marine resources were hunted along the shores, including sea lions and whales, which were prized for their blubber. Waterfowl were a very important part of the tribal diet and trapped along the tidal marshes. Other marine resources, such as salmon, steelhead, school fish, and shellfish, including mussels, were collected and were a major dietary staple. Tule boats were used to collect both saltwater and freshwater marine resources.

The Ohlone also used a wide range of other foods, including various seeds (the growth of which was promoted by controlled burning), buckeye, berries, roots, acorns, nuts, fruits, land and sea mammals, water fowl, reptiles, and insects. The Ohlone used tule balsas for watercraft, bows and arrows, cordage, and bone and ground stone tools to procure and process their foodstuffs.^{41,42,43,44}

³⁷ Milliken. 1995. A Time of Little Choice: The Disintegration of the Tribal Culture in the San Francisco Bay Area, 1769–1810. Ballena Press Anthropological Papers 43, series editor Thomas C. Blackburn, Novato, CA.

³⁸ Callaghan, C. A. 1967. Miwok-Costanoan as a Subfamily of Pentutian. International Journal of American Linguistics, Vol. 33, No. 3, pp.224–227. University of Chicago Press.

³⁹ Levy. 1978:485–486. Costanoan. In *The Handbook of North American Indians Volume 8: California.* Heizer, R.F., Editor. Pp. 485-495. Smithsonian Institution. Washington, D.C.

⁴⁰ Milliken, R. T. 1995. A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area, 1769–1810. Ballena Press, Menlo Park, CA.

⁴¹ Levy, R. 1978. Costanoan. In *The Handbook of North American Indians Volume 8: California.* Heizer, R.F., Editor. Pp. 485-495. Smithsonian Institution. Washington, D.C.

⁴² Milliken, R. 1995. *A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area 1769-1810.* Ballena Press. Novato, CA.

⁴³ Milliken, R. T. 1995. A *Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area,* 1769–1810. Ballena Press, Menlo Park, CA.

⁴⁴ Krober, A.L. 1925. *Handbook of the Indians of California*. Dover Press. New York, New York.

The primary trading partners of the Ohlone were most likely the Coast Miwok, Pomo groups, and Wappo. Exports from the Ohlone territory included mussels, salt, abalone shells, dried abalone, and *Olivella* shells.⁴⁵

Social Organization

The Ohlone were politically organized by tribelet, with each having a designated territory. A tribelet consisted of one or more villages and camps within a territory that were designated by physiographic features. Primary sources describe tribelets as small groups of people, averaging 60 to 90 individuals, that were located 3 to 5 miles apart. These groups within a territory were often linked by marriage. The office of tribelet chief, which was inherited patrilineally, could be occupied by a man or a woman. If there was no son to inherit the position, a sister or daughter would assume the position. Duties of the chief included providing for visitors, directing ceremonial activities, and leading fishing, hunting, gathering, and warfare expeditions. The chief served as the leader of a council of elders, which functioned primarily in an advisory capacity to the community.

Tribelets consisted of several households, which averaged 10 to 15 individuals and were grouped into clans and moieties. The extended family was included in these households, which were divided patrilineally. Marriage was informal, with only an exchange of a small gift from the groom's family to the bride's family. Marriage often occurred between neighboring tribes and was used as a means to resolve conflict. After the union, the couple was absorbed into the family group of the groom's father. There is some ethnographic evidence of polygynous family groups, with multiple wives and their children living together. If a couple split up, the children would stay with the mother.^{46,47,48}

Family households would host dances, assist with inter-tribelet resource collection and land management, and come together to defend their territory. Most of the year, households shared a single village location, but at other times, groups would disperse to satellite villages. This was often for resource extraction during seasonal changes. Trade feasts were held when households found themselves with a surplus of resources and called together neighbors for a social and ceremonial gathering. These trade feasts served to redistribute wealth as well as a way for groups across different regions to socialize and trade goods.⁴⁹

As stated above, a single tribelet, comprising patrilineal family groups, would occupy a village location at different times of the year. Ohlone villages in the Late Period of the Late Holocene typically had four types of structures. Dwellings were generally domed structures with central hearths. They were thatched with tule, grass, or other vegetal material and bound with willow

⁴⁵ Levy. 1978:488; 1991:31. Costanoan. In *The Handbook of North American Indians Volume 8: California.* Heizer, R.F., Editor. Pp. 485-495. Smithsonian Institution. Washington, D.C.

⁴⁶ Harrington, J. P. (cited in Levy, 1978). 1921. *Chochenyo Fieldnotes*. Manuscript in Survey of California Indian Languages, Department of Linguistics, University of California, Berkeley; Levy, R. 1978. Costanoan. In *California*, pages 486 and 487. Handbook of North American Indians, Volume 8. R. F. Heizer (ed.). Smithsonian Institution, Washington, D.C.

⁴⁷ Levy. 1978:490. Costanoan. In *The Handbook of North American Indians Volume 8: California.* Heizer, R.F., Editor. Pp. 485-495. Smithsonian Institution. Washington, D.C.

⁴⁸ Milliken. 1995:20–23. A Time of Little Choice: The Disintegration of the Tribal Culture in the San Francisco Bay Area, 1769–1810. Ballena Press Anthropological Papers 43, series editor Thomas C. Blackburn, Novato, CA.

⁴⁹ Ibid., pp. 21–24. A Time of Little Choice: The Disintegration of the Tribal Culture in the San Francisco Bay Area, 1769–1810. Ballena Press Anthropological Papers 43, series editor Thomas C. Blackburn, Novato, CA.

withes. Permanent settlements were usually placed away from the ocean shore, on high ground. Sweathouses were used by men and women and usually located along streambanks. A sweathouse consisted of a pit that was excavated into the streambank, with a thatched portion constructed against the bank. Dance structures were circular or oval in plan and enclosed by a woven fence of brush or laurel branches, standing approximately 5 feet high. These structures would have one doorway, with a smaller opening directly opposite. The assembly house was a thatched dome structure that was large enough to accommodate all of the inhabitants of the village.⁵⁰

From Contact to the Present

On November 4, 1769, a Spanish expedition led by Gaspàr de Portolà crossed the Coast Ranges on its way north from Monterey. This party encountered the first group of native Bay Area peoples at the village of Ssalson (near modern day San Mateo). According to Juan de Crespì, a diarist, this meeting was amicable, and the people of Ssalson took them into their village and feasted with them.⁵¹

On August 6, 1775, the Spanish ship *San Carlos* sailed into San Francisco Bay and anchored between what is today Richardson Bay and Angel Island. The ship, commanded by Juan Manuel de Ayala, carried 30 men who were there to chart the bay. The Huimen, in what is modern-day Marin County, observed the ships and would eventually meet the party. Up until this point, the only Spanish expeditions the native people of the Bay Area encountered were on foot or horseback and stayed only for a couple days. The *San Carlos* was the first ship to sail into the San Francisco Bay; it anchored for 1 month.⁵²

In June 1776, almost 1 year after the *San Carlos* entered San Francisco Bay, an expedition arrived to establish a mission on the San Francisco Peninsula. Father Francisco Palòu led the expedition of soldiers, settlers, and missionary priests. The expedition encountered the Yelamu on June 27, 1776, near what is thought to be the seasonal village of Chutchui, slightly inland from the shore. Soon after the Spanish set up their encampment, the Yelamu were attacked by the Ssalson and fled to the coast and across the bay to the east. Soon after this incident, violence broke out between the Yelamu and the Spaniards. A Yelamu man offended a Spanish soldier by attempting to kiss his wife. This man was ordered to be arrested and flogged the same day. His two companions fled, although, the following day, they were tracked down by Spanish soldiers and one was shot. This altercation could have been a defining moment in the Spanish assertion of power over the local community.⁵³

Seven Spanish missions were founded in Ohlone territory from 1776 to 1797. Mission San Francisco was established within Yelamu territory. The first baptisms at the mission were of three young Yelamu men on June 24, 1776. One of the fathers noted that the Yelamu were attracted by presents and "other inducements." By 1780, most of the Yelamu under the age of 20 were baptized at Mission San Francisco. Slowly, older married couples joined the young people. Although it did

⁵⁰ Crespi. 1927. Missionary Explorer on the Pacific Coast 1769–1774. H. E. Bolton, editor and translator. Berkeley, CA: University of California Press. (Reprinted: AMS Press, New York, 1971).

⁵¹ Milliken. 1995:32. A Time of Little Choice: The Disintegration of the Tribal Culture in the San Francisco Bay Area, 1769–1810. Ballena Press Anthropological Papers 43, series editor Thomas C. Blackburn, Novato, CA.

⁵² Ibid., pp. 40–42. A Time of Little Choice: The Disintegration of the Tribal Culture in the San Francisco Bay Area, 1769–1810. Ballena Press Anthropological Papers 43, series editor Thomas C. Blackburn, Novato, CA.

⁵³ Ibid., pp. 63–65. A Time of Little Choice: The Disintegration of the Tribal Culture in the San Francisco Bay Area, 1769–1810. Ballena Press Anthropological Papers 43, series editor Thomas C. Blackburn, Novato, CA.

not appear to be a forcible entry into mission life, strife with neighboring tribes may have caused extenuating circumstances. Most of the young men baptized at Mission San Francisco had fathers who had been killed in fights with the Ssalson.⁵⁴ Once neophytes were inducted into mission life, there was no leaving. If newly baptized neophytes decided they wanted to return to their old way of life, they were considered runaways. Runaways were tracked down and forcibly returned to the missions.

While living within the mission system, the Ohlone commingled with other groups, including the Esselen, Yokuts, Miwok, and Patwin. Mission life was devastating to the Ohlone population.⁵⁵ By the time of secularization of the California missions, the Ohlone population numbered less than 2,000 as a result of disease, harsh living conditions, and reduced birth rates.⁵⁶

Under the Mexican government, secularization of the mission lands began in earnest in 1834. The indigenous population scattered away from the mission centers, and the few that were given rancherias from the mission lands were ill equipped to maintain or work their land. Most of the former mission land was divided among loyal Mexican subjects, and the Ohlone who chose to remain in their ancestral territory usually became squatters. Some were given jobs as manual laborers or domestic servants on Mexican ranchos or, later, American cattle ranches. During the next few decades, there was a partial return to aboriginal religious practices, particularly shamanism, and some return to food collection as a means of subsistence.⁵⁷ Consequently, several multi-ethnic Indian communities (consisting of individuals of Chochenyo, Plains Miwok, Northern Valley Yokuts, Patwin, and/or Coast Miwok descent) were established in the mid-19th century within Ohlone territory.⁵⁸

Ohlone recognition and assertion began to move to the forefront during the early 20th century. Two lawsuits were brought against the U.S. government by the Indians of California (1928–1964) for reparation due them for the loss of traditional lands. Anthropologists, historians, and Indians were consulted regarding the nature of traditional land holding. A review of what was known about Indians in the state of California commenced. The political organizing necessary to mount this action on the part of Indians of California led to the formation of political advocacy groups throughout the state. The Ohlone participated, and a new roll of descendants was established, bringing a new focus on the community and re-evaluation of rights due its members.⁵⁹

⁵⁴ Ibid., pp. 93–96. A Time of Little Choice: The Disintegration of the Tribal Culture in the San Francisco Bay Area, 1769–1810. Ballena Press Anthropological Papers 43, series editor Thomas C. Blackburn, Novato, CA.

⁵⁵ Ibid. A Time of Little Choice: The Disintegration of the Tribal Culture in the San Francisco Bay Area, 1769–1810. Ballena Press Anthropological Papers 43, series editor Thomas C. Blackburn, Novato, CA.

⁵⁶ Cook. 1943. The Conflict between the California Indians and White Civilization, I: The Indian Versus the Spanish Mission. *Ibero-Americana*. 21. Berkeley, CA.; Cook, 1943b. The Conflict between the California Indians and White Civilization, II: The Physical and Demographic Reaction of the Non-Mission Indians in Colonial and Provincial California. *Ibero-Americana*. 22. Berkeley, CA.

⁵⁷ Harrington, J. P. (cited in Levy, 1978). 1921. *Chochenyo Fieldnotes*. Manuscript in Survey of California Indian Languages, Department of Linguistics, University of California, Berkeley; Levy, R. 1978. Costanoan. In *California*, pages 486 and 487. Handbook of North American Indians, Volume 8. R. F. Heizer (ed.). Smithsonian Institution, Washington, D.C.

Levy. 1978:487. Costanoan. In *The Handbook of North American Indians Volume 8: California.* Heizer, R.F., Editor. Pp. 485-495. Smithsonian Institution. Washington, D.C.

⁵⁹ Bean, L.J. 1994. The Ohlone Past and Present: Native Americans of the San Francisco Bay Region. Ballena Press. Novato, California.

Although they have yet to receive formal recognition from the federal government, the Ohlone are becoming increasingly organized as a political unit and have developed an active interest in preserving their ancestral heritage. In the later part of 20th century, the Galvan family of Mission San José worked closely with the American Indian Historical Society and successfully prevented destruction of a mission cemetery that lay in the path of a proposed freeway. These descendants incorporated as the Ohlone Indian Tribe and now hold title to the Ohlone Indian Cemetery in Fremont.⁶⁰ The descendants are active in maintaining their traditions and advocating for Native American issues.

4.3.2.3 Historical Setting

The following account of the settlement and growth of the city of South San Francisco, 19th and 20th century commercial development, and mid-20th century commercial and industrial property types was summarized and excerpted from AECOM's 2021 *Historical Resources Evaluation Report, US 101/Produce Avenue Overcrossing Project, City of South San Francisco, San Mateo County, California,* with information incorporated from the Lindenville Specific Plan where noted; the historic contexts have been edited for clarity:

South San Francisco

South San Francisco's industrial roots date to the early American period. Following the independence of Mexico from Spain and the secularization of the missions in the 1830s, Mexico disposed mission property by dividing it into ranchos for cattle and distributing it to private citizens. In 1835, José Antonio Sánchez, a sub-lieutenant stationed at the Presidio in San Francisco, was granted the 14,639-acre Rancho Buri Buri for grazing and agricultural purposes. The Sánchez family and Ohlone laborers raised 2,000 head of cattle and cultivated fields of wheat, corn, and beans. The Sánchez family maintained ownership of the rancho into the American period, but in 1853 the family sold 1,700 acres of rancho land to Charles Lux, a partner in the Miller & Lux cattle business, to help pay legal debts resulting from battles to hold on to the rancho. The land that Lux purchased consisted of prime grazing land for holding cattle before slaughter in San Francisco and was a key early purchase for the cattle magnates. Miller & Lux continued to buy land in the former rancho until they had doubled their acreage by 1872.

The industrial-scale ranching of Miller & Lux in the mid-19th century and Gustavus Swift's meatpacking plant, established at Point San Bruno in 1888, presaged the industrial future of the city. The city's proximity to burgeoning San Francisco and deep water access at Point San Bruno led to development of a number of industries in the area, including meatpacking, and marble, brick, and paint factories. Construction of Southern Pacific Railroad (SPRR) train yards near Point San Bruno between 1904 and 1907 allowed shipping of freight to and from San Francisco and San José. When the city became incorporated in 1908, it had nearly 2,000 residents and 14 major industries.

Bethlehem Steel, U.S. Steel, and the Edwards Wire Rope Factory were established in South San Francisco in the early 20th century. By the 1930s, shipping emerged as a major industry, as the city became an adjunct facility to the Port of San Francisco and the central distribution point for the entire Peninsula.⁶¹

⁶⁰ Yamane, Linda G. (cited in Bean, 1994). 1994. Costanoan/Ohlone. In *Native America in the Twentieth Century: An Encyclopedia*, pages 143 and 144. Mary B. David (ed.). Garland Publishing, Inc., New York and London; Bean, L. J. 1994. *The Ohlone: Past and Present*, page xxiv. Ballena Press Anthropological Papers No. 42. Ballena Press, Novato, CA.

⁶¹ AECOM. 2021. *Historical Resources Evaluation Report, US 101/Produce Avenue Overcrossing Project, City of South San Francisco, San Mateo County, California.* Prepared for Caltrans. July, pp. 4-1 and 4-2.

South San Francisco emerged as an industrial hub following the completion of the Southern Pacific Railroad in 1907, which facilitated transportation and attracted industries like steel manufacturing. The city was incorporated in 1908, with industrial zones located primarily east of the railroad and residential areas to the west. The natural environment, including Colma Creek, was a part of the city's landscape and supported various activities. The first half of the 20th century saw a surge in industrial activity as steel manufacturers and other industries set up operations, especially in areas east of US 101 (then called San Bruno Road) and in Lindenville. The population increased significantly during the world wars, with World War II bringing nearly 10,000 workers to local factories and plants.

In 1942, the war effort led to the construction of temporary housing in Lindenville, which accommodated thousands of workers for the military contractors. However, this residential development was of such low quality that it was abandoned and demolished by 1957. Subsequently, the land was repurposed for industrial use; since then, no residential developments have been permitted in Lindenville.⁶² This transition reflects the city's and, more specifically, Lindenville's evolution from a residential area to a predominantly industrial area, with lasting impacts on the local landscape and urban development.

Landfilling and Industrial Parks

During the late 1950s and early 1960s, older industries like meatpacking and steelmaking began disappearing from the Peninsula in general; in 1957, the stockyards in South San Francisco closed, bringing the end to an era of north county industry. Local business leaders and governments began courting larger corporations to relocate on the peninsula, touting the good weather and proximity to the Bayshore Freeway and San Francisco International Airport. New companies gravitated to marginal lands and fill sites on the outskirts of South San Francisco where property was cheaper and more plentiful. There, investors began creating industrial parks for a variety of uses, including light industries, warehouses, and offices.

South San Francisco Industrial Park

The area remained generally underwater until the late 1950s, when the city began to convert previously unused marshlands into areas usable for industrial development, drastically reshaping the shoreline and attracting light industry to the city for the first time. As early as 1939, a levee was built east of the SPRR tracks, and by 1947, the northern branch of Colma Creek was channelized and the area south of the creek was filled. Also by 1947, the modern alignment of the Bayshore Highway (US 101) was built and a railroad spur was constructed in the current location of the Golden Gate Produce Terminal's northern and western driveways. The adjacent area was filled between the late 1950s and early 1960s.

The South San Francisco Industrial Park, northeast of Airport Boulevard, was established in 1956, when the Utah Construction Company began landfilling the Bay shore. The landfill material was brought from an 80-acre hill, 1 mile north of the industrial park, and was transported over a special haul road. The 200-acre park was advertised for its proximity to the Bayshore Freeway and the SPRR spur and was developed by the general contracting firm of Haas and Haynie, in partnership with the Utah Construction Company (Haas-Haynie-Utah). The first tenant of the park was J.L. Stuart Manufacturing Company, who moved its offices from San Francisco to a 4-acre parcel on the corner of Utah Avenue and Airport Boulevard (100 Utah Avenue). Other industrial warehouse properties in the South San Francisco Industrial Park include the buildings at 101 Utah Avenue, built circa 1965, and at 1388 San Mateo Avenue, constructed in 1967.

⁶² City of South San Francisco. 2023. *Lindenville Specific Plan.*
Golden Gate Produce Terminal

The Golden Gate Produce Terminal was constructed in South San Francisco at 131 Terminal Court in November 1962. It was constructed to replace the original produce market that was located in downtown San Francisco on approximately 24 square blocks near the intersection of Washington and Drumm Streets. The original market was in the heart of city's Italian community and included dozens of one- and two-story warehouses, constructed after San Francisco's 1906 fire. The move to the privately financed Golden Gate Produce Terminal, west of Bayshore Highway, culminated a long and bitter dispute regarding the most appropriate site for the merchants to relocate, after the original market was demolished in the 1960s to make way for the Golden Gateway Redevelopment Project, the first prominent redevelopment project of the San Francisco Redevelopment Agency.

Future Congressman Leo Ryan was an instrumental figure in the Golden Gate Produce Terminal's development. The new terminal was to be owned cooperatively, with produce stalls leased by wholesale merchants for a cost of \$300 per month. Construction of the new terminal began in April 1962. The site of the produce terminal was selected because of its proximity to the Bayshore Highway, the railroad, and the San Francisco International Airport. Harvis Construction Company served as the general contractor for the building project. At the time construction began, the San Mateo Times reported that the major produce dealers in the Bay Area already had committed to move their stalls to the new terminal, and that the building was being constructed with 68 stalls to provide enough space for the committed produce firms and other smaller produce operators still remaining in the downtown location who had not yet chosen a new site. The San Francisco Produce Terminal also was being planned near Islais Creek, at 3rd and Jerrod Streets in San Francisco.

By early November 1962, the Golden Gate Produce Terminal was nearing completion. Other satellite businesses also had leased space in the terminal, including a bank, a restaurant, a refrigeration company, a barber shop, auto and truck service facilities, and administrative offices. Similar to other warehouse and commercial buildings that were built in the 1960s, the Golden Gate Produce Terminal was constructed of concrete. Because of the poor reputation of the old produce market as unsanitary, the concrete construction was used to market the terminal as a cleaner facility. The concrete panels that were used to construct the terminal also allowed the construction contractor to complete construction in just 120 working days, to accommodate the eviction of the produce dealers from their former spaces in downtown San Francisco. The Scatena York Company of San Francisco installed modern refrigeration and storage units in the new facility. The new terminal opened for business on November 26, 1962. In 2015, 23 independent and family-owned businesses operated at the Market, including wholesalers, jobbers, commission merchants, brokers, food service distributors, processors, and one restaurant.⁶³

⁶³ AECOM. 2021. *Historical Resources Evaluation Report, US 101/Produce Avenue Overcrossing Project, City of South San Francisco, San Mateo County, California.* Prepared for Caltrans. July, pp. 4-2 and 4-3.

4.3.2.4 Existing Setting

Surrounding Area

Built Environment

Buildings and structures located adjacent to the project site included different building types and uses. Mixed industrial and commercial development is located south and west of the project site, comprised of light industrial and mixed-use buildings with construction dates largely between 1956 and 1968.⁶⁴ Surface-level commercial parking lots extend north of the project site until a west-east alignment of the Colma Creek. Terminal 101 surface-level commercial parking, a north-south alignment of US 101 (also known as the Bayshore Freeway), and commercial development comprise east of the project site. The segment of US 101 nearest to the project site was constructed c. 1951 (1946–1956).⁶⁵

The project site is located in the Lindenville sub-area defined by the Shape SSF 2040 General Plan (General Plan), which augments citywide goals and policies from the Land Use and Community Design Element to provide policies and implementation actions to distinct regional sub-areas with distinct character, architectural diversity, and land uses. The General Plan defines the Lindenville sub-area as more than 400 acres of largely manufacturing, food processing, warehousing, and other light industrial uses. It is bounded by US 101 to the east, the city of San Bruno and Centennial Way Trail to the south, Fir Avenue and Magnolia Avenue to the west, and Railroad Avenue to the north. The Lindenville sub-area includes some of the city's historic "legacy" businesses, such as the Golden Gate Produce Terminal (the project site) and Bimbo Bakeries, as well as the Southline Specific Plan area and San Bruno Bay Area Rapid Transit (BART) station.⁶⁶

Archaeological Resources

As described above in Section 4.3.2.1, *Precontact Setting*, and Section 4.3.2.2, *Ethnographic Setting*, the greater San Francisco Bay region has been subject to human habitation for millennia. The project site's location in proximity to freshwater streams and the San Francisco Bay suggests a high likelihood for the presence of precontact resources. The records search conducted for the project site concluded that one precontact Native American site may be located within the project area and four other Native American sites are within 0.25 mile of the project area.

Records Search

On August 1, 2023, an ICF archaeologist conducted a records search for the project site and a 0.25mile radius at the Northwest Information Center (NWIC) (NWIC File #23-0130). The NWIC, an affiliate of the Office of Historic Preservation (OHP), is the official state repository of cultural resources records and reports for San Mateo County.

⁶⁴ Nationwide Environmental Title Research. 1956. *131 Terminal Court, South San Francisco, CA 94080.* Available: http://www.historicaerials.com/viewer. Accessed: June 5, 2024; Nationwide Environmental Title Research. 1968a. *131 Terminal Court, South San Francisco, CA 94080.* Available: http://www.historicaerials.com/viewer. Accessed: June 5, 2024.

⁶⁵ U.S. Geological Survey. 1946. *San Mateo, CA (1";500')*; USGS. 1956. *San Mateo, CA (1";500')*.

⁶⁶ City of South San Francisco. 2022. *City of South San Francisco 2040 General Plan*, 91-92,100.

No previously recorded built-environment resources were recorded within the project site. Two previously recorded built-environment resources were recorded within the 0.25-mile radius of the project site. One previously recorded archaeological resource was recorded within the project site: P-41-000051 (CA-SMA-47). It was originally recorded in 1909 by N. Nelson as a shell mound (Mound 382) in South San Francisco. The location is within the project site; however, no evidence of the resource was identified at this location during archaeological surveys conducted by Basin Research Associates in 1988 or Woodward-Clyde Consultants in 1995, nor was evidence identified during a geoprobe conducted in 2016 by AECOM. Based on these negative results, AECOM concluded that the resource was either mapped incorrectly or no longer present.

Four previously recorded archaeological resources were identified within 0.25 mile of the project site (discussed in detail below). Table 4.3-1, summarizes the previously recorded built-environment and archaeological resources in the records search study area. Table 4.3-2 summarizes those resources within a 0.25-mile radius of the study area.

Primary Number/Trinomial	Resource Name	Resource Attributes	Historical Resource Status Codeª	
P-41-000051/CA-SMA-47	Nelson 386	AP01	7	
a. A complete list of California historical resource status codes, along with their meaning, is maintained by the OHP. The list can accessed here: https://ohp.parks.ca.gov/pages/1069/files/chrstatus%20codes.pdf.				

Table 4.3-1. NWIC Results: Resources within the Project Area

Table 4.3-2. NWIC Results: Resources within 0.25 mile of the Project Area

Primary Number/Trinomial	Resource Name	Resource Attributes	Historical Resource Status Codeª	
P-41-000045/CA-SMA-41	Nelson 380	AP01	7	
P-41-000047/CA-SMA-43	Nelson 382	AP01	7	
P-41-000049/CA-SMA-45	Nelson 384	AP01	7	
P-41-000412	CT-3 (Peninsula Commute Service; San Francisco & San José Railway)	AH07	6Y	
P-41-000497	C-San Francisco South	AH07	6Z	
P-41-002147/CA-SMA-353H	PN-1 (Colma Creek site)	AH04	6Z	
P-41-002440	Bridge south of Airport Boulevard at MP 09.64 and bridge over Colma Creek at MP 09.72	HP19	6Z	
P-41-002520	123 S. Linden Avenue	HP08	6Z	
a. A complete list of California historical resource status codes, along with their meaning, is maintained by the				

OHP. The list can accessed here: https://ohp.parks.ca.gov/pages/1069/files/chrstatus%20codes.pdf.

The NWIC records search found that four shell mounds (P-41-000051, P-41-000045, P-41-000047, and P-41-000049) were within or near the landforms depicted on the map associated with the original recording of the shell mounds in the early 20th century.^{67, 68,69} The NWIC records search also found a historic refuse scatter (P-41-002147) was near the project site. This resource is recommended as not eligible for listing in the National Register of Historic Places (NRHP). The NWIC records search also documented 59 previous cultural resources studies within a 0.25-mile radius of the project site.

Two cultural resources surveys, one for San Mateo County and one for South San Francisco, were identified through supplemental online research. No built-environment resources were identified at the project site in either of these studies. In addition, online repositories of the OHP were consulted for resources within a 0.25-mile radius of the project site.⁷⁰ After review of the online repositories, no built-environment resources were identified at the project site.

4.3.2.5 Project Site

Built Environment

The 17.67-acre project site comprises one parcel (assessor's parcel number [APN] 015-113-210) in the southeastern portion of the city within Township 3 South, Range 5 West, of the Mount Diablo Base Line and Meridian, as depicted on the U.S. Geological Survey (USGS) San Francisco South 7.5-minute quadrangle map.⁷¹ The project site is approximately six feet above mean sea level and relatively level, with a low area slope to the south-southeast. Currently, the project site is occupied by the Golden Gate Produce Terminal, a produce market facility, and associated surface parking. The Golden Gate Produce Terminal consists of approximately 126,750 square feet (sf) of industrial, operational space between two buildings of vendor stalls and ancillary buildings, and 116,572 sf of open-air structures, including the loading docks and utility features. As discussed in more detail below, the existing warehouse and administrative buildings were constructed by 1962, the loading dock adjacent to the east warehouse building was constructed between approximately 1981 and 1987, and a large free-standing loading dock was constructed between approximately 2002 and 2005.

The project site outside the existing building footprints comprises asphalt and concrete paving, with minimal surrounding landscaping. The project site is adjacent to and separated by a chain-link fence from 101 Terminal Court surface parking and ancillary buildings.

⁶⁷ Richard, C. 2008. *San Francisco Historical Creek Map, Guide to San Francisco Bay Area Creeks*. Oakland Museum of California, Oakland, CA. Available: https://explore.museumca.org/creeks/SFTopoCreeks.html. Accessed: September 12, 2023.

⁶⁸ AECOM. 2016. Archaeological Survey Report and Extended Phase I Study, US101 HOV/Express (Managed) Lanes Project, San Francisco, San Mateo, and Santa Clara Counties, California, AECOM, Oakland, CA.

⁶⁹ Nelson, N. 1909. Shellmounds of the San Francisco Bay Region. *University of California Publications in American Archaeology and Ethnology*, Volume 4, No. 4: 309–356, The University Press, Berkeley, CA.

Office of Historic Preservation. 2023. Built-Environment Resources Directory for San Mateo County. Available: https://ohp.parks.ca.gov/?page_id=30338. Accessed: April 6, 2023; Office of Historic Preservation. 2023. California Historical Resources. Available: http://ohp.parks.ca.gov/ListedResources/?view=county&criteria=1. Accessed: June 14, 2023.

⁷¹ Bock & Clark. 2018. *Phase I Environmental Site Assessment (ASTM W 157-13)*, Prepared for Park 'N Fly Inc., December 28; ParcelQuest. 2023. 131 Terminal Court, South San Francisco, CA 94080. Available: https://www.parcelquest.com/. Accessed: April 6, 2023.

Golden Gate Produce Terminal

The Golden Gate Produce Terminal was constructed in 1962 to house produce wholesalers who were forced to abandon the original produce market in downtown San Francisco, which was demolished to accommodate the 1960s Golden Gateway redevelopment project. Large produce wholesalers relocated to the Golden Gate Produce Terminal; the terminal historically and continuously has been cooperatively owned by the produce dealers. The Golden Gate Produce Terminal consists of east and west terminal buildings, with respective loading docks, individual produce stalls, and a central parking area. The terminals feature pre-cast concrete slab construction with pre-cut window and door openings, concrete loading docks with overhanging metal canopies, and original steel sash and multi-light windows.

In previous documentation, the Golden Gate Produce Terminal was determined to be associated with the development of the South San Francisco Industrial Park and the produce industry in the San Francisco Bay Area.⁷² The technical report and associated previous documentation prepared for the project site (i.e., *Final Environmental Impact Report/Environmental Assessment with Finding of No Significant Impact for the US Highway 101/Produce Avenue Interchange Project*) are included in Appendix E.⁷³ A summary of the previous documentation is provided below.

In February 2023, Caltrans determined the Golden Gate Produce Terminal (APN 015-113-210) was eligible for listing in the NRHP under Criterion A for its association with the development of the South San Francisco Industrial Park and the produce industry in the San Francisco Bay Area. Furthermore, Caltrans considered it to be a historical resource for CEQA compliance, eligible for the CRHR on the local level under Criterion 1, and a Section 4(f) property.⁷⁴ For the US 101/Produce Avenue Interchange Project, the State Historic Preservation Officer (SHPO) did not indicate that it concurred with the determination of eligibility. Notwithstanding, the Golden Gate Produce Terminal was assumed to be eligible for listing in the NRHP and CRHR in the Caltrans Final EIR/EA. As such, the Golden Gate Produce Terminal is considered a historical resource under CEQA for purposes of analyzing the project's potential impacts.

Archaeological Resources

As discussed above, the records search concluded that there may be one known cultural resource within the project site. One previously recorded archaeological resource was identified within the project site: P-41-000051 (CA-SMA-47) during a survey in the early 1900s; however, subsequent efforts to relocate the site have been unsuccessful.

4.3.2.6 Off-Site Redesignation Parcels

Built Environment

As discussed in Section 3.7 in Chapter 3, *Project Description*, of this EIR, the proposed project would include additional amendments to the General Plan, Lindenville Specific Plan and City of South San Francisco (City) Zoning Code to redesignate five parcels north of the project site, across Terminal

74 Ibid.

⁷² AECOM. 2022. Finding of No Adverse Effect, US 101/Produce Avenue Overcrossing Project, City of South San Francisco, San Mateo County, California. Prepared for Caltrans. May 13.

⁷³ California Department of Transportation. 2023, *Final Environmental Impact Report/Environmental Assessment with Finding of No Significant Impact*, prepared for the US Highway 101/Produce Avenue Interchange Project. February.

Court, at 120 Terminal Court, 196 Produce Avenue, 160 Produce Avenue, and 140 Produce Avenue (APNs 015-113-350, 015-113-290, 015-113-340, 015-113-330, 015-113-320). The five off-site redesignation parcels are currently designated as Mixed Industrial High (MIH) under the General Plan, Specific Plan and City Zoning Code; they would be redesignated Business Technology Park High (BTP-H), consistent with the proposed land use and zoning designation for the project site. The five parcels total approximately 7.28 acres and currently comprise a large Park N' Fly surface parking lot with a large, covered structure and a small, one-story ancillary service building and a Shell gas station with associated one-story commercial building. The Park N' Fly structure was constructed c. 2015 (2014–2016) (replaced a surface-level parking lot and ancillary structures dated to c. 1990 [1987–1993]) and the Shell gas station was constructed c. 1974 (1968–1980).⁷⁵

4.3.3 Regulatory Framework

This section provides a summary of the cultural resources plans and policies of the City as well as regional, state, and federal agencies that have policy and regulatory control over the project site.

4.3.3.1 Federal

The sections below summarize the relevant federal regulations and guidelines.

National Historic Preservation Act and National Register of Historic Places

Archaeological and architectural resources (buildings and structures) are protected through the National Historic Preservation Act (16 United States Code 470f), the Archaeological and Historic Preservation Act of 1974, and the Archaeological Resources Protection Act of 1979. Section 106 of the National Historic Preservation Act requires project review for effects on historical properties only when projects involve federal funding or permitting or occur on federal land; therefore, it is not applicable to discretionary actions on privately owned land at the municipal level. However, the National Historic Preservation Act establishes the NRHP, which provides a framework for resource evaluation and informs the process of determining impacts on historical resources under CEQA.

The NRHP is the nation's official comprehensive inventory of historical resources. Administered by the National Park Service (NPS), the NRHP includes buildings, structures, sites, objects, and districts that possess historical, architectural, engineering, archaeological, or cultural significance at the national, state, or local level. Typically, a resource that is more than 50 years of age is eligible for listing in the NRHP if it meets any one of the four eligibility criteria *and* also retains sufficient historical integrity. A resource less than 50 years old may be eligible if it can be demonstrated that it is of "exceptional importance" or a contributor to a historical district. NRHP criteria are defined in *National Register Bulletin Number 15: How to Apply the National Register Criteria for Evaluation.*⁷⁶

There are four criteria under which a structure, site, building, district, or object may be eligible:

- **Criterion A (Event):** Properties that are associated with events that have made a significant contribution to the broad patterns of our history.
- **Criterion B (Person):** Properties that are associated with the lives of persons significant in our past.

⁷⁵ Nationwide Environmental Title Research. 1968b, 1980, 1987, 1993, 2014, 2016. *140 Produce Avenue, South San Francisco, CA 94080.* Available: http://www.historicaerials.com/viewer. Accessed: June 5, 2024.

⁷⁶ National Park Service. 1995. National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation. Washington, D.C., pp. 11–25.

- **Criterion C (Design/Construction):** Properties that embody the distinctive characteristics of a type, period, or method of construction; represent the work of a master; possess high artistic values; or represent a significant and distinguishable entity whose components may lack individual distinction.
- **Criterion D (Information Potential):** Properties that have yielded, or may be likely to yield, information important in prehistory or history.

A resource can be significant to American history, architecture, archeology, engineering, and/or culture at the national, state, or local level. In addition to meeting at least one of the four criteria, a property or district must retain integrity, meaning that it must have the ability to convey its significance through the retention of seven aspects, or qualities, that, in various combinations, define integrity:

- **Location:** Place where the historic property was constructed;
- **Design:** Combination of elements that create the form, plans, space, structure, and style of the property;
- **Setting:** The physical environment of the historic property, inclusive of the landscape and spatial relationships of the buildings;
- **Materials:** The physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form the historic property;
- **Workmanship:** Physical evidence of the crafts of a particular culture or people during any given period in history;
- **Feeling:** The property's expression of the aesthetic or historic sense of a particular period of time; and
- **Association:** Direct link between an important historic event or person and a historic property.

Properties that are listed in the NRHP, as well as properties that are formally determined to be eligible for listing in the NRHP, are automatically listed in the CRHR and, therefore, considered historical resources under CEQA.

4.3.3.2 State

California Public Resources Code and Related California Register of Historical Resources Administration

Cultural resources, including archaeological and historical sites, are protected pursuant to a wide variety of state policies and regulations, as enumerated under the California PRC. Cultural resources are recognized as nonrenewable resources and receive additional protection under the California PRC and CEQA. The following California PRC sections are applicable to the project:

- California PRC Sections 5020–5029.5 continued the former Historical Landmarks Advisory Committee as the State Historical Resources Commission. The commission oversees the administration of the CRHR and is responsible for the designation of State Historical Landmarks and Historical Points of Interest.
- California PRC Sections 5079–5079.65 define the functions and duties of the OHP. The OHP is responsible for the administration of federally and state-mandated historic preservation programs in California and the California Heritage Fund.

• California PRC Sections 5097.9–5097.991 provide protection to Native American historical and cultural resources and sacred sites and identify the powers and duties of the Native American Heritage Commission (NAHC). These sections also require notification to descendants of discoveries of Native American human remains and provide for treatment and disposition of human remains and associated grave goods. See Section 3.18, *Tribal Cultural Resources*, of the Initial Study for more detail (Appendix B).

California implements the National Historic Preservation Act (NHPA) through its statewide comprehensive cultural resource preservation programs. The California Office of Historic Preservation, an office of the California Department of Parks and Recreation, implements the policies of the NHPA on a statewide level. The Office of Historic Preservation also maintains the California Historical Resources Inventory. The State Historic Preservation Officer is an appointed official who implements historic preservation programs within the state's jurisdiction.

California Register of Historical Resources

The California Register of Historical Resources (CRHR) is an authoritative guide used by state and local agencies, private groups, and citizens to identify historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse impacts (PRC Section 5024.1[a]). The CRHR consists of properties that are listed automatically as well as those that must be nominated through an application and public hearing process. The CRHR automatically includes the following:

- California properties listed in the NRHP and those formally Determined Eligible for the NRHP;
- State Historical Landmarks from No. 0770 onward; and
- Those California Points of Historical Interest that have been evaluated by the State Office of Historic Preservation and have been recommended to the State Historical Resources Commission for inclusion on the CRHR.

The criteria for eligibility for listing in the CRHR are based upon NRHP criteria, but are identified as 1-4 instead of A-D. To be eligible for listing in the CRHR, a property generally must be at least 50 years of age and must possess significance at the local, state, or national level, under one or more of the following four criteria:

- **Criterion 1 (Events):** Resources that are associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States.
- **Criterion 2 (Persons):** Resources that are associated with the lives of persons important to local, California, or national history.
- **Criterion 3 (Design/Construction):** Resources that embody the distinctive characteristics of a type, period, region, or method of construction; represent the work of a master; or possess high artistic values.
- **Criterion 4 (Archaeological/Source of New Information):** Resources or sites that have yielded or have the potential to yield information important to the prehistory or history of the local area, California, or the nation.

In addition to meeting the significance criteria, a significant historical resource must possess integrity to be considered eligible for listing in the CRHR. Consideration of integrity for evaluation of CRHR eligibility follows the same definitions and criteria from the National Park Service's *National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation,* also listed above under the NRHP criteria.⁷⁷

California Environmental Quality Act

CEQA requires projects to be assessed to determine their potential to affect historical resources. CEQA uses the term *historical resources* to include buildings, sites, structures, objects, or districts, which may have historical, pre-historical, architectural, archaeological, cultural, or scientific importance. If implementation of a project would result in significant effects on historical resources, CEQA states that alternative plans or mitigation measures must be considered; however, only significant historical resources need to be addressed (14 California Code of Regulations [CCR] 15064.5, 15126.4). Therefore, before impacts and mitigation measures can be identified, the significance of historical resources must be determined.

The State CEQA Guidelines define three ways that a property may qualify as a historical resource for the purposes of CEQA review.

- 1. The resource is listed in or determined eligible for listing in the CRHR (as described below).
- 2. The resource is included in a local register of historical resources, as defined in Section 5020.1(k) of the California PRC or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the California PRC, unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- 3. The lead agency determines the resource to be significant, as supported by substantial evidence in light of the whole record (CCR, Title 14, Division 6, Chapter 3, Section 15064.5[a]).

The CEQA Guidelines also establish the criteria for CRHR eligibility as the standard for the significance of historical resources and find that cultural resources that meet the criteria of eligibility for the CRHR are significant historical resources. A historical resource may be eligible for inclusion in the CRHR if it meets any of the following conditions:

- 1. The resource is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- 2. The resource is associated with the lives of persons important in our past.
- 3. The resource embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of an important creative individual or possesses high artistic values.
- 4. The resource has yielded, or may be likely to yield, information important in prehistory or history.

Properties that are listed in or eligible for listing in the NRHP are considered eligible for listing in the CRHR (PRC Section 5024.1[d][1]) and, thus, are significant historical resources for the purpose of CEQA. Previously unidentified and identified or known cultural resources within the project site will be evaluated per the CRHR criteria (as needed) for eligibility in order to determine if the resource is significant on a state level.

⁷⁷ National Park Service. 1995. *National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation.* Washington, D.C., pp. 44–48.

Pursuant to CEQA Guideline Section 15064.5(c)(4), a historical resource that has not been formally evaluated for eligibility for listing to a local or state register does not preclude the lead agency from assuming the resource is a historical resource as defined in PRC Sections 5020.1(j) or 5024.1.

According to CEQA, a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant impact on the environment (14 CCR 15064.5[b]). Under CEQA, a substantial adverse change in the significance of a resource means the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be materially impaired. Actions that would materially impair the significance of a historical resource are any actions that would demolish or adversely alter the physical characteristics that convey the property's historical significance and qualify it for inclusion in the CRHR or in a local register or survey that meets the requirements of PRC Sections 5020.1(k) and 5024.1(g).

Treatment of cultural resources under CEQA requires the evaluation of resources in a project's area of potential affect, assessment of potential impacts on significant or unique resources, and development of mitigation measures for potentially significant impacts, which may include monitoring, combined with data recovery and/or avoidance.

Treatment of Human Remains

The disposition of burials falls first under the general prohibition on disturbing or removing human remains under California Health and Safety Code (CHSC) Section 7050.5. Specifically, remains suspected to be Native American are regulated under CEQA at CCR Section 15064.5(d)-(e). PRC Section 5097.98 establishes the process to be followed in the event that remains are discovered. If human remains are discovered during construction, no further disturbance to the site shall occur, and the County Coroner must be notified (CCR 15064.5 and PRC 5097.98). This is discussed further in the Initial Study (Appendix B).

Tribal Cultural Resources

Assembly Bill 52

Tribal cultural resources were identified as a distinct CEQA environmental category with the adoption of AB 52 (PRC Section 21074). AB 52 sets up an expanded consultation process, following PRC Section 21080.3.1(b).

CEQA defines a *tribal cultural resource* as any one of the following (California PRC Section 21074):

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either (1) included in, or eligible for inclusion in, the CRHR or (2) included in a local register of historical resources.
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to the criteria set forth in subdivision (c) of Section 5024.1. The lead agency shall consider the significance of the resource to a California Native American tribe.
- A cultural landscape that meets the requirements listed above and is geographically defined in size and scope.

Archaeological sites, including those that qualify as historical resources (California PRC Section 21084.1), unique archaeological resources (California PRC Section 21083.2[g]), and non-unique archaeological resources (California PRC Section 21083.2[h]), may qualify as tribal cultural resources.

California PRC Section 21080.3.1 requires that local agencies formally consult with recognized California Native American tribes during the CEQA process to discuss potential impacts on tribal cultural resources. Prior to the release of a negative declaration, mitigated negative declaration, or EIR, an agency must initiate consultation with tribes that are traditionally and culturally affiliated with the geographic area of a proposed project if 1) a tribe requested, in writing, to be informed by an agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe and 2) the tribe responds, in writing, within 30 days of receipt of the formal notification of a proposed project and requests consultation with the agency (California PRC Section 21080.3.1[b]).

The Governor's Office of Planning and Research's Tribal Consultation Guidelines define *consultation* as "a process in which both the tribe and local government invest time and effort into seeking a mutually agreeable resolution for the purpose of preserving or mitigating impacts to a cultural place, where feasible" (Governor's Office of Planning and Research 2005:15). Consultation is concluded when the agency and tribe(s) agree to measures to mitigate or avoid significant effects on a tribal cultural resource or when either party determines that mutual agreement cannot be reached after a good-faith and reasonable effort (California PRC Section 21080.3.2[b]).

Senate Bill 18

California SB 18, established in September 2004, requires local governments to consult with California Native American tribes prior to preparing or amending both general plans (as defined in California Government Code Section 65300 et seq.) and specific plans (as defined in Government Code Section 65450 et seq.). The purpose of this consultation is to include California Native American tribes early in the planning process to allow for the identification and protection of cultural resources. This process also allows cultural resources to be considered during the broadscale local and regional planning process rather than at a project level. The following includes a sequential list of local government responsibilities:

- Local governments must notify appropriate tribes, as identified by the NAHC, prior to the adoption or amendment of a general plan or specific plan.
- Tribes have 90 days from the receipt of notification to request consultation (Government Code Section 65352.3).
- Prior to adoption or substantial amendment of a general plan or specific plan, local governments must refer the proposed action to the appropriate tribes, as identified by the NAHC, regardless of whether previous consultation has taken place.
- Local governments must allow a 45-day comment period (Government Code Section 65352).
- Local governments must provide notice of a public hearing to all tribes that filed a written request for such notice at least 10 days prior to the hearing (Government Code Section 65092).

4.3.3.3 Local

South San Francisco Municipal Code

Chapter 2.56 of the South San Francisco Municipal Code *(Planning Commission)* contains several sections that pertain to the identification and treatment of historical resources within South San Francisco. A historical resource is defined as "a structure, a natural feature, or a site which is 50 years old or older, of architectural, artistic, cultural, engineering, aesthetic, archeological, historical, political, or social significance to the citizens of the city of South San Francisco, the state, or the nation" (SSFMC Section 2.56.090, Ordinance 1440, Section 2, 2011).

A survey of historic properties in South San Francisco was conducted in 1985–1986 and is documented in the South San Francisco Historic Preservation Survey 1985–1986, which is considered to be the most up-to-date inventory of historical resources in the City. In addition, per Section 15.32.010, the 2019 California Historical Building Code was adopted by resolution as the building code for historic buildings in South San Francisco.

The City's Municipal Code includes the following policies regarding the identification, designation, and treatment of cultural resources:

• Section 2.56.080: Historic Preservation Findings and Purposes.

- a) It is hereby found that structures, sites, and areas of special character or special historical, architectural, or aesthetic interest or value have been and continue to be unnecessarily destroyed, impaired, or neglected despite the feasibility of preserving them.
- b) It is further found that the prevention of such needless destruction and impairment is essential to the health, safety, and general welfare of the citizens of the city of South San Francisco.
- c) The purpose of Sections 2.56.080 through 2.56.210 is to promote the health, safety, and general welfare of the citizens of the city of South San Francisco through:
 - i. The identification, protection, enhancement, perpetuation, and use of structures, sites, and areas that are reminders of past eras, events, and persons important to local, state, or national history; significant examples of architectural styles of the past; elements in the history of architecture; or unique and irreplaceable assets to the city of South San Francisco and its neighborhoods, providing this and future generations examples of the physical surroundings in which past generations lived.
 - ii. The development and maintenance of appropriate settings and environments for such structures in such sites and areas.
 - iii. The enhancement of property values, the stabilization of neighborhoods and areas of the city, and the provision of economic and financial benefits to the city and its inhabitants.
 - iv. The preservation and encouragement of a city of varied architectural styles, reflecting the distinct phases of its history (cultural, social, economic, political and architectural).
 - v. The enrichment of human life in its educational and cultural dimensions in order to serve spiritual as well as material needs by fostering knowledge of the living heritage of the past.

• Section 2.56.110: Criteria for Historic Designation.

In considering a proposal for designation as a historic resource, the commission shall apply any or all of the following criteria:

- a) Its character, interest, or value as a significant part of the heritage of the city, the state, or the nation; and
- b) Its location as a site of a significant historic event; or
- c) Its identification with a person or persons who significantly contributed to the culture and development of the city, the state, or the nation; or
- d) Its exemplification of a particular architectural style or way of life; or
- e) Its exemplification of the best remaining example of a particular architectural type in the city; or
- f) Its identification as the creation, design, or work of a person or persons whose efforts have significantly influenced the heritage of the city, the state, or the nation; or
- g) Its embodiment of elements demonstrating outstanding attention to artistic, architectural and/or engineering design, detail, materials, or craftsmanship; or
- h) Its relationship to any other historic resource if its preservation is essential to the integrity of the other historic resource (for example, it is a clearly identified element of a larger cohesive neighborhood or area whose integrity and character should be protected, such as the civic center, downtown, or a specific residential neighborhood); or
- i) Its unique location or singular physical characteristics representing an established and familiar visual feature of the city; or
- j) Its potential of yielding significant information of archeological interest; or
- k) Its integrity as a natural environment that strongly contributes to the well-being of the people of the city, the state, or the nation. For example, an area retained in or developed in a natural setting, such as portions of Sign Hill, or some other feature that contributes to the quality of life in South San Francisco.

• Section 2.56.120. Procedures for Designation of Historic Resources.

The procedure for designation of historic resources shall be as follows:

- a) Any person or entity may file an application with the commission upon paying an application fee in an amount as set forth in the master fee schedule, as adopted by resolution of the city council.
- b) An application shall be made on the prescribed form and shall be filed with the chief planner. Included with the application shall be a statement of consent signed by the property owner(s).
- c) Each application shall also include a list of the applicable criteria under which the project qualifies for designation. Each criterion shall be supported by appropriate facts, which will be considered by the commission in the hearing.
- d) Each proposal shall be considered by the commission at a public hearing. Hearing dates shall be set administratively. Notice of the hearing shall include the date, time, and place of the public hearing and the subject of the hearing. Notice shall be published in a newspaper

of general circulation not less than 10 calendar days prior to the date of the hearing. All notices of the hearings shall be sent by first class mail not less than 10 days prior to the date of the hearing. All applicants, owners, adjacent property owners, and any other individuals who paid for and requested notice are to be notified. The commission may give such additional notice by mail or by posting, as the commission may deem desirable.

- e) After the close of the public hearing and discussion by the commission, the commission shall take action on the proposal. The commission may approve, disapprove, or conditionally approve an application for designation as a historic resource. Approval or conditional approval of a designation as a historic resource shall be made only by four or more affirmative votes. Written findings may be adopted within 30 days.
- f) The commission may approve or conditionally approve a designation as a historic resource when it finds:
 - i. That the proposed structure, natural feature, site, or district has significance as a historic resource; and
 - ii. That approval is consistent with the purpose and criteria of this chapter.
- g) Following its decision, the commission shall send to the applicant(s) and to the owner(s) of the property(ies) involved a notice outlining the basis for such decision, and if the commission approves the designation, the notice shall outline the regulations resulting from such designation. Information about appealing the decision shall be included in the notice. The commission also may forward a copy of the notice to any department or agency requesting it or that the commission considers affected by the designation.
- h) Upon expiration of the appeal period, the secretary of the commission shall cause notice of the designation to be recorded in the San Mateo County recorder's office.

• Section 2.56.130: Certificate of Alteration.

- a) No building permit shall be issued for and no person shall carry out or cause to be carried out on a designated historic resource any material change through alteration, construction, relocation, or demolition without a certificate of alteration, as approved by a majority of the commission.
- b) Any person who plans the demolition, construction, alteration, relocation, or removal of a historic resource or part thereof shall first submit an application for a certificate of alteration, along with a fee in an amount as set forth in the master fee schedule, as adopted by resolution of the city council. Copies of the plans for the proposed work shall accompany the application. An application shall be made on the prescribed form and shall be filed with the chief planner.
- c) Upon receipt of an application for a certificate of alteration, the matter shall be forwarded to the design review board for report and recommendation. The commission subsequently shall hold a public hearing. Notice of the time and place of the public hearing shall be given in the manner prescribed in Section 2.56.120.
- d) In evaluating an application for a certificate of alteration, the commission shall consider, among other things, the purpose of this chapter and the historic value, architectural value, and significance of the historic resource as well as present and prospective effects or hardships upon the owners and occupants of the affected properties. The commission shall take into consideration the design review board's report and recommendations, architectural features of the building or structure in question, the landscaping or natural features of the site in

question, and the position of such buildings, structures, or sites in relation to the street or public way and to other buildings, structures, or sites. The U.S. Secretary of the Interior's Guidelines for Rehabilitation, available in the office of the chief planner, shall provide base criteria for evaluating proposed alterations to a historic resource.

- e) The commission may approve, conditionally approve, or disapprove the application.
- f) No approval or conditional approval may be made unless the commission first finds that:
 - i. The action proposed is consistent with the purposes of this chapter; and
 - ii. The action proposed will not be detrimental to a structure or feature having significance as a historic resource; or
 - iii. The applicant has demonstrated that the action is necessary to correct an unsafe or dangerous condition on the property; or
 - iv. The applicant has demonstrated that denial of the application will result in immediate, undue, or substantial hardship because of conditions peculiar to the particular site or improvement.
- g) A final determination shall be rendered by the commission following completion of the hearing and discussion by the commission. Written findings may be adopted within 30 days.
- h) Action of the commission shall be deemed final, unless appealed. No certificate of alteration shall be issued until the time period for appeal has expired.
- i) The provisions of this section shall not apply to the following:
 - i. Where a historic resource has been damaged by fire, earthquake, or other act of God to the extent that it cannot be repaired or restored with reasonable diligence and where demolition of such structure, natural feature, or site is being undertaken with prior approval of the chief building official.
 - ii. Where, as determined by the chief building inspector, hazardous conditions exist and the hazardous conditions must be corrected immediately in the interest of the public health, safety, and welfare.
- j) Any certificate of alteration that has been issued under the provisions of this chapter shall expire 2 years from the date of issuance if a building permit for the work authorized is not obtained within the time period.
- Section 2.56.140. Amendment or Rescission of Designation.
 - a) The commission may amend or rescind a historic resource designation. The procedure for amending or rescinding the designation shall be the same as for initial designation.
 - b) Any natural act, accident, or act of God that alters or destroys the integrity or the significance that is the basis for a historic resource designation may be grounds for amendment or rescission of the designation. Any introduction of new elements that are out of character with the property or its setting may be grounds for rescission of the designation.
 - c) Change in ownership of a historic resource alone is not in and of itself sufficient grounds for amendment or rescission of the designation. Unusual circumstances, such as the destruction of a portion of the resource and the owner's inability to reconstruct it, may be grounds for rescission of the designation of a historic resource.

- d) The commission may amend or rescind a designation, in whole or in part, when it deems it to be in the public interest to do so.
- e) When a designation has been amended or rescinded, the secretary of the commission shall cause notice of the change in designation to be recorded in the San Mateo County recorder's office.

• Section 2.56.160. Maintenance and Repair.

- a) Nothing in this chapter shall be construed to prevent the ordinary maintenance or repair of any exterior architectural feature in or on a historic resource that does not involve a change in design or material or a substantial change in appearance thereof, nor does this chapter prevent the construction, reconstruction, alteration, restoration, demolition, or removal of any such feature when the chief building inspector certifies to the commission that such action is required for public safety because of an unsafe condition that cannot be rectified through the uses of the State Historic Building Code, as set forth in Health and Safety Code Section 18950, et seq.
- b) The owner, occupant, or other person in actual charge of a historic resource, or part thereof, shall keep in good repair all of the exterior portions of such building(s) or structure(s), any of the interior portions specifically identified in the designation or certificate of alteration, and all interior portions whose maintenance is necessary to prevent deterioration and decay of any exterior architectural feature.

• Section 2.56.170. Demolition of Potential Historic Resources.

- a) All applications for a demolition permit for any structure or portion thereof that is included on the list of potential historic resources shall be subject to review. All such applications shall be accompanied by a photograph and shall be transmitted from the building division to the chief planner for review.
- b) The issuance of any demolition permit for a structure described in subsection (a) of this section may be postponed by the chief planner for a period not to exceed 60 days from the date of application for the demolition permit. During the period of postponement, efforts shall be made to investigate, document, and photograph the structure and explore possible alternatives to demolition.
- c) The 60-day period may be waived by the chief building inspector where there is imminent danger to life, limb, or health of the public that requires immediate demolition.

• Section 2.56.180. Disposal of Historic Materials.

- a) The City Council shall, prior to selling, giving away, disposing of, or relinquishing its interest in any materials accepted by the City for the purpose of historic preservation, conduct a public hearing concerning its proposed actions.
- b) Notice of the public hearing shall be published 10 calendar days in advance of the hearing required by subsection (a) of this section and specify the time, date, and place of the hearing as well as the items to be disposed of by the council.
- c) At the close of the hearing, the council may, in its sole discretion, order the disposition of the identified items. The council's disposition order will become effective on the 30th day following the council action. All items ordered disposed shall be maintained until the council order becomes effective.

South San Francisco General Plan

The General Plan provides a roadmap for the City to implement policies and actions that create a resilient community, improve the quality of life of its residents, and expand economic development opportunities. Chapter 15, *Environmental and Cultural Stewardship*, outlines policies related to a number of resources topics, including the protection of cultural resources, i.e. historic architectural, tribal cultural, and archaeological resources, through identification, preservation, and education initiatives. The General Plan includes the following policies applicable to cultural resources:

- Policy ES-9.1: Maintain and update a Historic Resources Inventory at regular intervals to promote awareness of these community resources and as a tool to further their preservation. Give priority to identifying and establishing Historic Districts.
- Policy ES-9.2: Encourage the voluntary identification, conservation, and re-use of historical structures, properties, and sites with special and recognized historic, architectural, or aesthetic value.
- Policy ES-9.3: Encourage historic resources to remain in their original use whenever possible. The adaptive use of historic resources is preferred, particularly as inns, vacation rentals, light commercial use, museums, educational facilities, or visitor-serving uses, when the original use can no longer be sustained.
- Policy ES-9.4: Protect and preserve historic sidewalk stamps, street signs, lampposts, street trees, and other hardscape and cultural landscape elements, in addition to designated historical buildings, structures, and sites that contribute to the historic character of a neighborhood, and the city.
- Policy ES-9.5: Require the submittal of historic reports and surveys prepared as part of the environmental review process.
- Policy ES-10.1: Maintain formal procedures for minimizing and mitigating impacts to archaeological resources.
- Policy ES-10.2: Support educational efforts that increase community awareness, appreciation, and support for South San Francisco's archaeological resources.
- Policy ES-10.3: Require that development proposals be referred to the Northwest Information Center of the California Archaeological Inventory, Native American Heritage Commission (NAHC), and local Native American Tribes for review and recommendations regarding supplemental field investigation.
- Policy ES-10.4: Ensure the protection of known archaeological resources in the city by requiring a records review for any development proposed in areas of known resources.
- Policy ES-10.5: If construction or grading activities result in the discovery of significant historic or prehistoric archaeological artifacts, then all work within 100 feet of the discovery shall cease, the Economic and Community Development Department shall be notified, the resources shall be examined by a qualified archaeologist for appropriate protection and preservation measures; and work may only resume when appropriate protections are in place and have been approved by the Economic and Community Development Department.
- Policy ES-11.1: Encourage the identification, preservation, and protection of Tribal Cultural Resources, traditional cultural landscapes, sacred sites, places, features, and objects, including historic or prehistoric ruins, burial grounds, cemeteries, and ceremonial sites in

consultation or coordination with the appropriate Native America tribe(s), and ensure appropriate treatment of Native American and other human remains discovered during project construction.

- ES-11.2: Include the history of Native American peoples and cultural resources as part of the transformation of Colma Creek.
- Policy ES-11.3: Consult with local Native American tribes to identify, evaluate, and appropriately address tribal cultural resources and tribal sacred sites through the development review process.

Chapter 6, *Sub-Areas*, subsection "Lindenville," of the General Plan establishes policies for implementation of the guiding principles specific to the Golden Gate Produce Terminal, and adjacent redesignation parcels:

- Policy SA-22.3: Encourage parcel assemblage of the Park 'N Fly site (160 Produce Avenue) and the Golden Gate Produce Terminal site (131 Terminal Court) and encourage developers to create a master plan for mixed-use development on the combined parcels.
- Policy SA-25.2: Recognize the Golden Gate Produce Terminal as a legacy use; permit it as a conforming use, allowing for expansion and contraction as necessary. If in the future the Golden Gate Produce Terminal stops operation at this site, require any new uses or new development of the site to be in conformance with the Mixed Industrial High Designation.

Lindenville Specific Plan

The Lindenville Specific Plan includes policies and actions for the development of the sub-area, including one specific policy regarding potential future development of the project site:

• Policy LU-5.2: Golden Gate Produce Terminal and Park 'N Fly sites. Encourage parcel assemblage of the Park 'N Fly site (160 Produce Avenue) and the Golden Gate Produce Terminal site (131 Terminal Court) and encourage developers to create a master plan and appropriate environmental analysis for office and R&D uses on the site.

4.3.4 Impacts and Mitigation Measures

This section describes the impact analysis related to cultural resources for the proposed project, including the off-site redesignation parcels. It describes the methods and thresholds used to determine whether an impact would be significant. Measures to mitigate (i.e., avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion, when necessary.

4.3.4.1 Significance Criteria

Based on Appendix G of the CEQA Guidelines, the proposed project would have a significant cultural resources impact if it would:

- Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5; or
- Disturb any human remains, including those interred outside of formal cemeteries.

4.3.4.2 Approach to Analysis

The project site and surrounding area were studied to determine whether cultural resources are present and, if so, the potential impacts of the project on those resources. Several methodologies were employed for the purpose of determining the potential presence of cultural resources.

Records Search

As described in Section 4.3.2.4, *Existing Setting*, a records search was conducted at the NWIC. The search identified one previously recorded archaeological resource within the project site: P-41-000051 (CA-SMA-47). However, no evidence of the resource was identified at this location during archaeological surveys conducted by Basin Research Associates in 1998 or Woodward-Clyde Consultants in 1995, nor was evidence identified during a geoprobe conducted in 2016 by AECOM. Four previously recorded archaeological resources were identified within 0.25 mile of the project site (Table 4.3-2).

Native American Tribal Consultation

On June 20, 2023, ICF submitted a request to the NAHC to review its SLF for the project site. The NAHC is the official State repository of Native American sacred location records in California. On July 7, 2023, ICF received a response from the NAHC, stating "the results of any Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was negative." The NAHC also provided a list of eight Native American individuals who might have information that would be pertinent to this project or concerns regarding the proposed activities:

- Irene Zwierlein, Chairperson Amah Mutsun Tribal Band of Mission San Juan Bautista
- Tony Cerda, Chairperson Costanoan Rumsen Carmel Tribe
- Ann Marie Sayers, Chairperson Indian Canyon Mutsun Band of Costanoan
- Kanyon Sayers-Roods, MLD Indian Canyon Mutsun Band of Costanoan
- Chalene Nijmeh, Chairperson Muwekma Ohlone Indian Tribe of the SF Bay Area
- Monica Arellano, Vice Chairwoman Muwekma Ohlone Indian Tribe of the SF Bay Area
- Andrew Galvan, Chairperson The Ohlone Indian Tribe
- Kenneth Woodrow, Chairperson Wuksache Indian Tribe/Eshom Valley Band

Letters with a description of the project and an invitation for the tribes to respond with any information or concerns about the project were sent to the Native American contacts provided by the NAHC on September 27, 2023, consistent with California PRC Section 21080.3.1 and Policies ES-11.1 and ES-11.3 in the General Plan.

No requests for consultation were received. A record of all outreach and consultation efforts is included in Appendix F.

Other Research

ICF architectural historians reviewed previous documentation regarding the Golden Gate Produce Terminal, including the *Final Environmental Impact Report/Environmental Assessment with Finding of No Significant Impact for the US Highway 101/Produce Avenue Interchange Project* in Appendix E.⁷⁸

⁷⁸ California Department of Transportation. 2023. Final Environmental Impact Report/Environmental Assessment with Finding of No Significant Impact. Prepared for the US Highway 101/Produce Avenue Interchange Project. February.

Research Summary

As discussed above, one previously identified historical resources, the Golden Gate Produce Terminal, was identified on the project site. The Golden Gate Produce Terminal (APN 015-113-210) was determined eligible for listing in the NRHP under Criterion A for its association with the development of the South San Francisco Industrial Park and the produce industry in the San Francisco Bay Area by Caltrans as part of the *Final Environmental Impact Report/Environmental Assessment with Finding of No Significant Impact for the US Highway 101/Produce Avenue Interchange Project.* Furthermore, Caltrans considered it to be a historical resource for CEQA compliance, eligible for the CRHR on the local level under Criterion 1, and a Section 4(f) property.⁷⁹

ICF architectural historians reviewed the previous documentation for concurrence on the eligibility standards (or registration requirements) for formal determinations of eligibility for listing in the NRHP and conducted aerial map research as part of the *Final Built-Environment Resources Preliminary Study for the Infinite 131 Project* (Appendix E). ICF architectural historians completed research on the building located within the project site to confirm that character-defining features and sufficient integrity remain to exhibit historic significance under NRHP/CRHR Criteria A/1 relevant to the period of significance. Based on ICF's review of previous documentation and original research, ICF architectural historians conclude that the Golden Gate Produce Terminal remains eligible for listing in the CRHR today. Therefore, the Golden Gate Produce Terminal qualifies as a historical resource under CEQA, as defined in CEQA Section 21084.1 and CEQA Guidelines Section 15064.5(a)(3).

Field Survey

ICF architectural historians' survey of the project site was limited to the adjacent 101 Terminal Court property and the surrounding property boundaries. Photos of all buildings and general views toward the project site were captured to assess continued operation and aspects of integrity. ICF architectural historians completed a desktop survey of the redesignation parcels.

No archaeological pedestrian survey occurred because of the developed nature of the project site.

4.3.4.3 Topics Evaluated in the Initial Study

The Initial Study for the proposed project (Appendix B) found that the topic listed below would result in less-than-significant impacts. Therefore, these topics were excluded from further review in the EIR and are not discussed in this section.

Human Remains. Under CEQA, human remains are protected under the definition of archaeological materials, which applies to "any evidence of human activity." PRC Section 5097 has specific stop-work and notification procedures to follow when Native American human remains are inadvertently discovered during excavation and construction. Section 7050.5 of the California Health and Safety Code sets forth provisions related to the treatment of human remains, including the treatment of human remains found in locations other than a dedicated cemetery, and the responsibilities of the coroner. These requirements apply to all construction projects within the City, which includes the proposed project. Furthermore, the General Plan includes policies and actions to reduce impacts on archaeological resources, including human remains. Policy ES-11.1 requires the City to identify, preserve, and protect tribal cultural resources, traditional cultural landscapes, sacred sites, places, features, and objects, including historic or prehistoric ruins, burial

⁷⁹ Ibid.

grounds, cemeteries, and ceremonial sites, in consultation or coordination with the appropriate Native America tribe(s). Policy ES-11.1 further requires appropriate treatment of Native American and other human remains discovered during project construction. Implementation of policies and actions in the General Plan, as well as compliance with adopted State, federal, and local regulations for the protection of archaeological resources and human remains, would ensure that future development under the proposed project would result in a *less-than-significant* impact on human remains. **No further study is needed**.

4.3.4.4 Impact Evaluation

Impact CULT-1: The project would cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5. (*Significant and Unavoidable*)

Project

The proposed project would demolish the Golden Gate Produce Terminal facility, surface parking, and limited landscaping to construct approximately 1.7 million sf of research-and-development (R&D) and amenity space within seven buildings, ranging from one to six stories; two parking garages; additional surface parking; and landscaping. The Golden Gate Produce Terminal is recommended as eligible for listing in the CRHR and NRHP and is therefore considered a historical resource for CEQA compliance. Therefore, the demolition of Golden Gate Produce Terminal within the project site would result in a substantial adverse change to the historical resource. Even with implementation of Mitigation Measure CULT-1, Prepare Documentation in the Likeness of the Historic American Building Survey (HABS) in Consultation with Interested Parties, to reduce the potentially significant impact on the historical resource through written and photographic documentation of the significant and character-defining features of the property and recordation of the historic and architectural characteristics, the impact would remain significant and unavoidable. Similarly, implementation of Mitigation Measure CULT-2, Initiate Public Interpretation Program, to present documentation of the property through the design and installation of permanent signage on the project site would reduce impact on the historical resource but would remain significant and unavoidable. The mitigation measures shall be implemented to reduce adverse impact to the greatest extent possible. However, this impact would remain significant and unavoidable.

Off-Site Redesignation Parcels

The proposed project would require amendments to the General Plan and Specific Plan and an associated zone change from MIH to BTP-H for the off-site redesignation parcels. The purpose of the off-site redesignation is to ensure that future development is similar to and consistent with the development proposed as part of the project. The MIH designation currently allows for development of a wide range of warehousing, manufacturing, processing, service commercial, and storage and distribution uses. The redesignation would allow for high-density corporate headquarters, R&D facilities, and office uses. More specifically, the General Plan and Specific Plan describe the permitted uses for BTP-H as incubator research, prototype manufacturing, testing, repairing, packaging, publishing, and printing, along with office and R&D uses. Warehousing, distribution, manufacturing, retail services, personal services, and grocery and hotel uses are also permitted under this designation. The BTP-H land use designation was created to encourage campus-like environments for offices, R&D facilities, and corporate headquarters.

The subject redesignation comprises five parcels totaling approximately 7.28 acres with two built resources:

- A Park N' Fly surface parking lot with a large, covered structure and a small, one-story ancillary service building. The structures were constructed c. 2015 (2014-16) (replacing a surface-level parking lot and ancillary structures dated to c. 1990 [1987-1993]) and would not qualify as a potential historical resource due to its construction date.
- Shell gas station with associated one-story commercial building, constructed c. 1974 (1968-1980). While this may qualify as a potential historical resource due to its construction date, the Shell gas station was not evaluated as a CEQA historical resource as part of this project.⁸⁰ Upon future development of the parcel, the gas station would be subject to an environmental review process, including evaluation of historic significance for consideration as a CEQA historical resource.

The policies and implementation actions outlined in the General Plan regarding cultural resources through identification, preservation, and education initiatives would be implemented in development of the off-site redesignation parcels regardless of redesignation. Per the development policies of Policy SA-22.3, the off-site parcels would be subject to an environmental review process during future development, including the identification, protection, enhancement, perpetuation, and use of historical and archaeological resources, to ensure no impacts to the broad spectrum of cultural resources. Therefore, if built-environment historical resources are identified as part of the environmental review under SA-22.3, impacts would be evaluated, and mitigation measures implemented. Additionally, Policy SA-22.3 specifically encourages the parcel assemblage of the Park 'N Fly site (160 Produce Avenue) and the Golden Gate Produce Terminal site (131 Terminal Court) and creation of a master plan for mixed-use development on the combined parcels. These policies and implementation actions are required under the existing MIH designation and would continue to be required under the proposed BTP-H designation. Impacts on historical resources depend on the age and character of existing on-site uses. Changing the type of use that could be developed in the future would have no effect on existing on-site uses. As such, the impacts of the off-site redesignation would be *less than significant*. No further evaluation is required.

Whole Project

In summary, the demolition of the Golden Gate Produce Terminal on the project site would result in a significant impact on historical resources. The redesignation of the off-site parcels and their potential development would comply with the policies and amendments to the General Plan and Specific Plan and would have a less-than-significant impact on historical resources. Taken in combination, the impacts on the whole project would be *significant and unavoidable,* and the mitigation below would be required.

The following mitigation measures are proposed to minimize substantial adverse changes in the significance of the historical resource. Implementation of the below mitigation measures would ensure proper documentation of the historical resource and minimize impacts of project construction to the greatest extent possible.

⁸⁰ Nationwide Environmental Title Research. 1968b, 1980, 1987, 1993, 2014, 2016. *140 Produce Avenue, South San Francisco, CA 94080*. Available: http://www.historicaerials.com/viewer. Accessed: June 5, 2024.

Mitigation Measure MM-CULT-1: Prepare Documentation in the Likeness of the Historic American Building Survey (HABS) in Consultation with Interested Parties

Documentation and recordation of a historical resource that will be demolished will reduce the loss of local history by preserving the history of the resource and its role within the region's historical context for the public's benefit and understanding.

The applicant shall consult interested third parties and qualified professionals to prepare HABS-like documentation for the CRHR- and NRHP-eligible building on the project site proposed for demolition. Using the format and standards as defined by the NPS (which administers the HABS program), the applicant shall complete written and photographic documentation of the significant and character-defining features of the property prior to construction. This documentation shall minimize impacts by capturing and preserving a description of the property's significance, occupant and development history, and physical characteristics associated with the resource.

In recent years, due to the large volume of submissions generated by environmental mitigation requirements, the NPS and National Archives have issued directives, indicating that they will not accept formal submissions under the HABS, Historic American Landscape Survey (HALS), and Historic American Engineering Record (HAER) programs unless the resource being documented is a rare, unusual, or exceptionally high-quality example of its type. Therefore, documentation at a similar level and formatting—HABS-like, with standard photography, written narrative, measured drawings—shall supplement documentation standards without formal submission to the National Park Service for review and approval. Instead, the prepared documentation shall be prepared informally for distribution to local repositories or reuse in interpretive or educational programs.

Educational media, such as print materials, websites, or digital publications shall be prepared from the HABS-level documentation and donated to interested local repositories, such as the City of South San Francisco public library system and the Historical Society of South San Francisco (specifically their Historical Society Museum collections). Educational media may incorporate written, photographic, and archival documentation (e.g., informal HABS-level documentation undertaken with NPS standards); oral history interviews; videos; or animation to tell the story of the affected resource's contribution to the broad patterns of local history and cultural heritage represented by the affected resource.

Mitigation Measure MM-CULT-2: Initiate Interpretive Signage Plan or Public Interpretation Program

The applicant shall prepare an Interpretive Signage Plan and/or Public Interpretation Program, setting forth the process for the design and installation of interpretive signage and/or an interpretation program within the project site. The Interpretive Signage Plan and/or Public Interpretation Program shall be developed in coordination with professionals who meet the Secretary of the Interior's Professional Qualification Standards in History or Architectural History.

The Interpretive Signage Plan and/or Public Interpretation Program shall include details regarding the proposed locations for the signage and/or program materials and the design of the visual components of the interpretive signage and/or interpretation program. The Interpretive Signage Plan or Public Interpretation Program shall not include cost analysis or specifications for the fabrication or installation of interpretative signage and/or interpretative program materials.

The Interpretive Signage Plan and/or Public Interpretation Program shall be reviewed and approved by the City of South San Francisco prior to the issuance of a demolition permit for the proposed project. No further discretionary review or approvals are anticipated to be required by the City to implement the Interpretive Signage Plan and/or Public Interpretation Program. Implementation of the Interpretive Signage Plan and/or Public Interpretation Program shall include the following elements:

Permanent Signage: The permanent interpretive signage shall include a minimum of two and a maximum of four permanent interpretive markers or signs that interpret South San Francisco's industrial heritage and include a history of the land uses previously located within the project site. The signs shall describe the industries that operated within the project site, namely, the Golden Gate Produce Terminal, and provide a written or visual narrative that places these companies within the context of the City's industrial development. The permanent signage shall use relevant historic photos, historic maps, and company archival materials (such as logos) to illustrate the narrative where feasible, given the availability and publication permission of the images. The signs shall be located on the interior and exterior of the proposed amenity building and/or at its adjacent courtyard within the project site. They shall be visible to both project site tenants and the general public (e.g., through an accessible and specific area or route through the grounds or buildings made legally available to the general public). Potential locations for permanent signage include the north courtyard, the south courtyard (and adjacent large-event/recreational space), the lobby entrance, and the proposed day-care facility. Permanent signage may also be incorporated into the perimeter path, promenade, or infinite loop. No more than half of the signs may be located in lobbies or other public spaces that are inside buildings. The permanent signs shall be installed prior to the issuance of the first Certificate of Occupancy. Additionally, a secondary location shall be sourced for potential permanent signage with ties to local produce distribution history and/or current farmer's markets.

Public Interpretation Program: The Public Interpretation Program, including, but not limited to, self-guided walking tours, short-format films, or murals and public art, shall include materials that interpret South San Francisco's industrial heritage and a history of the land uses previously located within the project site. The Public Interpretation Program shall describe the industries that operated within the project site (i.e., the Golden Gate Produce Terminal) and provide a written or visual narrative that places these companies within the context of the city's industrial development. The Public Interpretation Program shall use relevant historic photos, historic maps, and company archival materials (such as logos) to illustrate the narrative where feasible, given the availability and publication permission of the images. The Public Interpretation Program shall be located on the interior and exterior of the proposed amenity building and at its adjacent courtyard within the project site. It shall be visible to both project site tenants and the general public. Potential locations for interpretative program materials include the north courtyard, the south courtyard (and adjacent large-event/recreational space), the lobby entrance, and the proposed day-care facility. Interpretative program materials could also be incorporated into the perimeter path, promenade, or infinite loop. No more than half of the Public Interpretation Program locations may be displayed in lobbies or other public spaces that are inside buildings. The Public Interpretation Program shall be installed prior to the issuance of the first certificate of occupancy. In addition, a secondary location shall be sourced for a potential interpretation program with ties to local produce distribution history and/or current farmer's markets.

Impact CULT-2: The project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5. (*Less than Significant with Mitigation*)

Project

The proposed project would generate approximately 40,214 cubic yards (cy) of material, including removed fencing, building materials, concrete, soil, and asphalt by way of demolition, grading, and excavation. In addition, during demolition and grading, approximately 170,000 cy of soil would be imported for site preparation. The project would excavate to a depth of approximately 3 to 7 feet below the ground surface for utility work. The average level of the project site is 6 feet above sea level. The maximum depth of excavation would be 5 feet below sea level for the sanitary sewer main upgrade.

The results of the NWIC records search indicate that one previously recorded archaeological resource (P-41-000051) is located within the project site, and four previously recorded archaeological resources (P-41-000045, P-41-000047, P-41-000049, and P-41-002147) are within 0.25 mile of the project site. Due to the presence of precontact midden deposits within and near the project site, there is increased potential for encountering as-yet undocumented archaeological deposits during projectrelated ground disturbance, given the magnitude of excavation associated with construction of the proposed project. This impact is considered potentially significant. Implementation of Mitigation Measure CULT-3, Train Workers to Respond to the Discovery of Cultural Resources, and Mitigation Measure MM-CULT-4, Retain a Qualified Archaeologist to Perform Construction Monitoring, Evaluate Uncovered Archaeological Features, and Mitigate Potential Disturbance for Identified Significant Resources at the Project Site, would reduce this potentially significant impact on archaeological resources to a *less-than-significant* level by ensuring that project activities would not result in the inadvertent destruction of an archaeological resource. In addition, the proposed project would be required to adhere to General Plan Policy ES-10.5, Discovery of Significant Historic or Prehistoric Archaeological Artifacts, which states that if construction or grading activities result in the discovery of significant historic or prehistoric archaeological artifacts, then all work within 100 feet of the discovery should cease, the Economic and Community Development Department should be notified, and the resources should be examined by a qualified archaeologist for appropriate protection and preservation measures; work may resume only when appropriate protections are in place and approved by the Economic and Community Development Department. Compliance with this General Plan policy would further ensure that the proposed project would not result in significant impacts on archaeological resources.

Off-Site Redesignation Parcels

The five off-site redesignation parcels are currently designated as MIH under the General Plan, Specific Plan, and City Zoning Code. However, they would be redesignated BTP-H, consistent with the proposed land use and zoning designation for the project site. The MIH designation currently allows for development of a wide range of warehousing, manufacturing, processing, service commercial, and storage and distribution uses. The redesignation would allow for high-density corporate headquarters, R&D facilities, and office uses. More specifically, the General Plan and Specific Plan describe the permitted uses for BTP-H as incubator research, prototype manufacturing, testing, repairing, packaging, publishing, and printing, along with office and R&D uses. Warehousing, distribution, manufacturing, retail services, personal services, and grocery and hotel uses are also permitted under this designation. The proposed project does not include the construction of any new uses on the off-site redesignation parcels.

Changing the land use designation would have no effect on the archaeological sensitivity of the offsite redesignation parcels. Similar to the proposed project, future development under the BTP-H designation could include life sciences and R&D office space, which would most likely result in similar amounts and types of ground-disturbing activities and have impacts on archaeological resources similar to those of the proposed project. As such, future development under the off-site redesignation parcels would be subject to the same federal and state regulations protecting archaeological resources, including AB 52 consultation, as necessary. Furthermore, future development would be required to comply with the same policies in the General Plan, as described above for the proposed project, which would ensure that any potential impacts on archaeological resources would be avoided. These policies are required under the existing MIH designation and would continue to be required under the proposed BTP-H designation. The amount of ground disturbance that could occur under the proposed BTP-H designation would not be substantially different from the amount of ground disturbance that could occur under the existing MIH designation because both designations permit uses that tend to include subterranean development. Therefore, impacts associated with the off-site redesignation would be less than significant, and no further evaluation is required.

Whole Project

If archaeological resources are encountered during project-related ground disturbance, a substantial adverse change in the significance of an archaeological resource could occur from its demolition, destruction, relocation, or alteration, and the significance of the resource could be materially impaired (CEQA Guidelines Section 15064.5[b][1]). The following measures are proposed to mitigate potential adverse impacts on P-41-000051 and other unanticipated archaeological resources, should they be encountered during project construction. As described above, changing the land use designation on the off-site redesignation parcels would have a less-than-significant impact on cultural resources.

Implementation of Mitigation Measures MM-CULT-3 and MM-CULT-4 would reduce this potentially significant impact on archaeological resources to a *less-than-significant* level by ensuring that project activities would not result in the inadvertent destruction of archaeological materials.

Mitigation Measure MM-CULT-3: Train Workers to Respond to the Discovery of Cultural Resources

A qualified archaeologist shall be retained to conduct cultural resources awareness training to all project personnel, prior to the start of construction. A qualified professional archaeologist is one that meets the Secretary of the Interior's Professional Qualification Standards in archaeology, as promulgated in Code of Federal Regulations (CFR), Title 36. The qualified archaeologist should note the names of all personnel who attend the cultural resources awareness training and email the information to the City for its records. The training shall include basic information about the types of artifacts that might be encountered during construction activities and procedures to follow in the event of a discovery. The training shall be provided for any additional personnel added to the project, even after the initiation of construction and ground-disturbing activities.

Mitigation Measure MM-CULT-4: Retain a Qualified Archaeologist to Perform Construction Monitoring, Evaluate Uncovered Archaeological Features, and Mitigate Potential Disturbance for Identified Significant Resources at the Project Site.

An archaeological monitor shall be onsite to monitor all construction-related ground disturbing activities. The archaeological monitoring, treatment, and evaluation of discoveries should be overseen by a qualified archaeologist who meets the Secretary of the Interior's Standards for Archaeology and is experienced in archaeological resource identification in the Bay Area. The archaeological monitor should identify archaeological remains that might be exposed by equipment during ground-disturbing construction activities. The monitor should observe all excavation activities associated with trenching, as well as inspect backdirt piles for evidence of pre-European contact, historical, or other culturally sensitive materials. If it is safe to do so, the monitor should inspect the sidewalls of trenches and pits as they are exposed. If warranted by their observations, the monitor should be empowered to temporarily halt or redirect construction to examine soils or inspect the potential resources.

Archaeological monitors shall collect photographs and maintain notes (including documentation of stratigraphy and culturally sterile soils) and complete daily monitoring logs. The monitoring logs shall record the daily activities, including project locations and times, stratigraphic information, and findings of archaeological monitoring activities.

An Archaeological Monitoring Results Report (AMRR) shall be prepared at the conclusion of ground-disturbing activities. The AMRR would include an introduction, regulatory context, monitoring methods, and findings. Daily monitoring logs, monitoring photographs, and figures depicting monitoring locations would be provided as appendices to the report.

4.3.4.5 Cumulative Impacts

Impact C-CULT-1: The whole project, inclusive of the off-site redesignation parcels, together with the cumulative projects identified, would not result in a cumulatively considerable contribution to significant cumulative impacts on historical resources. (*Less Cumulatively Considerable*)

The cumulative geographic context for built-environment historical resources is South San Francisco. In addition to the geographic area, the cumulative impact analysis focuses on cumulative impacts on similar historical resource types within South San Francisco for produce markets or produce distribution centers. The actions considered in the cumulative impact analysis for builtenvironment historical resources are summarized in Section 4.1.5, *Approach to Cumulative Impact Analysis*, of this EIR. The actions include the full build-out of the General Plan, which is inclusive of nine specific cumulative projects within a 0.5-mile radius of the project site, as identified in Section 4.1.5. The nine projects and full build-out of the General Plan would not cause impacts on other historical resources similar to Golden Gate Produce Terminal because there are no other produce terminals of a similar design and use in the area. Primarily due to the unique nature of the historical resource, cumulative impacts to similar historical resources would not occur. The impact would be *less than cumulatively considerable*.

Impact C-CULT-2: The project, inclusive of the off-site redesignation parcels, together with the cumulative projects identified, would not result in a cumulatively considerable contribution to significant cumulative impacts on archaeological resources and human remains. (*Less than Cumulatively Considerable with Mitigation*)

The cumulative geographic context for archaeological resources is the immediate vicinity of the project site, which is the area where construction activities, including ground-disturbing activities, could encounter archaeological resources and human remains that may be present on or near the site. The cumulative projects within 0.5 mile of the project site are described in Section 4.1.5, *Approach to Cumulative Impact Analysis*, of this EIR and shown in **Figure 4.1-1**.

The cumulative projects in the vicinity of the project site would be constructed on infill sites in highly disturbed areas. It is likely that the cumulative projects would be constructed on sites where the ground surface has been disturbed and/or covered with fill and gravel. Similar to the proposed project, all cumulative projects would be required to comply with regulations set forth by local, state, and federal agencies that protect cultural resources, including policies and actions identified in the General Plan, as well as implement mitigation measures, as appropriate, to ensure that project activities would not result in the inadvertent destruction of an archaeological resource and that discovery procedures pertaining to human remains would be implemented. Nonetheless, cumulative impacts on archaeological resources are considered potentially significant because the reasonably foreseeable projects would most likely involve ground-disturbing activities that could uncover resources related to the resources that could be uncovered by the project.

Implementation of Mitigation Measures CULT-3 and CULT-4 would ensure that the proposed project's contribution to cumulative impacts on archaeological resources would be *less than cumulatively considerable with mitigation*.

4.4 Greenhouse Gas Emissions

4.4.1 Introduction

This section evaluates the potential significance of greenhouse gas (GHG) emissions impacts related to the construction and operation of the Infinite 131 Project (proposed project), including the redesignation of the five parcels north of the project site (off-site redesignation parcels). This section also describes the existing conditions at the project site and off-site redesignation parcels, and the regulatory framework for this analysis. The impacts of the proposed project are analyzed at a project level, while the impacts of the off-site redesignation parcels are generally analyzed at a program level. Impacts resulting from implementation of the proposed project, as well as impacts resulting from the off-site redesignation measures, where applicable), are described, including cumulatively considerable contributions to significant cumulative impacts. Relevant technical documentation used in this analysis includes greenhouse gas modeling files and calculations (Appendix D) as well as an air quality and greenhouse gas technical report (Appendix C).

Issues identified in response to the Notice of Preparation (NOP) (Appendix A) were considered in preparing this analysis. No questions or concerns related to GHGs were raised in the responses to the NOP.

Refer to Chapter 1 of this environmental impact report (EIR) for the location where the *Shape SSF 2040 General Plan Update EIR* and *Lindenville Specific Plan Addendum* are available for public inspection.

4.4.2 Environmental Setting

The *Environmental Setting* subsections below (i.e., Section 4.2.2.1, *Project Site*, and Section 4.2.2.2, *Off-Site Redesignation Parcels*), describe the existing conditions as they relate specifically to greenhouse gases. The environmental setting would be identical for both the project site and the off-site redesignation parcels, because both are located within the same geographical region.

4.4.2.1 Project Site

Physical Scientific Basis of Greenhouse Gas and Climate Change

Certain gases in the Earth's atmosphere, classified as GHGs, play a critical role in determining the Earth's surface temperature. Solar radiation enters the atmosphere from space. A portion of the radiation is absorbed by the Earth's surface, and a smaller portion of this radiation is reflected toward space. The absorbed radiation is then emitted from Earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. The Earth has a much lower temperature than the sun; therefore, the Earth emits lower-frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the *greenhouse effect*, is responsible for maintaining a habitable climate on Earth.

Prominent GHGs that contribute to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride. These six gases are also identified as GHGs in Section 15364.5 of the California

Environmental Quality Act (CEQA) Guidelines. Human-caused emissions of these GHGs in excess of natural ambient concentrations are found to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the Earth's climate, known as *global climate change* or *global warming*. It is "extremely likely" that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in GHG concentrations and other anthropogenic forcing.¹

Since the Industrial Revolution (1760–1840), increases in fossil-fuel combustion and deforestation have exponentially increased concentrations of GHGs in the atmosphere. Rising atmospheric concentrations of GHGs in excess of natural levels enhance the greenhouse effect, which contributes to global warming of the Earth's lower atmosphere. This warming induces large-scale changes in ocean circulation patterns, precipitation patterns, global ice cover, biological distributions, and other changes to the Earth's system, which are collectively referred to as *climate change*.

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants (TACs), which are pollutants of regional and local concern. Whereas most pollutants with localized air quality effects have relatively short atmospheric lifetimes (approximately 1 day), GHGs have long atmospheric lifetimes (1 year to several thousand years). GHGs persist in the atmosphere long enough to be dispersed around the globe. Although the lifetime of any GHG molecule depends on multiple variables and cannot be determined with any certainty, it is understood that more CO₂ is emitted into the atmosphere than is removed from the atmosphere (i.e., *sequestered*) by ocean uptake, vegetation, and other forms of sequestration. Of the total annual human-caused CO₂ emissions, approximately 55 percent are estimated to be sequestered through ocean and land uptake every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO₂ emissions remain stored in the atmosphere.²

No single project alone would measurably contribute to an incremental change in the global average temperature or global or local climates or microclimates. From the standpoint of CEQA, GHG impacts relative to global climate change are inherently cumulative.

Principal Greenhouse Gases

The principle anthropogenic (human-made) GHGs are CO₂, CH₄, N₂O, and fluorinated compounds, including sulfur hexafluoride, HFCs, and PFCs. The primary GHGs that would be emitted by project-related construction and operations are CO₂, CH₄, N₂O, and HFCs. The principal characteristics of these pollutants are discussed below.

• **Carbon Dioxide (CO₂)** enters the atmosphere through the burning of fossil fuels (e.g., oil, natural gas, coal); it also comes from solid waste, trees and wood products, and respiration. CO₂ also results from chemical reactions (e.g., those associated with cement manufacturing). CO₂ is sequestered when it is absorbed by plants as part of the biological carbon cycle.

¹ IPCC. 2014. *Climate Change 2014 Synthesis Report: Summary for Policymakers.* Available: https://www.ipcc.ch/pdf/assessment-report/ar5/syr/AR5_SYR_FINAL_SPM.pdf. Accessed: December 15, 2023.

² IPCC. 2013. Chapter 6, Carbon and Other Biogeochemical Cycles. In Climate Change 2013: The Physical Science Basis. Working Group I Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Pages 465–570. Available: http://www.climatechange2013.org/images/report/WG1AR5_ALL_FINAL.pdf. Accessed: December 15, 2023.

- **Methane (CH₄)** is emitted during the production and transport of coal, natural gas, and oil. CH₄ also results from livestock emanations, agricultural practices, and the decay of organic waste in municipal solid-waste landfills.
- Nitrous Oxide (N₂O) is emitted during agricultural and industrial activities as well as the combustion of fossil fuels and solid waste.
- **Hydrofluorocarbons (HFCs)** are synthetic gases that are used primary for refrigeration, airconditioning, and other purposes; they replace ozone-depleting substances.

Methods have been set forth to describe emissions of GHGs in terms of a single gas to simplify reporting and analysis. The most commonly accepted method for comparing GHG emissions is the global warming potential (GWP) methodology defined by the Intergovernmental Panel on Climate Change (IPCC) (IPCC 2007). IPCC defines the GWP of various GHG emissions on a normalized scale that recasts all GHG emissions in terms of carbon dioxide equivalent (CO₂e), which compares the gas in question to that of the same mass of CO₂ (which has a GWP of 1, by definition). The GWP values used in this analysis are based on the IPCC Fourth Assessment Report and the United Nations Framework Convention on Climate Change reporting guidelines, as defined in Table 4.4-1.³ The Fourth Assessment Report GWP values are consistent with those used in the California Air Resources Board's (CARB's) 2021 California GHG inventory and the *2022 Scoping Plan for Achieving Carbon Neutrality*.^{4,5}

Gas	GWP (100 years)	Lifetime (years) ^a	
CO ₂	1	50-200	
CH ₄	25	9-15	
N ₂ O	298	121	
HFCs	124-14,800	1-270	

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Sources: IPCC. 2007. *Fourth Assessment Report: Climate Change 2007*. Working Group I: The Physical Science Basis. Section 2.10.2, Direct Global Warming Potentials. Available: https://archive.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html. Accessed: December 15, 2023; CARB. 2022. *Current California GHG Emission Inventory Data: 2000–2021 GHG Inventory (2023 edition).* Available: https://ww2.arb.ca.gov/ghg-inventory-data. Accessed: December 15, 2023; CARB. 2020. GHG Global Warming Potentials. Available: https://ww2.arb.ca.gov/ghg-gwps. Accessed: January 9, 2024.

^{a.} Defined as the half-life of the gas.

 CO_2 = carbon dioxide; CH_4 = methane; GHG = greenhouse gas; GWP = global warming potential; HFCs = hydrofluorocarbons; N_2O = nitrous oxide.

CARB recognizes the importance of reducing emissions of short-lived climate pollutants (SLCPs), as described in the *Regulatory Setting*, to achieve the state's overall climate-change goals. SLCPs have atmospheric lifetimes on the order of a few days to a few decades, and their relative climate-forcing impacts, when measured in terms of how they heat the atmosphere, can be tens, hundreds,

³ IPCC. 2007. *Fourth Assessment Report: Climate Change 2007*. Working Group I: The Physical Science Basis. Section 2.10.2, Direct Global Warming Potentials. Available: https://archive.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html. Accessed: December 15, 2023.

⁴ CARB. 2022. *Current California GHG Emission Inventory Data: 2000–2021 GHG Inventory (2023 edition).* Available: https://ww2.arb.ca.gov/ghg-inventory-data. Accessed: December 15, 2023.

⁵ CARB. 2022. 2022 Scoping Plan for Achieving Carbon Neutrality. November. Available: https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf. Accessed: January 9, 2024.

or even thousands of times greater than those of CO_2 .⁶ Given their short-term lifespan and warming impact, SLCPs are measured in terms of CO_2 e, using a 20-year time period. The use of GWPs with a time horizon of 20 years captures the importance of SLCPs and gives a better perspective as to the speed at which emission controls will affect the atmosphere relative to CO_2 emission controls. The SLCP Reduction Strategy, as discussed in the *Regulatory Setting*, addresses CH₄, HFC gases, and anthropogenic black carbon. CH₄ has lifetime of 12 years and a 20-year GWP of 72. HFC gases have lifetimes of 1.4 to 52 years and a 20-year GWP of 437 to 6,350. Anthropogenic black carbon has a lifetime of a few days to weeks and a 20-year GWP of 3,200.⁷

Greenhouse Gas Inventory

A GHG inventory is a quantification of all GHG emissions within a selected physical and/or economic boundary. GHG inventories can be performed on a large scale (e.g., for global and national entities) or on a small scale (e.g., for a particular building or person). Although many emissions are difficult to evaluate, several agencies have developed tools to quantify emissions from certain sources.

Table 4.4-2 shows results of the most current emissions inventories at the international, national, state, regional, and city levels, as quantified by the IPCC, U.S. Environmental Protection Agency (EPA), CARB, Bay Area Air Quality Management District (BAAQMD), and the City of South San Francisco (City), respectively.

Emissions Inventory	CO2e (metric tons)		
2017 IPCC Global GHG Emissions Inventory ⁸	53,500,000,000		
2022 EPA National GHG Emissions Inventory ⁹	6,341,200,000		
2021 CARB State GHG Emissions Inventory ¹⁰	381,300,000		
2011 BAAQMD GHG Emissions Inventory ¹¹	86,600,000		
2017 City of South San Francisco GHG Emissions Inventory ¹²	609,452		

Table 4.4-2. Global, National, State, and Local GHG Emissions Inventories

⁶ CARB. 2017. *Short-Lived Climate Pollutant Reduction Strategy*. Available: https://ww2.arb.ca.gov/sites/default/files/2020-07/final_SLCP_strategy.pdf. Accessed: January 9, 2024.

⁷ Ibid.

⁸ Intergovernmental Panel on Climate Change. 2018. *Emissions Gap Report 2018*. Available: https://www.ipcc.ch/apps/outreach/documents/446/1544107659.pdf. Accessed: March 13, 2024.

⁹ U.S. Environmental Protection Agency. 2024. Draft Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990– 2022. Available: https://www.epa.gov/system/files/documents/2024-02/us-ghg-inventory-2024-maintext.pdf. Accessed: October 19, 2023.

¹⁰ CARB 2022. *Current California GHG Emission Inventory Data: 2000–2021 GHG Inventory (2023 Edition)*. Available: https://ww2.arb.ca.gov/ghg-inventory-data. Accessed: March 13, 2024.

¹¹ Bay Area Air Quality Management District. 2011. Bay Area Emissions Inventory Summary Report: Greenhouse Gases Base Year 2011. Updated: January 2015. Available: http://www.baaqmd.gov/~/media/files/planningand-research/emission-inventory/by2011_ghgsummary.pdf. Accessed: March 13, 2024.

¹² City of South Francisco. 2022. City of South San Francisco Climate Action Plan. October. Available: https://shapessf.com/wp-content/uploads/2022/11/SSFCAP_AdoptedResolution.pdf. Accessed: March 13, 2024.

As discussed previously, GHG emissions are attributable in large part to human activities. The total GHG inventory for California in 2021, as shown in the table above, was 381.3 million metric tons of carbon dioxide equivalent.¹³ Table 4.4-3 provides a detailed breakdown of the GHG inventory for California.

Sector	Percent
Transportation	39
Industrial	22
Electricity generation (in state)	11
Electricity generation (imports)	5
Agriculture	8
Residential	8
Commercial	6

Table 4.4-3. Statewide Greenhouse Gas Emissions by Economic Sector for 2021^a

Sources: CARB. 2022. *California Greenhouse Gas Emissions for 2000 to 2021: Trends of Emissions and Other Indicators*. December 14. Available: https://ww2.arb.ca.gov/sites/default/files/ classic/cc/ inventory/2000-2020_ghg_inventory_trends.pdf. Accessed: December 15, 2023.

^{a.} The total emissions inventory for California in 2021 was 381.3 million metric tons of carbon dioxide equivalent.

According to the breakdown shown in Table 4.4-3, the commercial sector in California accounts for approximately 6 percent of the state's GHG emissions.

Potential Climate Change Effects

Climate change is a complex process that has the potential to alter local climatic patterns and meteorology. Although modeling indicates that climate change will result in sea-level rise (both globally and regionally) as well as changes in climate and rainfall, among other effects, there remains uncertainty about characterizing precise local climate characteristics and predicting precisely how various ecological and social systems will react to any changes in the existing climate at the local level. Regardless of this uncertainty, it is widely understood that substantial climate change is expected to occur in the future, although the precise extent will take further research to define. Specifically, significant impacts from global climate change worldwide and in California include:

- Declining sea ice and mountain snowpack levels, thereby increasing sea levels and sea surface evaporation rates, with a corresponding increase in atmospheric water vapor due to the atmosphere's ability to hold more water vapor at higher temperatures;¹⁴
- Rising average global sea levels, primarily due to thermal expansion and the melting of glaciers, ice caps, and the Greenland and Antarctic ice sheets;¹⁵

¹³ CARB. 2022. California Greenhouse Gas Emissions for 2000 to 2021: Trends of Emissions and Other Indicators. December 14. Available: https://ww2.arb.ca.gov/sites/default/files/ classic/cc/ inventory/2000-2020_ghg_inventory_trends.pdf. Accessed: December 15, 2023.

¹⁴ California Natural Resources Agency. 2018. California's Fourth Climate Change Assessment, Statewide Summary Report. Available: http://www.climateassessment.ca.gov/state/docs/20190116-StatewideSummary.pdf. Accessed: March 14, 2024.

¹⁵ Ibid.

- Changing weather patterns, including changes in precipitation, ocean salinity, and wind patterns, along with the more energetic aspects of extreme weather, including droughts, heavy precipitation, heat waves, extreme cold, and intense tropical cyclones;¹⁶
- Declining snowpack levels in the Sierra Nevada; snowpacks account for approximately half of the surface water storage in California but are projected to decline by 70 to as much as 90 percent over the next 100 years;¹⁷
- Increasing the number of days that are conducive to ozone formation (e.g., clear days with intense sun light) by 25 to 85 percent, depending on the future temperature scenario, by the end of the 21st century in high ozone areas, including Southern California;¹⁸
- Increasing the potential for erosion along California's coastlines as well as seawater intrusion at the Sacramento Delta and associated levee systems due to the rise in sea level; and¹⁹
- Exacerbating the severity of drought conditions in California such that durations and intensities are amplified, ultimately increasing the risk of wildfires and consequential damage.²⁰

Under changing climate conditions, agriculture is projected to experience lower crop yields because of extreme heat waves, heat stress, increased water needs associated with crops and livestock (particularly during dry and warm years), and new and changing pest and disease threats.²¹

The impacts of climate change, such as increased heat-related events, droughts, and wildfires, pose direct and indirect risks to public health because people will experience earlier deaths and worsening illnesses. Indirect impacts on public health include an increase in vector-borne diseases, stress and mental trauma due to extreme events and disasters, economic disruptions, and residential displacement.²²

4.4.2.2 Off-Site Redesignation Parcels

Since the off-site redesignation parcels are located within the same region as the project site, the environmental setting would be the same as what is described above in Section 4.4.2.1 *Project Site*.

4.4.3 Regulatory Framework

This section provides a summary of the greenhouse gas emissions plans and policies of the City, and regional, state, and federal agencies that have policy and regulatory control over the project site.

4.4.3.1 Federal

Several federal executive orders (EOs) related to GHG emissions and climate resiliency have been signed by President Biden. EO 13990, signed in January 2021, set a national goal to achieve a 50 to 52 percent reduction in economy-wide net GHG pollution from 2005 levels by 2030. In addition, EO 14057, signed in December 2021, requires federal agencies to develop strategic processes for

- ¹⁹ Ibid.
- ²⁰ Ibid.
- ²¹ Ibid.
- ²² Ibid.

¹⁶ Intergovernmental Panel on Climate Change. 2018. *Global Warming of 1.5°C. Contribution of Working Group I, II, and III.* Available: https://www.ipcc.ch/sr15/. Accessed: March 14, 2024.

¹⁷ Ibid.

¹⁸ Ibid.

achieving, among other things, carbon-free electricity by 2030 and 100 percent zero-emission vehicle acquisitions by 2035. President Biden has also signed two bills, the Infrastructure Investment and Jobs Act (2021) and Inflation Reduction Act (2022), that provide funding for infrastructure improvements to reduce GHG emissions and bolster resilience to climate change. Despite these actions, there is currently no federal law regarding GHG emissions or a legislatively mandated national GHG reduction target.

Vehicle Emissions Standards

The National Highway Traffic Safety Administration (NHTSA) and EPA set Corporate Average Fuel Economy (CAFÉ) standards that require substantial improvements in fuel economy and reductions in GHG emissions generated by passenger cars and light-duty trucks sold in the United States. On August 2, 2018, NHTSA and EPA proposed amendments to the current fuel efficiency standards for passenger cars and light-duty trucks as well as new standards for model years 2021 through 2026. Under the Safer Affordable Fuel Efficient (SAFE) Vehicles Rule, current 2020 standards would be maintained through 2026.

On September 19, 2019, NHTSA and EPA issued a final action on the One National Program Rule, which is considered Part One of the SAFE Vehicles Rule and a precursor to the proposed fuel efficiency standards, withdrawing the California Clean Air Act (CCAA) preemption waiver to set state-specific standards.²³ EPA reinstated California's authority under the CAA to implement its own GHG emission standards and zero-emission vehicles sales mandate on March 9, 2022.²⁴

On December 19, 2021, NHTSA finalized its vehicle efficiency standards rule to reach a projected industry-wide target of 40 miles per gallon by 2026, an approximately 25 percent increase over the prior SAFE rule.²⁵

4.4.3.2 State

Statewide GHG Emission Targets and the Climate Change Scoping Plan

The state has adopted legislation to address various aspects of climate change and GHG emissions mitigation. Much of this legislation establishes a broad framework for the state's long-term GHG reduction and climate change adaptation program. Senate Bill (SB) 32 requires the state to reduce emissions to 40 percent below the 1990 level by 2030. Assembly Bill (AB) 1279 requires California to achieve net-zero GHG emissions (i.e., reach a balance between the GHGs emitted and removed from the atmosphere) no later than 2045 and maintain net-negative GHG emissions from then on. It

²³ The One National Program Rule enables NHTSA and EPA to provide nationwide uniform fuel economy and GHG vehicle standards by 1) clarifying that federal law preempts state and local tailpipe GHG standards, 2) affirming NHTSA's statutory authority to set nationally applicable fuel economy standards, and 3) withdrawing California's CAA preemption waiver to set state-specific standards.

²⁴ California, 22 other states, the District of Columbia, and two cities filed suit against Part One of the SAFE Vehicles Rule on September 20, 2019 (*California et al. v. United States Department of Transportation et al.*, 1:19cv-02826, U.S. District Court for the District of Columbia). On December 12, 2021, NHTSA repealed the SAFE Vehicles Rule, Part One.

²⁵ NHTSA and EPA published final rules to amend and establish national carbon dioxide (CO₂) and fuel economy standards on April 30, 2020 (Part Two of the SAFE Vehicles Rule) (85 *Federal Register* 24174). The revised rule changes the national fuel economy standards for light-duty vehicles, decreasing from 46.7 to 40.4 miles per gallon in future years. California, 22 other states, the District of Columbia filed a petition for review of the final rule on May 27, 2020.

also mandates an 85 percent reduction in statewide anthropogenic GHG emissions (from 1990 levels) by 2045. SB 1203 requires state agencies to achieve net-zero GHG emissions resulting from their operations no later than 2035, or as soon thereafter as feasible.

The state's plan to reach the aforementioned targets is presented in periodic scoping plans. CARB adopted the 2017 Climate Change Scoping Plan (2017 Scoping Plan) in November of that year to meet the GHG reduction requirement set forth in SB $32.^{26}$ It proposed continuing the major aspects of the previous scoping plan, including cap-and-trade regulation; low-carbon fuel standards; more efficient cars and trucks, as well as freight operations; and the Renewables Portfolio Standard (RPS). Reductions in CH₄ emissions from agricultural and other wastes were also proposed. In December 2022, CARB adopted its Final 2022 Scoping Plan Update for Achieving Carbon Neutrality (2022 Scoping Plan), which identifies a technologically feasible, cost-effective, equity-focused path for achieving carbon neutrality by 2045, pursuant to AB 1279.²⁷ The plan also assesses the state's progress toward meeting the GHG emissions reduction goal called for in SB 32.

The state has also passed more detailed legislation to address GHG emissions associated with industrial sources, transportation, water conservation, building energy, solid waste, electricity generation, and energy consumption, as summarized below.

Legislation Addressing Electricity Generation

The state passed legislation that requires increasing use of renewables to produce electricity for consumers. California utilities are required to generate 33 percent of their electricity from renewables by 2020 (SB X1-2 of 2011), 52 percent by 2027 (California RPS Program [SB 100 of 2018]), 60 percent by 2030 (also SB 100 of 2018), and 100 percent by 2045 (also SB 100 of 2018). SB 1020 also requires state agencies to rely on 100 percent renewable energy and zero-carbon resources for their own facilities by 2030.

California Energy Efficiency Standards for Residential and Nonresidential Buildings—Green Building Code, Title 24 Update

The energy consumption of new residential and non-residential buildings in California is regulated by California Code of Regulations (CCR) Title 24, Part 6, Building Energy Efficiency Standards (California Energy Code), and Part 11, California Green Building Standards Code (CALGreen). The California Energy Commission (CEC) updates the California Energy Code every 3 years with more stringent design requirements to reduce energy consumption, resulting in lower GHG emissions.

In August 2021, the CEC adopted the 2022 Building Energy Efficiency Standards, which took effect on January 1, 2023.²⁸ The 2022 non-residential standards establish combined solar photovoltaic (PV) and battery standards for select businesses, establish new efficiency standards for commercial greenhouses, and improve efficiency standards for the building envelope, internal systems, and grid integration equipment.

²⁶ CARB. 2017. California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target. November. Available: https://www.arb.ca.gov/cc/scopingplan/ scoping_plan_2017.pdf. Accessed: December 15, 2023.

²⁷ CARB. 2022. 2022 Scoping Plan for Achieving Carbon Neutrality. November. Available: https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf. Accessed: January 9, 2024.

²⁸ California Energy Commission. 2021. 2022 Building Energy Efficiency Standards Summary. Available: https://www.energy.ca.gov/sites/default/files/2021-08/CEC_2022_EnergyCodeUpdateSummary_ADA.pdf. Accessed: December 15, 2023.
Fuel Efficiency Standards for Light-Duty Passenger Vehicles

AB 1493 of 2002 (Pavley I) required CARB to develop and implement regulations to reduce automobile and light-truck GHG emissions. These stricter emissions standards began with the 2009 model year. Additional strengthening of the Pavley standards (referred to previously as *Pavley II* and now referred to as the *Advanced Clean Cars* measure) was adopted for vehicle model years 2017–2025 in 2012. Together, the two standards were expected to increase average fuel economy to roughly 54.5 miles per gallon by 2025.

In August 2022, CARB board members voted to approve the Advanced Clean Cars II proposal, which should dramatically reduce emissions from passenger cars in model years 2026 through 2035. This will require an increasing proportion of new vehicles to be zero-emission vehicles, with the goal being to have 100 percent of new vehicles sold by 2035 to be zero-emission vehicles.²⁹

CARB also adopted the Advanced Clean Truck Regulation to accelerate a large-scale transition to zero-emission medium- and heavy-duty vehicles. The regulation requires zero-emission medium- and heavy-duty vehicles to be an increasing percentage of total annual vehicle sales in California between 2024 and 2035. By 2035, zero-emission truck/chassis sales will 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. By 2045, every new medium- and heavy-duty truck sold in California will need to be a zero-emission truck. Large employers, including retailers, manufacturers, brokers, and others, are required to report information about shipments and shuttle services to ensure they purchase available zero-emission trucks for their fleets.

Low-Carbon Fuel Standard

CARB adopted the low-carbon fuel standard (LCFS) in 2007 to reduce the carbon intensity of California's transportation fuels. The LCFS applies to fuels used by on-road motor vehicles and off-road vehicles, including construction equipment.

Note that the majority of the emissions benefits due to the LCFS come from the production cycle (i.e., upstream emissions) of the fuel rather than the combustion cycle (i.e., tailpipe). As a result, LCFS-related reductions are not included in this analysis of combustion-related emissions of CO₂.

Regional Land Use and Transportation Planning Requirements

In addition to regulations that address tailpipe emissions and transportation fuels, the legislature has passed regulations to address the number of miles driven in light-duty passenger vehicles. Since the passage of SB 375 in 2008, CARB has required metropolitan planning organizations (MPOs) to adopt plans that show reductions in GHG emissions from passenger cars and light trucks in their respective regions between 2020 and 2035.³⁰ If regions develop integrated land use, housing, and transportation plans that meet the SB 375 targets, new projects in the regions can be relieved of certain CEQA review requirements.

²⁹ California Air Resources Board. 2022. Proposed Advanced Clean Cars II Regulations: All New Passenger Vehicles Sold in California to Be Zero Emissions by 2035. Available: https://ww2.arb.ca.gov/our-work/programs/ advanced-clean-cars-program/advanced-clean-cars-ii. Accessed: January 30, 2023.

³⁰ CARB. 2018. SB 375 Regional Greenhouse Gas Emissions Reduction Targets. March 22. Available: https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-program/regional-plan-targets. Accessed: December 15, 2023.

CEQA Requirements to Assess Vehicle Miles Traveled

Under SB 743 of 2013, the Governor's Office of Planning and Research (OPR) proposed changes to the CEQA Guidelines to require CEQA transportation analyses to move away from focusing on vehicle delay and level of service (LOS) and instead focus on vehicle miles traveled (VMT). The intent behind SB 743 is to integrate and balance congestion management, infill development, active transportation with GHG emissions reductions. These changes were adopted by the California Natural Resources Agency, resulting in the addition of Section 15064.3. In support of these changes, OPR published its *Technical Advisory on Evaluating Transportation Impacts in CEQA*, which recommends that the transportation impact of a project be based on whether a project would generate a level of VMT per capita (or VMT per employee) that would be 15 percent lower than that of existing development in the region. OPR's technical advisory explains that this criterion is consistent with Section 21099 of the California Public Resources Code, which states that criteria for determining significance must "promote the reduction in greenhouse gas emissions."³¹ This metric replaces the use of delay and LOS to measure transportation-related impacts.

Short-Lived Climate Pollutant Strategy

In 2014, SB 605 directed CARB, in coordination with other state agencies and local air districts, to develop the comprehensive SLCP Reduction Strategy. In 2016, SB 1383 directed CARB to approve and implement the strategy to achieve the following reductions in SLCPs:

- 40 percent reduction in CH₄ relative to 2013 levels by 2030,
- 40 percent reduction in HFC gases relative to 2013 levels by 2030, and
- 50 percent reduction in anthropogenic black carbon relative to 2013 levels by 2030.

SB 1383 also establishes the following targets for reducing organic waste in landfills, as well as CH₄ emissions from dairy and livestock operations, as follows:

- 50 percent reduction in organic waste disposal relative to 2014 levels by 2020,
- 75 percent reduction in organic waste disposal relative to 2014 levels by 2025, and
- 40 percent reduction in CH₄ emissions from livestock and dairy manure management operations relative to the livestock and dairy sectors' 2013 levels by 2030.

CARB and the California Department of Resources Recycling and Recovery (CalRecycle) have developed regulations to achieve the organic waste reduction goals under SB 1383. In January and June 2019, CalRecycle proposed new and amended regulations to CCR Title 14 and Title 27. Among other things, the regulations set forth minimum standards for organic waste collection, hauling, and composting. The final regulations took effect on January 1, 2022.

CARB adopted the SLCP Reduction Strategy in March 2017 as a framework for achieving the CH₄, HFC, and anthropogenic black carbon reduction targets set by SB 1383. The SLCP Reduction Strategy includes 10 measures to reduce SLCPs, which fit within a wide range of ongoing planning efforts throughout the state, including CARB's and CalRecycle's proposed rulemaking on organic waste diversion.

³¹ Office of Planning and Research. 2017. Technical Advisory on Evaluating Transportation Impacts in CEQA. Available: https://opr.ca.gov/docs/20180416-743_Technical_Advisory_4.16.18.pdf. Accessed: February 23, 2024.

4.4.3.3 Local

Metropolitan Transportation Commission

Metropolitan Transportation Commission (MTC) is the MPO for the nine counties that make up the Bay Area and the San Francisco Bay Area Basin (SFBAAB), which includes South San Francisco. The first per capita GHG emissions reduction targets for the SFBAAB were 7 percent by 2020 and 15 percent by 2035 from 2005 levels. However, the per capita GHG emissions reductions targets for the SFBAAB have been revised to 10 percent by 2020 and 19 percent by 2035.³² MTC adopted a Sustainable Communities Strategy (SCS) as part of its Regional Transportation Plan (RTP) for the SFBAAB in 2021, known as Plan Bay Area 2050.³³ Plan Bay Area 2050 includes transportation and environmental strategies that support active and shared modes of travel combined with a transit-supportive land use pattern that places housing near transportation centers. Implementation of these strategies are forecast to lower the share of Bay Area residents who drive to work alone from 50 percent in 2015 to 33 percent in 2050. This would lead to a 20 percent decrease in GHG emissions compared to 2005, thereby meeting the state mandate of a 19 percent decrease in GHG emissions by 2050.

Bay Area Air Quality Management District

BAAQMD is the primary agency responsible for addressing air quality concerns in the San Francisco Bay Area, including San Mateo County. Its role is discussed further in Chapter 4.2, *Air Quality*. BAAQMD also recommends methods for analyzing project-related GHGs in CEQA analyses as well as multiple GHG reduction measures for land use development projects.

In April 2023, BAAQMD adopted the 2022 CEQA Air Quality Guidelines, which include new climate impact thresholds that address the statewide GHG target established by SB 32 and the eventual goal of carbon neutrality by 2045 (e.g., EO B-55-18).³⁴ The guidelines also look at how project and plan-level CEQA analyses should evaluate the significance of climate impacts, based on evolving case law. The BAAQMD 2022 CEQA Air Quality Guidelines update the CEQA GHG thresholds from the 2017 CEQA Air Quality Guidelines, which were not consistent with the statewide GHG target established by SB 32. In summary, the updated thresholds emphasize (1) avoiding wasteful electricity usage and developing fossil fuel infrastructure in new buildings that will be in place for decades and thus conflict with carbon-neutrality goals by 2045; (2) complying with the CALGreen Tier 2 electric-vehicle (EV) requirements and per-capita reductions in VMT, consistent with SB 743; and (3) ensuring consistency with a qualified GHG emissions reduction strategy (also known as a Climate Action Plan [CAP]). BAAQMD also provided an appendix to the 2022 CEQA Air Quality Guidelines, the Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans (BAAQMD Justification Report), which explains why its thresholds and approach to analysis for project-level impacts under CEQA are supported by substantial evidence.

³² CARB. 2018. SB 375 Regional Greenhouse Gas Emissions Reduction Targets. March 22. Available: https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-program/regional-plan-targets. Accessed: December 15, 2023.

³³ Metropolitan Transportation Commission and Association of Bay Area Governments. 2021. *Plan Bay Area 2050.* Adopted: October 2021. Available: https://www.planbayarea.org/finalplan2050. Accessed: December 15, 2023.

³⁴ BAAQMD. 2023. CEQA Thresholds and Guidelines Update. April. Available: https://www.baaqmd.gov/ plans-andclimate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines. Accessed: December 15, 2023.

City of South San Francisco Climate Action Plan

The City CAP was adopted in 2022 to reduce community and municipal GHG emissions. The CAP is a roadmap that outlines a path for the City to use to achieve its community-wide per-service-population GHG emissions reduction goal of 40 percent below 1990 levels by 2030, 80 percent below 1990 levels by 2040, and carbon neutral by 2045.³⁵ The CAP features 62 recommended GHG emissions reduction measures within seven sectors of community and municipal operations: clean energy, built environment (new and existing), transportation and land use, solid waste, water and wastewater, carbon sequestration and natural systems, and city leadership).

Shape South San Francisco 2040 General Plan

The following GHG-related goals from the *Shape South San Francisco 2040 General Plan* (General Plan)³⁶ are applicable to the proposed project:

Goal CP-1: A carbon neutral community by 2045.

Goal CP-2: A resilient and fossil fuel free energy system.

Goal CP-3: Green buildings are the standard in South San Francisco for new construction and major renovations.

Goal CP-6: The City continues to divert organics from landfill in accordance with state targets.

Goal CR-1: The City proactively advances community resilience and is prepared for all hazards, including climate disruption.

Goal CR-2: A resilient community that protects existing and future development and people from sea level rise and flooding.

Goal ES-1: The City supports nature in South San Francisco to encourage healthy ecosystems, improve air and water quality, improve public health, and adapt to a changing climate.

Goal ES-5: Landscape design standards for new development enhance habitat quality, reduce water use, and support a diverse ecosystem.

Goal MOB-4: South San Francisco's land use and transportation actions reduce VMT and GHG emissions.

Goal PE-4: Infrastructure investments support job access, job growth, and address climate hazards impacting South San Francisco businesses.

Goal SA-27: There are safe, comfortable, and accessible pedestrian and bicycle facilities that connect people to Downtown, El Camino, and East of 101.

³⁵ City of South San Francisco. 2022. City of South San Francisco Climate Action Plan. Available: https://shapessf.com/wp-content/uploads/2022/03/SSFCAP_PublicDraft2022_02_Small.pdf. Accessed: December 15, 2024.

³⁶ City of South San Francisco. 2022. Shape South San Francisco 2040. Available: https://shapessf.com/. Accessed: December 15, 2023.

Lindenville Specific Plan

The following greenhouse gas-related goals from the *Lindenville Specific Plan*³⁷ are applicable to the proposed project:

Goal DD-1: The Mixed Use Neighborhood, South Spruce Avenue Corridor and South Linden Avenue Arts and Makers District have a network of safe, walkable streets and pathways to access key destinations and open spaces.

Goal DD-3: New developments in Lindenville provide healthy places for people to live and work by mitigating potential noise, air quality, and odor impacts from industrial land uses, U.S. 101 and Interstate 380, and aircraft.

Goal MOB-1: Multi-modal travel options are readily available and offer equal levels of comfort.

Goal MOB-2: There are high-quality connections to Downtown, El Camino, East of 101, and regional destinations for all modes.

Goal MOB-3: Lindenville's transportation offerings and streetscape design support a vibrant mixeduse district.

Goal I-1: The development, management, and maintenance of infrastructure in Lindenville is driven by the ability to optimize the efficiency and effectiveness of each system, and to achieve the performance required to meet the City's sustainability goals.

Goal I-2: Lindenville invests in sustainable and resilient infrastructure and practices to illustrate leadership.

Goal I-5: The City increases reliance on local energy systems to ensure adequate utility provisioning for new potential users.

4.4.3.4 Transportation Demand Management Ordinance

The City's Transportation Demand Management (TDM) ordinance requires projects to incorporate measures to reduce the number of trips generated and achieve goals related to the use of alternative modes. According to the ordinance, projects that are categorized as Tier 4 projects (i.e., office and research-and-development [R&D] uses with at least 400,000 square feet [sf] of gross floor area) must implement trip reduction measures with a total worth of at least 50 points, based on the City Planning Department's table of measures and point values; implement annual monitoring to ensure a maximum of 50 percent of employees commuting while driving alone; and implement annual monitoring of a site-specific trip cap.³⁸ The ordinance also requires an annual employee mode-share survey at the project site to ensure that desired transportation mode shares are achieved. Where the mode share target is not achieved, City officials may require program modifications to increase alternative mode share or impose administrative penalties.

4.4.3.5 City of South San Francisco Municipal Codes

Chapter 15.60: The Recycling and Diversion of Debris from Construction and Demolition of the City's Municipal Code is applicable to this project. The City Municipal Code promotes redirection of recyclable materials generated during construction away from landfills and requires all project

³⁷ City of South San Francisco. 2023. *Lindenville Specific Plan*. Available: https://shapessf.com/wp-content/uploads/ 2023/10/LindenvilleSP_CompleteFinalPlan_1023_23.pdf. Accessed: January 12, 2024.

³⁸ South San Francisco, California, Municipal Code Section 20.400.

applicants to submit a recycling management plan to estimate the volume of debris generated during construction and the estimated amount of debris that would be sent to the landfill. Furthermore, Section 15.60.20 of the City Municipal Code requires the City to encourage contractors to make every structure planned for demolition available for deconstruction, salvage, and recovery prior to demolition and recover the maximum feasible amount of salvageable designated recyclable and reusable materials prior to demolition.

4.4.4 Impacts and Mitigation Measures

This section describes the impact analysis related to greenhouse gas emissions for the proposed project, including the off-site redesignation parcels. It describes the methods and thresholds used to determine whether an impact would be significant. Measures to mitigate (i.e., avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion, when necessary.

4.4.4.1 Significance Criteria

Based on Appendix G of the CEQA Guidelines, the proposed project would have a significant greenhouse gas emissions impact if it would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Compliance with BAAQMD GHG Thresholds for Land Use Projects

Construction

BAAQMD's CEQA Air Quality Guidelines do not identify a GHG emission threshold for constructionrelated emissions. Instead, the CEQA Air Quality Guidelines recommend that GHG emissions from construction be quantified and disclosed and that a determination regarding the significance of the GHG emissions be made with respect to whether a project would be consistent with emission reduction goals. BAAQMD further recommends incorporation of best management practices to reduce GHG emissions during construction, as feasible and applicable.

Operation

According to the CEQA Air Quality Guidelines, BAAQMD recommends that land use projects use the approach endorsed by the California Supreme Court in *Center for Biological Diversity v. Department of Fish & Wildlife* (2015) (62 Cal. 4th 204), which specifies that a project must evaluate its effect on California's efforts to meet the state's long-term climate goals. As the California Supreme Court held in that case, a project that meets the state's long-term climate goals can be found to have a less-than-significant impact on climate change under CEQA. Specifically, if a project contributes a "fair share"³⁹

³⁹ BAAQMD defines "fair share" as the design elements that need to be incorporated into a project to lay the foundation for achieving carbon neutrality by 2045. These design elements are elements that the project has influence or control over. For example, becoming carbon neutral by 2045 will require California's electrical power generators to shift to 100 percent carbon-free energy resources, which is not something that can be

toward what will be required to achieve long-term climate goals, then a reviewing agency can find that the impact will not be significant because the project will help to solve the problem of global climate change (62 Cal. 4th 220–223). Applying this approach, BAAQMD has found that a new land use development project being built today needs to incorporate the design elements shown in Table 4.4-4 to do its fair share toward meeting the SB 32 target for 2030 and the goal of carbon neutrality by 2045. If a project incorporates the design elements listed in Table 4.4-4 (Threshold Option A) or is consistent with a local GHG reduction strategy under Section 15183.5 of the CEQA Guidelines (Threshold Option B), then it will contribute a portion to what will be necessary to achieve California's long-term climate goals (i.e., its fair share) and will not result in a cumulatively considerable contribution to global climate change. If a project does not incorporate the design elements and is not consistent with a local GHG reduction strategy, then it should be found to be a project with a significant climate impact because it will hinder the state's efforts to address climate change.

The City's CAP does not meet the criteria for tiering under CEQA Guidelines Section 15183.5(b); therefore, Threshold Option B cannot be used. Thus, this analysis evaluates consistency with BAAQMD's threshold for land use projects by comparing this project to Threshold Option A, as stated in Table 4.4-4.

Table 4.4-4. BAAQMD GHG Thresholds for Land Use Projects

Thresholds for Land Use Projects (Must Include A or B)

A. Projects must include, at a minimum, the following project design elements:

- 1. Buildings
 - a. The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development).
 - b. The project will not result in any wasteful, inefficient, or unnecessary energy usage, as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the CEQA Guidelines.
- 2. Transportation
 - a. Achieve compliance with EV requirements in the most recently adopted version of CALGreen Tier 2.
- b. Achieve a reduction in project-generated VMT to a level below the regional average, consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent), or meet a locally adopted SB 743 VMT target, reflecting the recommendations provided in OPR's Technical Advisory on Evaluating Transportation Impacts in CEQA:
 - i. Residential projects: 15 percent below existing VMT per capita,
 - ii. Office projects: 15 percent below existing VMT per employee, and
 - iii. Retail projects: no net increase in existing VMT.
- B. Projects must be consistent with a local GHG reduction strategy that meets the criteria under CEQA Guidelines Section 15183.5(b).

Source: Bay Area Air Quality Management District. 2023. *CEQA Thresholds and Guidelines Update*. April. Available: https://www.baaqmd.gov/ plans-and-climate/4.4-15alifornia-environmental-quality-act-ceqa/updated-ceqa-guidelines. Accessed: December 15, 2023.

controlled through the design of new land use projects and would not be a part of a project's fair share. Other sources that would not be part of the "fair share" are vehicle fleet mix and indirect off-site emissions (e.g., CH_4 emissions from wastewater or solid waste).

Compliance with Regulatory Programs

This analysis also discusses the project's compliance with regulatory programs designed to reduce GHG emissions from particular activities (e.g., transportation, water usage). To the extent that the project's design features comply with or exceed the regulations adopted by CARB or other state agencies, the City could rely on this compliance to show that the proposed project would reduce emissions consistent with statewide legislation. This includes an analysis of the project's consistency with the City's CAP.⁴⁰ The CAP is not a qualified GHG reduction strategy that can be used for tiering purposes and, therefore, is not used to determine the significance of project emissions. However, this analysis evaluates the project's consistency with the CAP for informational purposes.

Stationary-Source Threshold

BAAQMD recommends a threshold of 10,000 metric tons (MT) CO₂e for stationary sources.⁴¹ This threshold is intended to capture 95 percent of GHG emissions from new permit applications. It would do so by capturing only large, significant projects; permit applications with emissions above the threshold of 10,000 MTCO₂e account for less than 10 percent of stationary-source permit applications.⁴² The emergency generators included as part of the proposed project would be permitted sources, and as such, BAAQMD's threshold of 10,000 MTCO₂e is appropriate for analyzing the significance of emissions from the generators.

4.4.4.2 Approach to Analysis

Greenhouse gas emissions generated by construction activities were quantified using the California Emissions Estimator Model (CalEEMod), version 2022.1.⁴³ Assumptions related to construction activity and scheduling (i.e., construction phase start and end dates) were based on project-specific information provided by the project sponsor as well as model defaults where project-specific information was not available.

Construction Activities

Construction of the south and north buildings would occur in separate stages but begin with a demolition/abatement phase that would involve construction activities on the entirety of the project site. Construction on the southern portion of the project site would occur during eight phases.

- Phase 1: Rough grading/site demolition (includes site clearing, shoring, grading, and mass excavation),
- Phase 2: Deep foundations,
- Phase 3: Foundations,
- Phase 4 Superstructure,

⁴⁰ City of South San Francisco. 2022. City of South San Francisco Climate Action Plan. Available: https://shapessf.com/wp-content/uploads/2022/03/SSFCAP_PublicDraft2022_02_Small.pdf. Accessed: December 15, 2024.

⁴¹ BAAQMD. 2023. *CEQA Thresholds and Guidelines Update*. April. Available: https://www.baaqmd.gov/ plans-andclimate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines. Accessed: December 15, 2023.

⁴² Ibid.

⁴³ California Air Pollution Control Officers Association. 2022. *California Emissions Estimator Model*. Version 2022.1. Available: https://www.caleemod.com/. Accessed: December 15, 2023.

- Phase 5: Building enclosure,
- Phase 6: Interior buildout,
- Phase 7: Sitework, and
- Phase 8: Start-up/building commissioning and final inspections.

Immediately following the completion of construction on the southern portion of the project site, construction on the northern portion would begin, with the same phases.

Each phase would have a discrete start and end date. Based on input from the project sponsor, the analysis assumes that construction would occur 5 days a week, Monday through Friday. The construction assumptions for the project are summarized below. In addition, the data used in the construction analysis are provided in Appendix D.

- **Heavy-Duty Construction Equipment**. The project sponsor provided information regarding the number of pieces of equipment, fuel type, engine tier, and hours per day for each phase of construction. Some equipment would be electrically powered, including the scissor lifts and manlifts. All construction equipment would be equipped with a Tier 4 Final engine, except for electrical equipment, which does not produce direct emissions. In addition, a diesel-powered drill rig would have a Tier 3 engine.
- **Construction Workers' Vehicle Trips**. Calculations of emissions from workers' vehicles were based on the CalEEMod default number for daily workers per phase, the number of trips per day (i.e., two one-way trips per worker), trip length (i.e., 12 miles one way), and fleet mix (e.g., light-duty autos and light-duty trucks).⁴⁴ Emissions were calculated in CalEEMod, which uses Emissions Factor 2021 (EMFAC2021).⁴⁵
- **Construction Vendor Truck Trips**. Calculations of emissions from vendors' trucks were based on the number of daily vendors per phase, as provided by the project sponsor; the number of trips per day (i.e., two one-way trips), trip length (i.e., 8 miles one way), and fleet mix (e.g., heavy-heavy duty trucks, medium-heavy-duty trucks), then calculated in CalEEMod.
- **Construction Haul Truck Trips**. Calculations of emissions from haul trucks were based on the total number of haul trucks per phase, as provided by the project sponsor, for the rough grading/site demolition, deep foundations, foundations, superstructure, and building enclosure phases. Trip lengths and fleet mix (e.g., heavy-heavy duty trucks) were also considered. The total number of truck trips for each construction phase was calculated by multiplying the number of daily trips by the number of days for the construction phase.
- **Electricity**. Electricity would be consumed by construction equipment and mobile offices, amounting to 2,392 megawatt hours (MWh) for each year of construction, based on input from the project sponsor.⁴⁶ Peninsula Clean Energy (PCE) provides electrical service to the project site. Since 2021, PCE has provided 100 percent carbon-free electricity to its customers; as such, there would be no indirect GHG emissions from the use of electricity during construction.

⁴⁴ Ibid.

⁴⁵ CARB. 2021. EMFAC2021 Web Database. Version 1.0.1. Available: https://www.arb.ca.gov/emfac/. Accessed: December 15, 2023.

⁴⁶ Metz, Bridget. SteelWave. June 21, 2023—email to Devan Atteberry of ICF regarding T131 CEQA project data needs.

Operations

Greenhouse gas emissions generated by operational activities were quantified using CalEEMod, version 2022.1.⁴⁷ Assumptions related to operational activity were based on project-specific information provided by the project sponsor. Additional operational assumptions unique to the analysis of GHG emissions are provided below.

Energy

Based on input from the project sponsor, the project would consume approximately 58,885,593 kWh of electricity each year.⁴⁸ This estimate includes electricity usage associated with project buildings and the enclosed parking garage.

Water and Wastewater

Water consumption requires electricity to supply, pre-treat, and distribute the water prior to being consumed and treat wastewater subsequent to being consumed. The electricity consumed for these water processes results in indirect GHG emissions. Based on information from the project sponsor, approximately 9,521,808 gallons of water per year would be used indoors and 1,952,414 gallons of water per year would be used outdoors.⁴⁹

Waste

Based on input from the project sponsor, the project would generate approximately 1,352 tons of landfilled waste per year, resulting in fugitive GHG emissions during decomposition of the waste once it is deposited in a landfill.⁵⁰

4.4.4.3 Impact Evaluation

Impact GHG-1: The project would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. (*Less than Significant*)

Project

Construction Emissions

Construction activities would generate emissions of CO₂, CH₄, N₂O and HFCs from mobile and stationary construction equipment as well as employees' vehicles and haul trucks. Based on available information provided by the project sponsor, construction would begin with a demolition phase, with construction activities occurring on the entirety of the project site. Then, construction of the south portion of the project would begin, with eight main phases. Immediately following completion of the south portion of the project, construction of the north portion would begin, with the same phasing as that of the south portion. Construction of the project would begin in January 2026 and be completed by May 2031, lasting approximately 65 months. Construction modeling outputs and detailed assumptions are included in Appendix D. The estimated construction emissions for the project are summarized by year in Table 4.4-5, below.

⁴⁷ California Air Pollution Control Officers Association. 2022. *California Emissions Estimator Model*. Version 2022.1. Available: https://www.caleemod.com/. Accessed: December 15, 2023.

⁴⁸ Ibid.

⁴⁹ Ibid.

⁵⁰ Ibid.

CO ₂	CH ₄	N ₂ O	HFCs	CO ₂ e
1,808	< 1	< 1	< 1	1,860
1,743	< 1	< 1	< 1	1,763
1,316	< 1	< 1	< 1	1,342
1,605	< 1	< 1	< 1	1,629
1,729	< 1	< 1	< 1	1,746
295	< 1	< 1	< 1	299
8,497	< 1	< 1	< 1	8,639
	CO2 1,808 1,743 1,316 1,605 1,729 295 8,497	CO2 CH4 1,808 < 1	CO2 CH4 N2O 1,808 <1	CO2 CH4 N2O HFCs 1,808 <1

Table 4.4-5. Estimated GHG Emissions from Project Construction (metric tons per year)^a

 CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; HFC = hydrofluorocarbon; CO_2e = carbon dioxide equivalent, including the relative warming capacity (i.e., GWP) of each GHG

As shown in Table 4.4-5, it is estimated that construction of the project would generate approximately 8,639 MTCO₂e over the entire construction period. The emissions generated during construction of the project would result primarily from the use of diesel-powered construction equipment (e.g., excavators) and on-road vehicles (e.g., haul trucks, workers' vehicles). Construction emissions would cease once construction of the project is complete and, therefore, are considered short term. Furthermore, the project sponsor would implement best management practices, as outlined in Section 6.3 of the CEQA Air Quality Guidelines and listed below.⁵¹

- Use zero-emission and hybrid-powered equipment to the greatest extent possible, particularly if emissions are occurring near sensitive receptors or within a Bay Area Air Quality Management District-designated Community Air Risk Evaluation (CARE) area or Assembly Bill 617 community.⁵²
- Require all diesel-fueled off-road construction equipment to be equipped with U.S. Environmental Protection Agency Tier 4 Final engines or better.
- Require all on-road heavy-duty trucks to be zero emissions or meet the most stringent modelyear emissions standard where feasible.
- Minimize idling time, either by shutting equipment off when not in use or reducing the time of idling to no more than 2 minutes. Provide clear signage that posts this requirement for workers at the entrances to the site.
- Use California Air Resources Board–approved renewable diesel fuel in off-road construction equipment and on-road trucks where feasible.
- Use U.S. Environmental Protection Agency SmartWay-certified trucks for deliveries and equipment transport where feasible.
- Require all construction equipment to be maintained and properly tuned in accordance with the manufacturer's specifications.
- Where grid power is available, prohibit portable diesel engines and provide electrical hook-ups for electric tools, such as saws, drills, and compressors; use electric tools whenever feasible.

⁵¹ Ibid.

⁵² The Project site is not located within a CARE or AB 617 community.

- Where grid power is not available, use alternative fuels, such as propane or solar electrical power, for generators at construction sites whenever feasible.
- Encourage and provide carpools, shuttle vans, transit passes, and/or secure bicycle parking to construction workers and offer meal options on-site or shuttles to nearby meal destinations for construction employees.
- Reduce electricity use in the construction office by using LED bulbs, powering off computers every day, and replacing heating and cooling units with more efficient ones.
- Minimize energy used during site preparation by deconstructing existing structures to the greatest extent feasible.
- Recycle or salvage nonhazardous construction and demolition debris, with a goal of recycling at least 15 percent more, by weight, than the diversion requirement in Title 24.
- Use locally sourced or recycled materials for construction (goal of at least 20 percent, based on cost of building materials and volume of roadway, parking lot, sidewalk, and curb materials).
- Use low-carbon concrete, minimize the amount of concrete used, and produce concrete on-site where feasible if it is more efficient than transporting ready-mix.
- Develop a plan to efficiently use water for adequate dust control because substantial amounts of energy can be consumed by pumping water.
- Include all requirements in applicable bid documents, purchase orders, and contracts, with successful contractors demonstrating the ability to supply compliant on- or off-road construction equipment prior to any ground-disturbing and construction activities.

The City Municipal Code promotes redirection of recyclable materials generated during construction away from landfills (Chapter 15.60) and requires all project applicants to submit a recycling management plan to estimate the volume of debris generated during construction and the estimated amount of debris that would be sent to the landfill. Furthermore, Section 15.60.20 of the City Municipal Code requires the City to encourage contractors to make every structure planned for demolition available for deconstruction, salvage, and recovery prior to demolition and recover the maximum feasible amount of salvageable designated recyclable and reusable materials prior to demolition.

Operational Emissions

Area, energy, water, and waste emissions were estimated using CalEEMod. Area sources include gaspowered landscaping equipment. Energy sources are typically associated with the combustion of natural gas as well as the use of electricity. Water consumption results in indirect GHG emissions from the conveyance and treatment of water, and waste generation results in fugitive CH_4 and N_2O emissions from decomposition of organic matter. Net emissions associated with the project were estimated by subtracting emissions associated with existing land uses from emissions associated with proposed land uses.

Table 4.4-6 shows existing land use emissions, proposed project emissions, and the difference between the two, which is the net impact of the proposed project. The area-source emissions in Table 4.4-6 assume implementation of Measure AQ-3, Require Use of Zero-Emission Landscape Equipment, which was proposed to reduce ROG emissions, as explained in Section 2.3.3. This would also reduce GHG emissions. The operational modeling outputs and detailed assumptions are included in Appendix D.

Source	CO ₂	CH4	N ₂ O	HFCs	CO ₂ e
Existing Land Uses					
Area Sources	—		—		—
Energy Use ^a	—	—	—		—
Mobile Sources	723	<1	<1	< 1	734
Solid Waste Generation	—	1	—	—	35
Water Use	—	1	<1	—	31
Total Existing On-site Operational Emissions (per year)	723	2	<1	< 1	800
Proposed Project					
Area Sources ^a	—	_	—	< 1	14
Energy Use ^b	—	—	—	—	—
Mobile Sources	11,823	< 1	< 1	< 1	11,953
Stationary Sources	919	< 1	< 1		922
Solid Waste Generation		12			301
Water Use	_	< 1	< 1		10
Vegetation	-56				-56
Total Project On-Site Operational Emissions (per year)	12,687	13	< 1	< 1	13,145
Net Project Emissions	11,963	10	< 1	< 1	12,345

Table 4.4-6. Annual Net Operational Greenhouse Gas Emissions (metric tons per year)

 CH_4 = methane; CO_2 = carbon dioxide; CO_2e = carbon dioxide equivalent; N_2O = nitrous oxide; HFCs = hydrofluorocarbons

^{a.} Area sources include refrigerants.

^{b.} The existing project site is currently receiving on-site electricity from on-site renewables or PCE, which means there are no energy-related emissions. PCE uses 100 percent renewable sources to generate electricity. The proposed project would have all-electric buildings that would receive electricity from on-site renewables or PCE, indicating that there would be no energy-related emissions.

As shown in Table 4.4-6, the proposed project would result in approximately 13,145 MTCO₂e per year. Net emissions associated with the project were estimated by subtracting emissions associated with existing land uses from proposed land uses. Net project emissions would total 12,345 MTCO₂e per year. As discussed above, BAAQMD's GHG threshold is centered around design elements rather than a quantitative bright-line threshold. Nevertheless, this analysis presents quantified GHG emissions for project operations.

BAAQMD land use GHG thresholds are established to ensure that projects meet their "fair share" contribution and help the state meet its long-term climate goals (SB 32 and EO B-55-18). BAAQMD has identified design elements and metrics that, if achieved by a project, represent a fair share as to contributing to long-term state goals. These design elements and metrics include not incorporating natural gas infrastructure in the project design, not wasting electricity, promoting EV use and charging consistent with CALGreen Tier 2 requirements, and, lastly, reducing VMT in accordance with the 2017 Scoping Plan. The proposed project's consistency with these requirements is discussed in Table 4.4-7.

Sector	BA to	AQMD Threshold Option A (refer Table 4.4-4)	Project Consistency
1. Buildings	a)	The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development).	Consistent. The proposed project would not include natural gas infrastructure in its design. It would therefore be consistent with this BAAQMD requirement.
	b)	The project will not result in any wasteful, inefficient, or unnecessary energy usage, as determined by the analysis required under CEQA Section 21100(b)(2) and Section 15126.2(b) of the CEQA Guidelines.	Consistent. The proposed project would pursue Leadership in Energy and Environmental Design (LEED) certification. As part of its design, the proposed project would include a PV solar system. Furthermore, the new building would be built under current or later CALGreen codes, which would result in at least 30 percent less energy usage compared with commercial buildings that were designed to meet the 2016 CALGreen code. This reduction would be achieved primarily through a transition to high-efficiency lighting. Emergency generators on the project site would be used infrequently for emergency backup power or when testing is required to ensure proper functioning. Thus, generator use would not be wasteful, inefficient, or unnecessary because generators would be used only during emergencies or during testing. As such, the proposed project would not waste energy and would be consistent with this BAAQMD requirement.
2. Transportation	a)	Achieve compliance with electric- vehicle requirements in the most recently adopted version of CALGreen Tier 2.	Consistent. The proposed project would meet the CALGreen Tier 2 nonresidential voluntary requirement (i.e., 45 percent of all spaces to be EV capable and 33 percent of the EV spaces to have electric-vehicle supply equipment [EVSE]). As such, the proposed project would be consistent with this BAAQMD requirement.
	b)	Achieve a reduction in project- generated vehicle miles traveled (VMT) to a level below the regional average, consistent with the current version of the California Climate Change Scoping Plan, or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and	Consistent. The proposed project, which would be a nonresidential project, would develop a new R&D building and parking lot near residential and commercial uses, thereby reducing the demand for travel by single-occupancy vehicles. In addition, the project area is served by public transit. The proposed project would develop and implement a TDM

Table 4.4-7. Project Consistency with the BAAQMD GHG Land Use Thresholds (Option A)

	BAAQMD Threshold Option A (refer	
Sector	to Table 4.4-4)	Project Consistency
Source: BAAOMD 2022	 Research Technical Advisory on Evaluating Transportation Impacts in CEQA: i. Residential projects: 15 percent below the existing VMT per capita, ii. Office projects: 15 percent below the existing VMT per employee, and iii. Retail projects: no net increase in existing VMT. 	plan consistent with the City's TDM ordinance, with measures that would reduce vehicle traffic in and around the project site. Also, the proposed project's bicycle and pedestrian facilities would help reduce the demand for travel in single-occupancy vehicles. In total, through its design and TDM plan, the proposed project would achieve a reduction in VMT of 29.5 percent relative to unmitigated conditions, which is more than the 28 percent reduction needed to reduce existing regional VMT by 15 percent. This reduction would achieve the BAAQMD threshold regarding a VMT reduction (i.e., 15 percent below existing VMT per employee). The proposed project would be consistent with this BAAQMD requirement.
JULICE, DAAQMD 2022	U.	

As demonstrated in Table 4.4-7, the project would meet all BAAQMD requirements. Because of this, the proposed project would be consistent with BAAQMD Threshold Option A. Therefore, this impact would have a *less-than-significant* impact. No mitigation is required.

Off-Site Redesignation Parcels

The five off-site redesignation parcels are currently designated as Mixed Industrial High (MIH) under the General Plan, Specific Plan, and City Zoning Code. However, they would be redesignated Business Technology Park High (BTP-H), consistent with the proposed land use and zoning designation for the project site. The MIH designation currently allows for development of a wide range of warehousing, manufacturing, processing, service commercial, and storage and distribution uses. The redesignation would allow for high-density corporate headquarters, R&D facilities, and office uses. More specifically, the General Plan and Specific Plan describe the permitted uses for BTP-H as incubator research, prototype manufacturing, testing, repairing, packaging, publishing, and printing, along with office and R&D uses. Warehousing, distribution, manufacturing, retail services, personal services, and grocery and hotel uses are also permitted under this designation.

While no construction or development is currently proposed at the off-site parcels, the potential impacts if development were to occur at these sites are discussed here. The baseline for this evaluation is the existing zoning of the site, which, as noted above, currently allows for industrial-type uses. If R&D uses are developed instead of industrial uses greenhouse gas emissions would likely result in less of an impact. By transitioning from MIH to BTP-H, the focus shifts from a wide range of warehousing, manufacturing, and distribution activities to high-density R&D facilities and office spaces. R&D uses are more likely to meet BAAQMD's land use thresholds, because industrial facilities may be all-electric facilities, and thus the energy needs can be sourced from renewables either from the utility provider or on-site (i.e., solar). In

addition, the higher employee density at R&D sites make it more economical and efficient to reduce vehicle trips through TDM measures (i.e., offering a first- and last-mile shuttle is more emissions efficient with higher passenger ridership).

As such, the future uses associated with the off-site redesignation parcels would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. This impact would be *less than significant*, and no mitigation is required.

Whole Project

As described above, the proposed project would meet all BAAQMD requirements; therefore, the proposed project would be consistent with BAAQMD Threshold Option A. In addition, if R&D uses were developed instead of industrial uses on the off-site redesignation parcels, it is more likely that the BAAQMD's land use threshold would be met. Therefore, the whole project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. Therefore, this impact would have a *less-than-significant* impact. No mitigation is required.

Impact GHG-2: The project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. (*Less than Significant*)

Project

At the local level, the City's CAP is the plan for reducing GHG emissions. At the state level, the 2022 Scoping Plan is state's plan for reducing GHG emissions. The project's consistency with the City CAP and the scoping plan is assessed here to determine the significance of this impact. In addition, the project's consistency with BAAQMD's 2017 Clean Air Plan and Plan Bay Area 2050/SB 375 is also evaluated.

Consistency with the City of South San Francisco's Climate Action Plan

The City adopted a CAP in 2022 to reduce community and municipal GHG emissions associated with General Plan buildout. The CAP is a roadmap that outlines a path for achieving carbon neutrality by 2045, reducing emissions 40 percent by 2030 and 80 percent by 2040, equitably mitigating and addressing the impacts of climate change, and realizing the co-benefits of climate mitigation actions that help create a sustainable community. The CAP features 62 recommended GHG emissions reduction measures within seven sectors of community and municipal operations: clean energy, built environment, transportation and land use, solid waste, waste and wastewater, carbon sequestration and natural systems, and city leadership. The proposed project's operational emissions are discussed by sector and evaluated for CAP consistency.⁵³

Transportation and Land Use Emissions

As shown in Table 4.4-6, emissions associated with net mobile sources would amount to approximately 11,219 MTCO₂e per year. The TDM plan includes 13 measures that would be implemented to reduce the number of trips. The measures include subsidizing transit passes for employees, establishing carpool or vanpool programs, and providing bicycle storage and shower and locker facilities. In addition, the CAP has nine transportation and land use measures. Although many of the measures require action on the City's part to create policies and incentive programs, the proposed project supports the measures that are considered applicable, as evaluated in Table 4.4-8, below.

⁵³ The proposed project is not compared to the city leadership measures because the measures are applicable only to City municipal buildings.

Measure Category	Description of Measure	Applicable?	Project Implementation	Consistent?
TL 2.1: Trip CAP on East of 101	Implement an East of 101 area trip cap with triennial monitoring and corrective actions if exceeded to manage the number of vehicles entering the area.	No	This measure is a City action and would not be applicable to the proposed project, which is not located in the East of 101 area.	N/A
TL 2.2: TDM Program	Implement, monitor, and enforce compliance with the City's TDM ordinance	Yes	The proposed project would be required to achieve a 50 percent non-drive-alone mode share and be compliant with an on-site trip cap, both to be monitored annually, which is consistent with the City's TDM ordinance.	Yes
TL 2.3: Improve Curb Management	Evaluate the current and best use of curb space in the city's activity centers and repurpose space to maximize people served (i.e., for loading, bikeways, bike parking, bus lanes, EV charging, or parklets).	No	This measure is a City action and would not be applicable to the proposed project.	N/A
TL 2.4: Parking Demand Management Strategy	Incorporate maximum parking requirements for new residential and office/R&D projects.	Yes	The proposed project would provide 2,976 parking spaces. Of these, 2,434 spaces would be for primarily R&D uses, consistent with the City's maximum allowable parking supply (i.e., 1.5 spaces per 1,000 sf).	Yes
TL 2.5: Development along Transit Corridors	For all new land use and transportation projects, adhere to the City's VMT analysis guidelines and qualitatively assess the project's effect on multimodal access. Use the development review process to identify opportunities to enhance bicycle, pedestrian, and transit connectivity.	Yes	The proposed project has a TDM plan with 13 measures that are designed to reduce the number of trips and VMT. In addition, the project would provide first- mile/last-mile shuttles to the San Bruno Bay Area Rapid Transit (BART) station and South San Francisco Caltrain station. The project sponsor would establish new routes, with at least one vehicle dedicated to each route and service at	Yes

Table 4.4-8. Consistency of the Project with the City of South San Francisco's Transportation and Land Use Measures

Measure Category	Description of Measure	Applicable?	Project Implementation	Consistent?
			least every 15 minutes during the AM and PM peak periods. Shuttles would be free and open to the public. Implementation of the TDM plan would reduce project VMT by 29.5 percent relative to unmitigated conditions, bringing it in line with the City's VMT per- capita reduction goal of 15 percent below the regional average.	
TL 2.6: Complete Streets Policy	Ensure that all roadway and development projects are designed and evaluated to meet the needs of all street users and that development projects contribute to multimodal improvements in proportion to their potential impacts on vehicle miles traveled. Develop Capital Improvement Program prioritization criteria, including equity considerations for SB 1000 neighborhoods, to strategically advance multimodal complete streets projects. All capital improvements and development projects incorporate bicycle and pedestrian improvements identified in the Active South City Plan, such as trails, bikeways, bicycle detection at traffic signals, high-visibility crosswalks, and pedestrian-oriented site plans.	Yes	The proposed project would provide continuous bike and pedestrian access throughout the campus, which would support this measure's goal that calls for designing projects that meet the needs of all street users.	Yes
TL 2.7: Free Local Bus Service	Develop a dedicated funding source or leverage private sector contributions to fund the South City shuttle and free bus service for South City residents.	No	This measure is a City action and not applicable to the proposed project.	N/A

Measure				
Category	Description of Measure	Applicable?	Project Implementation	Consistent ?
TL 2.8: Improve Transit Station Access	Leverage public-private partnerships to increase transit ridership and improve transit station access by incorporating first-mile/last-mile bus, shuttle, and active transportation connections between employment hubs and regional transit stations.	No	This measure is a City action and not applicable to the proposed project.	N/A
TL 2.9: Scale Transit Service Levels	Continue collaboration with Caltrain, San Mateo County Transit District (SamTrans), Water Emergency Transportation Authority (WETA), and shuttle providers to scale service levels in growing areas and leverage private sector subsidies of transit fares to support BART, Caltrain, SamTrans, and WETA ridership.	No	This measure is a City action and not applicable to the proposed project.	N/A
Note:				
N/A = not applica	able			

Federal, state, and local regulatory efforts target three elements of emissions reduction: vehicle fuel efficiency, the carbon content of fuels, and VMT. Most adopted programs and regulations focus on fuel efficiency (e.g., CAFÉ standards, Pavley standard) and the carbon intensity of transportation fuels (e.g., LCFS). Vehicle electrification is also rapidly becoming part of the state's approach to reducing mobile-source emissions (e.g., Title 24). The proposed project would not include any features that would conflict with these programs. Rather, it would implement a TDM plan that would reduce the number of trips and VMT. A recent CARB assessment makes clear that the state is "not on track to meet greenhouse gas reductions expected under SB 375." SB 743 is intended to close the VMT and emissions reduction gap. There is therefore a nexus between SB 743 and state goals to reduce mobile-source GHG emissions. In response to SB 743, OPR released its technical advisory on evaluating transportation impacts under CEQA in December 2018. The advisory indicates that "achieving 15 percent lower per capita (residential) or per employee (office) VMT than existing development is both generally achievable and is supported by evidence that connects this level of reduction to the state's emissions goals." This reduction goal is consistent with recent CARB (2019) analysis, which demonstrates that a 14.3 percent reduction in VMT per capita by 2050 (compared to a 2015–2018 average) would be needed statewide to meet the GHG planning goals.

The proposed project would implement a TDM plan for a gross VMT reduction of approximately 30 percent. This would align with the City's VMT per-capita reduction target of 15 percent below the regional average, which is designed to meet statewide VMT reduction goals. Therefore, it would not conflict with the state's long-term emissions reduction trajectory for mobile sources.

Area Emissions

As shown in Table 4.4-6, emissions associated with net area sources would amount to approximately 14 MTCO₂e per year. The CAP does not include measures specific to area-source emissions. In addition, there are no relevant measures in the scoping plan for landscaping equipment. A transition away from fossil-fuel equipment will be needed to achieve carbon neutrality by 2045. The proposed project supports this with Measure AQ-3, which requires the use of zero-emission landscaping equipment. This is consistent with the scoping plan's overall goal of reducing emissions from fossil-fuel landscaping equipment.

Energy Emissions

As shown in Table 4.4-6, the proposed project would not generate emissions associated with energy sources. The proposed project would have all-electric buildings and receive electricity from on-site renewables or renewable sources from PCE, which means that there would be no energy-related emissions. The City CAP has seven energy measures, all of which require action on the City's part, such as creating policies and incentive programs. The proposed project supports the applicable measures, as evaluated in Table 4.4-9, below.

			Project	
Measure	Description of Measure	Applicable?	Implementation	Consistent?
CE 1.1: Adopt Solar Reach Code for Nonresidential Buildings	Require the construction of any new nonresidential conditioned space of 5,000 sf or more, or the conversion of unconditioned space 5,000 sf or more, to meet a minimum of 50 percent of modeled building electricity needs with on-site renewable energy sources, as feasible. To calculate 50 percent of building electricity needs for the new conditioned space, the applicant shall calculate building electricity use as part of the Title 24 compliance process. Total electricity use shall include total use for the new conditioned space, excluding process energy.	No	This measure specifies a citywide goal; it is not applicable to individual development projects. However, the proposed project would comply with the underlying intent of the measure and would contract with PCE, which would provide electricity from renewable sources. The project site currently offsets building electricity needs by 3 percent with the incorporation of solar canopies and other energy-efficient design features. The proposed project would continue to work with its consultant, Atelier Ten, to achieve an offset of 5 percent, if feasible. Achieving more than a 5 percent offset with on- site renewable energy sources (e.g., solar canopies, wind turbines, energy-efficient design	N/A

Table 4.4-9. Consistency of the Project with the City of South San Francisco's Energy Measures

			Project	
Measure	Description of Measure	Applicable?	Implementation	Consistent?
			features) may not be feasible with life science and R&D uses due to the equipment plug loads, fans and pumps, and space heating required for laboratory buildings.	
CE 1.2: Streamline Permitting and Approval Processes for Battery Storage Systems	Establish a streamlined approval process for battery storage systems and reduce or eliminate permitting fees to encourage the addition of battery storage.	No	This measure is an action the City will perform and does not apply to this project.	N/A
CE 1.3: Streamline PV System Permitting and Approval	Establish a streamlined PV system permitting and approval process to encourage the addition of solar PV systems.	No	This measure is an action the City will perform and does not apply to this project.	N/A
CE 1.4: Develop a Program to Provide Energy Resilience through Backup Energy Systems, Microgrids, and Other Measures	Provide energy resilience through backup energy systems, microgrids, and other measures that serve the community during emergency events, particularly disadvantaged communities; consider creating a financial incentive program for existing and new solar/battery backup system installations.	No	This measure is an action the City will perform and does not apply to this project.	N/A
CE 1.5: Work with Pacific Gas and Electric (PG&E) to Minimize the Impacts of Public Safety Power Shutoffs	Work with PG&E to minimize the impacts of Public Safety Power Shutoffs and prevent utility shutoffs during extreme heat events.	No	This measure is an action the City will perform and does not apply to this project.	N/A
CE 1.6: Explore Community- Scale Solar and Other Renewable Energy Implementation	Explore opportunities to install community-scale solar PV or other renewable energy systems, including biogas, to support local energy resiliency and provide renewable energy to disadvantaged communities.	No	This measure is an action the City will perform and does not apply to this project.	N/A

			Project	
Measure	Description of Measure	Applicable?	Implementation	Consistent ?
CE 2.1: Achieve and Maintain 95 Percent Participation in PCE 100 Percent Renewable Energy Tier	Maintain City membership in PCE and continue to work to maintain a minimum of 95 percent of private-owner participation in PCE.	No	This measure is an action the City will perform and does not apply to this project.	N/A
Note:				
N/A = not applicabl	e			

Solid Waste Emissions

As shown in Table 4.4-6, emissions associated with solid waste sources would amount to approximately 266 MTCO₂e per year. The CAP has six solid waste measures, most of which require action on the City's part to create policies and incentive programs. Two of the measures evaluated in Table 4.4-10 are applicable to the project.

Measure Category	Description of Measure	Applicable?	Project Implementation	Consistent?
SW 1.1: Zero- Waste Plan	Adopt an SB 1383-compliant zero-waste plan for municipal operations and the community that includes mandatory residential and commercial recycling and collection of organics/food waste, mandatory commercial edible food recovery program (per memorandum of understanding with San Mateo County Office of Sustainability), and updated trash enclosure space and access requirements, based on hauler recommendations, to accommodate all waste streams (e.g., recycling, trash, organics).	Yes	Although this measure is an action item for the City, the proposed project will have recycling containers in the utility yard and organic waste services, which supports the City's goal to increase participation in recycling and organic waste programs.	Yes
SW 1.2: SSF Scavenger Partnership	Continue to work with SSF Scavenger to ensure implementation of waste reduction targets.	No	This measure is an action item for the City and is not applicable to the proposed project.	N/A

Table 4.4-10. Consistency of the Project with the City of South San Francisco's Solid Waste Measures

Measure		A 11 11 0	Project	a i i i a
Category	Description of Measure	Applicable?	Implementation	Consistent?
SW 1.3: Waste Reduction Compliance Pathways	Establish compliance pathways and enforcement mechanisms for mandatory diversion of organics and food waste.	Yes	Although this measure is an action item for the City, the proposed project would provide organics/composting waste services, which supports the City's goal to divert organics from the landfill.	Yes
SW 1.4: Educational Outreach about Waste Diversion	Develop education and technical assistance programs to help all residents and businesses to compost and recycle.	No	This measure is an action item for the City and is not applicable to the proposed project.	N/A
SW 1.5: Waste Rate Structures	Explore modifying waste rate structures to encourage efficiency in future franchise agreements.	No	This measure is an action item for the City and is not applicable to the proposed project.	N/A
SW 1.6: City Green Purchasing Program	Establish a green purchasing program for City of South San Francisco municipal operations.	No	This measure is an action item for the City and is not applicable to the proposed project.	N/A
Note:				
N/A = not applicable	le			

The features described above (e.g., recycling, organic waste collection) are consistent with the scoping plan's overall goal of reducing waste emissions and its specific strategy to avoid landfill CH₄ emissions by reducing the disposal of landfill waste and organics. In addition, these features would comply with AB 341's mandatory recycling requirement and support the state's recycling goal.

Water and Wastewater Emissions

As shown in Table 4.4-6, emissions associated with net water and wastewater sources would amount to approximately 21 MTCO₂e per year. The CAP has seven measures related to the water and wastewater sector. Although all measures require action on the City's part to create policies and incentive programs, the proposed project supports one measure that is considered applicable, as evaluated in Table 4.4-11.

			Project	
Measure	Description of Measure	Applicable?	Implementation	Consistent?
WW 1.1: Landscaping Water Requirements	Achieve greater water use reductions than those of the Water-Efficient Landscape Ordinance by requiring all landscapes to obtain a landscape permit, decreasing the size threshold to capture all landscape renovations, and adding prescriptive irrigation plant lists or water budget requirements.	No	This measure is an action the City will perform and does not apply to the proposed project.	N/A
WW 1.2: Alternative Water Sources	Explore options at the South San Francisco – San Bruno Water Quality Control Plant for delivering non-potable, recycled water for cooling towers, processes, and irrigation in East of 101 (e.g., flow-pipe water). Maximize available non- potable water reuse from the Orange Park stormwater capture project at Orange Memorial Park, Centennial Way, and the new Civic Campus.	No	This measure is an action the City will perform and does not apply to the proposed project.	N/A
WW 1.3: Promote Greywater Systems	Create a streamlined permit process for laundry-to-landscape greywater systems.	No	This measure is an action the City will perform and does not apply to the proposed project.	N/A
WW 1.4: Landscaping Plant List	Develop a plant list and a landscaping palette for efficiency and for habitat/wildlife for new development and landscape retrofits.	No	This measure is an action the City will perform and does not apply to the proposed project.	N/A
WW 1.5: Install Smart Meters	Partner with the California Water Service to install smart water meters throughout the city.	No	This measure is an action the City will perform and does not apply to the proposed project.	N/A

Table 4.4-11. Consistency of the Project with the City of South San Francisco's Water and Wastewater Measures

Measure	Description of Measure	Applicable?	Project Implementation	Consistent?
WW 2.1: Indoor Water Efficiency Standards	Require high-efficiency fixtures in all new construction and major renovations that are comparable to CALGreen Tier 1 or 2 standards.	Yes	The project would use high-efficiency fixtures, which would be comparable to CALGreen Tier 1 or 2 standards.	Yes
WW 2.2: Promote Available Rebates	Promote available water conservation rebates from the Bay Area Regional Energy Network, California Water Service, and other sources, focusing resources in the most disadvantaged communities.	No	This measure is an action the City will perform and does not apply to the proposed project.	N/A
Note:				
N/A = not applicab	le			

The proposed project would include several water conservation features. Furthermore, it would be required to comply with all applicable City and state water conservation measures for both indoor and outdoor applications, including Title 24, Part 6, the California Energy Code baseline standards for energy efficiency, as based on the 2022 Energy Efficiency Standards and CALGreen. The features would be consistent with the scoping plan's overall goal of reducing emissions associated with water delivery and would support ongoing regulatory programs (e.g., SB X7-7, Title 24) that aim to reduce GHG emissions associated with conveying and distributing water.

Carbon Sequestration and Natural Systems

The CAP has four carbon sequestration and natural system measures. Three of these measures require action on the City's part; one measure is applicable to the proposed project, as evaluated in Table 4.4-12.

Measure Category	Description of Measure	Annlicable?	Project Implementation	Consistent?
CS 1.1: Carbon Farming	Explore compost application on available acres of appropriate open space.	No	This measure is an action for the City to take; it is not applicable to this project.	N/A
CS 2.1: Public Tree Planting	Expand the canopy cover to reach the goals of the Urban Forest Master Plan and increase environmental benefits, prioritizing disadvantaged communities and connected wildlife corridors.	Yes	The project would plant 662 trees in the central courtyard, surface parking area, and terrace areas and along the western and southern perimeters of the project site, thereby expanding the tree canopy, thereby helping to achieve the goals of the Urban Forest Master Plan.	Yes
CS 2.2: Tree Standards for New Development	For nonresidential and residential new construction, require Silva Cells and a soil compaction plan for tree growth; require the preservation and addition of trees on private property in residential neighborhoods through design review where appropriate. Incorporate Parks and Recreation urban forest personnel in the review process.	Yes	The proposed project would incorporate Silva Cells and a soil compaction plan for tree growth where appropriate.	Yes
CS 3.1: Colma Creek Restoration	Enhance Colma Creek as an ecological corridor by restoring 5 miles of creek ecologies and creating transitional habitat zones to build resilience and ecosystem services. Protect and expand existing marsh and wetland habitat to improve water quality, adapt to climate change, and provide habitat for wildlife.	No	This measure is an action for the City to take; it is not applicable to this project.	N/A
Note: N/A = not applicabl	e			

Table 4.4-12. Consistency of the Project with the City of South San Francisco Carbon Sequestration and Natural Systems Measures

Built Environment

The CAP has two built-environment measures that focus on new construction and 10 builtenvironment measures that focus on existing buildings. Because the proposed project would demolish all existing structures on the site, Table 4.4-13 compares the proposed project to only the measures pertaining to new construction. Although the project would include emergency generators, Measure BE 1.8, Transition to Carbon-Free Backup Power, is included below to show that the project would still be consistent with the City's CAP because Measure BE 1.8 does not indicate that new development can have only carbon-free backup generators.

Measure			Project	
Category	Description of Measure	Applicable?	Implementation	Consistent?
BNC 1.1: Improve the Energy Efficiency of New Construction	Provide a combination of financial and development process incentives (e.g., expedited permitting, increases in floor area ratios) to encourage new development to exceed the Title 24 energy efficiency standard.	No	This is an action for the City and does not apply to the proposed project.	N/A
BNC 2.1: Adopt an All-Electric Reach Code for Nonresidential New Construction	Implement a residential all- electric reach code and adopt an all-electric reach code for nonresidential new construction. Exempt occupancies must install electric building systems (e.g., space and water heating equipment) where feasible. Until the adoption of the nonresidential all- electric reach code, require any new nonresidential conditioned space of 5,000 sf or more, or the conversion of unconditioned space of 5,000 sf or more, to comply with CALGreen Tier 2 energy efficiency requirements to exceed mandatory energy efficiency requirements by 20 percent or more. For additions to existing development of 5,000 sf or more, CALGreen Tier 2 shall be calculated as part of the Title 24 compliance process. Existing building	Yes	The proposed project would have all-electric buildings.	Yes

Table 4.4-13. Consistency of the Project with the City of South San Francisco Built Environment – New Construction Measures

Measure			Project	a b b b
Category	Description of Measure	Applicable?	Implementation	Consistent?
	space that has already been permitted shall not be subject to CALGreen Tier 2 requirements.			
BE 1.8: Transition to Carbon-Free Backup Power	Work with PG&E and PCE to transition backup generators from diesel to carbon-free sources, including battery storage systems.	No	This is an action for the City and does not apply to the proposed project.	N/A
Note:				
N/A = not applicabl	e			

Consistency with Senate Bill 32 (including the CARB 2022 Scoping Plan)

SB 32 outlines the state's GHG emissions reduction targets for 2030. Although not legislatively adopted, EO S-03-05 establishes the state's long-term goal to reduce GHG emissions 80 percent from 1990 levels by 2050. AB 1279 sets a more ambitious state goal of net-zero GHG emissions by 2045 and an 80 percent reduction in anthropogenic emissions from 1990 levels by 2045.

In 2008 and 2014, CARB adopted the original scoping plan and first update, respectively, as a framework for achieving AB 32. The scoping plan and first update outline a series of technologically feasible and cost-effective measures to reduce statewide GHG emissions. CARB adopted the 2022 Scoping Plan in July of that year to assess progress toward the statutory 2030 target while laying out a path to achieving carbon neutrality no later than 2045. CARB's 2022 Scoping Plan outlines the main strategies for keeping California on track and able to meet its SB 32 GHG reduction target (i.e., reduce GHG emissions to at least 40 percent below 1990 levels by 2030), achieve carbon neutrality by 2045, and reduce anthropogenic emissions to 85 percent below 1990 levels.⁵⁴ Regarding project-level GHG analyses, Appendix D to CARB's 2022 Scoping Plan, Local Actions, notes:

When jurisdictions have a CEQA-qualified CAP, an individual project that complies with the strategies and actions within a CEQA-qualified CAP can tier and streamline its project-specific CEQA GHG analysis to make a determination "that a project's incremental contribution to a cumulative [GHG] effect is not cumulatively considerable" (CEQA Guidelines Sections 15064.4 (b)(3) and 15183.5).

As discussed above in the *Consistency with the City of South San Francisco's Climate Action Plan* section, the City's 2022 CAP does not satisfy the tiering requirements established in Section 15183.5 of the CEQA Guidelines and therefore cannot be used to determine the significance of an individual project's GHG emissions. As indicated in Appendix D to CARB's 2022 Scoping Plan, the City's CAP, while not qualified for tiering, incorporates various measures pertaining to transportation electrification, VMT reductions, and building decarbonization. As described above, the project would be consistent with all required and applicable measures of the City's CAP.

Appendix D to CARB's 2022 Scoping Plan, Local Actions, also identifies key project attributes that empirical evidence has shown to reduce operational GHG emissions while simultaneously advancing fair housing. CARB concludes that "[r]esidential and mixed-use projects that have all of the key

⁵⁴ CARB. 2022. 2022 Scoping Plan for Achieving Carbon Neutrality. November. Available: https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf. Accessed: January 9, 2024.

project attributes in Table 3 [Key Residential and Mixed-Use Project Attributes that Reduce GHGs] should accommodate growth in a manner consistent with state GHG reduction and equity prioritization goals".⁵⁵ Although this project does not include residential uses, it is a mixed-used non-residential project. As such, this analysis also evaluates the project's consistency with the scoping plan–identified key project attributes to provide a comprehensive assessment of the project's GHG impact. The project's consistency with these attributes is discussed in Table 4.4-14.

Project Attribute	Project Consistency
Transportation Electrification	
Provides EV charging infrastructure that, at a minimum, meets the most ambitious voluntary standard in the California Green Building Standards Code at the time of project approval.	Consistent . Currently, the most ambitious voluntary standard in the CALGreen code would be the voluntary Tier 2 nonresidential standard (i.e., 45 percent of all spaces to be EV capable and 33 percent of the EV spaces to have EVSE). The project would meet the voluntary Tier 2 nonresidential standard for EV charging infrastructure under the 2022 CALGreen code. As such, the project would be consistent with this attribute.
VMT Reduction	
Is located on infill sites that are surrounded by existing urban uses and reuses or redevelops previously undeveloped or underutilized land that is presently served by existing utilities and essential public services (e.g., transit, streets, water, sewer).	Consistent . The project proposes infill mixed-use development in an existing urbanized area, thereby supporting local, regional, and state mobility and GHG reduction objectives to reduce VMT and infrastructure costs. As such, the project would be consistent with this attribute.
Does not result in the loss or conversion of natural and working lands.	Consistent . The project site is in an existing urbanized area and currently occupied by industrial buildings and a paved surface parking lot. As such, the project would not result in the loss or conversion of natural or working lands and would be consistent with this attribute.
Consists of transit-supportive densities (minimum of 20 residential dwelling units per acre) or is in proximity to existing transit stops (within a half mile) or satisfies more detailed and stringent criteria specified in the region's SCS.	Consistent . The project site is within a 0.5 mile of an existing bus stop at Herman Street and Pacific Avenue. In addition, the project would provide first-mile/last-mile shuttles to the San Bruno BART station and South San Francisco Caltrain station. The project sponsor would establish new routes, with at least one vehicle dedicated to each route and service at least every 15 minutes during the AM and PM peak periods. Shuttles would be free and open to the public. As such, the project would be consistent with this attribute because it would facilitate connections to major transit services.
Reduces parking requirements by eliminating parking requirements or including maximum allowable parking ratios (i.e., the ratio of parking spaces to residential units or square feet) or providing a residential parking supply at a ratio of less than one parking space per dwelling unit or, for multi-family	Consistent . The proposed project would provide 2,976 parking spaces. Of these, 2,434 spaces would be used primarily for R&D uses. This would be below the City's maximum allowable parking ratio of 1.5 spaces per 1,000 sf. Because the project would provide less parking than the maximums set forth in the City Code, the project would be consistent with this attribute.

⁵⁵ Ibid.

Project Attribute	Project Consistency
residential development, requiring parking costs to be unbundled from costs to rent or own a residential unit.	
At least 20 percent of units included are affordable to lower-income residents.	N/A . The project is a nonresidential project. This attribute does not apply to the project.
Results in no net loss of existing affordable units.	Consistent . The project site is currently occupied by industrial buildings and a paved surface parking lot. The project would therefore not result in a net loss in existing affordable units and would be consistent with this attribute.
Building Decarbonization	
Uses all-electric appliances without natural gas connections and does not use propane or other fossil fuels for space heating, water heating, or indoor cooking.	Consistent . The project would build all-electric buildings; natural gas would not be used. As such, the project would be consistent with this attribute.
Source: CARB 2022a.	

As discussed above in Table 4.4-14, the project would incorporate all scoping plan–identified key project attributes. The project's consistency with the scoping plan–identified key project attributes provides further evidence that the project would not conflict with implementation of CARB's 2022 Scoping Plan or attainment of the statewide GHG targets for 2030 and 2045 mandated by SB 32 and AB 1279, respectively. As such, the project would be consistent with the City's CAP and align with the GHG emissions reduction strategies outlined in CARB's 2022 Scoping Plan.

Plan Bay Area 2050/California Senate Bill 375

Plan Bay Area 2050 is consistent with SB 375, which requires MTC to adopt an SCS that outlines policies to reduce per capita GHG emissions from automobiles and light trucks. Environment and transportation are two of four elements discussed in MTC's Plan Bay Area 2050.⁵⁶ Both of these elements comprise a set of strategies that aim to reduce both VMT and emissions. The strategies include a mix of measures that encourage compact growth patterns, alternative transportation, transit, mobility and access, network expansion, and transportation investment.

It is estimated that the project would generate up to 10,110 daily vehicle trips. To reduce VMT and associated emissions, the project would improve conditions for walking and biking by providing onstreet bicycle racks/lockers, as well as long-term bicycle racks for workers, and orienting buildings so as to be sidewalk facing, with multiple pedestrian entrances. The proposed project would be an infill development. This would involve redevelopment and densification of the site. In addition, the project would be near local transit lines and routes that provide safe and convenient access for bicyclists and pedestrians, thereby encouraging alternative transportation modes. Overall, the project would incorporate 13 TDM features, which are anticipated to reduce gross VMT by approximately 29.5 percent relative to unmitigated conditions. This reduction in gross VMT would make the project consistent with the City's VMT per capita reduction target of 15 percent below the regional average, which is designed to meet statewide VMT reduction goals.

⁵⁶ Metropolitan Transportation Commission and Association of Bay Area Governments. 2021. *Plan Bay Area 2050.* Adopted: October 2021. Available: https://www.planbayarea.org/finalplan2050. Accessed: December 15, 2023.

These policies would support alternative transportation within the community, which could help reduce VMT and per capita GHG emissions from passenger vehicles, consistent with Plan Bay Area 2050.

Other State Regulations

As discussed above in the analysis of consistency with SB 32, systemic changes would be required at the state level to achieve statewide future GHG reduction goals. Regulations such as the SB 100– mandated 100 percent carbon-free RPS by 2045; implementation of the state's SLCP Reduction Strategy, including forthcoming regulations for composting and organics diversion; and future updates to the state's Title 24 standards, including requirements for net-zero energy, will be necessary to attain the magnitude of reductions required by the state's goals. The proposed project would be required to comply with these regulations in new construction (e.g., in the case of updated Title 24 standards) or be directly affected by the outcomes (e.g., energy consumption would be less carbon intensive with the increasingly stringent RPS). Unlike the scoping plans, which explicitly call for additional emissions reductions from local governments and new projects, none of these state regulations identify specific requirements or commitments for new development beyond what is already required by existing regulations or will be required in forthcoming regulation. Therefore, for the foreseeable future, the proposed project would not conflict with any state-level regulations pertaining to GHGs in the post-2020 era.

Conclusion

The proposed project would be consistent with and support all applicable measures from the CAP. In addition, as noted above, the project would be consistent with BAAQMD Threshold Option A. With respect to mobile sources, the proposed project would achieve the City's VMT reduction target, ensuring that the proposed project would be consistent with relevant regulatory programs, such as SB 743, that expressly aim to reduce VMT. In addition, the project would be consistent with CARB's 2022 Scoping Plan–identified key project attributes applicable to the project.⁵⁷ The project would also comply with Plan Bay Area 2050, the applicable regional plan for reducing mobile-source emissions in the San Francisco Bay Area. As such, the project would not conflict with state, regional, or local plans designed to achieve the GHG reduction goals mandated by SB 32 and AB 1279 for 2030 and 2045, respectively. Therefore, this impact would have a *less-than-significant* impact. No mitigation is required.

Off-Site Redesignation Parcels

The five off-site redesignation parcels are currently designated as MIH under the General Plan, Specific Plan, and City Zoning Code. However, they would be redesignated BTP-H, consistent with the proposed land use and zoning designation for the project site. The MIH designation currently allows for development of a wide range of warehousing, manufacturing, processing, service commercial, and storage and distribution uses. The redesignation would allow for high-density corporate headquarters, R&D facilities, and office uses. More specifically, the General Plan and Specific Plan describe the permitted uses for BTP-H as incubator research, prototype manufacturing, testing, repairing, packaging, publishing, and printing, along with office and R&D uses. Warehousing, distribution, manufacturing, retail services, personal services, and grocery and hotel uses are also permitted under this designation.

⁵⁷ Although this analysis determines the project's alignment with CARB's 2022 Scoping Plan, based on its consistency with the City's CAP, the project's consistency with the scoping plan-identified key attributes provides further evidence that the project would not conflict with implementation of CARB's 2022 Scoping Plan or attainment of the statewide GHG targets for 2030 and 2045 mandated by SB 32 and AB 1279, respectively.

While no construction or development is currently proposed at the off-site parcels, the potential impacts if development were to occur at these sites are discussed here. The baseline for this evaluation is the existing zoning of the site, which, as noted above, currently allows for industrialtype uses. If R&D uses are developed instead of industrial uses the potential to conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases would be reduced. R&D uses are more likely to align with the CARB's 2022 Scoping Plan and the City's CAP objectives. This is because R&D facilities are more likely to meet BAAOMD's land use thresholds compared to industrial facilities, which often require natural gas infrastructure and use fossil fuel combustion. In contrast, R&D facilities may be all-electric, meaning their energy needs can be sourced from renewables, either from the utility provider or generated on-site (i.e., solar). This aligns with the renewable energy goals of both the CARB's 2022 Scoping Plan and the City's CAP. Furthermore, the higher employee density at R&D sites makes it more economical and efficient to reduce vehicle trips through TDM measures. For instance, offering a first- and last-mile shuttle is more emissions-efficient with higher passenger ridership. This approach aligns with the transportation and emissions reduction strategies outlined in the CARB's 2022 Scoping Plan and the City's CAP. Thus, redesignating to R&D uses can contribute to achieving the climate action goals set out in these plans. As such, the future uses associated with the off-site redesignation parcels would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. This impact would be *less than significant*, and no mitigation is required.

Whole Project

As described above, the proposed project would be consistent with plans designed to achieve the GHG reduction goals mandated by SB 32 and AB 1279 for 2030 and 2045, respectively. In addition, the off-site redesignation parcels do not include the construction of any new uses that could potentially conflict with greenhouse gas reduction efforts. Therefore, the whole project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs. Therefore, this impact would have a *less-than-significant* impact. No mitigation is required.

4.4.4.4 Cumulative Impacts

Climate change is a global problem, and GHG impacts are inherently cumulative. This is because GHGs contribute to the global phenomenon that is climate change, regardless of where they are emitted. Climate change is the result of the individual contributions of countless past, present, and future sources.

4.5 Noise and Vibration

4.5.1 Introduction

This section evaluates the potential significance of noise and vibration impacts related to the construction and operation of the Infinite 131 Project (proposed project), including the redesignation of the five parcels north of the project site (off-site redesignation parcels). This section also describes the existing conditions at the project site and off-site redesignation parcels, and the regulatory framework for this analysis. The impacts of the proposed project are analyzed at a project level, while the impacts of the off-site redesignation parcels are generally analyzed at a program level. Impacts resulting from implementation of the proposed project, as well as impacts resulting from the off-site redesignation parcels (and mitigation measures, where applicable), are described, including cumulatively considerable contributions to significant cumulative impacts. Appendix G includes the noise technical report, which discusses the methodologies used to assess the significance level of impacts related to noise and vibration in more detail.

Issues identified in response to the Notice of Preparation (NOP) (Appendix A) were considered in preparing this analysis. The only NOP comment pertaining to noise was related to the 65 decibel (dB) Community Noise Equivalent Level (CNEL) airport contour for SFO. However, and as noted in the comment, the proposed project does not include any land uses that are identified as conditionally compatible or not compatible with this noise level, and the project site is outside of all safety compatibility zones. Therefore, the project would not conflict with the land use compatibility criteria contained in the Airport Land Use Compatibility Plan (ALUCP). This issue was addressed in the Initial Study for the project, and is summarized below in Section 4.5.5, *Topics Evaluated in the Initial Study*.

4.5.2 Environmental Setting

4.5.2.1 Fundamentals of Noise and Sound

Overview of Noise and Sound

Noise is commonly defined as unwanted sound that annoys or disturbs people and potentially causes an adverse psychological or physiological effect on human health. Because noise is an environmental pollutant that can interfere with human activities, CEQA requires an evaluation of noise when considering the environmental impacts of a proposed project.

Sound is mechanical energy (i.e., vibration) transmitted by pressure waves over a medium such as air or water. Sound is characterized by various parameters, including the rate of oscillation of sound waves (i.e., frequency), the speed of propagation, and the pressure level or energy content (i.e., amplitude). In particular, the sound pressure level is the most common descriptor for characterizing the loudness of an ambient (i.e., existing) sound level. The dB scale, which is a logarithmic scale, is used to quantify sound intensity, with 0 dB corresponding roughly to the threshold of hearing; however, the dB scale does not accurately describe how sound intensity is perceived by human hearing. The human ear is not equally sensitive to all frequencies in the entire spectrum. Therefore, noise measurements are weighted more heavily toward the frequencies to which humans are sensitive in a process called A-weighting, written as dBA and referred to as A-weighted decibels. Table 4.5-1 defines sound measurements and other terminology used in this chapter, and Table 4.5-2 summarizes typical A-weighted sound levels for different noise sources.

Sound Measurements	Definition
Decibel (dB)	A unitless measure of sound on a logarithmic scale that indicates the squared ratio of sound pressure amplitude with respect to a reference sound pressure amplitude. The reference pressure is 20 micropascals.
A-Weighted Decibel (dBA)	An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
C-Weighted Decibel (dBC)	The sound pressure level in decibels measured using the C-weighting filter network. C-weighting is very close to an unweighted or <i>flat</i> response. C-weighting is used only in special cases (i.e., when low-frequency noise is of particular importance). A comparison of the measured A- and C-weighted level gives an indication of low-frequency content.
Maximum Sound Level (L_{max})	The maximum sound level measured during the measurement period.
Minimum Sound Level (Lmin)	The minimum sound level measured during the measurement period.
Equivalent Sound Level (L_{eq})	The equivalent steady-state sound level that in a stated period of time would contain the same acoustical energy.
Percentile-Exceeded Sound Level (L _{xx})	The sound level exceeded X percent of a specific time period. L_{10} is the sound level exceeded 10 percent of the time, and L_{90} is the sound level exceeded 90 percent % of the time. L_{90} is often considered to be representative of the background noise level in a given area.
Day-Night Level (L _{dn})	The energy average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the A-weighted sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.
Community Noise Equivalent Level (CNEL)	The energy average of the A-weighted sound levels occurring during a 24hour period, with 5 dB added to the A-weighted sound levels occurring during the period from 7:00 p.m. to 10:00 p.m. and 10 dB added to the A-weighted sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.
Ambient Noise Level	The all-encompassing composite of noise (from all sources near and far) associated with a given environment. The normal or existing level of environmental noise at a given location.
Vibration Velocity Level (or Vibration Decibel Level, VdB)	The root-mean-square velocity amplitude for measured ground motion, expressed in dB.
Peak Particle Velocity (peak velocity or PPV)	A measurement of ground vibration, defined as the maximum speed (measured in inches per second) at which a particle in the ground is moving relative to its inactive state. PPV is usually expressed in inches per second.
Frequency: Hertz (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure.

	Noise Level	
Common Outdoor Activities	(dBA)	Common Indoor Activities
	—110—	Rock band
Jet flyover at 1,000 feet		
	—100—	
Gas lawnmower at 3 feet		
	—90—	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	—80—	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawnmower at 100 feet	—70—	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	—60—	
		Large business office
Quiet urban daytime	—50—	Dishwasher in next room
Quiet urban nighttime	—40—	Theater, large conference room (background)
Quiet suburban nighttime		
	—30—	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	—20—	
		Broadcast/recording studio
	—10—	
	—0—	

Table 4.5-2. Typical A-weighted Sound Levels

Source: Federal Transit Administration. 2018. *Transit Noise and Vibration Impact Assessment*. FTA Report 0123. September. Available: 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: February 24, 2024.

In general, human sound perception is such that a change in sound level of 1 dB cannot typically be perceived by the human ear, a change of 3 dB is barely noticeable, a change of 5 dB is clearly noticeable, and a change of 10 dB is perceived as doubling or halving the sound level as it increases or decreases, respectively.

Different types of measurements are used to characterize the time-varying nature of sound. These measurements include the equivalent sound level (L_{eq}) , the minimum and maximum sound levels $(L_{min} \text{ and } L_{max})$, percentile-exceeded sound levels (such as L_{10} , L_{20}), the day-night sound level (L_{dn}) , and the CNEL. L_{dn} and CNEL values differ by less than 1 dB. As a matter of practice, L_{dn} and CNEL values are considered to be equivalent and are treated as such. These measurements are defined in Table 4.5-1.

For a point source, such as a stationary compressor or a piece of construction equipment, sound attenuates (i.e., lessens in intensity), based on geometry, 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 perpendicular to the source.¹ Atmospheric conditions, including wind, temperature gradients, and 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. Barriers such as buildings or topographic features that block the line of sight between a source and receiver also increase the attenuation of sound over distance.

Community noise environments are generally perceived as quiet when the 24-hour average noise level is below 45 dBA CNEL, moderate in the 45 to 60 dBA CNEL range, and loud above 60 dBA CNEL. Very noisy urban residential areas are usually around 70 dBA CNEL. Along major thoroughfares, roadside noise levels are typically between 65 and 75 dBA CNEL. Incremental changes of 3 to 5 dB in the existing 1-hour L_{eq} , or the CNEL, are commonly used as thresholds for an adverse community reaction to a noise increase. However, there is evidence that incremental thresholds in this range may not be adequately protective in areas where noise-sensitive uses are located and the CNEL is already high (i.e., above 60 dBA). In these areas, limiting noise increases to 3 dB or less is recommended.² Noise intrusions that cause short-term interior noise levels to rise above 45 dBA at night can disrupt sleep. Exposure to noise levels greater than 85 dBA for 8 hours or longer can cause permanent hearing damage.

Noise from Multiple Sources

Because sound pressure levels in decibels are based on a logarithmic scale, they cannot be added or subtracted in the usual arithmetical way. Adding a new noise source to an existing noise source, with both producing noise at the same level, will not double the noise level. If the difference between two noise sources is 10 dBA or more, the higher noise source will dominate, and the resultant noise level will be equal to the noise level of the higher noise source. In general, if the difference between two noise sources is 0 to 1 dBA, the resultant noise level will be 3 dBA higher than the higher noise source, or both sources if they are equal. If the difference between two noise sources is 2 to 3 dBA, the resultant noise level will be 2 dBA above the higher noise source. If the difference between two noise sources is 4 to 10 dBA, the resultant noise level will be 1 dBA higher than the higher noise source.

Attenuation of Noise

A receptor's distance from a noise source affects how noise levels attenuate (i.e., how noise levels decrease). Transportation noise sources tend to be arranged linearly such that roadway traffic attenuates at a rate of 3.0 to 4.5 dBA per doubling of distance from the source, depending on the

¹ California Department of Transportation. 2020. *Transportation and Construction Vibration Guidance Manual*. April. Available: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/ tcvgm-apr2020-a11y.pdf. Accessed: February 24, 2024.

² Federal Transit Administration. 2018. *Transit Noise and Vibration Impact Assessment*. FTA Report 0123. September. Available: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/researchinnovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf. Accessed: February 24, 2024.
intervening surface (paved or vegetated, respectively). Point sources of noise, such as stationary equipment or construction equipment, typically attenuate at a rate of 6.0 to 7.5 dBA per doubling of distance from the source, depending on the intervening surface.³ For example, a sound level of 80 dBA at 50 feet from the noise source will be reduced to 74 dBA at 100 feet, 68 dBA at 200 feet, and so on, based on the 6 dB point-source reduction over a non-absorptive surface (e.g., pavement instead of vegetation). Noise levels can also be attenuated by "shielding" or providing a barrier between the source and the receptor. With respect to interior noise levels, noise attenuation effectiveness depends on whether windows are closed or open. Based on the U.S. Environmental Protection Agency's (EPA's) national average, closed windows reduce noise levels by approximately 25 dBA, and open windows reduce noise levels by about 15 dBA.⁴

Noise-Sensitive Land Uses

Noise-sensitive land uses are generally defined as locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Noise-sensitive land uses typically may include but are not limited to single- and multi-family residential areas, health care facilities, churches, lodging facilities, and schools. Noise-sensitive land uses where people typically sleep are typically more sensitive to noise during nighttime hours (when people are typically sleeping). Recreational areas where quiet is an important part of the environment as well as some commercial areas, such as outdoor restaurant seating areas, can also be considered sensitive to noise.

Overview of Ground-borne Vibration

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Several different methods are typically used to quantify vibration amplitude; one is peak particle velocity (PPV); another is root-mean-square (RMS) velocity. PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. RMS velocity is defined as the average of the squared amplitude of the signal. Vibration is typically measured in inches per second or millimeters per second.

Operation of heavy construction equipment, particularly pile-driving equipment and other impact devices (e.g., pavement breakers), creates seismic waves that radiate along the surface of and downward into the ground. These surface waves can be felt as ground vibration. Vibration from the operation of this type of equipment can result in effects that range from annoyance for people to damage for structures. Variations in geology and distance result in different vibration levels, including different frequencies and displacements. In all cases, vibration amplitudes decrease with increased distance.

Perceptible ground-borne vibration is generally limited to areas within a few hundred feet of construction activities. As seismic waves travel outward from a vibration source, they cause rock and soil particles to oscillate. The actual distance that these particles move is usually only a few ten

³ The 1.5 dBA variation in attenuation rate (6 dBA vs. 7.5 dBA) can result from ground-absorption effects, which occur as sound travels over soft surfaces such as soft earth or vegetation (7.5 dBA attenuation rate) versus hard surfaces such as pavement or very hard-packed earth (6 dBA rate) (U.S. Housing and Urban Development. 1985. *The Noise Guidebook*, p. 24. Available: https://www.hudexchange.info/onecpd/assets/File/Noise-Guidebook-Chapter-4.pdf. Accessed: February 20, 2024.)

⁴ U.S. Environmental Protection Agency. 1974. *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.

thousandths to a few thousandths of an inch. The rate or velocity (in inches per second) at which these particles move is the commonly accepted descriptor of vibration amplitude, referred to as PPV.

Vibration amplitude attenuates over distance. This is a complex function of how energy is imparted into the ground and the soil or rock conditions through which the vibration is traveling. The following equation is used to estimate the vibration level at a given distance for typical soil conditions:⁵

 $PPV = PPV_{ref} x (25/Distance)^{1.5}$

 PPV_{ref} is the reference PPV at 25 feet (refer to Table 4.5-3).

Construction Vibration

Construction activities can cause vibration that varies in intensity depending on several factors. The use of pile-driving, excavation equipment and vibratory compaction equipment typically generates the highest construction-related ground-borne vibration levels. The activities that are typical of single-impact (transient) or low-rate, repeated impact vibration include blasting and the use of drop balls, impact pile drivers, "pogo stick" compactors, and crack-and-seat equipment.⁶ Typically, ground-borne vibration generated by human activities attenuates rapidly with distance from the source of the vibration. In general, such vibration is only an issue when sensitive receptors are located in close proximity. Since rubber tires provide vibration isolation, rubber- tire vehicles rarely create substantial ground-borne vibration effects unless there is a discontinuity or bump in the road that causes the vibration. The PPV descriptor is the most common measure of construction vibration. Table 4.5-3 summarizes typical vibration levels generated by construction equipment proposed for use with the project at a reference distance of 25 feet and other distances, as determined with use of the attenuation equation above.⁷ Note that pile drivers, one of the most vibration-intensive pieces of construction equipment, would not be used for project construction.

Table 4.5-3. Vibration Source Level	ls for Construction Equipment
-------------------------------------	-------------------------------

Equipment Item	Reference PPV at 25 feet, in/sec^a		
Auger drill	0.089		
Large bulldozer ^b	0.089		
Small bulldozer ^c	0.003		

Source: California Department of Transportation. 2020. *Transportation and Construction Vibration Guidance Manual*. April. Available: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf. Accessed: February 24, 2024.

^{a.} Obtained from Caltrans 2020.

b. Considered representative of other heavy earthmoving equipment such as excavators, graders, backhoes, etc.

^{c.} Considered representative of smaller equipment such as a small backhoe and front-end loader.

⁵ Federal Transit Administration. 2018. *Transit Noise and Vibration Impact Assessment*. FTA Report 0123. September. Available: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/researchinnovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf. Accessed: February 24, 2024.

⁶ Ibid.

⁷ California Department of Transportation. 2020. *Transportation and Construction Vibration Guidance Manual*. April. Available: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/ tcvgm-apr2020-a11y.pdf. Accessed: February 24, 2024.

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 or interfere with activities. Studies have shown that the threshold of perception for average persons is a PPV in the range of 0.008 to 0.012 inch per second (in/sec). Human perception to vibration varies with the individual and is a function of physical setting and the type of vibration. Vibration may be found to be annoying at much lower levels than those defined in commonly used guidance documents. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. On the other hand, persons exposed to elevated ambient vibration levels such as people in an urban environment may tolerate a higher vibration level. 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. Depending on the age of the structure and type of vibration (transient, continuous, or frequent intermittent sources), vibration levels with a PPV as low as 0.5 to 2.0 in/sec can damage a structure.

The guidelines developed by the California Department of Transportation (Caltrans) for annoyance and damage potential from the transient and continuous vibration that is usually associated with construction activity are included below under the Regulatory Framework section.

4.5.2.1 Existing Noise Environment

Project Site

The project site is bounded by Terminal Court and a large Park 'N Fly surface parking lot to the north, a large surface parking lot and U.S. 101 (known as Bayshore Freeway) to the east, a navigable slough⁸ that feeds into San Bruno Canal to the south, and several industrial and commercial buildings along with San Mateo Avenue to the west. The project site is approximately 1 mile west of San Francisco Bay and 0.30 mile west of a portion of the San Francisco Bay Trail that runs along San Bruno Canal. In addition, the project site is approximately 1 mile northwest of San Francisco International Airport (SFO).

A number of transportation- and industrial-related noise sources contribute to the ambient noise environment in the project vicinity. Traffic on major roadways, such as U.S. 101, South Airport Boulevard, and San Mateo Avenue, heavily influence the ambient noise levels in this area. In addition, aircraft noise from planes taking off and landing at nearby SFO, along with Caltrain's passenger trains running north and south parallel to Hermann Street in San Bruno, influence the ambient noise environment.

⁸ The navigable slough is a remnant tidal channel that cuts through a commercial district in the city of South San Francisco and is connected to San Francisco Bay. (ESA. 2019. Navigable Slough Flood Management Study, Prepared for County of San Mateo, City of South San Francisco, and City of San Bruno. Available: https://oneshoreline.org/wp-content/uploads/2020/06/Navigable-Slough-Flood-Management-Study.pdf. Accessed: April 12, 2023).

Existing Uses at the Project Site

The project site is currently occupied by the Golden Gate Produce Terminal, a produce market facility, and associated surface parking. The project site consists of two warehouse buildings and a smaller administrative building totaling approximately 126,750 square feet (sf). In addition, the site is also developed with approximately 116,572 sf of open-air structures (including loading docks and trash compactors) associated with operations of the Golden Gate Produce Terminal.

Existing Noise-Sensitive Uses in the Vicinity

The project site is surrounded primarily by commercial and industrial uses to the south, west, and north. Such uses are generally not considered to be noise sensitive. To the east, the project site is bounded by U.S. 101. The nearest noise-sensitive land uses are two hotels (Travelodge and Best Western) located east of the project site, across U.S. 101 in the city of South San Francisco. The Travelodge hotel is approximately 250 feet from the project site, or 295 feet from the nearest portion of a proposed project structure. The Best Western hotel is approximately 800 feet east of the project site. The nearest existing residences are southwest of the intersection of Hermann Street and Tanforan Avenue in the City of San Bruno, approximately 1,100 feet (0.2 mile) southwest of the nearest projoced project building footprint. A proposed residential development has also been approved at 100 Produce Avenue and 124 Airport Boulevard. Although construction has not yet begun for this project, these multi-family residences would be occupied during project operation and may be occupied during some portions of project construction. The nearest portion of this residential development is located approximately 950 feet north of the northernmost portion of the project site.

Existing Noise Levels

Ambient noise is often measured to help characterize existing ambient noise levels in the vicinity of a given project. To quantify existing ambient noise levels near the project site, long- (24-hour) and short-term (15-minute) ambient noise measurements were conducted between Wednesday, March 1, and Thursday, March 3, 2023. Long- and short-term monitoring locations were selected to capture noise levels in areas with representative ambient noise levels throughout the day and night near the project site, and areas representative of noise-sensitive receptors, including the hotel uses east of the project site and the residences to the southwest. The long-term measurements were conducted using a Piccolo Type 2 sound-level meter (SLM). Five long-term noise measurement locations near the project site were selected. The 24-hour noise levels from the long-term measurements ranged from 69.6 to 77.2 dBA L_{dn}, with higher noise levels generally corresponding to areas near busier roadways (i.e., U.S. 101) and the nearby Caltrain passenger rail line (parallel to Herman Street). In addition, four short-term noise measurements were conducted near the project site. Short-term measurements were conducted using a Larson Davis 831 Type 1 SLM, which measured the L_{eq} noise level every 10 seconds for 15 minutes, as well as overall average L_{eq} over the 15-minute measurement interval. The measured short-term noise levels ranged from 57.8 to 73.0 dBA Leq.

The relevant noise data from the noise measurement survey are shown in Tables 4.5-4 and 4.5-5 for the long- and short-term noise measurements, respectively. All noise measurement locations are shown in Figure 4.5-1. Refer to Appendix A of the noise technical report (contained in Appendix G) for the complete dataset of noise measurement data from the field survey.

				Highest Recorded	Lowest Recorded	12-Hour Daytime
Site	Site Description	Ldn	CNEL	1-Hour L _{eq} a	1-Hour L _{eq} b	Leq ^c
LT-1	San Mateo Avenue, between Peking Handi-Craft and W.M. Dickerson	77.2	77.4	74.7	64.6	73.6
LT-2	Within the parking lot between Best Western hotel and Travelodge hotel, ~120 feet south of electrical tower	69.6	69.9	69.8	58.7	65.8
LT-3	The corner of Pacific Avenue and Hermann Street	76.5	77.0	76.2	54.9	74.1
LT-4	On project site, approximately 450 feet south of Terminal Court	74.9	75.2	75.4	65.0	70.3
LT-5	The southeast corner of IHOP parking lot	73.2	73.5	69.9	63.3	68.8
LT = long-term (24-hour) ambient noise measurement.						
All noise levels are reported in A-weighted decibels (dBA).						

Table 4.5-4. Measured Existing Noise Levels in the Project Vicinity, Long-Term

^{a.} Highest 1-hour L_{eq} is the highest calculated L_{eq} level during a 24-hour period.

 $^{\text{b.}}$ Lowest 1-hour L_{eq} is the lowest calculated L_{eq} level during a 24-hour period.

^{c.} The 12-hour daytime L_{eq} was the average hourly L_{eq} noise level from 8:00 a.m. to 8:00 p.m.

Table 4.5-5. Measured Existing Noise Levels in the Project Vicinity, Short-Term

Site	Site Description	Measurement Start Time	Lea	Lmax	Lmin	Dominant Noise Source
ST-1	Travelodge parking lot, adjacent to U.S. 101	9:20 a.m.	73.0	87.2	68.9	Highway traffic
ST-2	Parking lot between Bay Badminton Center and Peking Handicraft, Inc.	10:35 a.m.	68.0	76.9	63.5	Mechanical equipment, nearby table saw
ST-3	Parking lot between Peninsula Autobody and SF Elite Volleyball Club	9:03 a.m.	62.6	75.3	50.8	Roadway traffic
ST-4	Approximately 570 feet west from the southwest corner of the project site	11:39 a.m.	57.8	71.5	53.7	HVAC equipment hum from produce facility
ST = long-term (15-minute) ambient noise measurement. All noise levels are reported in A-weighted decibels (dBA).						

HVAC = heating, ventilation, air-conditioning



Graphics ... 104667

Figure 4.5-1 Noise Measurement Locations

Off-Site Redesignation Parcels

Five parcels north of the project site at 120 Terminal Court, 196 Produce Avenue, 160 Produce Avenue, and 140 Produce Avenue (off-site redesignation parcels), which are currently designated as Mixed Industrial High (MIH), would also seek General Plan, Specific Plan, and Zoning Code amendments to be redesignated as Business Technology Park High (BTP-H). The off-site redesignation parcels currently comprise a large Park N' Fly surface parking lot and a Shell gas station.. In general, existing noise levels at the redesignation parcels are similar to those near the project site, shown in Tables 4.5-4 and 4.5-5 because the primary noise source in the vicinity of both the project site and the off-site redesignation parcels is traffic on the same major roadways, such as U.S. 101, South Airport Boulevard, and San Mateo Avenue.

4.5.3 Regulatory Framework

This section provides a summary of the noise and vibration plans and policies of the City of South San Francisco (City), along with applicable regional, state, and federal regulatory guidelines and policies.

4.5.3.1 Federal

No federal laws, regulations, or policies for construction-related noise and vibration apply directly to the proposed project. However, the Federal Transit Administration (FTA) has developed general assessment criteria for analyzing construction noise. Although FTA standards are intended for federally funded mass-transit projects, the impact assessment procedures and criteria included in FTA's Transit *Noise and Vibration Impact Assessment* manual⁹ are routinely used to evaluate a variety of projects proposed by local jurisdictions (i.e., not exclusively transit projects). The FTA construction guidelines state that each A-weighted sound level increase of 10 dB corresponds to an approximate doubling of subjective loudness. As a result, a 10 dB increase in the ambient noise level is often used as the threshold in determining if an increase in ambient noise levels because of construction would be considered substantial.

4.5.3.2 State

Governor's Office of Planning and Research

The *State of California General Plan Guidelines*, published and updated by the Governor's Office of Planning and Research, provides guidance for evaluating the compatibility of various land uses with respect to community noise exposure. These guidelines for general land use planning describe noise acceptability categories for the different types of land uses considered by the state. California also requires each local government entity to perform noise studies and implement a noise element as part of its general plan. The purpose of the noise element is to limit the exposure of the community to excessive noise levels; the noise element must be used to guide decisions concerning land use. Section 4.5.3.3 of this document examines noise guidelines found in the *Shape SSF 2040 General Plan* (General Plan).

⁹ Federal Transit Administration. 2018. Transit Noise and Vibration Impact Assessment. FTA Report No. 0123. September. Available: 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: February 24, 2024.

California Department of Transportation

Caltrans provides guidelines regarding vibration associated with construction and operation of transportation infrastructure. Table 4.5-6 provides Caltrans' vibration guidelines for potential damage to different types of structures. Generally, people are more sensitive to vibration during nighttime hours (when people generally sleep) rather than daytime hours. Numerous studies have been conducted to characterize the human response to vibration. Table 4.5-7 provides Caltrans' guidelines regarding vibration annoyance potential (expressed here as PPV).

	Maximum Peak Particle Velocity (PPV, in/sec	
Structure Type and Condition	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings	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

Table 4.5-6. Caltrans Vibration Guidelines for Potential Damage to Structures

Source: California Department of Transportation. 2020. *Transportation and Construction Vibration Guidance Manual*. April. Available: https://dot.ca.gov/-/media/dot-media/ programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf. Accessed: February 24, 2024.

Note: Transient sources create a single, isolated vibration event (e.g., blasting or the use of drop balls). Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Table 4.5-7. Caltrans Guidelines for Vibration Annoyance Potential

	Maximum PPV (in/sec)		
Human Response	Transient Sources	Continuous/Frequent Intermittent Sources	
Barely perceptible	0.04	0.01	
Distinctly perceptible	0.25	0.04	
Strongly perceptible	0.9	0.10	
Severe	2.0	0.4	

Source: California Department of Transportation. 2020. *Transportation and Construction Vibration Guidance Manual*. April. Available: https://dot.ca.gov/-/media/dot-media/ programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf. Accessed: February 24, 2024.

Note: Transient sources create a single, isolated vibration event (e.g., blasting or the use of drop balls). Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

4.5.3.3 Local

South San Francisco Municipal Code

Chapter 8.32 of the City Municipal Code contains noise regulations for the city of South San Francisco. The code includes noise limits for sound that constitutes a noise disturbance, measured as the maximum permissible sound level at any receiving property. The City Municipal Code's quantitative noise limits and construction noise regulations are described below. Table 4.5-8 outlines the specific noise criteria that apply to various land uses in South San Francisco. Although these exact zoning/district designations are no longer in effect, the City generally applies the guidelines to the corresponding current zoning districts.

Table 4.5-8. Noise Level Standards for the City of South San Francisco

Land Use Category	Time Period	Noise Level (dBA) ^a
R-e, R-1, and R-2 zones or any single-family or	10:00 p.m. to 7:00 a.m.	50
duplex residential use in a specific plan district	7:00 a.m. to 10:00 p.m.	60
R-3 and D-C zones or any multi-family residential or	10:00 p.m. to 7:00 a.m.	55
mixed residential/commercial use in any specific	7:00 a.m. to 10:00 p.m.	60
C-1, P-C, Gateway, and Oyster Point Marina Specific	10:00 p.m. to 7:00 a.m.	60
Plan districts or any commercial use in any specific plan district	7:00 a.m. to 10:00 p.m.	65
M-1, P-1	Anytime	70

Notes:

• Noise levels are identified as maximum permissible sound levels for a cumulative period of more than 30 minutes in an hour.

• If the measured ambient noise level for any area is higher than the standard set listed above, the ambient level shall be the base noise level standard for purposes of identifying a noise disturbance.

• If the measurement location is on a boundary between two different zones, the applicable noise level standard shall be the more stringent noise zone plus 5 dBA.

^{a.} The noise level standard for each land use for a cumulative period of more than 30 minutes in any hour (L₅₀). Standards increase for durations of less than 15 minutes per hour.

Under the City Noise Ordinance, it is unlawful for any person to operate or cause to be operated any source of sound at any location within the city, or allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person, that causes the noise level, when measured on any other property, to exceed the limits specified in Table 4.5-8, with limited exceptions (including permitted construction activity). If the measured ambient level for any area is higher than the standard in the City Municipal Code for a particular use, then the applicable threshold for that use is 5 dB above the measured ambient level.¹⁰

The City Municipal Code also identifies special provisions for activities related to construction, alterations, and landscaping. With a valid permit, such activities may occur from 8:00 a.m. to 8:00 p.m. Monday through Friday, 9:00 a.m. to 8:00 p.m. on Saturdays, and 10:00 a.m. to 6:00 p.m. on Sundays and holidays. Other hours may be authorized by the permit if at least one of the following noise limitations is met:

¹⁰ South San Francisco Municipal Code, Section 8.32.030(a), (b).

- 1. No individual piece of equipment shall produce a noise level exceeding 90 dBA at a distance of 25 feet.
- 2. The noise level at any point outside of the property plane of the project shall not exceed 90 dBA.

Exception permits may be issued if an applicant can show that a diligent investigation of available noise abatement techniques indicates that immediate compliance with the requirements of Chapter 8.32 of the City Municipal Code would be impractical or unreasonable. Exception permits may contain conditions to minimize the public detriment caused by such exceptions. In addition, performance standards related to noise and vibration can be found in Chapter 20.300.010 of the City Municipal Code. Section E, Noise, states that no use or activity shall create ambient noise levels that exceed the levels of the standards established in Chapter 8.32, Noise Regulation. Section 20.300.010(F) states that vibration shall not be transmitted through the ground that is discernible without the aid of instruments by a reasonable person at the lot lines of a site. Vibration from temporary construction, demolition, and vehicles that enter and leave the subject parcel (e.g., construction equipment, trucks) is exempt from this standard. Section 20.300.010 also lists noise exposure requirements and limitations for new development, based on various land use types, which can be found below in Table 4.5-9. In these cases, noise levels at a new land use must meet the requirements for that designated land use.

Land Use	CNEL Range (dBA)	Requirements and Limitations
	Less than 65	Satisfactory
Residential and other	65 to 70	Acoustic study and noise attenuation measures required
noise-sensitive uses (e.g., schools, hospitals, churches)	More than 70	Not allowed, with the exception of projects deemed appropriate by the City Council and, to the extent necessary, approved through the local agency override process, consistent with Public Utilities Code Section 21670 et seq.
Commercial	Less than 70	Satisfactory
	70 to 80	Acoustic study and noise attenuation measures required
	More than 80	Airport-related development only; noise attenuation measures required
	Less than 75	Satisfactory
Industrial	75 to 85	Acoustic study and noise attenuation measures required
	More than 85	Airport-related development only; noise attenuation measures required
	Less than 75	Satisfactory
Open	More than 75	Avoid uses involving concentrations of people or animals

2040 South San Francisco General Plan

The General Plan, adopted in October of 2022, contains a noise element (Chapter 16) that sets goals, policies, and implementing programs related to the goal of achieving acceptable noise levels in the city. In addition, the noise chapter sets land use compatibility noise standards for new developments. The following General Plan goals, policies, and programs adopted to avoid or minimize environmental noise are applicable to the project:

Goal NOI-1: Residents and Employees of South San Francisco Are Exposed to Acceptable Noise Levels.

Policy NOI-1.1: Ensure New Development Complies with Noise Compatibility Guidelines. Ensure that all new development within the city complies with the land use/noise compatibility guidelines shown in Table 11 (Table 4.5-10 of this EIR).

		CN	IEL
Land Use Categories	Compatible Uses	Interior ^a	Exterior ^b
Residential	Single-family, duplex, multi-family, mobile home, residence care uses	45°	65 ^d
	Hotel, motel, transient lodging uses	45°	65
	Commercial, retail, bank, restaurant, health club uses	55	—
Commercial	Office building, R&D, professional office uses	50	_
Gommereia	Amphitheater, concert hall, auditorium, meeting hall, movie theater uses	50	_
	Manufacturing, warehousing, wholesale, utility uses	65	—
Open Space	Park, neighborhood park, playground uses	—	65
Institutional/Public	Hospital, school, classroom uses	45°	65
Facility	Church, library uses	45°	

Table 4.5-10. Land Use Compatibility Noise Standards for New Development

Interpretation:

a. Interior environment excludes bathrooms, toilets, closets, and corridors.

^{b.} Outdoor environment limited to private yard of single-family residential, multi-family residential, and mobile home park outdoor common space area; hospital patio; park picnic area; school playground; and hotel and motel recreation area.

^{c.} Noise-Level Requirement with Closed Windows: Mechanical ventilating system or other means of natural ventilation shall be provided pursuant to Uniform Building Code requirements.

d. Multi-family developments with private balconies that would not meet the 65 dBA CNEL standard are required to provide occupancy disclosure notices to all future tenants regarding potential noise impacts.

Action NOI-1.1.1: Enforce Exterior and Interior Noise Limits. Enforce the standards of Table 11, Land Use/Noise Compatibility Matrix (Table 4.5-10), which specify acceptable exterior and interior noise limits for various land uses throughout the city.

Action NOI-1.1.2: Incorporate Noise Compatibility Conditions of Approval. Continue to assess projects through subdivision, site plan, conditional use permit, and other development review processes and incorporate conditions of approval and mitigation measures that ensure noise compatibility where appropriate.

Action NOI-1.1.3: Require Noise Study in Applicable Areas. Require a noise study to be performed and appropriate noise attenuation to be incorporated to reduce interior noise levels to 45 dB CNEL or less prior to approving any multi-family or mixed-use residential development in an area with a CNEL of 65 dB or greater.

Action NOI-1.1.5: Require Noise Control for New Developments. Require the control of noise at the source through site design, building design, landscaping, hours of operation, and other techniques for new developments deemed to be noise generators.

Policy NOI-1.2: Enforce Noise Performance Standards. The City enforces the noise ordinance noise performance standards.

Action NOI 1.2.1: Update Municipal Code Section Related to the Noise Ordinance. Update the noise ordinance in the South San Francisco Municipal Code to establish standards for permissible construction hours and controls related to other potential nuisances, such as music, dogs, special events, and mechanical/sound equipment, and encourage enforcement and penalties for violations of the noise ordinance. The update should not interfere with the regular course of business in commercial and industrial zones.

- *General Activity Noise Performance Standards:* Establish general noise performance standards for the city's established land use zones.
- *Construction Noise:* Continue to restrict construction activities to acceptable time periods. Consider constructing temporary sound walls surrounding construction sites during construction.
- *Special Event Noise:* Allow single-event occurrences at specific sites, subject to special permit conditions, which alleviate noise to the greatest extent possible. Limit the permissible hours for special single events and the number of special single events allowed to take place each year.

Goal NOI-2: Prevent the Exposure of Residents and Employees of South San Francisco to Unacceptable Vibration Levels.

Policy NOI-2.1: Require Vibration Analysis for Sensitive Receptors. A vibration analysis shall be prepared by a qualified acoustical consultant for any construction-related activities within 100 feet of residential or other sensitive receptors that require the use of pile driving or other construction methods that have the potential to produce high vibration levels.

Policy NOI-2.2: Require Vibration Analysis for Rail Lines. A vibration analysis shall be prepared by a qualified acoustical consultant for new land uses located within 200 feet of existing rail lines.

Goal NOI-3: Historic Structures Are Not Exposed to Unacceptable Vibration Levels.

Policy NOI-3.1: Require Vibration Analysis for Historic Structure Protection. Prior to issuance of grading permits for any development project within 150 feet of a historic structure, if construction activities will require either (1) pile driving within 150 feet the historic structure or (2) utilization of mobile construction equipment within 50 feet of the historic structure, the property owner/developer shall retain an acoustical engineer to conduct a vibration analysis of potential impacts from construction-related vibration on the historic structure. The vibration analysis shall determine the vibration levels created by construction activities at the historic structure and, if necessary, develop mitigation to reduce vibration to the Caltrans threshold for historic buildings (PPV of 0.12 in/sec).

Lindenville Specific Plan

The Lindenville Specific Plan, adopted September 27, 2023, contains specific guidelines for development within the Lindenville neighborhood, located in the southern portion of the City of South San Francisco. Chapter 3.3.3, *Land Use Vision – Allowed Uses*, lists one standard regarding noise.

Standard 5: Airport Land Use Compatibility Plan consistency. All development shall adhere to land use compatibility requirements established in Zoning Code Chapter 20.300.03 ("Airport Land Use Compatibility Plan Consistency").

- a. ALUCP Safety Zone Compatibility. Development projects in Safety Zones 2, 3, and 4 shall adhere to the land use restrictions as defined by the ALUCP.
- b. ALUCP Noise Compatibility (Interior). Future developments under the Specific Plan exposed to conditionally acceptable and generally unacceptable aircraft noise levels, as defined by the ALUCP or the South San Francisco General Plan, whichever is more restrictive, shall complete a detailed noise analysis that includes the required noise reduction measures and noise insulation features included in the design to ensure compatibility with appropriate noise standards.
- c. ALUCP Noise Compatibility (Exterior). Exterior noise requirements shall adhere to Zoning Code Chapter 20.300.03 ("Airport Land Use Compatibility Plan Consistency") and Noise Performance Standards in the City's General Plan, with the following exceptions: i. For new multi-family residential projects and for the residential component of mixed-use development, use a standard of 60 dB CNEL in usable outdoor activity areas. Use noise attenuation techniques such as shielding by buildings and structures for common outdoor use areas. Outdoor uses shall be designed for passive recreational use. ii. For new parks and open spaces, use a standard of 60 dB CNEL. Parks and open spaces shall be designed for passive recreational use.

San Bruno Municipal Code

Although the project site is located in the city of South San Francisco, project construction and operation have the potential to cause noise impacts at nearby sensitive land uses in the neighboring city of San Bruno. The nearest existing residences to the project site are the single-family residences west of the intersection of Hermann Street and Tanforan Avenue. Therefore, relevant portions of the San Bruno Municipal Code are summarized below.

The San Bruno Municipal Code contains regulations in Section 6.16 (San Bruno Noise Ordinance) pertaining to noise. This section discusses noise limits for various noise sources in the jurisdiction. The relevant guidelines from the San Bruno Noise Ordinance are included below.

6.16.030, Ambient Noise Level Limits

Where the ambient noise level is less than designated in this section, the respective noise level shall govern (Sound Level A, decibels). Residential zone: 10:00 p.m. to 7:00 a.m., 45 dBA; 7:00 a.m. to 10:00 p.m., 60 dBA (Ordinance 1354, Section 1; prior code: Section 16-4.3).

6.16.050, Noise Levels Exceeding Ambient Base Level

Any noise level exceeding the zone ambient base level at the property plane of any property, or exceeding the zone ambient base level on any adjacent residential area zone line or at any place of other property (or, if a condominium or apartment house, within any adjoining apartment), by more than 10 dB shall be deemed to be prima facie evidence of a violation of the provisions of

this chapter. However, during the period of 7:00 a.m. to 10:00 p.m., the ambient base level may be exceeded by 20 dB for a period not to exceed 30 minutes during any 24-hour period (Ordinance 1354, Section 1; prior code: Section 16-4.1-5).

6.16.060, Machinery Noise Levels

No person shall operate any machinery, equipment, pump, fan, air-conditioning apparatus, or similar mechanical device in any manner so as to create any noise that would cause the noise level at the property plane of any property to exceed the ambient base noise level by more than 10 dB. However, during the period of 7:00 a.m. to 10:00 p.m., the ambient base level may be exceeded by 20 dB for a period not to exceed 30 minutes during any 24-hour period (Ordinance 1354, Section 1; prior code: Section 16-4.6).

6.16.070, Construction of Buildings and Projects

No person shall, within any residential zone, or within a radius of 500 feet therefrom, operate equipment or perform any outside construction or repair work on any building, structure, or other project or operate any pile driver, power shovel, pneumatic hammer, derrick, power hoist, or any other construction-type device that shall exceed between the hours of 7:00 a.m. and 10:00 p.m. a noise level of 85 dBA, as measured at 100 feet, or exceed between the hours of 10:00 p.m. and 7:00 a.m. a noise level of 60 dBA, as measured at 100 feet, unless such person shall have first obtained a permit from the director of public works. No permit shall be required to perform emergency work (Ordinance 1354, Section 1; prior code: Section 16-4.7).

4.5.4 Impacts and Mitigation Measures

This section describes the impact analysis related to noise and vibration for the proposed project, including the off-site redesignation parcels. It describes the methods and thresholds used to determine whether an impact would be significant. Measures to mitigate (i.e., avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion, when necessary.

4.5.4.1 Significance Criteria

Based on Appendix G of the CEQA Guidelines, the proposed project would have a significant noise and vibration impact if it would:

- Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Generate excessive ground-borne vibration or ground-borne noise levels; or
- For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels.

4.5.4.2 Approach to Analysis

This noise impact analysis evaluates temporary noise and vibration generated by construction activities, operational noise generated by on-site mechanical equipment, and traffic noise increases associated with project-related changes in traffic patterns for the proposed project.

Construction and Demolition Impacts

The evaluation of potential noise and vibration impacts associated with project construction was based on the construction schedule, phasing, and equipment assumptions provided by the project sponsor. Using the construction assumptions derived for the proposed project, noise and vibration levels were estimated using the methods described below.

Noise – Daytime Hours

Estimates of combined construction and demolition noise levels for the proposed project were based on reference noise levels from the Federal Highway Administration (FHWA) roadway construction noise model, the FTA general assessment construction noise analysis method, and information provided by the project sponsor.^{11,12} The FTA recommends combining noise levels from the two loudest pieces of equipment expected to operate simultaneously in roughly the same location. For the purposes of this analysis, and to provide a reasonably conservative assessment, the analysis included an evaluation of the three loudest pieces of equipment expected to operate during a given construction phase, assuming simultaneous operation in roughly the same location on the project site. Consideration was also given to overlapping phases in the analysis.

The FHWA noise source data used in the construction noise model include A-weighted L_{max} noise levels, measured at 50 feet from the construction equipment, along with utilization factors for the equipment. The utilization factor is the percentage of time each piece of equipment is typically operated at full power over a specified time period. It is used to estimate L_{eq} values from L_{max} values. For example, the L_{eq} value for a piece of equipment that operates at full power over 50 percent of the time is 3 dB less than the L_{max} value.¹³

Modeled construction noise levels were compared to applicable construction noise standards for daytime hours. The City identifies criteria for daytime construction noise in Chapter 8.32 of the City Municipal Code. Based on those requirements, and for the purpose of this assessment, daytime construction noise generated in South San Francisco is considered significant if it exceeds the provisions of City Municipal Code Section 8.32.050(d). Specifically, if:

- Any individual equipment would result in noise exceeding 90 dB at a distance of 25 feet, or
- If overall construction noise (combined) would exceed 90 dB at any point outside of the property plane

In San Bruno, daytime construction noise generated within 500 feet of a sensitive use is limited to 85 dBA L_{eq} at a distance of 100 feet. However, because project construction would take place more than 500 feet from any sensitive uses in San Bruno, this threshold does not apply. Construction noise levels at the nearest existing residential land uses in San Bruno (approximately 1,100 feet from the project driveway, approximately 1,400 feet to the main project site, and approximately

¹¹ Federal Highway Administration. 2006. FHWA Roadway Construction Noise Model User's Guide. FHWA-HEP-05-054. January. Available: https://www.fhwa.dot.gov/ENVIRonment/noise/construction_noise/rcnm/rcnm.pdf. Accessed: January 17, 2024.

¹² Federal Transit Administration. 2018. *Transit Noise and Vibration Impact Assessment*, FTA Report No. 0123. September. Available: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/researchinnovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf Accessed: February 24, 2024.

¹³ Federal Highway Administration. 2008. FHWA Roadway Construction Noise Model (RCNM), Software Version 1.1. December 8. Prepared by: U.S. Department of Transportation, Research and Innovative Technology Administration, John A. Volpe National Transportation Systems Center, Environmental Measurement and Modeling Division.

1,570 feet from the nearest project building footprint) were modeled and compared to the existing ambient noise level to determine if a substantial temporary increase in noise (10 dB or greater) would occur.

Noise – Non-Daytime Hours

Construction activities proposed for non-daytime hours would be those taking place outside of the specified daytime hours for construction identified in the City Municipal Code. For South San Francisco, construction noise generated outside of the standard daytime hours for construction of 8:00 a.m. and 8:00 p.m. Monday through Friday (8:00 a.m. to 8:00 p.m. on Saturday or 10:00 a.m. to 6:00 p.m. on Sundays and holidays) was evaluated to determine if it would exceed the maximum permissible sound levels at nearby noise receptors (based on land use category of the receiving property, as identified in Table 4.5-8).

As identified by the project sponsor, activities that may take place outside of the standard daytime hours for construction in the City could include concrete pours, crane work, drilling, and interior buildout work. The interior buildout work would take place inside the buildings during early-morning hours, so the analysis focuses on exterior construction activities that may occur outside of the standard daytime hours for construction. As was the case for the daytime construction evaluation (described above), non-daytime construction noise was assessed by modeling combined construction noise levels based on reference noise levels from the FHWA roadway construction noise model, the FTA general assessment construction noise analysis method, and information provided by the project sponsor.

Combined construction noise levels for activities occurring outside of daytime hours were compared to the maximum permissible sound level for surrounding noise-sensitive land uses. The nearest sensitive land uses to the project in South San Francisco are the nearby hotel uses. Consideration is also given to the planned multi-family residential development at 100 Produce Avenue and 124 Airport Boulevard. During non-daytime hours, project construction noise is evaluated to determine if it would comply with the overall local noise standards (included in Table 4.5-8) at the nearest sensitive land uses; the less stringent daytime construction-specific noise thresholds in South San Francisco would not apply.

According to Table 4.5-8, the City nighttime noise standard for multi-family residential or mixed residential/commercial land uses (including transient lodging), is 55 dBA between the hours of 10:00 p.m. and 7:00 a.m., unless the existing ambient noise level exceeds this criterion. According to the City Municipal Code, if measured ambient noise levels are higher than the standard, generated noise levels may exceed measured ambient noise levels by up to 5 dB.

For purposes of the non-daytime construction noise analysis, the lowest 1-hour L_{eq} noise levels at the nearest sensitive uses are used to establish non-daytime construction noise thresholds because measured ambient noise levels exceed the aforementioned standards. The lowest measured 1-hour nighttime noise level at the nearest hotel (Travelodge) was 63.3 dBA L_{eq} . According to City Municipal Code standards, non-daytime construction noise may be up to 5 dB greater than this measured noise level at this land use. Therefore, non-daytime construction noise is evaluated to determine if combined equipment noise would be expected to exceed approximately 68 dBA at the Travelodge hotel.

Regarding the proposed multi-family residential development at 100 Produce Avenue and 124 Airport Boulevard, existing noise levels are best represented by LT-4 because this measurement is located at a similar distance from the U.S. 101 as the closest edge of this proposed development. The lowest measured 1-hour nighttime noise level at LT-4 was 65.0 dBA L_{eq}. As non-daytime construction noise is allowed to be up to 5 dB greater than the measured noise level, predicted non-

daytime construction noise levels are compared to a threshold of 70 dBA L_{eq} at the proposed residential development at 100 Produce Avenue/124 Airport Boulevard. Although project construction may be completed prior to the occupation of this development, an evaluation of non-daytime construction noise at this location is conservatively included in this assessment.

For nighttime and early-morning construction noise experienced by receptors in the city of San Bruno, because construction noise would take place more than 500 feet from the nearest sensitive uses, the nighttime (between 10:00 p.m. and 7:00 a.m.) noise criterion of 60 dBA, as measured at 100 feet, does not apply. Noise levels at the nearest existing residences are presented and compared to the existing ambient noise level (based on project-specific noise measurements) to determine if a substantial temporary increase (10 dB or greater) in noise would be expected to occur.

Construction Haul Trucks

The municipal code of South San Francisco does not include specific thresholds pertaining to construction haul truck noise. Anticipated daily haul truck noise was assessed to determine if a 3 dB increase over modeled ambient traffic noise levels, which is considered to be "barely perceptible," would occur as a result of hauling activity. Note that, in some cases, modeled traffic noise levels do not fully characterize the existing noise environment along a given roadway segment. For example, traffic noise from an adjacent larger-capacity roadway segments may dominate the overall noise environment in some areas (i.e., noise from U.S. 101 may be experienced along an adjacent quieter/smaller roadway segment). Therefore, along roadway segments where overall noise levels are influenced by traffic on other roadway segments, measured noise levels (when available) are also considered when evaluating potential haul truck noise impacts.

Vibration

Building/Structure Damage

The operation of heavy-duty construction equipment can generate localized ground-borne vibration at buildings adjacent to the construction areas. Ground-borne vibration rarely causes damage to normal buildings. However, a structure's susceptibility to vibration-induced damage depends on its age, condition, distance from the vibration source, and the vibration level.

Vibration resulting from construction of the proposed project was analyzed using data and modeling methodologies provided by Caltrans' *Transportation and Construction Vibration Guidance Manual.*¹⁴ This guidance manual provides typical vibration source levels for various types of construction equipment as well as methods for estimating the propagation of ground-borne vibration over distance. Table 4.5-3, presented previously, provides the PPV levels of the most vibration-intensive construction equipment expected to be used for the proposed project at a reference distance of 25 feet. All of the analyzed equipment is classified as continuous/frequent intermittent vibration sources.

The previously cited Caltrans vibration criteria included in the *Transportation and Construction Vibration Guidance Manual* are routinely used to evaluate a variety of projects (not merely transit projects) proposed by local jurisdictions, as outlined below. That guidance and the thresholds contained therein (shown in Table 4.5-6. *Caltrans Vibration Guidelines for Potential Damage to Structures*) is used in the analysis of potential vibration-related damage impacts.

¹⁴ California Department of Transportation. 2020. *Transportation and Construction Vibration Guidance Manual*. April. Available: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/ tcvgm-apr2020-a11y.pdf. Accessed: February 24, 2024.

Annoyance/Sleep Disturbance

Regarding the potential for annoyance-related vibration impacts to occur, residential and transient lodging land uses (e.g., hotels and motels) are considered most sensitive to vibration during nighttime hours when people generally sleep. For the purposes of this analysis, should strongly perceptible vibration levels (a PPV of 0.1 in/sec per the Caltrans guidelines for vibration annoyance potential [Table 4.5-7]) occur at nearby homes, hotels, or motels during nighttime hours, annoyance-related vibration impacts would be considered significant.

Operational Noise Impacts

Noise associated with project operations was evaluated for individual operational noise sources, as described below. Primary sources of operational noise associated with the project include heating, cooling, and ventilation equipment, emergency generators (during testing), loading docks, and operational traffic. Note that no planned events or large gatherings are proposed for the project courtyard, and there would be no amplified music or speech in this area; as a result, no assessment of noise from gatherings is included in this EIR.

Operational Traffic Noise

Traffic noise increases along nearby roadway segments resulting from project development were quantitatively modeled using traffic volumes and existing vehicle-mix assumptions (i.e., the proportion of automobiles, trucks, buses, and other vehicles) provided by the project traffic engineer (Fehr & Peers). Provided daily turn movements were converted into average daily traffic (ADT) volumes and posted speeds were determined using Google Street View. Traffic volumes were provided for existing, existing-with-project, future, and future-with-project conditions.

Quantitative modeling of traffic noise from the project was conducted using a spreadsheet that was based on the FHWA Traffic Noise Model, version 2.5, for the following conditions:

- Existing
- Existing with project
- Future (2040)
- Future (2040) with project

The spreadsheet calculates the traffic noise level at a fixed distance from the centerline of a roadway, according to the traffic volume, roadway speed, and vehicle mix predicted to occur under each condition. The evaluation of potential direct traffic noise impacts compared traffic noise modeling for the traffic scenario; potential effects on existing noise-sensitive land uses along major project traffic access roadways were assessed.

In some cases, modeled traffic noise levels do not accurately characterize the existing noise environment along a given roadway segment; for example, traffic noise from an adjacent largercapacity roadway segment may dominate the overall noise environment in some areas. Therefore, along roadway segments where overall noise levels are influenced by traffic on other roadway segments (e.g., U.S. 101), measured noise levels (when available) are also considered when evaluating potential traffic noise impacts. In general, an increase of 3 dBA in traffic noise is considered just noticeable, a change of 5 dBA in traffic noise is clearly noticeable, and a change of 10 dBA in traffic noise is perceived as a doubling of noise. This report applies the following thresholds of significance for direct traffic-related noise increases:

- A project-generated increase of 5 dBA in traffic noise if the resulting traffic noise would remain below the satisfactory range at noise-sensitive receivers, as found in Table 4.5-9.
- A 3 dBA or greater increase in traffic noise resulting from project implementation occurs when the future noise level is above the satisfactory range for a noise-sensitive land use.

Regarding potential cumulative traffic noise impacts, a comparison of existing traffic noise to future-with-project traffic noise was conducted to determine if a 3 dBA or 5 dBA increase (as described in the bullets above) would occur. In instances where cumulative traffic noise impacts were modeled to occur, the project contribution to these impacts was assessed by comparing traffic noise from the future-no-project scenario to the future-with-project scenario. Specifically, a cumulative impact and cumulatively considerable contribution related to traffic noise would be identified if:

- A project-generated increase of more than 1 dBA is attributable to the project where a cumulative traffic noise increase of 3 dBA or more occurs (and where cumulative traffic noise levels would be *above* the satisfactory range at a noise-sensitive land use).
- A project-generated increase of more than 1 dBA is attributable to the project where a cumulative traffic noise increase of 5 dBA or more occurs (and where cumulative traffic noise levels would remain *within* the satisfactory range at a noise-sensitive land use).

Mechanical Equipment

The evaluation of operational noise impacts associated with proposed on-site mechanical equipment was based on the available equipment information for the project, as provided by the project sponsor. Noise at various distances from point sources (e.g., stationary operational equipment such as generators and heating and cooling equipment) was estimated using available source noise data for similar equipment and a point-source attenuation of 6 dB per doubling of distance. Although final equipment numbers, makes, models, and locations have not been determined, an example case was modeled to estimate combined noise levels from project mechanical equipment. The potential for noise to exceed allowable levels was also evaluated.

Regarding the applicable operational equipment noise threshold, according to City Municipal Code, mechanical equipment noise at nearby residential-type uses (assumed to include hotel land uses) shall not exceed 60 dBA during the hours of 7:00 a.m. to 10:00 p.m. or 55 dBA during the hours of 10:00 p.m. to 7:00 a.m., unless the existing ambient noise level exceeds these criteria. According to the City Municipal Code, if measured ambient noise levels are higher than the standards, generated noise levels may exceed measured ambient noise levels by up to 5 dB. For purposes of the operational equipment analysis, the lowest 1-hour L_{eq} at the nearest sensitive uses is used to establish operational equipment noise thresholds because measured ambient noise levels would exceed the aforementioned standards.

To establish a baseline noise level for the purposes of this analysis, the lowest recorded hourly L_{eq} was conservatively used. The lowest measured nighttime noise level at the nearest residential/transient lodging land use (Travelodge) was 63.3 dBA L_{eq} . The lowest measured nighttime noise level at the Best Western was 58.7 dBA L_{eq} . The lowest measured nighttime noise

level at the planned 100 Produce Avenue/124 Airport Boulevard Development was 65.0 dBA L_{eq} . Because operational equipment noise may be up to 5 dB greater than this measured noise level at these uses, operational equipment noise was evaluated to determine if combined equipment noise would be expected to exceed approximately 68 dBA at the Travelodge, approximately 64 dBA at the Best Western, or approximately 70 dBA L_{eq} at the proposed residential development at 100 Produce Avenue/124 Airport Boulevard.

Estimated equipment noise levels at the nearest existing residences in San Bruno are also presented. Under applicable San Bruno thresholds, mechanical equipment must not result in a noise level of 10 dB above ambient at the nearest property plane of a sensitive use. The lowest measured hourly L_{eq} noise level at the nearest residences in San Bruno was 54.9 dBA L_{eq} ; therefore, operational equipment noise at these residences was analyzed to determine if combined noise would exceed approximately 65 dBA L_{eq} .

City Municipal Code Section 8.32.030 outlines maximum permissible sound levels, as measured at specified land uses. As shown in Table 4.5-8, maximum permissible sound levels are determined by the land use category of the receiving property. As described in the Methodology section, because generated noise levels may exceed measured ambient noise levels by up to 5 dB if the applicable municipal code noise standard is already exceeded, operational noise was compared to a threshold of 68 dBA at the nearest hotel (Travelodge), based on the lowest hourly ambient noise measurement of approximately 63 dBA L_{eq} at that location. Noise from mechanical equipment noise was also evaluated at the next closest sensitive land uses, including the Best Western Hotel and the proposed multi-family residential development at 100 Produce Avenue/124 Airport Boulevard. The lowest measured noise nighttime noise level at the Best Western and at the planned 100 Produce Avenue/124 Airport Boulevard residential development were 58.7 dBA L_{eq} and 65.0 dBA L_{eq}, respectively. Mechanical equipment noise is compared to a noise limit of 5 dB greater than the measured noise levels at these land uses. Therefore, mechanical equipment noise at these land uses was compared to approximately 64 dBA at the Best Western hotel and approximately 70 dBA at the planned 100 Produce Avenue/124 Airport Boulevard residential development residential development.

Emergency Generator Testing

The project would incorporate diesel generators, which would be used during power disruptions. Although use of the generators would be limited to primarily emergency circumstances, periodic testing would be required. Note that noise from the operation of generators during an emergency is considered exempt from local noise thresholds in South San Francisco. However, the testing of emergency generators is required to comply with applicable local noise limits for operational equipment. Note that emergency generators would not be tested during nighttime hours.

Noise from emergency generator testing at various distances was estimated using conceptual site plans, equipment specification data, and equipment layout information provided by the project sponsor, along with the general point-source attenuation equation of 6 dB per doubling of distance.

The City Municipal Code establishes daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) noise limits according to the receiving land use. These can be applied to noise generated by stationary equipment in South San Francisco (as presented in Table 4.5-8). According to the City Municipal Code (and as described previously), if measured ambient noise levels are higher than the standards, generated noise levels may exceed measured ambient noise levels by up to 5 dB. For purposes of the generator noise analysis, because generator testing would take place during daytime hours, generator noise would be limited to 5 dB above the

12-hour average daytime L_{eq} at the nearest sensitive land uses. The nearest sensitive land use is the Travelodge, which had a measured daytime 12-hour L_{eq} noise level of 68.8 dBA $L_{eq(12)}$; 5 dB above this noise level would be approximately 74 dBA L_{eq} . The 12-hour average ambient daytime noise levels in the vicinity of the Best Western hotel and the planned 100 Produce Avenue/124 Airport Boulevard development were 65.8 dBA L_{eq} and 70.3 dBA L_{eq} , respectively. Therefore, modeled generator noise levels are compared to a noise limit of 71 and 75 dBA L_{eq} , respectively.

Although the generators would not be located in San Bruno, and therefore not required to comply with noise limits for equipment in San Bruno, an analysis was done to determine if noise from the generators in South San Francisco would result in a substantial increase in noise levels at nearby homes in San Bruno. Noise from emergency generator testing experienced in San Bruno was evaluated to determine if a 20 dB increase over the daytime ambient noise level, consistent with San Bruno Municipal Code noise limits, would occur (because the noise would not last longer than 30 minutes in a given hour and because testing would not occur during nighttime hours).

For the reasons described above pertaining to noise from mechanical equipment, because all emergency generator testing would take place during daytime hours, emergency generator testing noise was compared to a threshold 5 dB greater than the daytime 12-hour L_{eq} noise level of 68.8 dBA $L_{eq(12)}$ at the nearest sensitive use (the Travelodge). Because a 5 dB increase above this noise level would be approximately 74 dBA L_{eq} , the threshold was applied to the assessment of emergency generator noise at this land use. Noise from emergency generator testing was also evaluated at the next closest sensitive land uses, including the Best Western hotel and the proposed multi-family residential development at 100 Produce Avenue/124 Airport Boulevard. The 12-hour average ambient daytime noise levels in the vicinity of the Best Western hotel and the planned 100 Produce Avenue/124 Airport Boulevard development were 65.8 dBA L_{eq} and 70.3 dBA L_{eq} , respectively. Therefore, modeled generator noise levels are compared to a noise limit of 71 and 75 dBA L_{eq} , respectively.

Loading Dock Noise

The potential for loading dock noise to result in substantial noise increases in the project area was analyzed qualitatively to determine the potential for a substantial temporary increase in noise at nearby sensitive land uses; a quantitative analysis of loading noise would be necessary only if the development was a loading-intensive use, such as a distribution center.

Parking Garage Activity

Noise sources in parking garage activity is evaluated to determine if a substantial temporary increase in noise would be expected to occur. Noise from underground, or below grade, parking garages would largely be attenuated by the mass of the earth above them, and because the line of sight between the noise source and the nearest sensitive uses would be blocked. Therefore, the I131S parking garage located beneath the I131S buildings would not be expected to result in parking-related noise at nearby sensitive uses. However, noise from the above ground parking garage associated with the proposed project has the potential to radiate out from the structure. Therefore, noise from the 1,378-parking space above ground I131N parking structure was evaluated to determine if a substantial increase in noise at nearby sensitive uses would occur.

On-Site Day Care and Outdoor Play Area

Activities taking place within the proposed day-care building would very likely not increase ambient noise as these sources would be blocked and attenuated by the walls of the building. However, children playing in outdoor play areas associated with the day care may generate audible noise at nearby sensitive land uses. Noise measurements were obtained from a previous study involving an outdoor play area. Specifically, source noise levels of approximately 58 children playing at Linda Vista Elementary School in San Diego were used to estimate noise from children playing outside the proposed day care. It is anticipated that this would be reasonably representative of the outdoor play area at the day-care site, which approximately 50 children would attend daily. The measured noise levels from this previous study were normalized to a reference distance of 50 feet, then adjusted to account for the assumed number of children playing within the outdoor play area and the distances to the closest noise-sensitive receptors.

The City Municipal Code establishes daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) noise limits according to the receiving land use. These can be applied to noise generated by children playing outdoors in South San Francisco. According to the City Municipal Code (and as described previously), if measured ambient noise levels are higher than the standards, generated noise levels may exceed measured ambient noise levels by up to 5 dB. For purposes of the day-care outdoor play area noise analysis, because the facility would operate during daytime hours, outdoor play area noise should not exceed 5 dB above the 12-hour average daytime L_{eq} at the nearest sensitive land uses. The nearest sensitive land use is the Travelodge, which had a measured daytime 12-hour L_{eq} noise level of 68.8 dBA L_{eq(12)}; 5 dB above this noise level would be approximately 74 dBA L_{eq}. The 12-hour average ambient daytime noise levels in the vicinity of the Best Western hotel and the planned 100 Produce Avenue/124 Airport Boulevard development were 65.8 dBA L_{eq} and 70.3 dBA L_{eq}, respectively. Therefore, modeled play area noise levels are compared to a noise limit of 71 and 75 dBA L_{eq}, respectively.

Note that the day-care center would not operate during project construction, so children at the day care would not be exposed to project construction noise.

Since the day-care facility would be operating only during daytime hours, outdoor play area noise was compared to a threshold 5 dB greater than the daytime 12-hour L_{eq} noise level of 68.8 dBA $L_{eq}(12)$ at the nearest sensitive use (the Travelodge). Because a 5 dB increase above this noise level would be approximately 74 dBA L_{eq} , the threshold was applied to the assessment of outdoor play area noise at this receiver. Noise from the play area was also evaluated at the next closest sensitive land uses, including the Best Western hotel and the proposed multi-family residential development at 100 Produce Avenue/124 Airport Boulevard. The 12-hour average ambient daytime noise levels in the vicinity of the Best Western hotel and the planned 100 Produce Avenue/124 Airport Boulevard development were 65.8 dBA L_{eq} and 70.3 dBA L_{eq} , respectively. Therefore, estimated outdoor play area noise levels are compared to a noise limit of 71 and 75 dBA L_{eq} , respectively.

4.5.5 Topics Evaluated in the Initial Study

The Initial Study for the proposed project (Appendix B) found that the topic listed below would result in less-than-significant impacts. Therefore, this topic was scoped out from further review in the EIR and is not discussed in this section.

Aircraft Noise Impacts. As discussed in the Initial Study for the project, the closest airport to the project site is SFO, which is approximately 1 mile to the southeast. Portions of the project site fall within the 65 dBA noise contour for this airport, according to the 2012 *Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport.* No portion of the project site is within the 70 or 75 dBA CNEL noise contours.¹⁵ Land uses proposed under the project include commercial, office, and/or research-and-development (R&D) land uses. The 2012 ALUCP designates commercial and industrial/production land uses as compatibility Criteria, of the ALUCP document.¹⁶ Although residential land uses are designated as conditionally compatible within the 65 dBA CNEL contour, no residential land uses are proposed as part of the project. Therefore, the project would not conflict with the land use restrictions for the 65 dBA noise contour in the ALUCP. Impacts related to aircraft noise were determined to be *less than significant* in the Initial Study for the project, and this topic will not be addressed in the EIR.

4.5.5.1 Impact Evaluation

Impact NOI-1: The project would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (*Less than Significant*)

Project

Construction Noise

Construction for the proposed project has the potential to generate noise that could exceed applicable noise thresholds at nearby sensitive uses. The proposed project would be constructed in eight phases (i.e., rough grading/site demolition, deep foundations, foundations, superstructure, building enclosure, interior buildout, sitework, startup/building commissioning/final inspections). Demolition and construction activities are anticipated to begin in March 2026 and be completed by May 2031, lasting approximately 62 months. Most construction activities would be expected to occur on the project site, with some limited work for a project driveway occurring southwest of the project site. As a result, most construction equipment would generally be operating no closer than 1,400 feet from the nearest single-family residences in San Bruno and 250 feet from the nearest hotel in South San Francisco (assuming equipment could operate anywhere on the project site). Estimated noise levels for individual construction equipment proposed for use with the project are shown in Table 4.5-11, based on the FHWA Roadway Construction Noise Model.

¹⁵ City/County Association of Governments of San Mateo County. 2012. Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport. November. Redwood City, CA. Available: https://ccag.ca.gov/wp-content/uploads/2014/10/Consolidated_CCAG_ALUCP_November-20121.pdf. Accessed: March 10, 2023.

¹⁶ Ibid.

Equipment Type	Noise at 25 Feet (L _{eq})
Drill rig	83
Crane	79
Excavator	83
Dozer	84
Scraper	86
Gradall	85
Concrete pump truck	80
Front-end loader/forklift	81
Welder	76
Man lift/scissor lift/glass manipulator	74

Table 4.5-11. Noise from Equipment Proposed for Project Construction (Leq)

Source: Federal Highway Administration. 2006. *FHWA Roadway Construction Noise Model User's Guide*. FHWA-HEP-05-054. January. Available: https://www.fhwa.dot.gov/ENVIRonment/noise/construction_noise/rcnm/rcnm.pdf. Accessed: January 17, 2024.

Note: Noise levels are based on source noise levels and utilization factors from the FHWA Roadway Construction Noise Model.

Daytime Construction Noise

In South San Francisco, construction activities are allowed between 8:00 a.m. and 8:00 p.m. weekdays, 9:00 a.m. to 8:00 p.m. on Saturdays, and 10:00 a.m. to 6:00 p.m. on Sundays and holidays, provided they meet one of two noise limitations. Construction is allowed during the daytime hours specified on the permit if noise from each individual piece of equipment is limited to 90 dB at a distance of 25 feet or if combined construction noise does not exceed 90 dB at any point outside of the property plane of the project. Table 4.5-11 demonstrates that noise levels for each individual piece of equipment proposed for the project would not exceed 90 dBA L_{eq} at a distance of 25 feet. For that reason, construction that takes place during daytime hours, as defined by the City Municipal Code, would not conflict with the City's construction noise regulations.

Combined construction noise is also assessed. To provide a reasonable worst-case analysis of potential combined noise levels from project construction, it was assumed that the three loudest pieces of equipment from each phase of construction would be operating simultaneously and close to one another anywhere on the project site (including at the project perimeter closest to sensitive uses). This ensures a conservative analysis because many construction phases (e.g., deep foundations, foundations, superstructure, building enclosure, interior buildout) would most likely be limited to the project building footprint, which is not adjacent to the project site perimeter, and therefore would be even farther from the nearest off-site sensitive uses.

A screening analysis was conducted to compare combined noise levels for each construction phase to determine which phase would be expected to produce the highest overall noise levels. These results are shown in Table 4.5-12. The screening analysis demonstrated that the rough grading/site demolition phase would be the loudest. The loudest three pieces of equipment proposed for use during this phase are two scrapers and a Gradall.

At a reference distance of 50 feet, the combined noise level of two scrapers and a Gradall operating simultaneously and close to one another during rough grading and site demolition is estimated to be 84 dBA L_{eq}. Table 4.5-13 shows the anticipated worst-case combined noise levels from operation of these three pieces of equipment at the closest nearby noise-sensitive land uses. The closest noise-

Construction Phase	Average Composite Hourly Noise Level (L _{eq}) at 50 feet, dBA
Rough grading/site demolition	84
Deep foundations	83
Foundations	83
Superstructure	83
Building enclosure	83
Interior buildout	82
Site work	81
Startup/building commissioning/final inspection	76

Table 4.5-12. Combined Noise Levels for Each Construction Phase at 50 Feet

Source: Construction assumptions were provided by the project sponsor. See Appendix A of the noise technical report (contained in Appendix G) for modeling data.

Modeling was conducted with the use of data from: Federal Highway Administration. 2006. *FHWA Roadway Construction Noise Model User's Guide*. FHWA-HEP-05-054. January. Available: https://www.fhwa.dot.gov/ENVIRonment/noise/construction_noise/rcnm/rcnm.pdf. Accessed: January 17, 2024.

Table 4.5-13. Weekday Daytime Construction Noise Levels at nearby Land Uses for Rough Grading/Site Demolition

Receiver (distance from project site, feet)	Construction Phase	Average Construction Noise Level (Leq), dBA	Average Daytime Ambient Noise Level (Leq), dBAª	Increase over Daytime Ambient (Leq), dBA
Travelodge (250 feet)		71	68.8 ^b	2.2
Best Western (800 feet)	Dough	60	65.8 ^c	-5.8
Planned 100 Produce Ave/124 Airport Blvd Development (950 feet)	Grading/Site	59	70.3 ^d	-11.3
Single-family residential (San Bruno, 1,100 feet)		58	74.1 ^e	-16.1

Source: Appendix A of the Noise Technical Report (contained in Appendix G).

Note: Combined construction noise levels from overlapping phases were also estimated, with nearly identical results. Because modeled construction noise from overlapping phases was comparable to modeled construction noise from individual phases, this analysis focuses on construction noise from individual phases. Refer to Appendix A of the Noise Technical Report (contained in Appendix G) for modeling files for overlapping construction phases.

- ^{a.} Modeled noise levels for construction activities were compared to the average daytime ambient noise level (12-hour L_{eq}) measured between the hours of 8:00 a.m. and 8:00 p.m.
- $^{\text{b.}}$ 12-hour L_{eq} was calculated from LT-5 data.
- ^{c.} 12-hour L_{eq} was calculated from LT-2 data.
- d. 12-hour Leq was calculated from LT-4 data.
- $^{e.}\,$ 12-hour L_{eq} was calculated from LT-3 data.

sensitive land uses in South San Francisco are the Travelodge and Best Western hotels east of U.S. 101 and the planned residential development at 100 Produce Avenue and 124 Airport Boulevard. The Travelodge is approximately 250 feet from the project site, the Best Western is approximately 800 feet from the project site, and the planned multi-family residential development near Produce Avenue and Airport Boulevard is approximately 950 feet from the project site. At a distance of 250 feet (i.e., at the nearby Travelodge), the rough grading/site demolition construction phase could result in a combined noise level of approximately 71 dBA L_{eq}. At the Best Western, located 800 feet from the project site, the noise level would be approximately 60 dBA L_{eq}. The 12-hour average ambient daytime noise levels in the vicinity of these two hotels were measured to be 68.8 and 65.8 dBA L_{eq}, as shown in Table 6-4. Combined construction noise levels are therefore anticipated to exceed the existing ambient noise level at the Travelodge by approximately 2 dBA. However, modeled construction noise would be approximately 6 dBA lower than the average ambient noise level during daytime hours at the Best Western.

Regarding the nearby proposed residential development at 100 Produce Avenue and 124 Airport Boulevard, approximately 950 feet north of the project site, the rough grading/site demolition construction phase could result in a combined noise level of approximately 59 dBA L_{eq} at this location. The measurement location that best represents this future noise-sensitive land use (LT-4) had a 12-hour daytime L_{eq} noise level of 70.3 dBA. Therefore, as shown in Table 6-4, combined construction noise levels would be approximately 11 dBA lower than the average ambient noise level during daytime hours at this location.

Although modeling demonstrates that construction noise at the nearby Travelodge may be approximately 2 dBA greater than the existing ambient noise level at this location, 2 dBA is below the commonly accepted threshold of perception for the average human ear, with a 3 dB change generally considered to be "barely perceptible." In addition, the increase would be temporary and intermittent, with construction lasting for 62 months. Furthermore, not all construction activities would occur at the perimeter of the project site closest to sensitive receptors. Some construction would occur at much greater distances as work moves throughout the project site. As described previously, project construction noise during daytime hours would comply with the applicable City Municipal Code threshold (i.e., no piece of equipment proposed for project construction would produce a noise level that would exceed the 90 dB threshold at 25 feet). For these reasons, the daytime construction noise impacts on the nearest noise-sensitive land uses in South San Francisco would not be considered substantial.

The existing single-family residential land uses closest to the project site are in San Bruno. These would be approximately 1,100 feet southwest of the closest project construction area (i.e., the project driveway for access to Shaw Road); the residences would also be more than 1,570 feet southwest of the nearest proposed project building. At a distance of 1,100 feet, noise from rough grading and demolition on the project site was modeled to be 58 dBA L_{eq}, without accounting for shielding and the associated attenuation from intervening buildings. Shielding from intervening buildings would further reduce this estimated noise level. The 12-hour average daytime ambient noise near the homes was approximately 74 dBA Leg. Therefore, ambient noise at the nearest existing residences was an estimated 16 dBA higher than construction noise would be at these locations. When noise sources are more than 10 dBA different from one another, the combined noise level is equal to the louder noise level. Therefore, construction noise from the project site, as experienced at the nearby residences in San Bruno, would not be expected to result in increases to the ambient noise environment. Daytime construction noise impacts at the nearest single-family residential land uses would also not be considered substantial. Daytime construction noise impacts to sensitive uses in both South San Francisco and San Bruno would be *less than significant*. No mitigation is required.

Non-Daytime Construction Noise

In addition to the daytime construction activities evaluated above, certain activities may be required to take place during nighttime and early-morning hours (i.e., outside of the standard daytime hours for construction). These non-daytime construction activities would include concrete pours, crane and/or large equipment (e.g., drill) work, and interior building work. Regarding concrete pours, there would be an estimated five mat slab pours, starting between 12:00 a.m. and 2:00 a.m., and 22 slab-on-metal-deck (SOMD) and slab-on-grade (SOG) pours, starting between 4:00 a.m. and 6:00 a.m. The project sponsor has stated that crane and drilling work may start as early as 5:00 a.m., with a total of 105 days for steel erection (i.e., crane work) and 40 days for drilling during early-morning hours. In addition, once the proposed building is constructed and enclosed, interior work may start before 8:00 a.m. However, this work would all take place internally and would not be expected to generate high noise levels outside. Noise from this activity was not quantitatively analyzed because it would generate less noise than the other analyzed phases. Noise from non-daytime construction activities is evaluated below.

During non-daytime hours, project construction noise would not be compared to constructionspecific daytime noise thresholds in South San Francisco. Rather, it would need to comply with the general City Municipal Code noise standards (included in Table 5-3) for South San Francisco. The City nighttime noise level standard for multi-family residential and transient lodging land uses (mixed-use/commercial land uses, according to Table 5-3) is 55 dBA between the hours of 10:00 p.m. and 7:00 a.m., unless the existing ambient noise level exceeds this criterion. According to the City Municipal Code, if measured ambient noise levels are higher than the standards, generated noise levels may exceed measured ambient noise levels by up to 5 dBA.

For purposes of the non-daytime construction noise analysis, the lowest 1-hour L_{eq} noise levels at the nearest sensitive uses are used to establish operational equipment noise thresholds because measured ambient noise levels exceeded the aforementioned standards. The lowest measured noise nighttime noise level at the nearest land use (Travelodge) was 63.3 dBA L_{eq} . The lowest measured nighttime noise level at the planned 100 Produce Avenue and 124 Airport Boulevard residential development was 65.0 dBA L_{eq} . Non-daytime construction noise may be up to 5 dB greater than the measured noise levels at these land uses, according to the City Municipal Code standards. Therefore, non-daytime construction noise was evaluated to determine if combined equipment noise would be expected to exceed approximately 68 dBA at the Travelodge, 64 dBA at the Best Western, or approximately 70 dBA at the planned 100 Produce Avenue and 124 Airport Boulevard residential development.

Modeling was conducted for concrete pours, crane work/steel erection, and drilling that would occur during non-daytime hours. This analysis assumes that concrete pours could occur anywhere on the project site and that drilling and crane work could occur anywhere within or adjacent to the footprint of proposed project buildings or structures. Therefore, concrete pours and crane/drill work could occur as close as 250 and 295 feet, respectively, from the nearby Travelodge. Concrete pours and crane/drill work could occur as close as 800 and 820 feet, respectively, from the Best Western. Finally, concrete pours and crane/drill work could occur as close as 950 and 1,000 feet, respectively, from the planned 100 Produce Avenue and 124 Airport Boulevard development.

Modeling for non-daytime construction activities was conducted to estimate the combined noise level by activity at the nearby noise-sensitive land uses. Based on the construction equipment list provided by the project sponsor, early-morning or nighttime crane work could require the use of two cranes at one time. Similarly, early-morning drilling activities could involve the use of two drills simultaneously. Finally, early-morning concrete pours could involve the use of two concrete pumps near one another on the project site simultaneously.

Table 4.5-14 shows estimated noise levels for activities that may occur during nighttime or earlymorning hours. As shown in this table, crane work (i.e., two cranes operating simultaneously) could result in an estimated noise level of approximately 61 dBA L_{eq} at the nearby Travelodge. Drilling activities (i.e., two drill rigs operating simultaneously) could result in an estimated noise level of approximately 65 dBA L_{eq} at the Travelodge. Concrete pours would result in an estimated noise level of 63 dBA L_{eq} at the hotel. These noise levels are all below the established non-daytime construction noise threshold of 68 dBA for this location (based on 5 dB above the existing ambient).

At the Best Western, crane work could result in an estimated noise level of approximately 52 dBA L_{eq} , drilling activities could result in an estimated noise level of approximately 56 dBA L_{eq} , and concrete pours could result in an estimated noise level of approximately 53 dBA L_{eq} . These noise levels are all below the established non-daytime construction noise threshold of 64 dBA for this location.

At the planned 100 Produce Avenue and 124 Airport Boulevard development, crane work could result in an estimated noise level of approximately 50 dBA L_{eq} , drilling activities could result in an estimated noise level of approximately 54 dBA L_{eq} , and concrete pours could result in an estimated noise level of approximately 51 dBA L_{eq} . These noise levels are all below the established non-daytime construction noise threshold of 70 dBA for this location.

Regarding the nearest existing single-family residences, which are approximately 1,100 feet from the nearest project construction area and approximately 1,570 feet from the footprint of the nearest project building in San Bruno, estimated noise levels at this location would be 46 dBA L_{eq} from crane work, 50 dBA L_{eq} from drilling work, and 50 dBA L_{eq} from concrete pours, as shown in Table 4.5-14. The lowest hourly ambient noise level near these residences would be 54.9 dBA L_{eq} during nighttime and early-morning hours. In addition, numerous buildings are located between the project site and the residences, which would greatly reduce the level of construction noise at these locations. Because estimated noise from project construction activities would be below the measured existing noise level and construction noise would be further reduced by intervening buildings, construction noise impacts at the nearest residences in San Bruno would not be considered substantial.

As demonstrated in this analysis, noise from limited non-daytime construction would not be expected to exceed the applicable thresholds. Construction noise impacts during non-daytime hours would be *less than significant.* No mitigation is required.

Construction Traffic Noise

Demolition and construction activities would require the use of haul trucks to remove debris and excavated materials. To ensure a conservative analysis, haul truck noise modeling was conducted based on the worst-case (maximum) number of haul truck trips that may occur on a given day. Specifically, based on information provided, up to 550 one-way truck trips may be made to or from the site on a worst-case day. Note that a smaller number of haul truck trips would take place on most construction days. In addition, no other site deliveries (e.g., vendor drop-offs) would occur while worst-case hauling activities would take place. Therefore, modeling for haul truck noise is based on a maximum of 550 one-way truck trips on a worst-case construction day.

Receiver	Distance (feet)	Non-Daytime Construction Activity	Construction Noise Levels (Leg), dBA Leg	Lowest Hourly Ambient Noise Level (Leg), dBA ^a	Threshold Based on 5 dBA Increase over Ambient ^a	Exceeds Threshold?
	250 (distance	Concrete pours – mat slabs	63			No
Travelodge (South San	to project site)	Concrete pours – SOMD/SOG	63	633	68	No
Francisco)	295	Drilling	65	03.3	00	No
	(distance to project building)	Crane work	61			
	800 (distance	Concrete pours – mat slabs	53			No
Best Western (South San Francisco)	to project site)	Concrete pours – SOMD/SOG	53	597	64	No
	820 (distance to project building)	Drilling	56	- 50.7		No
		Crane work	52	-		No
Residential (South San Francisco)	950 (distance to project site)	Concrete pours – mat slabs	51			No
		Concrete pours – SOMD/SOG	51	65.0	70	No
	1,000	Drilling	54	- 05.0	70	No
	(distance to project building)	Crane work	50			
Residential	1,100 (distance to project site)	Concrete pours – mat slabs	50			No
		Concrete pours – SOMD/SOG	50	54.9	60	No
(San Bruno)	1,570	Drilling	50	51.7	00	No
	(distance to project building)	Crane work	46			No

Table 4.5-14. Non-Daytime Construction Noise Levels at nearest Sensitive Land Uses

Source: Appendix A of the Noise Technical Report (contained in Appendix G).

The lowest ambient noise level is conservatively used to establish a baseline noise level. In South San Francisco, if existing noise exceeds the applicable noise threshold, a 5 dBA increase in noise over the existing noise level is allowed.

^{a.} The noise threshold for construction noise at the Travelodge was based on the lowest hourly L_{eq} from LT-5. The noise threshold for construction noise at the Best Western was based on the lowest hourly L_{eq} from LT-2. The noise threshold for construction noise at the 100 Produce Avenue and 124 Airport Boulevard planned development was based on the lowest hourly L_{eq} from LT-4. The noise threshold for construction noise at residential land uses in San Bruno was based on the lowest hourly L_{eq} from LT-3, even though these land uses are outside of South San Francisco. The thresholds for South San Francisco are more stringent and therefore more protective of these uses during non-daytime hours.

Neither the municipal code nor the General Plan includes specific thresholds pertaining to construction haul truck noise. Therefore, anticipated worst-case daily haul truck noise was assessed to determine if a 3 dB increase over ambient noise levels, which is considered to be "barely perceptible," would occur.

The project sponsor identified two northbound and two southbound haul routes, depending on which end of the project site the trucks are accessing. Trucks would exit the site from the north side of the project site via Terminal Court. At Produce Avenue, trucks would turn right to access southbound U.S. 101 or turn left and follow Produce Drive north before turning right onto South Airport Boulevard. Trucks would stay on South Airport Boulevard as it continues south, then make one more right turn before accessing the U.S. 101 northbound ramp. Haul trucks leaving the south end of the project site would use the proposed project driveway to access Shaw Road and San Mateo Avenue west of the project site. Trucks would travel north to the point where San Mateo Avenue intersects Produce Avenue/Airport Boulevard. To access southbound U.S. 101, haul trucks would turn right on Produce Avenue and continue to the entrance ramp. Trucks headed northbound would turn left at San Mateo Avenue onto Airport Boulevard and access the northbound U.S. 101 ramp near Grand Avenue. Trucks would use these same routes to return to the project site.

Daily turn movements and vehicle-mix percentages provided by Fehr & Peers were used to model existing traffic noise along the haul truck routes. In addition, traffic noise modeling was completed for an existing-plus-haul-truck condition by adding the worst-case daily haul truck volumes to the existing daily traffic volumes along roadway segments where hauling would occur. This would be a worst-case existing-plus-haul-truck condition because it would be based on the predicted worst-case daily haul truck volumes.

Traffic noise modeling for the existing and existing-plus-haul-truck scenarios along haul route roadway segments was conducted using a spreadsheet that was based on the FHWA Traffic Noise Model, version 2.5. Modeled noise levels were then compared to determine if a project-related increase in haul truck noise of 3 dB or more would occur along any evaluated segment. Table 4.5-15 shows the modeled traffic noise levels under both conditions for roadway segments where hauling would occur.

This initial modeling, which was based on existing traffic volumes and predicted haul truck volumes along a given segment, demonstrated that project haul truck trips could result in a 3 dB or greater increase in noise (with a maximum increase of 10.7 dB identified) along some roadway segments, based on modeling alone. However, project noise measurements demonstrated that actual noise levels along nearby roadway segments are actually greater than the estimated (modeled) traffic-only noise levels. This is primarily because ambient noise levels along a given roadway segment near the project site are also affected by traffic noise from adjacent or nearby roadways, including highways (e.g., U.S. 101) and major arterials, as well as other noise sources existing in the environment (e.g., industrial uses, aircraft overflights, train noise). In general, long-term noise measurements are a more accurate representation of existing ambient noise levels along a given roadway than modeling of segment traffic volumes alone because a measurement takes into consideration all noise sources (e.g., traffic on nearby roads, industrial or commercial sources of noise, aircraft fly-overs).

In order to account for real-world conditions, further evaluation was conducted for roadways where potential haul truck noise impacts (i.e., a 3 dB increase, or greater) were identified in the modeling results. This detailed evaluation was done by comparing modeled haul truck noise to the measured existing noise level representative of a given segment.

Table 4.5-15. Haul Truck Traffic Noise Analysis

		Modeled Noise Levels (Screening Analysis)			Comparison to Measured Noise Levels (More Detailed Analysis)			
		dBA CNEL, at 50 feet		dBA CNEI	L at 50 feet	Madalad		
Roadway	Segment	Modeled Existing Noise Levels	Existing-plus-Haul- Truck Noise Levels	Modeled Delta dBA	Measured Ambient Noise if 3 dBA Increase Modeled	Modeled Haul Truck Only Noise dBA	Haul-Truck-Only Noise Compared to Existing Measured Noise (dB)	Significant Impact?
Airport Boulevard	North of San Mateo Avenue/South Airport Boulevard	66.9	68.0	1.1	N/A	-	-	No
Produce Avenue	North of Terminal Court	68.5	69.5	1.0	N/A	-	-	No
Produce Avenue	North of U.S. 101 SB off-ramp	69.6	70.6	1.0	N/A	-	-	No
Produce Avenue	South of San Mateo Avenue/South Airport Boulevard	69.5	70.4	1.0	N/A	-	-	No
Produce Avenue	South of U.S. 101 SB off-ramp	68.5	69.5	1.0	N/A	-	-	No
San Mateo Avenue	North of South Linden Avenue	60.6	64.9	4.3	77.4 ^a	62.8	-14.6	No
San Mateo Avenue	North of Tanforan Avenue/Shaw Road	61.9	64.9	3.1	77.4 ^a	62.8	-14.6	No
San Mateo Avenue	South of South Linden Avenue	61.9	64.9	3.1	77.4ª	62.8	-14.6	No
San Mateo Avenue	West of Airport Boulevard/Produce Avenue	62.6	65.6	3.0	77.4 ^a	62.8	-14.6	No
Shaw Road	East of San Mateo Avenue	56.7	63.8	7.1	77.4 ^a	62.8	-14.6	No
South Airport Boulevard	East of Airport Boulevard/Produce Avenue	66.0	67.3	1.3	N/A	-	-	No
South Airport Boulevard	North of U.S. 101 NB on- and off-ramp/Wondercolor Lane	65.8	67.2	1.3	N/A	-	-	No
South Airport Boulevard	South of South Airport Boulevard/Mitchell Avenue	65.6	66.9	1.3	N/A	-	-	No
South Airport Boulevard	West of South Airport Boulevard/Gateway Boulevard	66.0	67.3	1.3	N/A	-	-	No
Terminal Court	West of Produce Avenue/U.S. 101 SB on-ramp	53.8	64.5	10.7	75.2 ^b	64.1	-11.1	No
U.S. 101 NB on- and off-ramp	West of South Airport Boulevard	65.6	67.8	2.3	N/A	-	-	No
U.S. 101 SB off-ramp	East of Produce Avenue	61.2	66.8	5.7	75.2 ^b	66.1	-9.1	No
U.S. 101 SB on-ramp	South of Terminal Court	72.2	73.0	0.8	N/A	-	-	No

^{a.} Measured ambient noise level based on LT-1, 77.4 dBA CNEL.

^{b.} Measured ambient noise level based on LT-4, 75.2 dBA CNEL.

Bold text denotes modeled 3 dB or greater increase attributable to project haul trucks between modeled conditions.

NB = northbound; SB = southbound

City of South San Francisco

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Environmental Setting, Impacts, and Mitigation Noise and Vibration

This comparison, which considers measured ambient CNEL noise levels near these roadway segments, is also included in Table 4.5-15. As shown in this table, existing measured noise levels along the roadway segments are already approximately 9 to 15 dB greater than the modeled haul truck noise levels. Existing ambient noise levels along the evaluated segments are therefore such that the addition of haul truck noise would not result in a meaningful increase in the overall ambient noise level in the vicinity of these roadway segment. This is because, if the dB difference between two noise sources is 10 dBA or more, the higher noise source will dominate, and the resultant noise level will be equal to the noise level of the higher noise source (as discussed in the subsection Noise from Multiple Sources, above). If the difference between two noise sources is 4 to 10 dBA, the resultant noise level will be 1 dBA higher, or less (and approximately 0.5 dB when the difference is 9 dB), than the higher noise source. For these reasons, no increases in noise of 3 dB or greater would be expected to occur from project haul truck traffic. In addition, most of the roadways where hauling would occur are surrounded by commercial and industrial land uses, which are not considered to be noise sensitive. For example, San Mateo Avenue is lined with various commercial and industrial land uses. Finally, note that the noise modeling conservatively assumed that all 550 daily haul truck trips (on a worst-case day) would use all roadway segments along each of the four haul routes. The haul trucks would most likely be split amongst the four potential haul routes, reducing haul truck noise along a given segment.

In conclusion, noise increases from project haul truck activity at sensitive uses located along haul routes would not be expected to exceed 3 dB, and haul truck noise impacts would be *less than significant.* No mitigation is required.

Summary of Construction Noise Impact Conclusions

Based on the construction noise modeling results, estimated noise levels for both daytime and non-daytime (i.e., early-morning and nighttime) construction activities would be below the applicable significance thresholds. In addition, construction haul truck noise impacts would not be expected to result in a 3 dB increase in noise along evaluated roadway segments. Therefore, daytime and non-daytime construction noise impacts on nearby sensitive uses would be *less than significant.* No mitigation is required.

Project Operation

Mechanical Equipment Noise

Although general information regarding project heating, cooling, and ventilation equipment, as well as other operational mechanical equipment for the project, is available, final equipment makes and models have not been selected. The proposed locations for project equipment are also not final. However, it is known that project mechanical equipment would include multiple air handling units, air-source heat pumps, make-up air units, chillers, split-system air-conditioners, direct outside air systems, cooling towers, electric water boilers, pumps, and fans.

In general, air handling units, standard heating and cooling package units, and split-system airconditioners can produce sound levels in the range of about 70 to 75 dBA at 50 feet, depending on the size of the unit.¹⁷ With regard to cooling towers, a typical 100-horsepower, propeller-driven cooling tower generates a noise level of approximately 74 dBA at 50 feet. Depending on cooling capacity, a chiller generates a sound power level of 97 to 103 dBA, which equates to a noise level of 65 to 71 dBA

¹⁷ Hoover and Keith. 2000. Noise Control for Buildings, Manufacturing Plants, Equipment, and Products. Houston, TX.

at 50 feet.¹⁸ A typical boiler generates a sound power level in the range of 96 to 99 dBA,¹⁹ which equates to a noise level of 64 to 67 dBA at 50 feet. Pumps generate noise levels at 50 feet of approximately 81 dBA, and exhaust/ventilation fans generate noise levels at 50 feet of approximately 79 dBA.²⁰

Although the exact makes, models, sizes, and locations for the proposed mechanical equipment are not known at this time, an example case of combined noise levels was modeled, based on the equipment information available at the time. The analysis evaluated combined noise from a select number of units that could be installed under the project. It conservatively assumed that all modeled pieces of equipment in each building would be located relatively close to one another. Although more equipment than evaluated could be installed under the project, overall noise levels would be generally dominated by the closest and loudest equipment. In addition, equipment located farther from the edge of the project roof would be somewhat blocked by equipment located closer to the roof, resulting in noise attenuation. Finally, the edge of the roof itself would also reduce equipment noise experienced by noise-sensitive uses located closer to the ground level of the approximately 114-foot-tall project building. As a result, the example analysis provides a reasonable estimate of combined noise levels from project equipment experienced at the nearest sensitive uses.

According to the project sponsor, boilers and pumps would be located inside buildings. As a result, because walls would somewhat reduce noise, an estimated 10 dB reduction in the noise level is assumed in the model for these types of equipment. In addition, all rooftop equipment would be located behind a solid screen. As a result, noise reduction of approximately 5 dB was assumed for equipment located behind a mechanical screen in the model.

As described above in Section 4.5.4.2, Approach to Analysis, operational equipment noise was evaluated to determine if combined equipment noise would be expected to exceed approximately 68 dBA at the Travelodge or approximately 64 dBA at the Best Western, based on a 5 dB allowable increase over the lowest recorded hourly ambient noise level. In addition, an evaluation is conducted to determine if combined equipment noise would be expected to exceed 70 dBA at the planned residential development at 100 Produce Avenue and 124 Airport Boulevard. Equipment noise experienced at the residences in San Bruno was evaluated to determine if it would exceed approximately 65 dBA Leq, which would constitute a 10 dB increase over the lowest recorded hourly ambient noise level at that location. Note that using the lowest recorded hourly noise level (which occurred during nighttime hours) to establish the operational equipment threshold is conservative because more of the equipment would be operating during daytime hours (i.e., air-conditioning equipment) than during nighttime hours. In addition, most project buildings would be six stories tall, with an estimated height of 114 feet. The Travelodge is one or two stories and an estimated 15 to 30 feet in height. Therefore, the edge of the project roof for the project buildings where most mechanical equipment would be located (I131N and I131 S) would be expected to block the line of sight between most mechanical equipment and this nearby hotel, resulting in a reduction in mechanical equipment noise. However, to ensure a conservative analysis, a quantitative reduction in noise was not applied for this shielding.

¹⁸ Ibid.

¹⁹ Ibid.

²⁰ Federal Highway Administration. 2006. FHWA Roadway Construction Noise Model User Guide. FHWA-HEP-05-054. January. Available: https://www.fhwa.dot.gov/ENVIRonment/noise/construction_noise/rcnm/rcnm.pdf. Accessed: January 17, 2024.

Combined noise levels from two boilers (in an equipment room), two chillers, two cooling towers, four pumps (in an equipment room), two air handlers or direct outside air system (DOAS) units, and two exhaust fans would result in an estimated noise level of 81.5 dBA L_{eq} at a standard distance of 50 feet. At the nearby Travelodge, approximately 295 feet from the closest project building, without accounting for the height difference between the rooftop equipment and the hotel, the noise level would be approximately 66.2 dBA L_{eq} . At the Best Western, approximately 820 feet from the nearest project building, the estimated combined equipment noise level would be reduced to 57.3 dBA L_{eq} in the example case described above. At the planned residential development at 100 Produce Avenue and 124 Airport Boulevard, located more than 950 feet from the nearest project building, the noise level would be approximately 56.0 dBA L_{eq} . Refer to Table 4.5-16 for a summary of the equipment noise modeling for this example case.

For the reasons described above, and based on the modeling results shown in Table 4.5-16, it is unlikely that combined mechanical equipment noise would result in a 5 dB increase over the existing ambient noise level at the nearby land uses. Specifically, modeled noise levels would not exceed the established 68 dBA L_{eq} standard at the Travelodge, the 64 dBA L_{eq} standard at the Best Western, or the 70 dBA L_{eq} standard at the planned residential development at 100 Produce Avenue and 124 Airport Boulevard (based on a 5 dB allowable increase over the lowest recorded hourly ambient noise level).

Type of Equipment	dBA L _{eq} Noise at 50 Feet (assuming 100% utilization)	Number of Pieces of Equipment Assumed	Combined Noise Level	Attenuated Noise ^a	Source for Estimated Equipment Noise	
Boiler	67	2	70	60	H&K	
Chiller	71	2	74	69	H&K	
Cooling tower	74	2	77	72	H&K	
Pump	81	4	87	77	FHWA	
Air handling unit	75	2	78	73	H&K	
Exhaust fan	79	2	82	77	FHWA	
Combined Equipment Noise at 50 feet81.6						
Combined Equipment Noise at 295 feet (Travelodge)66.2						
Combined Equipment Noise at 820 feet (Best Western)57.3						
Combined Equipment Noise at 950 feet56.0(100 Produce Avenue/124 Airport Boulevard)56.0						
Combined Equipment Noise at 1,570 feet (San Bruno Residences)51.7						

Table 4.5-16.	Fxample	Combined	Mechanical	Faui	pment Noise
10010 4.5 10.	Example	combilica	Witcemannear	LYUI	

Sources:

Hoover and Keith. 2000. *Noise Control for Buildings, Manufacturing Plants, Equipment, and Products*. Houston, TX. Federal Highway Administration. 2006. *FHWA Roadway Construction Noise Model User's Guide*. FHWA-HEP-05-054. January. Available: https://www.fhwa.dot.gov/ENVIRonment/noise/construction_noise/rcnm/rcnm.pdf. Accessed: January 17, 2024.

^{a.} Assumes 10 dB of attenuation if equipment is internal to the building and 5 dB of reduction if equipment is behind a solid screen.

H&K = Hoover and Keith

Regarding noise impacts on residences in San Bruno, which are approximately 1,100 feet from the nearest portion of the project site but 1,570 feet southwest of the nearest project building (where

mechanical equipment would be installed), noise from the example case above would be reduced to approximately 51.7 dBA L_{eq} . It would be reduced further by the edge of the roof where the equipment would be located and the presence of intervening buildings between the project site and the residences. In addition, this noise level would be well below the conservatively established 65 dBA noise limit for this location (based on the lowest hourly L_{eq} recorded). For these reasons, noise from project mechanical equipment would not be expected to result in noise in excess of the thresholds at the residential land uses in San Bruno, which would be 1,570 feet from the closest project building.

Although modeled equipment noise levels would be below the applicable thresholds at nearby sensitive uses, the final equipment has not yet been selected. In addition, should more equipment be operational simultaneously than assumed in the example analysis included above, actual noise levels may be louder than the combined noise levels presented previously. Therefore, actual mechanical equipment noise levels could differ from, and be greater than, the levels cited above. However, General Plan policies and actions would ensure that noise from rooftop mechanical equipment would be in compliance with applicable thresholds. Specifically, Action NOI-1.1.5 from the General Plan requires all new developments that are considered to be noise generators to control noise at the source through their site designs, building designs, and other techniques. Although City Municipal Code noise standards still reflect the previous land use designation terminology, the standards are applied to comparable land uses under the current General Plan, according to the City. Therefore, with respect to project mechanical equipment, compliance with the noise standards in Table 8.32.030 from the current City Municipal Code (or comparable, once the Action NOI 1.2.1, Update Municipal Code, section related to the noise ordinance is implemented) would be demonstrated prior to the issuance of building permits and once the final makes, models, sizes, and locations have been determined. For these reasons, noise impacts from project mechanical equipment would be *less than significant*. No mitigation is required.

Emergency Generator Noise

Emergency generators included in the project could result in the generation of audible noise during testing. Generator testing for the project would be conducted on a monthly basis for 30 minutes on weekends or during non-business hours but never after 10:00 p.m. (when noise standards become more stringent). Noise from the operation of generators during an emergency is typically exempt from local ordinances. However, even though the testing of emergency generators is a short-term (i.e., less than 1 hour) and intermittent process (usually occurring once or twice per month), noise resulting from generator testing must comply with the local noise limits for operational equipment noise.

The project sponsor has specified that the project would involve the installation of twenty-four 500 kW emergency generators. Six generators would be located at grade inside I131N in a separate generator room. The remaining 18 generators would be at grade in the outdoor service yards around the project site. Specifically, six generators would be located outside I131N, eight generators would be located outside the I131S A and buildings, and four generators would be located outside the I131S C building.

Although the final makes and models of the generators have not been selected, specification data for a similar generator can be used to estimate generator noise. Based on the example generator specification data, a 500 kW generator (Cummins 500 DFEK)^{21, 22} could produce an unattenuated noise level of 101.5 dBA at 50 feet, including both engine and exhaust noise.

²¹ Cummins, Inc. 2019. *Cummins Power Generation*. Sound Data, 500DFEK. October.

²² Choice based on specification data provided by the project sponsor.
The City Municipal Code establishes daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) noise limits, based on the receiving land use, that can be applied to stationary equipment noise generated in the city (as presented in Table 4.5-8). As described in the Methodology section, if measured ambient noise levels are higher than the standards, the allowable noise level is instead the ambient noise levels plus 5 dB. For purposes of the generator noise analysis, and because generator testing would take place during daytime hours, generator noise would be limited to 5 dB above the 12-hour average daytime L_{eq} at the nearest sensitive land uses. The nearest sensitive land use (the focus of this analysis) is the Travelodge, which had a measured daytime 12-hour L_{eq} noise level of 68.8 dBA; the adjusted noise limit would therefore be 5 dB above this noise level, or approximately 74 dBA L_{eq} .

Note that specific details about generator shielding and the precise attenuation features for the project generators are not known with certainty at this time. It is expected that six of the generators would be located indoors, and the remaining generators outdoors would be located in service yards with acoustic enclosures. These features would be expected to reduce some of the noise from generator engines but would be unlikely to greatly reduce noise from exhaust, which is typically piped out of a building/generator enclosure. Exhaust noise usually dominates overall generator noise levels. Note that all walls must be solid to result in meaningful attenuation from shielding, with no gaps or open louvers. Although it is expected that the generator room and enclosures would result in some noise reduction, the precise noise reduction (in dB) cannot be estimated at this time. Because the type and sound rating of future shielding or exhaust mufflers is unknown, this analysis is conservatively based on unattenuated generator noise levels.

General locations for the proposed generators have been identified by the project sponsor. The nearest sensitive land use to all four generator locations (i.e., the generator room and the service yard locations) is the Travelodge, which is on the east side of U.S. 101. This hotel is approximately 340 feet from the closest proposed generators (i.e., the six 500 kW generators located outside the I131N B building), approximately 410 feet from the six generators internal to the I131N A building, 770 feet from the four generators outside the I131S C building, and approximately 1,030 feet from the eight generators outside the I131S A and B buildings. At these distances, unattenuated noise from the testing of each of the twenty-four 500 kW generators located throughout the site, noting only one would be tested at a given time, is estimated to be between 93.2 dBA L_{eq} (for the closest generators) and 88.4 dBA L_{eq} (for the farthest generators). Therefore, unattenuated generator noise levels from the testing of all proposed generators would most likely exceed the City noise level standard of 5 dB over the ambient noise level of 68.8 dBA, or approximately 74 dBA L_{eq}. Because noise levels during testing of all generators may exceed the existing ambient noise level at the nearby hotel by 5 dB or more, noise effects at the nearby hotel land use in South San Francisco from generator testing would be considered substantial.

With respect to noise levels from generator testing at other nearby sensitive land uses in South San Francisco, the Best Western and the planned 100 Produce Avenue and 124 Airport Boulevard development would be farther from the nearest generators compared with the Travelodge. Specifically, the Best Western would be at least 810 feet from any generator service yard, and the planned 100 Produce Avenue and 124 Airport Boulevard development would be at least 1,100 feet from the nearest generator set (i.e., inside the I131N A building). At these distances, unattenuated noise from a 500 kW generator would be approximately 89.4 and 88.5 dBA L_{eq}, respectively. The 12-hour average ambient daytime noise levels in the vicinity of the Best Western hotel and the planned 100 Produce Avenue and 124 Airport Boulevard development were 65.8 dBA L_{eq} and 70.3 dBA L_{eq}, respectively. Therefore, modeled generator noise levels of 89 to 90 dBA L_{eq} at these locations would be more than 5 dB above the existing ambient noise level. Noise effects at the nearby Best Western hotel and planned 100 Produce Avenue and 124 Airport Boulevard development in South San Francisco from generator testing would also be considered substantial.

Regarding noise effects in San Bruno on existing residential land uses, San Bruno noise standards allow for a 20 dB increase over ambient conditions during daytime hours for noise that occurs for no more than 30 minutes in 1 hour. Although generator testing would not take place in San Bruno, and therefore would not be required to comply with the noise limits of the San Bruno Municipal Code, generator noise experienced at the nearest sensitive uses in San Bruno was evaluated to determine if substantial noise increases would occur. As described in the Methodology section, generator noise was evaluated to determine if a 20 dB increase in ambient noise would occur at residences in San Bruno, based on the noise guidance from that jurisdiction. The average ambient daytime (12-hour) noise level measured during daytime hours (7:00 a.m. to 10:00 p.m.) near the homes was 74.1 dBA Leq. Therefore, if generator testing noise were to exceed 94.1 dBA at these homes, noise effects would be substantial. The closest generators to the residential land uses in San Bruno would be the eight 500 kW generators outside the I131S A and B buildings, which would be at least 1,520 feet away. At that distance, generator testing noise from the proposed 500 kW generators is estimated to be 86.7 dBA Lea. For generators in the service yards, which are farther away, and within the I131N A building, noise levels from testing would be reduced. As mentioned previously, these noise levels do not account for attenuation from intervening buildings, which would further reduce noise. Because estimated noise levels from generator testing would be below the allowable limits at the residences in San Bruno, generator noise in San Bruno would not be considered substantial.

Although modeled noise levels from temporary and intermittent generator testing could exceed the applicable thresholds, no attenuation is accounted for in this model. Attenuation measures would be evaluated and included in the generator design prior to installation in order to comply with applicable General Plan policies and actions. Compliance with General Plan policies and actions would ensure that noise from generator testing would not be substantial. Specifically, Action NOI-1.1.5 from the General Plan requires all new developments that are considered to be noise generators to control noise at the source through their site designs, building designs, and other techniques. Although City Municipal Code noise standards still reflect previous land use designation terminology, the standards are applied to the comparable land uses under the current General Plan, according to the City. Therefore, project emergency generator compliance with the noise standards in Table 8.32.030 from the current City Municipal Code (or comparable, once the Action NOI 1.2.1, Update Municipal Code, section related to the noise ordinance is implemented) would be demonstrated prior to issuance of building permits once the final makes, models, sizes, and locations of the generators have been determined. For these reasons, noise effects from project emergency generator testing on nearby sensitive uses would be *less than significant.* No mitigation is required.

Loading Dock Noise

Four loading dock areas are proposed for the project, two at each end of the project site. Each interior loading area would be designed to serve two WB-40 intermediate semi-trailers as well as smaller delivery vehicles. Per information received from the project sponsor, a maximum of 20 deliveries would be made to the site on a worst-case day. The nearest sensitive land use to all four loading docks would be the Travelodge. This hotel could be as close as 310 and 420 feet from the north loading docks and approximately 800 and 920 feet from the south loading docks. Although there could be direct line of sight between the north loading dock and the Travelodge (across U.S. 101), the temporary loading and unloading activities associated with the project would be short term and intermittent throughout the day (with a maximum of 20 deliveries expected on a given day), occurring only during daytime hours when people are less sensitive to noise. In addition, loading and unloading activities already occur at the existing commercial and industrial uses on the site; therefore, project implementation would not result in an increase in

this type of activity at the site. Furthermore, U.S. 101, which generates high levels of traffic noise, is located between the project loading docks and the nearby hotels. For these reasons, impacts from temporary and short-term increases in noise from project loading dock activity would be *less than significant.* No mitigation is required.

Operational Traffic Noise

Once operational, the project would result in an increase in traffic in the vicinity of the project site. As described in the methodology section, project-specific traffic data, including daily turning movements, speed limits, and existing vehicle-mix assumptions (i.e., the proportion of automobiles, trucks, buses, and other vehicles) were provided by the project traffic engineer (Fehr & Peers). Daily turning movements were converted to ADT volumes for existing, existing-with-project, future, and future-with-project conditions (note that the future scenarios are evaluated separately below). To evaluate direct traffic noise impacts associated with the project, modeling was conducted for existing and existing-with-project conditions to estimate traffic noise increases resulting from project implementation along roadway segments in the project vicinity. The following thresholds are applied to determine the significance of project-related traffic noise increases:

- 1. An increase of more than 5 dB is considered a significant traffic noise increase, regardless of the modeled existing noise level, and
- 2. In places where the existing or resulting noise environment exceeds the land use compatibility standards and/or allowable noise level for the adjacent land uses (e.g., existing or existing-with-project noise levels are greater than 65 dBA for sensitive land uses), any noise increase greater than 3 dB is considered a significant traffic noise increase.

The General Plan Land Use/Noise Compatibility Matrix (Table 4.5-10, above) outlines acceptable CNEL noise levels for various land uses in the city. Prior to completing the quantitative traffic noise modeling, an initial screening analysis was conducted to determine which roadway segments would experience a 10 percent increase (or greater) in vehicle traffic resulting from project implementation. A 10 percent increase in traffic volumes would typically result in a 0.4 dB increase in traffic noise, which is much smaller than the 3 and 5 dB increase thresholds mentioned above. Therefore, these roadways need not be quantitatively modeled to confirm a 3 dB or greater increase would not occur.

Traffic noise modeling along segments with at least a 10 percent increase in volumes attributable to the project was conducted using a spreadsheet that was based on the FHWA Traffic Noise Model, version 2.5, as described in the Methodology subsection of this report. Traffic noise was evaluated in terms of how project-related traffic noise increases could affect existing noise-sensitive land uses in the project area. Refer to Table 4.5-17 for a summary of the quantitative traffic noise modeling results for existing and existing-with-project conditions on all segments with a 10 percent, or greater, increase in traffic attributable to the project.

One of the modeled roadway segments, the project driveway north of Shaw Road, does not currently exist; therefore, modeled with-project traffic noise cannot be compared to existing noise conditions. The existing-with-project noise level along this segment was modeled to be 59.4 dBA CNEL. It should be noted that all surrounding land uses along this segment are commercial and industrial, which are not considered to be noise sensitive. Therefore, although project-related traffic noise increases along this segment cannot be quantified, significant traffic noise impacts would not occur.

Roadway	Segment Location	Modeled Existing Conditions (dBA CNEL)	Modeled Existing-with- Project Conditions (dBA CNEL)	Change (dB)	3 dB Increase or Greater?
Produce Avenue	North of Terminal Court	68.5	69.6	1.1	No
Produce Avenue	North of U.S. 101 SB off-ramp	69.6	70.4	0.8	No
Produce Avenue	South of San Mateo Avenue/South Airport Boulevard	69.5	70.3	0.9	No
Produce Avenue	South of U.S. 101 SB off-ramp	68.5	69.5	1.1	No
Project Driveway	North of Shaw Road	67.7 ^a	59.4	-7.7	No
San Mateo Avenue	North of South Linden Avenue	61.7	62.2	0.6	No
San Mateo Avenue	North of Tanforan Avenue/ Shaw Road	61.9	62.4	0.5	No
San Mateo Avenue	South of Tanforan Avenue/Shaw Road	61.0	61.8	0.8	No
Shaw Road	East of San Mateo Avenue ^b	56.7	61.6	4.9	Yes
South Linden Avenue	South of San Mateo Avenue	58.6	59.5	0.9	No
South Linden Avenue	West of San Mateo Avenue	58.4	59.4	1.0	No
Terminal Court	West of Produce Avenue/U.S. 101 SB on-ramp	53.8	61.0	7.2	Yes
U.S. 101 SB off-ramp	East of Produce Avenue	61.2	62.1	0.9	No
U.S. 101 SB on-ramp	South of Terminal Court	72.2	72.8	0.6	No

Table 4.5-17. Modeled Traffic Noise Levels for Segments with a 10 Percent Project Increase or Greater

Refer to Appendix A of the Noise Technical Report (contained in Appendix G) for the complete traffic noise modeling results.

Note: Modeled noise levels at a fixed distance of 50 feet from the roadway centerline.

Bold text denotes segments with a 3 dB or greater project-related increase in noise.

^{a.} The project driveway does not currently exist. Therefore, measured existing ambient noise levels were used to calculate a proxy CNEL noise level near this segment. Note that adjacent land uses along this segment are not considered to be noise sensitive (adjacent uses are commercial and industrial).

^{b.} Shaw Road east of San Mateo Avenue is theoretically the same as Shaw Road west of the project driveway. However, the data provided by the project traffic engineers (Fehr & Peers) were slightly different along these two segments, most likely due to some vehicles using private driveways along these segments. Refer to Appendix A of the Noise Technical Report for the modeled traffic noise results for Shaw Road west of the project driveway.

NB = northbound; SB = southbound

Two roadway segments were modeled to potentially result in a 3 dB or greater increase in traffic noise as a result of project implementation. Specifically, Shaw Road east of San Mateo Avenue and Terminal Court west of the Produce Avenue/U.S. 101 southbound on-ramp were modeled to have a project-related 4.9 and 7.2 dB increase in traffic noise, respectively. Note that the traffic noise evaluation above is based on modeled traffic noise levels only. Some roadway segments may be influenced by traffic noise from adjacent roads and other noise sources, which is not accounted for in the individual segment traffic noise modeling results presented above. Because the modeling approach assumes that each roadway is isolated and not affected by surrounding roads, modeled noise levels can sometimes be lower than actual noise levels in a given area.

In order to assess if modeled increases would actually constitute significant traffic noise impacts, as discussed in the Methodology section, it is important to consider measured existing noise levels in certain areas in conjunction with modeled traffic noise levels. This is particularly true in areas where the roadway segment evaluated is not the dominating noise source in the area (e.g., where noise from a nearby highway may dominate). The existing-with-project traffic noise levels for the segments where a potentially significant impact was identified during modeling were compared to nearby measured ambient noise levels.

As shown in Table 4.5-17, the modeled existing and existing-with-project traffic noise levels on Shaw Road east of San Mateo Avenue were 56.7 dBA CNEL and 61.6 dBA CNEL, respectively (as shown in Table 4.5-17). The measured ambient noise level near this segment (represented by LT-1 along San Mateo Avenue) was 77.4 dBA CNEL. Therefore, the measured existing noise level near this segment is already almost 16 dBA higher than the modeled existing-with-project traffic noise level.

Regarding the segment of Terminal Court west of the Produce Avenue/U.S. 101 southbound onramp, the modeled existing and existing-with-project traffic noise levels were 53.8 dBA CNEL and 61.0 dBA CNEL, respectively (as shown in Table 4.5-17). The measured ambient noise near Terminal Court west of the Produce Avenue/U.S. 101 southbound on-ramp (represented by LT-4) was measured to be 75.2 dBA CNEL. Therefore, measured existing noise levels along this segment are already about 14 dBA higher than the modeled existing-with-project traffic noise level as a result of nearby U.S. 101 traffic. Refer to Table 4.5-18 for a comparison of the modeled and measured noise levels along the potentially affected roadway segments identified above.

As shown in Table 4.5-18, measured ambient noise along the two segments (i.e., Shaw Road and Terminal Court) are substantially greater than the modeled existing and existing-with-project traffic noise levels because of the proximity of Shaw Road to industrial land uses and the relatively busy San Mateo Avenue as well as the proximity of Terminal Court to U.S. 101. When adding decibels, if the difference between two noise sources is 10 dBA or more, the higher noise source will dominate, and the resultant noise level will be equal to the noise level of the higher noise source. Therefore, because measured existing ambient noise levels are 14 to 16 dB higher than modeled existing-with-project noise levels, the project-related traffic increase would not result in a perceptible increase in noise along these roadway segments. Project-related traffic noise impacts along these segments, and along all other evaluated segments (as discussed above and shown in Table 4.5-17), would be **less than significant.** No mitigation is required.

Roadway	Segment Location	Modeled Existing Conditions (dBA CNEL)	Modeled Existing-with- Project Conditions (dBA CNEL)	Increase in Modeled Conditions (dB)	Measured Noise Level (dBA CNEL)	Nearest Most- Sensitive Land Use	Change Compared to Measured Ambient Noise (dB)
Shaw Road	East of San Mateo Avenue	56.7	61.6	4.9	77.4 ^a	Commercial	-15.8
Terminal Court	West of Produce Avenue/ U.S. 101 SB on-ramp	53.8	61.0	7.2	75.2 ^b	Commercial	-14.2

Table 4.5-18. Detailed Evaluation for Segments with a Modeled 3 dB Project-Related Traffic Noise Increase

Refer to Appendix A of the Noise Technical Report (Contained in EIR Appendix G) for the complete traffic noise modeling results, including modeling results for the cumulative-no-project and cumulative-with-project condition (which were not used in this analysis).

Note: Modeled noise levels at a fixed distance of 50 feet from the roadway centerline are presented.

^{a.} The measured ambient noise level representative of this segment was LT-1 (77.4 dBA CNEL).

^{b.} The measured ambient noise level representative of this segment was LT-4 (75.2 dBA CNEL).

SB = southbound

Parking Garage Noise

Although parking area noise is difficult to predict because of the many variables (e.g., parking structure design, the number of vehicles moving through the structure at any given time), noise from parking areas is temporary and periodic. The nearest noise-sensitive uses to the project parking garage uses the hotel land uses across U.S. 101. The hotels would be more than 790 feet from the proposed parking structure. The nearest existing residences are located in San Bruno at a distance of approximately 1,980 feet from this garage. The nearby planned residential development at 100 Produce Avenue and 124 Airport Boulevard would be more than 1,000 feet from this garage.

According to FTA's *Transit Noise and Vibration Impact Assessment* manual,²³ 1,000 cars in a peak activity hour would generate a sound equivalent level (SEL) of 92 dBA at 50 feet, which can be converted to an hourly Leq (average) noise level of 56.4 dBA Leq at 50 feet. Although it is not known at this time how many vehicles would use this garage during a peak hour, conservatively assuming 1,300 vehicles would be using the 1,378-space garage and 60 surface parking spaces at once, parking garage noise at a distance of 790 feet would be approximately 34 dBA Leg. At a distance of 1,000 feet, the distance to the planned residential development at 100 Produce Avenue and 124 Airport Boulevard, parking garage noise would be approximately 32 dBA, based on the calculation described above. These noise levels would be well below the measured ambient noise levels at the nearest hotel land uses (with a daytime 12-hour Leg noise level of 68.8 dBA) and nearby proposed residential development (with a daytime 12-hour Leg noise level of 70.3 dBA). In addition, because U.S. 101 is located between or adjacent to the nearest noisesensitive land uses and the location of the proposed parking structure, and because the times of day when the parking structure would be most heavily used (daytime hours) would align with the times of day when traffic on U.S. 101 would be heaviest (daytime hours), noise from U.S. 101 would largely overshadow intermittent nuisance noise from the proposed parking structure.

At the nearest existing residences, which are 1,980 feet away, the noise level from 1,500 vehicles using the garage simultaneously would be approximately 26 dBA L_{eq} (without accounting for attenuation from intervening buildings). This noise level would be well below the measured 12-hour daytime noise level at these residences (i.e., 74.1 dBA L_{eq}). In addition, vehicle noise is currently generated on and around the project site, given the existing use at and adjacent to the site; therefore, noise from vehicle parking activities would be similar to noise under existing conditions. Because of the distance between the parking structure and nearby sensitive land uses, temporary and periodic noise from the parking structure would not be considered substantial. Parking garage noise impacts would be considered *less than significant.* No mitigation is required.

On-Site Daycare and Outdoor Play Area

Along with the proposed R&D buildings, a proposed daycare facility would serve employees of the proposed project as well as the general public. The facility would accommodate up to 50 children. Information provided by the project sponsor indicates that the facility would operate

²³ Federal Transit Administration. 2018. Transit Noise and Vibration Impact Assessment. FTA Report No. 0123. September. Available: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/researchinnovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf. Accessed: February 24, 2024.

Monday through Friday. Although activities occurring within the facility would not be expected to increase noise levels in the vicinity of the project site, the potential exists for the facility's 4,950 sf play area to generate noise.

To estimate hourly noise levels at the nearest sensitive noise receptors, previously measured source noise levels from children playing at Linda Vista Elementary School in San Diego were used. During the measurement survey at this school, noise levels were measured from approximately 10:30 a.m. to 11:40 a.m. to capture morning recess and from 12:20 p.m. to 1:40 p.m. to capture the lunch recess. The measurements indicated an L_{eq} noise level of 64 dBA at an acoustical average distance of 120 feet, with an average of approximately 58 children playing simultaneously at various locations, including in flat asphalt playground areas, on climbing/play equipment, in a tetherball area, and on a decomposed granite field. The measured noise levels were normalized to a reference distance of 50 feet, then adjusted to account for the assumed number of children playing within the outdoor play area and the distances to the closest noise-sensitive receptors. Assuming 50 children were playing continuously within the project outdoor play area throughout an entire hour, the noise level at a distance of 50 feet would be approximately 71 dBA L_{eq} . Table 4.5-19 shows the estimated noise levels at the distances to the nearest sensitive land uses. Refer to Appendix A of the Noise Technical Report (contained in Appendix G) for more detailed modeling results.

Receiver	Distance between Outdoor Play Area and Receiver	Estimated Noise Level at Receiver (dBA L _{eq})	Measured Ambient Noise Level at Receiver (dBA L _{eq[12-hour]})
Travelodge Hotel	840	46.1	68.8
100 Produce Ave/124 Airport Blvd	960	45.0	65.8
Best Western	1,470	41.3	70.3

Table 4.5-19. Summary of Outdoor Play Area Noise

Source: Linda Vista Elementary School in San Diego during morning and lunchtime recess.

As shown in Table 4.5-19, estimated noise levels from children playing near the daycare would not exceed locally measured ambient noise levels at the nearest sensitive land uses. For example, Travelodge is the nearest sensitive receptor, located approximately 840 feet east of the proposed outdoor play area. At that distance, the sound of 50 children playing is estimated to be approximately 46 dBA L_{eq}. The measured daytime 12-hour L_{eq} noise level near the Travelodge was 68.8 dBA. This would mean that noise from the outdoor play area would be about 13 dBA below the measured ambient level. The 12-hour average ambient daytime noise levels in the vicinity of the Best Western hotel as well as the planned 100 Produce Avenue and 124 Airport Boulevard development were 65.8 dBA L_{eq} and 70.3 dBA L_{eq}, respectively. The estimated noise levels for 50 children playing continuously for 1 hour at these locations are approximately 41 and 45 dBA L_{eq}, respectively. These estimated noise levels are approximately 21 and 29 dBA lower than the measured ambient noise levels at the Best Western and 100 Produce Avenue and 124 Airport Boulevard location.

Because estimated noise levels while the outdoor play area is in use would not exceed the existing ambient noise level at the nearby hotel, or the other nearby noise-sensitive receptors, noise effects from children playing near the on-site daycare would be considered *less than significant*. No mitigation is required.

Off-Site Redesignation Parcels

The five off-site redesignation parcels are currently designated as MIH under the General Plan, Specific Plan, and City Zoning Code. However, they would be redesignated BTP-H, consistent with the proposed land use and zoning designation for the project site. The MIH designation currently allows for development of a wide range of warehousing, manufacturing, processing, service commercial, and storage and distribution uses. The redesignation would allow for high-density corporate headquarters, R&D facilities, and office uses. More specifically, the General Plan and Specific Plan describe the permitted uses for BTP-H as incubator research, prototype manufacturing, testing, repairing, packaging, publishing, and printing, along with office and R&D uses. Warehousing, distribution, manufacturing, retail services, personal services, and grocery and hotel uses are also permitted under this designation. The proposed project does not include the construction of any new uses on the off-site redesignation parcels.

Although the project does not propose any specific construction at these parcels, construction could occur following the redesignation. However, future projects would be required to undergo the appropriate environmental review to ensure noise impacts would not be significant. During this process, compliance with applicable local thresholds (including construction noise thresholds) would be evaluated prior to receiving environmental clearance and/or building permits. In addition, the City of South San Francisco contains General Plan policies and actions that would help ensure noise impacts from future development would be less than significant. For example, Policy NOI-1.2 states that the City enforces the noise ordinance performance standards. Action NOI1.2.1 under this policy includes a component related to construction noise, which states that the City shall "continue to restrict construction activities to acceptable time periods" and that "constructing temporary sound walls surrounding construction sites during construction" should be considered. For these reasons, construction noise impacts from future development at the off-site redesignation parcels would be expected to comply with the applicable local construction noise thresholds. Construction noise impacts for the off-site redesignation parcels would be *less than significant*. No mitigation is required.

Regarding operational noise, although no operational sources of noise would be installed at these parcels under the project, future development would likely include the installation of noisegenerating equipment. However, future development projects would be required to comply with applicable General Plan policies and actions which would ensure that noise impacts from future operational equipment would not be significant. For example, Action NOI-1.1.5 from the General Plan requires all new developments that are considered to be noise generators control noise at the source through their site designs, building designs, and other techniques. Operational equipment noise for future development at these parcels would be required to demonstrate compliance with the noise standards in Table 8.32.030 from the current City Municipal Code (or comparable, once the Action NOI 1.2.1, Update Municipal Code, section related to the noise ordinance is implemented) prior to issuance of building permits. Regarding noise from loading docks or areas, although some loading may occur at the redesignation parcels once future development occurs, the proposed R&D or office-type uses would be unlikely to result in more (and would likely result in fewer) loading and unloading activities per day than would occur if these uses were developed with industrial or commercial uses as currently allowed under the MIH designation. For these reasons, noise effects from operations associated with future development of the off-site redesignation parcels would be *less than significant*. No mitigation is required.

Whole Project

Construction and operational noise impacts from the proposed project and the off-site redesignation parcels would be *less than significant.* No mitigation is required.

Impact NOI-2: The project would not generate excessive ground-borne vibration or groundborne noise levels. (*Less than Significant with Mitigation*)

Project

Damage to Structures

Construction of the proposed project would involve the use of equipment that could generate ground-borne vibration. PPV levels associated with the heavy-duty construction equipment proposed for use with the project at a distance of 25 feet, as well as other project-specific distances, are shown in Table 4.5-20. Note that project construction would not involve the use of pile drivers. The most vibration-intensive construction equipment proposed for use with the project are an auger drill rig and an excavator. For the purpose of this analysis, a large bulldozer is considered to be representative of heavy earthmoving equipment, such as an excavator.

Equipment	Reference PPV at 25 Feet ^a	PPV at 10 Feet	PPV at 250 Feet	PPV at 800 Feet	PPV at 1,100 Feet
Auger drill rig	0.089	0.352	0.003	> 0.001	> 0.001
Large bulldozer ^b	0.089	0.352	0.003	> 0.001	> 0.001
Small bulldozer ^c	0.003	0.012	> 0.001	> 0.001	> 0.001

Source: Federal Transit Administration. 2018. *Transit Noise and Vibration Impact Assessment*. FTA Report No. 0123. September. Available: 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: February 24, 2024.

Note: **Bold** text indicates values that are used in the analysis below.

^{a.} Obtained from FTA *Transit Noise and Vibration Impact Assessment*, 2018.

^{b.} Considered representative of other heavy earthmoving equipment such as excavators, graders, backhoes, etc.

^{c.} Considered representative of smaller equipment such as a small backhoe and front-end loader.

The potential for structural damage to occur at adjacent or nearby buildings can be evaluated by estimating PPV levels from construction equipment at nearby uses and comparing those levels to the Caltrans damage criterion for that type of building. The nearest off-site structures to the project site are the commercial and industrial buildings located along the western border of the project site. A setback from the property line is anticipated to keep vibration-intensive construction equipment away from these structures. However, the size of the setback is not known at this time. This analysis conservatively assumed that a large bulldozer, or similar equipment, would be operated with a 10-foot setback from the closest structure in place. An auger drill rig would be used only within the footprint of the proposed project buildings and therefore be would farther from the nearby existing structures (to the west) than the large earthmoving equipment, such as an excavator or large bulldozer. Because an excavator and large bulldozer would both generate approximately the same vibration level as an auger drill, this

analysis focuses on the use of a large bulldozer or excavator within 10 feet of the nearest existing off-site structure. The PPV from an excavator at the nearest structure (i.e., 10 feet away) would be approximately 0.352 in/sec.

The structures along the western border of the project site (parallel to San Mateo Avenue) were constructed between 1956 and 1968. Based on the age of these structures, they would be categorized as "historic" and "some old buildings," according to the Caltrans vibration guidelines for damage to structures. The applicable damage criterion for these buildings from the Caltrans vibration damage guidelines is a PPV of 0.25 in/sec.²⁴ Because the estimated vibration level from an excavator at 10 feet (PPV of 0.352 in/sec) would exceed the applicable criterion, vibration-related damage could occur at this structure if vibration-intensive equipment were to be used at this distance. However, the equipment may be farther from the existing structures. Should a buffer distance of 13 feet between large earthmoving equipment and the nearest existing structure be maintained, estimated vibration levels would be below the applicable damage criterion. Note that the vibration levels at other buildings located more than 13 feet from the project site would be even lower, and vibration-related damage would therefore not be expected to occur at these other buildings. However, because it is unknown whether a 13-foot buffer between these structures would be maintained during project construction, vibration-related damage impacts on the existing structures west of the project site would be considered substantial and mitigation would be required.

Implementation of **Mitigation Measure NOI-1**, which would be required if vibration-generating construction equipment were to operate within 13 feet of adjacent structures, would reduce construction-related vibration impacts. Mitigation Measure NOI-1 would ensure that vibration would be kept below the level that may cause damage. It would also require monitoring to ensure that damage effects would not occur. This impact would be *less than significant with mitigation*.

Mitigation Measure NOI-1: Protect adjacent structures from construction-generated vibration.

For construction with heavy ground-disturbing equipment that occurs within 13 feet of neighboring buildings, a construction vibration control plan shall be required to mitigate potential construction vibration impacts. The project sponsor shall incorporate into construction specifications for the proposed project a requirement for the construction contractor(s) to use all feasible means to avoid damage to adjacent and nearby buildings. Such methods to help reduce vibration-related damage effects may include maintaining a safe distance between the construction site and the potentially affected building (e.g., at least 13 feet for large earth-disturbing equipment) or using smaller and less-vibration-intensive equipment in proximity to the potentially affected building.

In the event that vibration-generating construction activity is required within 13 feet of nearby older buildings similar to "historic and some old buildings," the construction contractor shall implement a monitoring program to minimize damage to adjacent buildings and ensure that any such damage is documented and repaired. If required, the monitoring program shall include the following components:

²⁴ California Department of Transportation. 2020. *Transportation and Construction Vibration Guidance Manual*. April. Available: https://dot.ca.gov/-/media/dot-media/ programs/environmentalanalysis/documents/env/tcvgm-apr2020-a11y.pdf. Accessed: February 244, 2024.

- Prior to the start of any ground-disturbing activity within 13 feet of adjacent buildings, the construction contractor shall engage a structural engineer or other professional with similar qualifications to document and photograph the existing conditions of potentially affected buildings within 13 feet of proposed vibratory-generating construction activities.
- Based on the construction and condition of the resource(s), the consultant shall also establish a standard maximum vibration level that will not be exceeded at nearby buildings, based on existing conditions, character-defining features, soil conditions, and anticipated construction practices (a common standard is a peak particle velocity of 0.25 inch per second for "historic and some old buildings," as shown in Table 5-1).
- To ensure that vibration levels do not exceed the established standard, the project sponsor shall monitor vibration levels at each structure and prohibit vibratory construction activities that generate vibration levels in excess of the standard.
- Should vibration levels be observed in excess of the selected standard, construction shall be halted and alternative construction techniques put in practice, to the extent feasible.
- When vibration-intensive activity (e.g., heavy earth-disturbing equipment) occurs within 13 feet of a building, the structural engineer shall conduct an inspection of the building for damage within 7 days of that activity. If inspections determine that no damage occurred, the 7-day period may be increased to 30 days for that activity. Should damage to adjacent buildings occur, the building(s) shall be remediated to their preconstruction condition at the conclusion of ground-disturbing activity on the site.
- Should all ground-disturbing construction activity occur 13 feet or more from the nearest existing structure, this monitoring plan shall not be required.

Vibration-Related Annoyance

Regarding annoyance-related vibration impacts, vibration-related annoyance is typically considered to be substantial if it results in sleep disturbance at nearby residences. For purposes of this analysis, should vibration from project construction exceed the Caltrans "strongly perceptible" criterion (i.e., PPV of 0.1 in/sec) at residential land uses during nighttime hours (when people generally sleep), impacts would be considered significant.

Note that most construction activities would occur during the hours of 8:00 a.m. to 8:00 p.m. Monday through Friday, 9:00 a.m. to 8:00 p.m. on Saturdays, and 10:00 a.m. to 6:00 p.m. on Sundays and holidays (the City's standard hours for construction). However, some construction activities are proposed for nighttime and early-morning hours. Specifically, the sponsor has explained that activities requiring the use of a crane, which does not generate meaningful vibration, or large equipment such as an auger drill rig could start as early as 5:00 a.m. to avoid some of the high winds that occur during the day in South San Francisco. Potential vibration-related annoyance impacts of the use of a drill rig during the early-morning hours are evaluated below.

The closest sensitive use where people are expected to be sleeping during nighttime and earlymorning hours is the Travelodge hotel, which is approximately 250 feet east of the project site; additional hotels are located farther to the east. Residential land uses are located southwest of the project site at a distance of approximately 1,570 from the nearest proposed project building (where an auger drill rig could be used) and 1,400 feet from the main project site.

Assuming that vibration-intensive equipment could be used anywhere on the project site, an auger drill rig or large bulldozer operating at the perimeter of the site closest to the Travelodge could result in a PPV of approximately 0.003 in/sec. At the next-closest hotel (the Best Western,

approximately 800 feet east of the project site), an auger drill rig or large bulldozer would result in a PPV of less than 0.001 in/sec. At the nearby proposed residential development at 100 Produce Avenue and 124 Airport Boulevard (located approximately 950 feet from the project site) and at the nearest existing residences (located approximately 1,400 feet southwest of the main project site, excluding the project driveway), an auger drill rig would also result in a PPV of less than 0.001 in/sec. These vibration levels are all well below the Caltrans "strongly perceptible" criterion for vibration-related annoyance (i.e., PPV of 0.1 in/sec).²⁵

Based on the estimated vibration levels for the project equipment presented above, early-morning or nighttime project construction activities would not be expected to result in sleep disturbance at nearby sensitive land uses. In addition, project construction equipment would typically be operating even farther from the off-site sensitive land uses than the distances assessed in this analysis, resulting in even lower vibration levels. Therefore, because the estimated vibration levels would not exceed the strongly perceptible criterion during early-morning or nighttime hours when people generally sleep, annoyance-related vibration impacts from project construction would not be *less than significant*. No mitigation is required.

Off-Site Redesignation Parcels

The five off-site redesignation parcels are currently designated as MIH under the General Plan, Specific Plan, and City Zoning Code. However, they would be redesignated BTP-H, consistent with the proposed land use and zoning designation for the project site. The MIH designation currently allows for development of a wide range of warehousing, manufacturing, processing, service commercial, and storage and distribution uses. The redesignation would allow for high-density corporate headquarters, R&D facilities, and office uses. More specifically, the General Plan and Specific Plan describe the permitted uses for BTP-H as incubator research, prototype manufacturing, testing, repairing, packaging, publishing, and printing, along with office and R&D uses. Warehousing, distribution, manufacturing, retail services, personal services, and grocery and hotel uses are also permitted under this designation. Note that the proposed project does not include the construction of any new uses on the off-site redesignation parcels.

Although the proposed project does not include the construction of any new uses on the off-site redesignation parcels, construction could occur following the redesignation. However, future projects would be required to undergo the appropriate environmental review to ensure vibration-related damage and annoyance impacts would not be significant. During this process, compliance with applicable thresholds (including vibration criteria pertaining to both annoyance and damage) would be evaluated prior to a specific project receiving environmental clearance and/or building permits. In addition, the City of South San Francisco contains General Plan policies and actions pertaining to vibration that would help ensure vibration impacts from future development would be less than significant. For example, Policy NOI-3.1 states that a vibration analysis is required for historic structure protection when various construction activities are proposed within certain distances of such a structure. Further, construction activities for future projects at the parcels under existing conditions (with the parcels designated MIH) would require the use of similar equipment and take place in similar locations to construction activities for projects at the parcels after redesignation to BTP-H parcels. Because construction vibration would be evaluated at the environmental review stage to confirm that impacts would be (or would be reduced to) less than significant, and because construction-related vibration effects at

²⁵ Ibid.

the site would be similar under the project and under existing conditions, vibration impacts associated with the redesignation parcels would be *less than significant*. No mitigation is required.

Whole Project

Vibration impacts from the off-site redesignation parcels would be less than significant. Vibration impacts from project construction related to annoyance would be less than significant. Vibration impacts from project construction related to damage would be less than significant with mitigation. Therefore, vibration impacts from the whole project would be **less than significant with mitigation**.

4.5.5.2 Cumulative Impacts

The cumulative geographic context for noise and vibration varies, depending on the source of the noise or vibration. Specifically, the geographic context for cumulative construction noise impacts typically encompasses cumulative projects within 1,000 feet of the project site. Beyond 1,000 feet, the contributions of noise from the construction of other projects would be greatly attenuated through both distance and intervening structures, and their contribution would be expected to be minimal. The cumulative context for stationary-source noise impacts, such as noise effects from heating and cooling or other mechanical equipment, as well as vibration effects from construction activities is generally smaller than this distance (a few hundred feet, at most). Finally, cumulative impacts related to vehicular traffic noise are based on the overall forecast average daily traffic along roadway segments near the project site, which includes traffic increases from all growth in the project area, as predicted in the traffic model. The cumulative projects within 0.5 mile of the project site, as well as larger-scale projects slightly further than this distance from the project site, are described in Section 4.1.5, *Approach to Cumulative Impact Analysis*, of this EIR and shown in Figure 4.1-1.

Impact C-NOI-1: The project, inclusive of the off-site redesignation parcels, together with the cumulative projects identified, would not result in generation of 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. (*Less than Significant*)

Construction Noise

Construction noise is generally a localized impact that reduces as distance from the noise source increases. In addition, intervening features (e.g., buildings) between construction areas and nearby noise-sensitive land uses result in additional noise attenuation by providing barriers that break the line of sight between noise-generating equipment and sensitive receptors. These barriers can block sound wave propagation and somewhat reduce noise at a given receiver. The cumulative setting for construction noise impacts is typically considered to be approximately 1,000 feet from the project site since projects located within this distance could expose receptors between the two projects to noise. Cumulative projects within 1,000 feet of the project site are the Infinite 101 project, located adjacent to the project site, and 100 Produce Avenue/124 Airport Boulevard project, located approximately 950 feet north of the project site.

As described under Impact NOI-1, most project construction would occur during the standard daytime hours for construction as defined by the South San Francisco Municipal Code. Similarly, construction for cumulative projects would likely occur primarily during daytime hours. During these hours, construction noise restrictions are less stringent, and nearby receptors are considered less sensitive to noise. Modeling demonstrated that construction noise for the proposed project would not be expected to exceed the allowable noise limits in the City during daytime hours. Other projects would likely use similar equipment during construction, and also result in noise levels below the applicable daytime construction noise thresholds. In addition, noise at a given receptor would generally be dominated by the loudest and closest noise sources. There are no sensitive and/or residential land uses located between the project and the Infinite 101 project site or the 100 Produce Avenue/124 Airport Boulevard project site. Therefore, construction noise from cumulative projects would not be expected to combine to expose an individual receptor to substantially greater noise levels than would be experienced by construction of a single project. Rather, construction noise at the nearest sensitive uses would generally be dominated by the nearest and loudest construction activities. Cumulative construction noise impacts during daytime hours would be *less than significant.*

Regarding nighttime construction, some nighttime and/or early morning (i.e., non-daytime) construction is proposed for the project, including concrete pours, crane work and drilling work. Cumulative projects located near the project site may also propose construction activities outside of the standard daytime hours for construction in South San Francisco. Should construction of these projects occur concurrently with the proposed project, the nearest noise-sensitive uses (i.e., hotel receptors across US 101 from the project site) could be exposed to construction noise during non-daytime hours from both the proposed project and these cumulative projects.

The nearest cumulative project Is the Infinite 101 project, which is located adjacent to the project site. Demolition and construction for the proposed project is anticipated to begin in March 2026 and be completed by May 2031. Demolition and construction for the Infinite 101 project is anticipated to begin in 2024 and be completed by February of 2027. Therefore, it is possible that construction for these projects, including potential instances of non-daytime construction, could occur concurrently. Should instances of non-daytime construction for the Infinite101 project occur concurrently with non-daytime construction for the project, nearby noise-sensitive land uses (the closest being the nearby hotels) could be exposed to non-daytime construction noise from both projects. However, noise at a given receptor would generally be dominated by the loudest and closest noise sources. There are no noise-sensitive land uses (e.g., residences) located between the project site. Therefore, construction noise from cumulative projects would not be expected to combine to expose an individual receptor to substantially greater noise levels than would be experienced by construction of a single project. Cumulative construction noise impacts during non-daytime hours would also be *less than significant*.

Operational Noise

Cumulative Traffic Noise

To evaluate potential cumulative traffic noise impacts in the project area, traffic volumes from the existing scenario were compared to the future-with-project scenario. A cumulative traffic noise impact would occur at a noise-sensitive land use if a 3 dB increase in noise would occur in areas where existing and resulting noise levels are above the applicable land use compatibility standard

or if a 5 dB increase in noise would occur in areas where existing and resulting noise levels are below the applicable land use compatibility standard. To provide a conservative assessment, the initial screening analysis evaluated a 3 dB increase along all segments. If a 3 dB increase was shown to occur, further evaluation was done to determine if a cumulative impact would indeed occur (e.g., by confirming the presence of noise-sensitive land uses or by comparing to existing measured noise levels if they are higher than modeled noise levels). Subsequently, the proposed project's contribution to a cumulative impact is assessed by determining if the project contribution would be cumulatively considerable (i.e., if it would contribute 1 dB or more to the overall cumulative increase).

Traffic noise modeling was conducted using a spreadsheet based on the FHWA Traffic Noise Model, version 2.5, as described in the Methodology subsection of this report. Modeling results are included in Appendix A of the Noise Technical Report (contained in Appendix G) for all roadway segments where at least a 10 percent increase in traffic volumes (or 0.4 dB increase in noise) would occur from existing to future-with-project conditions. Table 4.5-21 shows all roadway segments where a 3 dB or more increase from existing to future-with-project conditions was modeled to occur. A 3 dB increase or greater from existing to future-with-project conditions was modeled to occur along eight of the evaluated roadway segments.

As shown below in Table 4.5-21, a 3 dB increase (or greater) from existing to future-with-project conditions was modeled to occur along eight roadway segments. A 3 dB increase indicates that a cumulative impact may occur, depending on the overall noise level (i.e., if it exceeds the applicable land use compatibility standard) and the proximity to noise-sensitive land uses. Conservatively assuming that a cumulative traffic noise impact could occur along these eight segments, the project contribution to the 3 dB increase is assessed to see if a 1 dB project-related increase would occur. Should a 1 dB project-related increase occur, then the project may have a cumulatively considerable contribution to that potential cumulative impact.

When comparing future-no-project and future-with-project conditions, two of the eight segments with a 3 dB or greater increase would have a project-related increase of 1 dB or more (from future-no-project to future-with-project conditions). A 3.9 dB project-related increase in noise was modeled to occur along Shaw Road east of San Mateo Avenue (which had a 6.7 dB increase from existing to future-with-project conditions). In addition, a 1.3 dB project-related increase was modeled to occur along Tanforan Avenue west of San Mateo Avenue (which has a 6 dB increase from existing to future-with-project conditions).

Although a 3.9 dB project-related increase was modeled to occur along Shaw Road east of San Mateo Avenue, the modeled future-with-project traffic noise level for this segment is substantially lower than the existing measured noise level in this area (77.4 dBA CNEL). In general, long-term noise measurements are a more accurate representation of existing ambient noise levels along a given roadway than modeling of segment traffic volumes alone because a measurement takes into consideration all audible noise sources at a given site (e.g., traffic on nearby roads, industrial or commercial sources of noise, aircraft fly-overs). Therefore, it is appropriate to conduct a screening analysis to see if the project is likely to have an impact, based on modeling alone, and then to take existing measured noise levels into consideration in order to determine the likelihood of an actual substantial increase in noise to occur. For example, the existing and future-with-project traffic noise levels on Shaw Road east of San Mateo Avenue were modeled to be 56.7 dBA CNEL and 63.5 dBA CNEL, respectively (as shown in Table 4.5-21). In addition, project-related traffic noise along Tanforan Avenue west of San Mateo Avenue was

Table 4.5-21. Cumulative Traffic Noise Evaluation for Potentially Affected Segments

Roadway	Segment Location	Existing Conditions (dBA CNEL)	Future (2040) No- Project Conditions (dBA CNEL)	Future-with- Project Conditions (dBA CNEL)	Increase from Modeled Existing to Future-with-Project Conditions (dB)	Potential Cumulative Impact?	Increase from Future- No-Project to Future- with Project- Conditions (dB)	Potential Cumulatively Considerable Project Contribution?
Mitchell Avenue	East of South Airport Boulevard/Gateway Boulevard	63.0	66.9	67.0	4.0	Yes	0.1	No
San Mateo Avenue	North of South Linden Avenue	60.6	65.3	65.4	4.8	Yes	0.1	No
San Mateo Avenue	North of Tanforan Avenue/Shaw Road	61.9	64.5	64.9	3.0	Yes	0.4	No
Shaw Road	East of San Mateo Avenue ^a	56.7	59.6	63.5	6.8	Yes	3.9	Yes
South Linden Avenue	West of San Mateo Avenue	57.1	63.7	64.0	6.9	Yes	0.3	No
Tanforan Avenue	West of San Mateo Avenue	50.8	55.6	56.8	6.0	Yes	1.3	Yes
Terminal Court	West of Produce Avenue/U.S. 101 SB on-ramp	53.8	75.2 ^b	64.2	21.4	Yes	-11.0 c	No
Wondercolor Lane	East of South Airport Boulevard	53.7	58.9	58.9	5.1	Yes	-0.1	No

Refer to Appendix A of the Noise Technical Report (contained in Appendix G) for the complete traffic noise modeling results.

Note: Modeled noise levels at a fixed distance of 50 feet from the roadway centerline.

a Shaw Road east of San Mateo Avenue is theoretically the same as Shaw Road west of the project driveway. However, the data provided by the project traffic engineers (Fehr & Peers) were slightly different along these two segments, most likely due to some vehicles using private driveways along these segments. Refer to Appendix A of the Noise Technical Report (contained in Appendix G) for the modeled traffic noise results for Shaw Road west of the project driveway.

b. According to the project traffic engineer (Fehr & Peers), Terminal Court west of Produce Avenue would not exist under 2040 no-project conditions due to implementation of the flyover. As a result, traffic data for future (2040) no-project conditions were not available for this roadway segment, and traffic noise for this scenario could not be modeled. The existing measured CNEL noise level in this area was 75.2 dBA CNEL (LT-4), which can be conservatively used in place of the modeled future-no-project noise level for this segment.

^{c.} Because Terminal Court west of Produce Avenue would not exist with implementation of the flyover (i.e., under future-no-project conditions), modeling for future conditions could not be conducted; measured noise is used in the assessment. The measured 75.2 dBA CNEL noise level (LT-4) is 21.4 dB louder than the existing modeled noise level and 11.0 dB louder than the modeled future-with-project noise level along this segment. This indicates that noise along this segment is dominated by traffic on nearby U.S. 101 instead of vehicles along Terminal Court.

SB = southbound

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Environmental Setting, Impacts, and Mitigation Noise and Vibration modeled to increase by 1.3 dB from existing conditions to future-with-project conditions. However, the modeled future-with-project traffic noise level for this segment is substantially lower than the existing measured noise level in this area (77.4 dBA CNEL) as a result of the factors discussed above (e.g., traffic noise from other nearby roadway segments, other noise sources in the vicinity of the segment). Specifically, the existing and future-with-project traffic noise levels on Tanforan Avenue west of San Mateo Avenue were modeled to be 50.8 dBA CNEL and 56.8 dBA CNEL, respectively (as shown in Table 4.5-21). Based on the existing ambient noise near these two roadway segments (77.4 dBA CNEL as shown in Table 4.5-22), the measured existing noise levels are therefore already approximately 14 dB and 21 dB higher than the modeled future-with-project traffic noise levels along Shaw Road east of San Mateo Avenue and along Tanforan Avenue west of San Mateo Avenue.

When adding decibels, if the difference between two noise sources is 10 dBA or more, the higher noise source will dominate, and the resultant noise level will be equal to the noise level of the higher noise source. Therefore, because measured existing ambient noise levels are at least 14 dB higher than modeled future-with-project noise levels (as a result of traffic noise from other nearby segments, aircraft overflights, nearby industrial noise sources), the project-related traffic increase would not result in a perceptible increase in noise along these roadway segments when giving consideration to the existing ambient noise levels. As a result, the potential cumulative impact along these segments would not be expected to occur. In conclusion, project-related cumulative traffic noise impacts for all evaluated segments would be *less than significant*.

Heating, Cooling, and Ventilation Equipment

Noise from project heating and cooling equipment would generally be localized and would attenuate rapidly with distance. However, it is possible that noise-generating uses from nearby projects could be close enough to one another that heating and cooling noise from multiple projects could combine and result in greater cumulative noise levels at a nearby noise-sensitive land use.

The nearest cumulative project is the Infinite 101 project, which is located adjacent to the project site. This project would also result in the installation of noise-generating mechanical heating and cooling equipment. Therefore, it is possible that an individual receiver (e.g., the nearby Hotel land uses across US 101 from the project site and from the Infinite 101 project site) could be exposed to operational equipment noise from both projects at the same time. Note that the project-specific noise evaluations for both the project and the Infinite 101 project demonstrated that mechanical equipment would result in less than significant noise impacts. This is largely because General Plan policies and actions would ensure that noise from rooftop mechanical equipment would be in compliance with applicable thresholds. Specifically, General Plan policies and actions required that compliance with the noise standards in Table 8.32.030 from the current City Municipal Code (or comparable, once the Action NOI 1.2.1, Update Municipal Code, section related to the noise ordinance is implemented) would be demonstrated prior to the issuance of building permits and once the final makes, models, sizes, and locations have been determined. For these reasons, noise impacts from project mechanical equipment and from mechanical equipment for nearby projects would be less than significant. In addition, noise at a given receptor is generally governed by the loudest and closest noise sources. In addition, due to the high existing ambient noise levels in this area (as shown in Table 4.5-4), noise from mechanical equipment across US 101 from the hotels would be unlikely to be audible above the

highway traffic noise. For these reasons, noise from mechanical equipment for the project and nearby cumulative projects would be unlikely to combine to expose a given receptor to greater overall mechanical equipment noise levels. Cumulative impacts related to mechanical heating, cooling and ventilation equipment would be *less than significant*.

Emergency Generator Testing

Emergency generators associated with the proposed project would result in the generation of audible noise during testing. With regard to the potential for cumulative impacts, the nearest cumulative projects are the Infinite 101 project, located adjacent to the project site, and 100 Produce Avenue/124 Airport Boulevard project, located approximately 950 feet north of the project site. Should nearby projects also install emergency generators, and should generator testing occur simultaneously for a nearby project and the proposed project, a potential cumulative impact could occur. It is currently known that the Infinite 101 project would include the installation of emergency generators.

Emergency generators are tested intermittently (often on the order of once per month for 30 to 60 minutes), and their use is usually exempted during actual emergencies. Although the nearby Infinite 101 project would include emergency generators that would undergo testing, it is very unlikely that the testing of an emergency generator for the proposed project would occur concurrently with the testing of a generator this (or any other) nearby project. Even if testing on two separate sites were to occur simultaneously, which is unlikely, it is not likely that the generators would be close enough to one another for the noise to combine at a given individual receptor. Cumulative noise impacts related to emergency generator testing would be *less than significant*.

Loading Dock Noise

Loading docks included in the development of project would generate audible noise during loading activities. The nearby Infinite 101 project would also include the development of loading docks that would be close to the project site, and reasonably close to the same off-site sensitive land uses (the hotels across US 101 from the project site). However, loading dock noise is intermittent, and even if loading activities for two nearby projects were to occur simultaneously, it is unlikely that the loading docks would be close enough to one another and to the same receptor for the noise to combine at a given individual receptor. In addition, loading and unloading activities already occur at the existing commercial and industrial uses on the site; therefore, project implementation would not result in an increase in this type of activity at the site. Furthermore, U.S. 101, which generates high levels of traffic noise, is located between the project loading docks and the nearby hotels. For these reasons, project-specific impacts from temporary and short-term increases in noise from project loading dock activity were determined to be less than significant. No mitigation is required. Cumulative noise impacts related to loading dock activity would similarly be **less than significant**.

Parking Garage Activity

The project parking structure is located at least 1,980 feet from the nearest residences and approximately 790 feet from the nearest hotel. Parking garage noise for the project was estimated to be approximately 26 dBA L_{eq} at the nearest residences and 34 dBA L_{eq} at the nearest hotel, noting that the existing ambient noise levels at the nearest residences and hotel were measured to be approximately 70 and 69 dBA Leq, respectively. Although the nearby Infinite 101 project site would also include parking areas and potentially result in parking activity noise, parking activity would result in similarly low noise levels at that project site. Given the relatively low noise levels associated with parking activity and the high existing ambient noise levels at the nearest noise-

Table 4.5-22. Detailed Traffic Noise Evaluation for Potentially Affected Segment

Roadway	Segment Location	Modeled Existing Conditions (dBA CNEL)	Future (2040) No-Project Conditions	Future-with-Project Conditions dBA CNEL	Measured Noise Level (dBA CNEL)	Noise-Sensitive Land Use along This Roadway Segment?	Change Compared to Measured Ambient Noise (dB)
Shaw Road	East of San Mateo Avenue	56.7	59.8	63.5	77.4 ^a	No	-13.9
Tanforan Avenue	West of San Mateo Avenue	50.8	55.6	56.8	77.4 ^a	No	-20.6
			1. 1.				

Refer to Appendix A of the Noise Technical Report (contained in Appendix G) for the complete traffic noise modeling results.

Note: Modeled noise levels at a fixed distance of 50 feet from the roadway centerline.

^{a.} Measured ambient noise level from LT-1 (77.4 dBA CNEL) is considered representative of this segment.

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Environmental Setting, Impacts, and Mitigation Noise and Vibration sensitive land uses, parking garage noise from the project and from nearby cumulative projects would not be expected to combine to expose an individual receptor to greater parking activity noise. Cumulative noise impacts related to parking garage activity would be *less than significant*.

Impact C-NOI-2: The project, inclusive of the off-site redesignation parcels, together with the cumulative projects identified, would not result in generation of excessive ground-borne vibration or ground-borne noise levels. (*Less than Significant*)

Vibration impacts are based on instantaneous PPV levels. Unlike the analysis for average noise levels, in which noise levels of multiple pieces of equipment can be combined to generate a maximum combined noise level, instantaneous peak vibration levels do not combine in this way. because PPV is a measure of the peak instantaneous vibration level rather than an average, other sources of vibration that operate simultaneously (e.g. for other project sites, or even on the same project site) would not be expected to combine to raise the overall peak vibration level experienced at a nearby sensitive use. Worst-case ground-borne vibration levels are generally determined by whichever equipment generates the highest vibration level at the affected location, or by the closest and most vibration-intensive equipment being used at a given time.

For this reason, the cumulative impact of construction vibration from multiple construction projects near one another (or even adjacent to one another) would generally not combine to increase PPV vibration levels. The cumulative geographic context for vibration is highly localized.

The nearest cumulative projects are the Infinite 101 project, located adjacent to the project site, and 100 Produce Avenue/124 Airport Boulevard project, located approximately 950 feet north of the project site. Even though the nearest cumulative project (Infinite 101) is located adjacent to the proposed project site, cumulative vibration impacts would not be expected because the PPV level experienced at the nearest sensitive use would be governed by the closest and most vibration-intensive equipment being used at a given time. For this reason, cumulative vibration impacts related to both annoyance and damage would be *less than significant*.

4.6 Transportation and Circulation

4.6.1 Introduction

This section evaluates the potential significance of transportation and circulation impacts related to construction and operation of the Infinite 131 project (proposed project), including the redesignation of the five parcels north of the project site (off-site redesignation parcels). This section also describes the existing conditions at the project site and off-site redesignation parcels, and the regulatory framework for this analysis. The impacts of the proposed project are analyzed at a project level, while the impacts of the off-site redesignation parcels are generally analyzed at a program level. Impacts resulting from implementation of the proposed project, as well as impacts resulting from the off-site redesignation parcels (and mitigation measures, where applicable), are described, including cumulatively considerable contributions to significant cumulative impacts. Appendix H discusses the methodologies used to assess the significance level of impacts related to transportation and circulation in detail.

Issues identified in response to the Notice of Preparation (NOP) (Appendix A) were considered in preparing this analysis. The NOP comments pertaining to transportation and circulation include comments pertaining to the analysis of project effects on bicyclist and pedestrian conditions, site circulation, and vehicle miles traveled (VMT). This issue is addressed below in Section 4.6.4, *Impacts and Mitigation Measures*.

4.6.2 Environmental Setting

This section describes the setting for transportation and circulation in the vicinity of the project site, including the existing roadway network, transit network and service, pedestrian conditions, bicycle conditions, and emergency vehicle access.

4.6.2.1 Regional Setting

Roadway System

Key roadways in the vicinity of the project site are described below and shown in Figure 4.6-1.

- *U.S. 101* is an eight-lane freeway and principal north-south roadway connection between San Francisco, San José, and intermediate San Francisco Peninsula cities. In South San Francisco, U.S. 101 is located directly adjacent to the project site and serves the project area with the Produce Avenue/South Airport Boulevard exit. Access to the project for vehicles traveling north on U.S. 101 is provided by the South Airport Boulevard exit and underpass to the west side of the freeway. Access to the site for vehicles traveling south on U.S. 101 is provided by the Produce Avenue exit.
- *Interstate (I) 380* is an approximately 1.7-mile-long, eight-lane freeway, linking I-280 (to the west) and U.S. 101 (to the east). I-380, which is approximately 0.5 mile south of the project site, is the closest freeway access route to the project site.

Figure 4.6-1. Project Location Map



- *I-280* is an eight-lane, north–south freeway connection between San Francisco to San José that follows the western urbanized edge of the San Francisco Peninsula. At the freeway's northern and southern endpoints, the route serves Daly City, Colma, and southwestern San Francisco neighborhoods. I-280 is approximately 1.25 miles west of the project site. I-280 may be accessed via ramps at Sneath Lane and San Bruno Avenue, or via I-380.
- *El Camino Real (State Route [SR] 82)* is a north–south arterial roadway and state highway that spans the San Francisco Peninsula between San Francisco and San José. It has six travel lanes in the vicinity of the project site; it connects with I-380 approximately 0.5 mile from the project site, providing regional vehicle access from all directions.

Transit System

The project site is not directly served by regional rail, ferry, or bus transit services. Existing transit facilities are shown in Figure 4.6-2 and described below (see Table 4.6-1).

- *Caltrain* provides passenger rail service on the Peninsula between San Francisco and San José and limited-service trains to Morgan Hill and Gilroy during weekday commute periods. The South San Francisco Caltrain Station is approximately one mile north of the project and is accessed from the Grand Avenue/Airport Boulevard intersection. Caltrain provides weekday service from 5:00 a.m. to 12:30 a.m., with two trains per hour during peak periods and hourly service during off-peak periods. In fall 2024, Caltrain plans to complete its electrification project to support faster and more frequent rail service on the Peninsula; draft service plans published in October 2023 include a service increase in South San Francisco to four trains per hour per direction during peak periods (two express trains and two local trains) along with two trains per hour per direction during off-peak periods (local trains only).
- *Bay Area Rapid Transit (BART)* provides regional rail service between the East Bay, San Francisco, and San Mateo County, connecting between San Francisco International Airport (SFO) and Millbrae Intermodal Station to the south, San Francisco to the north, and Oakland, Richmond, Antioch, Dublin/Pleasanton, and Fremont in the East Bay. The San Bruno Station is the closest station to the project site, about one mile southwest adjacent to the Tanforan Mall. The station is served by the Red Line (Richmond-Millbrae via SFO) and the Yellow Line (Antioch-SFO). BART provides service from 5:00 a.m. to 12:00 a.m. on weekdays and 6:00 a.m. to 12:00 a.m. on weekends. The Yellow Line operates at 10 minute frequencies during the day and every 20 minutes after 9:00 pm, while the Red Line operates every 20 minutes throughout the day and ceases service after 9:00 pm.
- *San Mateo County Transit District (SamTrans)* provides bus service in San Mateo County. SamTrans Route 292 runs from San Francisco to Hillsdale and stops along Airport Boulevard about 0.7 miles north of the project. Buses provide service every 30 minutes from 4:30 a.m. to 9:30 p.m. on weekdays and 6:50 a.m. to 6:50 p.m. on weekends.
- *The Peninsula Traffic Congestion Relief Alliance (commute.org)* provides weekday commute period first/last mile shuttles connecting employers in the East of 101 Area with BART and Caltrain. No shuttle service is present west of 101 near the project site.

Figure 4.6-2. Existing Transit Facilities



Route	Service Endpoints	Service Span	Average Peak- Hour Frequency
BART Red Line	Richmond Station-Millbrae Station via Oakland and San Francisco	5:15 a.m. to 12:00 a.m. (northbound);	20 minutes
		6:00 a.m. to 1:30 a.m. (southbound)	
BART Yellow Line	Pittsburg Bay Point and Antioch Stations-SFO Station via Oakland and San Francisco	5:15 a.m. to 12:00 a.m. (northbound); 6:00 a.m. to 1:30 a.m. (southbound)	10 minutes
Caltrain	San Francisco Station – San José Diridon Limited-service trains to Morgan Hill and Gilroy	5:00 a.m. to 12:30 a.m.	30 minutes
SamTrans 292	San Francisco – SFO – Hillsdale Mall	4:00 a.m. to 3:00 a.m.	30 minutes
Source: Fehr & Peers;	SamTrans 2023.		

Table 4.6-1. Transit Service

4.6.2.2 Project Site

The approximately 17.67-acre project site comprises one parcel at 131 Terminal Court in the city of South San Francisco (Figure 4.6-1). The project site is bounded by the Park & Fly lot, U.S. 101, and Produce Avenue to the east; Terminal Court to the north; the navigable slough to the south; and the San Mateo Avenue corridor to the west. The Park & Fly lot was recently entitled as the Infinite 101 development, a 696,000-square-foot research-and-development (R&D) campus with the same owner as the proposed project that would function as a separate phase to the project. The project site is approximately 1 mile south of the South San Francisco Caltrain station, 1 mile north of the San Bruno Caltrain station, and 1 mile northeast of the San Bruno BART station. Primary bicycle and pedestrian site access is provided via the planned Class I shared-use pathway along the western frontage of the site, which would connect to Shaw Road and Terminal Court/Produce Avenue. SFO is approximately 2 miles to the south.

Roadway System

Key local roadways in the vicinity of the project site are described below and shown in Figure 4.6-1.

- *U.S. 101* is an eight-lane freeway and the principal north–south roadway connection between San Francisco, San José, and intermediate San Francisco Peninsula cities. In South San Francisco, U.S. 101 is located directly adjacent to the project site; it serves the project area from the Produce Avenue/South Airport Boulevard exit. Access to the project for vehicles traveling north on U.S. 101 is provided by the South Airport Boulevard exit and underpass to the west side of the freeway. Access to the site for vehicles traveling south on U.S. 101 is provided by the Produce Avenue exit.
- *Produce Avenue* is a three-lane arterial east of the project, with two southbound lanes accessing the southbound U.S. 101 on-ramp.
- *Terminal Court* is a two-lane cul-de-sac that intersects Produce Avenue.

- *Shaw Road* is a two-lane local road south of the project site and the navigable slough.
- *San Mateo Avenue* is a two-lane arterial west of the site that can provide access to Shaw Road from the north and the south.
- *Southline Avenue* is a new east-west street that will connect Sneath Lane and San Mateo Avenue/South Linden Avenue.

Pedestrian and Bicycle Network

Pedestrian facilities include sidewalks, crosswalks, trails, and pedestrian signals. Bicycle facilities consist of separated bikeways, bicycle lanes, routes, trails, and paths, bicycle parking, bicycle lockers, and showers for cyclists. The California Department of Transportation (Caltrans) recognizes four classifications of bicycle facilities:

- Class I Shared-Use Pathway: Provides a completely separated right-of-way for the exclusive use of cyclists and pedestrians.
- Class II Bicycle Lane: Provides a striped lane for one-way travel on a street or highway. May include a "buffer" zone, consisting of a striped portion of roadway between the bicycle lane and the nearest vehicle travel lane.
- Class III Bicycle Route: Provides for shared use with motor vehicle traffic; however, these are often signed or included with a striped bicycle lane.
- Class IV Separated Bikeway: Provides a right-of-way designated exclusively for bicycle travel adjacent to a roadway and protected from vehicular traffic. Types of separation include, but are not limited to, grade separation, flexible posts, inflexible physical barriers, or on-street parking.

There are no existing bicycle facilities near the project site. Centennial Way Trail, located approximately 0.75 mile west of the project site, may be accessed via Tanforan Avenue, South Linden Avenue, and Shaw Road. The Bay Trail is approximately 0.25 mile east of the project site; however, access to the trail requires travel on a circuitous 1-mile diversion to the north via South Airport Boulevard. Most streets near the project site pose barriers to bicycle use due to high volumes of auto and truck traffic.

The project site is in an industrial area with challenging pedestrian conditions. Sidewalks near the project site are generally narrow, without buffer zones from adjacent roadways, and frequently interrupted by driveways. The pedestrian facilities outlined below exist near the project site. Existing and proposed bicycle facilities are shown in Figure 4.6-3.

- *San Mateo Avenue* has sidewalks on both sides of the street that are approximately 5 feet wide.
- *Shaw Road* has sidewalks on both sides of the street that are approximately 5 feet wide.
- *Produce Avenue* has a sidewalk on the west side of the roadway that is approximately 5 feet wide. Produce Avenue serves as a connection from South Airport Boulevard to the project site. There are no sidewalks on the east side of Produce Avenue due to U.S. 101.
- *Terminal Court* has sidewalks that are approximately 5 feet wide. Terminal Court connects Produce Avenue to the project site. There are no marked pedestrian crossings connecting the north side of Terminal Court to the project site.





Emergency Vehicle Access

Emergency vehicles typically use major streets through the study area when heading to and from an emergency and/or emergency facility. Arterial roadways allow emergency vehicles to travel at higher speeds and provide enough clearance space to permit other traffic to maneuver out of the emergency vehicle's path and yield the right-of-way. The nearest existing fire station to the project is Fire Station 62 at 249 Harbor Way, approximately 0.9 mile east of the project site, via Mitchell Avenue and Produce Avenue, with access to the project via the driveway on Terminal Court. Alternatively, emergency vehicles can travel along San Mateo Avenue to access the project Site via the driveway on Shaw Road. Harbor Way has one travel lane in each direction and a two-way center left turn lane. Mitchell Avenue and Produce Avenue have two travel lanes with a center median. Travel time is approximately five minutes from Fire Station 62 to the project site, and the project site allows for larger vehicle turning movements.

4.6.2.3 Off-Site Redesignation Parcels

The off-site redesignation parcels are north of the project site, across Terminal Court, at 120 Terminal Court, 196 Produce Avenue, 160 Produce Avenue, and 140 Produce Avenue (APNs 015-113-350, 015-113-290, 015-113-340, 015-113-330, 015-113-320). The off-site redesignation parcels currently comprise a large Park N' Fly surface parking lot and a Shell gas station. Collectively, the off-site redesignation parcels cover approximately 7.28 acres. Because the off-site redesignation parcels are located within the same area as the project site, the environmental setting would be the same as what is described above in Section 4.6.2.2, *Project Site*.

4.6.3 Regulatory Framework

This section provides a summary of the transportation and circulation plans and policies of the City of South San Francisco (City), along with those of regional, state, and federal agencies that have policy and regulatory control over the project site and surrounding areas.

4.6.3.1 Federal

Americans with Disabilities Act of 1990

The Americans with Disabilities Act of 1990 (revised 2010) is a landmark civil rights law that prohibits discrimination based upon disability. Titles I, II, III, and V of the act have been codified in Title 42 of the United States Code, beginning at Section 12101. Title III prohibits discrimination on the basis of disability in "places of public accommodation" (businesses and non-profit agencies that serve the public) and "commercial facilities" (other businesses). The regulation includes Appendix 4.13-A to Part 36 (Standards for Accessible Design), which establishes minimum standards to ensure accessibility for persons with disabilities when designing and constructing a new facility or altering an existing facility, including roadways, parking lots, and sidewalks. Examples of key guidelines include detectable warnings for pedestrians when entering traffic zones where there is no curb, a clear zone of 48 inches for the pedestrian travel way, and a vibration-free zone for pedestrians.

4.6.3.2 State

California Department of Transportation

Caltrans has authority over the state highway system, including freeways, interchanges, and arterial routes. Caltrans operates and maintains state highways in the project site vicinity. The *Guide for the Preparation of Traffic Impact Studies* (Caltrans 2001) provides information that Caltrans uses to review impacts on state highway facilities, including freeway segments. This guidance was updated by the *Local Development – Intergovernmental Review Program Interim Guidance* published in November 2016 for consistency with Senate Bill (SB) 743, described below.

Senate Bill 743

Senate Bill (SB) 743¹ was signed into law in 2013 and codified in Section 21099 of the California Public Resources Code with the intent of aligning California Environmental Quality Act (CEQA) transportation impact analysis practices and mitigation outcomes with the state's goals to reduce greenhouse gas (GHG) emissions, encourage infill development, and improve public health through more active transportation. SB 743 created several key statewide changes to CEQA, as described in the environmental impact report (EIR) sections referenced above. This discussion focusses on changes related to the assessment of transportation and parking impacts under CEQA.

As required by SB 743, the Office of Planning and Research (OPR) amended CEQA Guidelines Section 15064.3 to provide an alternative to automobile delay, as described by level of service (LOS) or similar measures of vehicular capacity or traffic congestion, for evaluating traffic impacts of proposed projects. The new metric, VMT, measures the total number of miles traveled by vehicles daily on the roadway network and thereby the impacts on the environment from those miles traveled (e.g., through GHG emissions). In other words, SB 743 changes the focus of transportation impact analysis in CEQA from measuring impacts on drivers to measuring the impact of driving on the environment, particularly as it relates to GHG emissions. Land use projects with one or more of the following characteristics would generally have lesser VMT impacts relative to projects without these characteristics:

- A mix of project uses,
- Support for a citywide jobs/housing balance,
- Proximity to high-quality transit service, and
- Locations in highly walkable or bikeable areas.

In addition, CEQA Guidelines Section 15064.3 states that lead agencies generally should presume that projects within 0.5 mile of an existing major transit stop or an existing stop along a high-quality transit corridor will have a less-than-significant impact on VMT. This presumption would not apply, however, if project-specific or location-specific information indicates that the project will still generate significant levels of VMT. For transportation infrastructure projects, such as a street extension, projects that reduce or have no impact on VMT are presumed to have a less-than-significant impact on VMT.

This shift in transportation impact criteria is expected to align transportation impact analysis and mitigation outcomes with state goals to reduce GHG emissions, encourage infill development, and improve public health through more active transportation. Although OPR provides

¹ Full text of SB 743 available: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140SB743. Accessed: June 12, 2024.

recommendations for adopting new VMT analysis guidelines, lead agencies retain discretion in designing their methodology. Lead agencies must select their preferred method for estimating and forecasting VMT, their preferred significance thresholds for baseline and cumulative conditions, and the mitigation strategies they consider feasible. Lead agencies must prove that their selected analysis methodology aligns with SB 743's goals to promote infill development, reduce GHGs, and reduce VMT. To aid in SB 743 implementation, the following state guidance has been produced:

- OPR's Technical Advisory on Evaluating Transportation Impacts in CEQA²
- California Air Resources Board's (CARB's) 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals³
- Caltrans' Local Development–Intergovernmental Review Program Interim Guidance, Implementing Caltrans Strategic Management Plan 2015–2020 Consistent with SB 743⁴

On June 10, 2020, the City of South San Francisco adopted Resolution 77-2020, establishing VMT thresholds and methodology, effective July 1, 2020. The VMT thresholds applied in this analysis are further described in Section 4.15.4.1, *Significance Criteria*, p. **Error! Bookmark not defined.**.

4.6.3.3 Regional

Metropolitan Transportation Commission

The Metropolitan Transportation Commission (MTC) is the Bay Area's regional transportation planning agency and federally designated metropolitan planning organization (MPO). The MTC is responsible for preparing the regional transportation plan (RTP), a comprehensive blueprint for the development of mass transit as well as highway, airport, seaport, railroad, bicycle, and pedestrian facilities. The RTP, which is a 20-year plan, is updated every 3 years to reflect new planning priorities and changing projections of future growth and travel demand. The long-range plan must be based on a realistic forecast of future revenues, and the transportation projects, taken as a whole, must help improve regional air quality. The MTC also screens requests from local agencies for state and federal grants for transportation projects to determine compatibility with the RTP.

Plan Bay Area 2050

Plan Bay Area 2050 is overseen by the MTC and the Association of Bay Area Governments (ABAG). It serves as the region's sustainable communities strategy (SCS) and the 2050 RTP, integrating transportation and land use strategies to manage GHG emissions and plan for future population growth. The RTP and SCS include policies that call for shifting more travel demand to transit and accommodating growth along transit corridors in Priority Development Areas. Plan Bay Area 2050 was adopted by ABAG and the MTC in October 2021.

² Office of Planning and Research. 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. December. Available: http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf. Accessed: June 12, 2024.

³ California Air Resources Board. 2017. 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals. January. Available: https://ww2.arb.ca.gov/resources/documents/carb-2017-scoping-plan-identified-vmt-reductions-and-relationship-state-climate. Accessed: June 12, 2024.

⁴ California Department of Transportation. 2016. *Local Development–Intergovernmental Review Program Interim Guidance, Implementing Caltrans Strategic Management Plan 2015–2020 Consistent with SB 743*. November. Available: https://advocacydev.calchamber.com/wp-content/uploads/2014/2016/10/LDIGRInterimGuidance Approved.pdf. Accessed: March 12, 2024.

City/County Association of Governments of San Mateo County

As the designated Congestion Management Agency, the City/County Association of Governments of San Mateo County (C/CAG) has primary responsible for administering the state-mandated Congestion Management Program. C/CAG–designated components of the Congestion Management Program roadway system in the cities of South San Francisco and San Bruno include SR 82 (El Camino Real), U.S. 101, I-380, and I-280.

C/CAG adopted guidelines as a part of its Congestion Management Plan (CMP) to reduce the regional traffic impacts of substantive new developments. The guidelines apply to all projects in San Mateo County that will generate 100 or more net new peak-hour trips on the CMP network and are subject to CEQA review. C/CAG calls for projects that meet the criteria to determine if a combination of acceptable measures is possible that has the capacity to "fully reduce," through the use of a trip credit system, the demand for net new trips that the project is anticipated to generate on the CMP roadway network (including the first 100 trips). C/CAG has published a list of mitigation options in a memorandum. South San Francisco's Transportation Demand Management (TDM) ordinance is consistent with C/CAG of San Mateo County's ordinance, so by adhering to the City's ordinance, the proposed project would also be compliant with C/CAG of San Mateo County's guidelines for new development.

The C/CAG is also responsible for preparing the Countywide Transportation Plan, which establishes a long-range transportation vision for the county and informs the RTP/SCS prepared by the MTC and ABAG. The current version of the plan, adopted in February 2017, looks at a horizon year of 2040. The C/CAG of San Mateo County also partners with local jurisdictions and other transportation agencies to develop transportation plans and studies for areas as well as projects with countywide and regional significance.

The San Mateo County Transit District

SamTrans is the administrative body for the principal public transit and transportation programs in San Mateo County (i.e., SamTrans bus service, including Redi-Wheels and RediCoast paratransit service; Caltrain commuter rail; and San Mateo County Transportation Authority operations). Caltrain and the San Mateo County Transportation Authority have contracted with SamTrans, which serves as their managing agency under the direction of their appointed boards.

Peninsula Corridor Joint Powers Board

The Peninsula Corridor Joint Powers Board (JPB) owns and operates Caltrain. The JPB consists of representatives from San Francisco, San Mateo and Santa Clara counties. Caltrain's Strategic Plan establishes a common vision for the agency, and frames key policy, service and investment decisions. The most recent strategic plan was adopted by the board on September 4, 2014.

Bay Area Rapid Transit

BART has authority over rail service and facilities spanning its services in the East Bay, San Francisco, and San Mateo County. BART's Transit-Oriented Development (TOD)⁵ Policy informs BART's internal and external approach to development near BART stations.

⁵ Bay Area Rapid Transit. 2016. *Transit-Oriented Development Policy*. Adopted: June 9, 2016. Amended: April 23 2020. Available: https://www.bart.gov/sites/default/files/docs/BART%20Transit-Oriented%20Development %20Policy_Amended2020-04-23.pdf. Accessed: June 12, 2024.

4.6.3.4 Local

City of South San Francisco Plans and Policies

City General Plan Policies

The Shape SSF 2040 General Plan (General Plan) establishes a vision for the city's future growth. Its Circulation Element includes five goals, 13 policies, and 26 actions covering topics such as complete streets, VMT, connectivity, safety, active transportation, TDM, parking, and innovations. Each goal is presented below, accompanied by policies and actions that are particularly relevant the project.

South San Francisco prioritizes safety in all aspects of transportation planning and engineering.

Policy MOB-1.2: Strive to reduce vehicle speeds throughout the city to reduce the frequency and severity of collisions.

Action MOB-1.2.1. Incorporate traffic calming treatments into all street projects to support lower design speeds.

South San Francisco provides a multimodal network with convenient choices for everyone.

Policy MOB-2.1: Incorporate complete streets improvements into all roadway and development projects.

Action MOB-2.1.1: Complete multimodal design and impact analysis. Ensure that roadway and development projects are designed and evaluated to meet the needs of all street users, and that development projects contribute to multimodal improvements in proportion to their potential impacts on vehicle miles traveled.

Action MOB-2.1.3: Implement Active South City Pedestrian and Bicycle Plan. All capital improvements and development projects incorporate bicycle and pedestrian improvements identified in the Active South City Plan, such as trails, bikeways, bicycle detection at traffic signals, high-visibility crosswalks, and pedestrian-oriented site plans.

Action MOB-2.1.4: Implement transit speed, reliability, and access improvements. All capital improvements and development projects near regional transit stations or bus/shuttle routes incorporate improvements to advance speed, reliability, and access, such as in-lane far-side bus stops, bus-only lanes, queue jumps, and pedestrian/bicycle gap closures.

Policy MOB-2.2: Advance more equitable transportation within South San Francisco.

Action MOB-2.2.2: Develop free bus and shuttle service for residents. Develop a dedicated funding source or leverage private sector contributions to fund the South City shuttle and free bus service for South San Francisco residents.

Policy MOB-2.3: Interaction between truck routes and bicycle/pedestrian priority streets. When streets are designed as a truck route and a priority street for bicyclists and pedestrians (either in the General Plan or Active South City Plan), complete a more detailed review and study to prioritize intersections and street design for active mobility and limit truck movements to the designated truck routes.

South San Francisco proactively manages traffic and parking demand.

Policy MOB-3.1: Promote mode shift among employers. Manage the number of vehicle trips, with a focus on promoting mode shift among employers.

Action MOB-3.1.2: Implement an East of 101 trip cap. Implement an East of 101 area trip cap with triennial monitoring and corrective actions if exceeded. Implement project-specific trip caps for large campus developments.

Policy MOB-3.2: Optimize traffic operations on city streets. Optimize traffic operations on City streets while avoiding widening roadways or otherwise pursuing traffic operations changes at expense of multimodal safety, transit reliability, or bicycle and pedestrian comfort.

Action MOB-3.2.1: Update traffic operations metrics. Use appropriate metrics (e.g. travel time, vehicle queues, vehicle delay/level of service, and/or person delay) to evaluate and advance projects that manage traffic flow in coordination with the implementation of complete streets.

Action MOB-3.2.2: Incorporate new street connections. Incorporate new street connections to better distribute vehicle trips across South San Francisco's street network, especially in the East of 101 Area.

Policy MOB-3.3: Right-size parking supply and maximize the efficiency of curb space.

Action MOB-3.3.1: Incorporate parking maximums. Incorporate maximum parking requirements for new residential and office/R&D projects that align with TDM ordinance trip reduction goals.

South San Francisco's land use and transportation actions reduce VMT and GHG emissions.

Policy MOB-4.1: Increase substantially the proportion of travel using modes other than driving alone.

Action MOB-3.1.2: Implement an East of 101 trip cap. Implement an East of 101 area trip cap with triennial monitoring and corrective actions if exceeded. Implement project-specific trip caps for large campus developments.

South San Francisco's land use and transportation actions reduce VMT and GHG emissions.

Policy MOB-5.1: Expand the low-stress bike and pedestrian network. Capitalize on opportunities to expand the low-stress bike and pedestrian network throughout the city.

The General Plan proposes new streets and major transportation investments. The Utah Avenue interchange project would create an overpass across U.S. 101, from South Airport Boulevard to San Mateo Avenue (via the northern edge of the project site) connecting Lindenville to the East of 101 area. The U.S. 101 southbound off-ramp and the U.S. 101 northbound on-/off-ramp would be reconfigured as part of that project. Produce Avenue would remain as the access for the U.S. 101 south on-ramp and the project driveway. Several other projects identified in the General Plan will impact the transit access, traffic operations, and multimodal performance of the project.

The project was not included in the General Plan and therefore requires a General Plan amendment.

Active South City Plan

The Active South City Plan identifies priority projects and policies to improve bicycle and pedestrian access through the city. The plan proposes an additional 50 miles of bike facilities for the network. In the proximity of the project, the Active South City Plan proposed the following bicycle facilities:

- San Mateo Avenue Class II Bicycle Lanes
- Airport Boulevard Class IV Separated Bikeway
- Shaw Road Class I Shared-Use Path
- U.S. 101 Bicycle & Pedestrian Bridge Class I Shared-Use Path
- Utah Avenue Overpass Class II Bicycle Lanes

The planned bicycle network in relation to the project site is illustrated in Figure 4.6-3.

The Active South City Plan also identifies Airport Boulevard and San Mateo Avenue as candidates for pedestrian improvements to enhance walkability and reduce conflicts with other modes.

South San Francisco Transportation Demand Management Ordinance

South San Francisco Zoning Code includes a TDM ordinance (Chapter 20.400). The ordinance aims to reduce VMT of new developments, manage congestion, and promote efficient use of the existing transportation network through TDM measure adoption, and ongoing monitoring and reporting. Each development tier is required to meet a different point value for TDM measure adoption, trip cap, and monitoring requirements. Tier 4 projects are required to achieve at least 50 points, conduct annual monitoring to achieve a maximum of 50 percent of employees commuting via driving alone, and conduct annual monitoring of a site-specific trip cap. The project's TDM plan is provided as an appendix (see Appendix I).

Lindenville Specific Plan

The Lindenville Specific Plan expands upon the General Plan's vision for a mixed-use neighborhood, employment hub, and cultural center around the project site. The Lindenville Specific Plan identifies conceptual street layouts and circulation improvements for the Lindenville District that are generally consistent with the General Plan and Active South City Plan. The following summarizes mobility goals and policies included in the specific plan.

MOB-1: Multi-modal travel options are readily available and offer equal levels of comfort.

Policy MOB-1.1: Establish key pedestrian-oriented streets. Transform streets with higher density mixed use development and arts and makers uses into welcoming pedestrian environments with street trees, lighting, and landscaping. Create a relaxing pedestrian environment along a rehabilitated Colma Creek.

Policy MOB 1.2: Establish key low-stress bicycle routes. Facilitate seamless low-stress bicycle connections to Lindenville via South Spruce Avenue, Centennial Way Trail, and Tanforan Avenue, accompanied by feeder routes to access local destinations.

Policy MOB 1.3: Establish high-quality transit facilities. Prioritize public transit mobility and facilities on South Spruce Avenue and at shuttle hubs at major employment centers.

Policy MOB 1.4: Facilitate vehicle access in and out of Lindenville. Accommodate regional auto access to U.S. 101 and I-380 via Southline Avenue, San Mateo Avenue, South Airport Boulevard, and an extension of Utah Avenue.

Policy MOB 1.5: Prioritize safety. Prioritize safety and accessibility over speed and vehicle flow in all streetscape and intersection projects.

Policy MOB 1.6: Plan for the future. Incorporate design choices, like flexible curb space, that futureproof the transportation network for emerging technologies like autonomous vehicles.

MOB-2: There are high-quality connections to Downtown, El Camino, East of 101, and regional destinations for all modes.

Policy MOB 2.1: Connect bicyclists and pedestrians to Lindenville. Complete low-stress bicycle and pedestrian connections to the Centennial Way Trail, Bay Trail, and the Colma Creek Greenbelt.

Policy MOB 2.2: Connect regional transit riders to Lindenville. Work with SamTrans and individual employers to maintain high frequency, high-capacity transit service with direct connections to the South San Francisco Caltrain station and the San Bruno BART station.

Policy MOB 2.3: Provide drivers direct connections to Lindenville. Add vehicle capacity to reach East of 101 and farther destinations by completing the Utah Avenue interchange project including a reconfiguration of southbound U.S. 101 ramps.

MOB-3: Lindenville's transportation offerings and streetscape design support a vibrant mixed use district.

Policy MOB 3.1: Apply TDM requirements. Apply and enforce the citywide Transportation Demand Management (TDM) ordinance for new development in Lindenville.

Policy MOB 3.2: Add new connections. Create short blocks with new streets, alleys, and pathways to support connections for people who walk, bike, or use other micromobility options.

Policy MOB 3.3: Prioritize pedestrian and bike access. Require property owners to prioritize pedestrian and bicycle access in site design in the mixed use and office corridors and deemphasize vehicle access using design, wayfinding, and building amenities.

Policy MOB 3.4: Overhaul key streets, support gradual shift elsewhere. Encourage land use transition and mode shift by overhauling the transportation experience on select corridors (e.g., South Spruce Avenue and South Canal Street) and taking a more gradual approach on others (e.g., South Linden Avenue and Victory Avenue). Incremental changes might include converting some parking to parklets and pick-up/drop-off zones and providing pedestrian bulb-outs at crosswalks.

Policy MOB 3.5: Facilitate safe truck activity. Use traffic calming features and slower speed limits to facilitate safe truck interaction with other modes in districts zoned for industrial and commercial uses while phasing in weight limits and large truck restrictions in the districts zoned for mixed use.

Policy MOB 3.6: Incorporate stormwater management. Integrate blue-green infrastructure within the street right-of-way and curb-to-curb widths where appropriate to meet stormwater goals.

Many streets in Lindenville are particularly narrow with limited opportunities to widen sidewalks, add bicycle facilities, maintain parking, and add landscaping on every street. The Lindenville Specific Plan uses a layered network approach that prioritizes walking, biking, transit, truck, and auto access on specific streets. Near the project site, the plan identifies the following priorities:

- *San Mateo Avenue and Southline Avenue* are identified as auto priority streets that provide regional access to U.S. 101 and the future Utah Avenue overpass.
- *Southline Avenue and Produce Avenue/Airport Boulevard* are identified as transit priority streets to facilitate shuttle access to and from BART and Caltrain. A shuttle route through the project site is suggested, along with a new bus stop at the Airport Boulevard/Produce Avenue/San Mateo Avenue intersection.

• *Shaw Road and Tanforan Avenue* are identified as bicycle priority streets, with connections to a new trail crossing of U.S. 101 along the navigable slough as well as a north-south bikeway along the western edge of the project site. These bikeways would provide parallel alternatives to San Mateo Avenue and Utah Avenue, which would serve a high volume of auto and truck traffic.

The Lindenville Specific Plan emphasizes the need to modernize local street infrastructure to accommodate changing land uses and incorporate first/last mile shuttle services to provide connections with BART and Caltrain.

4.6.4 Impacts and Mitigation Measures

This section describes the impact analysis related to transportation and circulation for the proposed project, including the off-site redesignation parcels. It describes the methods and thresholds used to determine whether an impact would be significant. Measures to mitigate (i.e., avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion, when necessary.

4.6.4.1 Significance Criteria

The impacts of the project related to transportation will be considered significant under CEQA if any of the following thresholds of significance are exceeded, per Appendix G of the CEQA Guidelines:

- **Consistency with Plans and Policies**: A significant impact would a occur if the development of the project would conflict with a program plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities;
- **Vehicle Miles Traveled**: A significant impact would a occur if the development of the project would generate per-employee VMT greater than the City's adopted threshold of 15 percent below the regional average, according to CEQA Guidelines Section 15064.3, subdivision (b) and City of South San Francisco Resolution 77-2020 related to VMT;
- **Design Hazards**: A significant impact would a occur if the development of the project would substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or
- **Emergency Access and Evacuation**: A significant impact would a occur if the development of the project would result in inadequate emergency access

The thresholds of significance used in this document are based on Appendix G criteria and the City of South San Francisco's adopted local policies. The criteria of significance apply to all project scenarios as measured against the corresponding No project scenarios.

4.6.4.2 Approach to Analysis

Analysis Scenarios

The effect of the project on the surrounding transportation system were evaluated in comparison to existing and cumulative conditions without the project. Existing conditions represent the baseline condition upon which project impacts are measured, reflecting transportation conditions in 2023. Cumulative conditions reflect buildout of planned land use developments and transportation improvements, including those envisioned in South San Francisco's 2040 General Plan and within San Bruno (including buildout of the Bayhill Specific Plan and redevelopment of the Tanforan Mall).

Travel Demand Forecasting Methodology

The amount of traffic added to the roadway system by the proposed project was estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. The first step, trip generation, estimates the amount of traffic that would be generated once the proposed project is built and fully occupied. The second step, trip distribution, estimates the direction of travel to and from the project site. The third step, trip assignment, assigns proposed project trips to specific street segments and intersection turning movements.

Trip Generation

Project trip generation was calculated using the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 11th edition, fitted curve equation for R&D land use and day care, along with reductions associated with the project's TDM plan, consistent with the City's Transportation Impact Analysis (TIA) Guidelines as summarized in Table 4.6-2. Amenity uses are included within the R&D trip generation given the expected high internalization rate and comparable employee densities of these uses. Trip generation includes a 34 percent reduction associated with the project's TDM plan, consistent with the City's TDM ordinance requirements for a Tier 4 project. According to this trip generation analysis, the project would generate approximately 1,056 AM peak-hour trips and 999 PM peak-hour trips.

Table 4.6-2. Vehicle Trip Generation

	AM Peak Hour		Hour	PM Peak Hour		
Land Use ^a	In	Out	Total	In	Out	Total
R&D and amenities (1,700,000 square feet)	1,261	227	1,538	232	1,221	1,453
TDM reduction ^b	-429	-77	-523	-79	-415	-494
Day care (50 students)	22	19	41	19	21	40
Project Trip Generation	854	169	1,056	172	827	999

Source: Fehr & Peers, 2023.

Notes:

Trip generation rates are based on ITE 11th edition (Land Use #760 – Research and Development Center, fitted curve equation, and Land Use #565 – Day Care, fitted curve equation)

b. A 34 percent trip reduction, based on TDM plan, consistent with City's TDM policy for Tier 4 project.

Estimated peak-hour person trips and mode share is presented in Table 4.6-3. Consistent with the mode share targets included in the City's TDM ordinance and recent survey data at comparable sites, the project is estimated to generate approximately 50 percent of its peak-hour travel via single occupancy vehicle, 20 percent via transit, 20 percent via telecommute, and 10 percent via carpool, vanpool, and active transportation. These estimates are for planning purposes only; actual mode shares may vary depending on site-specific and employer-specific characteristics as well as continued evolution in telecommuting patterns.

Mode	Mode Share ^c	AM Peak Hour	PM Peak Hour	Daily
Drive alone	50%	954	901	1,855
Carpool/Vanpool ^b	8%	153	144	297
Transit	20%	381	361	742
Active Transportation	2%	38	36	74
Telecommute	20%	381	361	742
Total Person Trips	100%	1,907	1,803	3,710

Table 4.6-3. Estimated Peak-Hour Person Trips and Mode Share^a

Source: Fehr & Peers, 2023.

Notes:

a. Estimates based on review of City's TDM surveys and U.S. Census Bureau data for 2019 and 2022 conditions.

b. Carpool/vanpool assumes average vehicle occupancy of 2.5 persons per vehicle.

^{c.} For planning purposes only; actual mode shares may vary, depending on site-specific and employer-specific characteristics as well as continued evolution in telecommuting patterns.

Trip Distribution and Assignment

The C/CAG model was used as a basis for analyzing trip distribution and VMT. This trip-based regional travel demand model considers regional land use patterns, approximates highway congestion, and analyzes connecting transit service within the nine-county Bay Area region. Through the South San Francisco General Plan, the C/CAG model was reviewed and updated within South San Francisco through a series of diagnostic tests to assess its performance and reasonableness for the project. A series of refinements were made to the model inputs for land use, the roadway network, and transit service in South San Francisco. These updates improved the model's effectiveness with respect to reasonably estimating current travel patterns and changes in travel patterns in response to project land use and transportation network changes.

To further enhance the reasonableness of trip assignment from the C/CAG model, the City's sub-area model was applied through the use of project trip generation and trip distribution from the C/CAG Model. The sub-area model, developed for the City General Plan update, reflects origin/destination patterns consistent with the C/CAG Model and incorporates refinements to the level of detail in the local street network. It includes a 2019 base year and 2040 horizon year, which includes all land use and transportation changes documented in the 2040 General Plan. The sub-area model, developed in the Visum software platform, provides a more detailed representation of the traffic circulation and operational performance of the roadway network in the vicinity of the project site and within South San Francisco and San Bruno. The roadway network in the sub-area model was refined to include most streets and major driveways in South San Francisco. The traffic assignment process in the sub-area model incorporates details such as signal timing, intersection lane geometry, and turning movement delay, allowing for a more realistic representation of existing traffic patterns and those associated with the project land use and proposed street extension.

Vehicle Miles Traveled

The project's VMT was analyzed using the City's VMT thresholds established in Resolution 77-2020 on June 10, 2020 and consistent with CEQA Guidelines Section 15064.3, subdivision (b). The adopted VMT threshold for employment-generating land uses determines that a project would have a significant transportation impact if its VMT is greater than 15 percent below the

baseline for home-based work (HBW) VMT per employee. This threshold would be set at 12.7 (15 percent below the existing regional average of 14.9) HBW VMT per employee for office and R&D projects as shown in Table 4.6-4. This threshold of 12.7 HBW VMT per employee also applies to cumulative conditions.

Location	Estimated HBW VMT per Employee		
Bay Area Region: Existing	14.9		
HBW VMT Per Employee Threshold (15% below existing)	12.7		
Project	17.5		
Project with TDM Mitigation (29.5% reduction)	12.3		
Source: Fehr & Peers. 2023. C/CAG-VTA Bi-County Transportation Demand Model, 2022.			
Notes:			
a. HBW= home-based work; VMT = vehicle miles traveled.			

Table 4.6-4. Home-Based Work Vehicle Miles Traveled Per Employee

4.6.4.3 Impact Evaluation

This section includes the evaluation of the project's potential impacts. This section also describes the required associated mitigation measures that would reduce impacts of the project.

Impact TRANS-1: The project would conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicyclist, and pedestrian facilities. (*Significant and Unavoidable*)

Project

As discussed above, the project site is currently designated as Mixed Industrial High (MIH) and Mixed Industrial Medium under the City's Lindenville Specific Plan and Zoning Code, respectively. Neither the General Plan nor the Lindenville Specific Plan analyzed this site as Business Technology Park-High (BTP-H); in order to construct and operate the proposed project, amendments to the General Plan, Specific Plan, and City Zoning Code would be required.

The project includes various design features that are consistent with the General Plan and Lindenville Specific Plan. The project would provide multimodal circulation improvements within the site, along its eastern frontage, and along the frontage of the navigable slough. The project is designed to separate bicycles and pedestrians from vehicle traffic, which will circulate along the periphery of the site and connect Terminal Court with Shaw Road. The central courtyard is designed for people walking and biking or accessing the site via the shuttle service to/from regional transit stations. Speed humps and raised crosswalks are included on the internal roadways to prevent high vehicle travel speeds where there may be conflicts with other road users. These design features align with General Plan Goals MOB-1, MOB-2, MOB-4, and MOB-5, Lindenville Specific Plan goals MOB-1, MOB-2, and MOB-3, as well as the Active South City Plan, and the TDM ordinance.

The project complies with the measures and monitoring requirements identified in the TDM ordinance. The project will implement a TDM plan that includes an enhanced shuttle commitment to serve first-last mile connections to the site, address active transportation gap closures, and fully subsidized transit passes for employees. The TDM plan is expected to achieve 50 points under the

TDM ordinance and implement a 50 percent trip cap, which aligns with General Plan goals MOB-3 and MOB-4. In addition, the project does not affect the potential implementation of the Utah Avenue Overpass or its connections to the relevant roadways and ramps, as identified in the General Plan.

Although the project's site plan and TDM plan exhibit features that are consistent with goals, policies, and actions identified in the General Plan and Lindenville Specific Plan, the project overall remains inconsistent because it would add 1.7 million square feet of R&D uses and amenities to the Produce Avenue corridor, an area where additional density was not identified or studied in the Lindenville Specific Plan or General Plan. This intensification of uses would occur in a location with insufficient access and circulation facilities, limited transportation options, and challenging connectivity to the regional transportation network. Therefore, the project conflicts with the goals and policies of the General Plan and Lindenville Specific Plan identified in Section 4.6.3.4. The project's lack of consistency with adopted plans and policies addressing the circulation system would constitute a significant impact. As mitigation, the project would be required to implement various actions consistent with those identified in the General Plan, Lindenville Specific Plan, and Active South City Plan, described in Mitigation Measure TRANS-1, below. With implementation of Mitigation Measure TRANS-1, the project would advance off-site improvements consistent with Actions MOB-1.2.1, MOB-2.1.1, 2.1.3, 2.1.4, 3.2.1, and 3.2.2 to adequately address its effects on the transportation network. However, part of this right-of-way is under the jurisdiction of Caltrans and the jurisdiction of the City of San Bruno, and neither jurisdiction has a mechanism for funding this mitigation. Therefore, while the proposed mitigation could reduce the project's impact, the impact would be *significant and unavoidable* because the City of South San Francisco cannot ensure its implementation.

Off-Site Redesignation Parcels

The five off-site redesignation parcels are currently designated as MIH under the General Plan, Specific Plan, and City Zoning Code. However, they would be redesignated BTP-H, consistent with the proposed land use and zoning designation for the project site. The MIH designation currently allows for development of a wide range of warehousing, manufacturing, processing, service commercial, and storage and distribution uses. The redesignation would allow for high-density corporate headquarters, R&D facilities, and office uses. More specifically, the General Plan and Specific Plan describe the permitted uses for BTP-H as incubator research, prototype manufacturing, testing, repairing, packaging, publishing, and printing, along with office and R&D uses. Warehousing, distribution, manufacturing, retail services, personal services, and grocery and hotel uses are also permitted under this designation. The proposed project does not include the construction of any new uses on the off-site redesignation parcels.

Compared to the City's land use forecasts in the General Plan and Lindenville Specific Plan, the proposed change in land use for the off-site redesignation parcels would not materially affect the projected number of employees or travel demand along the Produce Avenue corridor and Lindenville as a whole. For these reasons, the redesignation would be consistent with adopted plans and policies by the City. As such, the impacts of the off-site redesignation would be *less than significant*. No further evaluation is required.

Whole Project

As described above, the project's site plan and TDM plan exhibit features that are consistent with goals, policies, and actions identified in the General Plan and Lindenville Specific Plan. In addition, the off-site redesignation parcels would not conflict with these plans and would have no impact.

However, the whole project remains inconsistent because it would intensify uses beyond what the City has planned for a location with insufficient access and circulation facilities, limited transportation options, and challenging connectivity to the regional transportation network.. The project's lack of consistency with adopted plans and policies addressing the circulation system would constitute a significant impact. With implementation of Mitigation Measure TRANS-1, the whole project would advance off-site improvements consistent with buildout of the General Plan and Lindenville Specific Plan to adequately address its effects on the transportation network. Nonetheless part of this right-of-way is under the jurisdiction of Caltrans and the jurisdiction of the City of San Bruno, and neither jurisdiction has a mechanism for funding this mitigation.. Therefore, while the proposed mitigation could reduce the project's impact, the impact would be *significant and unavoidable* because the City of South San Francisco cannot ensure its implementation.

Mitigation Measure TRANS-1: Advanced Implementation of Transportation Improvements Identified in General Plan, Lindenville Specific Plan, and Active South City Plan

The project shall implement and/or fund, as indicated below, the following improvements identified in the General Plan, Lindenville Specific Plan, and Active South City Plan:

1. <u>Signalization of the U.S. 101 Off-ramp/Produce Avenue and U.S. 101 On-ramp/Produce</u> <u>Avenue/Terminal Court Intersections.</u>

The project shall implement two new traffic signals along Produce Avenue to improve traffic operations, safety, and bicycle and pedestrian access to the project site. The traffic signals shall be located at the intersections of the U.S. 101 off-ramp/Produce Avenue and U.S. 101 on-ramp/Produce Avenue/Terminal Court. The traffic signals shall be accompanied by changes to lane configurations, sidewalks, crosswalks, and bicycle facilities identified by the City to achieve consistency with adopted plans and policies.

2. <u>Redesign of the Produce Avenue/San Mateo Avenue/Airport Boulevard Intersection</u>

The project shall implement a redesign of the Produce Avenue/San Mateo Avenue/Airport Boulevard intersection to improve traffic operations, safety, and bicycle, pedestrian, and transit access to the project site. A partial redesign of this intersection is already funded by the 100 Produce, 124 Airport, and 40 Airport projects, which will include removal of slip lanes on the northeast, northwest, and southwest corners. The project's redesign shall include the reconfiguration of turning lanes, improvements to pedestrian and bicycle facilities, and the addition of bus stops and shelters for SamTrans Route 292, as identified by the City.

3. <u>Construction of a Class IV Separated Bikeway from Baden Avenue to Terminal Court via</u> <u>Airport Boulevard and Produce Avenue</u>

The project shall implement a Class IV separated bikeway on Produce Avenue and Airport Boulevard from Baden Avenue to Terminal Court, connecting the Caltrain Station to the project site. This bikeway would close existing gaps between the project site, Caltrain Station, and downtown South San Francisco, enabling continuous bicycle travel separated from auto and truck traffic. Improvements would include construction of a two-way facility along the west side of Produce Avenue from Terminal Court to Airport Boulevard/San Mateo Avenue, transitioning to a pair of one-way facilities through the Caltrain crossing to Baden Avenue. 4. Signalization of the San Mateo Avenue/Shaw Road/Tanforan Avenue Intersection:

The project shall implement a new traffic signal at the intersection of San Mateo Avenue/Shaw Road/Tanforan Avenue. This traffic signal would facilitate access to the project site via Shaw Road while reducing potential for multimodal conflicts. The traffic signal shall be accompanied by accessible sidewalk and curb ramp upgrades at the intersection, as well as associated signal and intersection/sidewalk modifications at the adjacent San Mateo Avenue/South Linden Avenue intersection.

5. <u>Engineering Study of a New Southbound U.S. 101 Off-ramp Connecting to the Utah Avenue</u> <u>Overpass</u>

The project shall fund an engineering study of a new southbound U.S. 101 off-ramp connecting to the proposed Utah Avenue overpass as envisioned in the General Plan and Lindenville Specific Plan. The engineering study shall be led by the city. As currently envisioned, the overpass would not include a southbound off-ramp. A second off-ramp would facilitate more direct access to the overpass and address long-term queueing concerns. The off-ramp would be accompanied by a new street connection between Utah Avenue and Produce Avenue north of the project site.

6. <u>Engineering Study and Fair-Share Contribution toward a New Trail Crossing of U.S. 101</u> <u>South of the Project Site</u>

The project shall fund an engineering study for a new Class I shared-use path crossing of U.S. 101 to connect the Bay Trail with Shaw Road. The engineering study shall be led by the city. An engineering study of the planned U.S. 101 crossing has not yet occurred, and a preferred alternative alignment has not been determined. The engineering study will consider potential trail crossing alignments, incorporate the preferred alternative alignment into its site plan, and quantify a fair share contribution toward construction of the crossing.

Mitigation shall be completed by the applicant prior to the project receiving a certificate of occupancy. If the City implements these improvements in advance of the project's construction, the project shall reimburse the City for the cost of construction. If another development implements these improvements and/or engineering studies prior to the project's construction, the project shall be responsible for a fair-share reimbursement of construction costs to the developer leading these improvements. This funding will ensure that transportation facilities serving the project site are appropriately sized to handle multimodal travel demand associated with the project as envisioned in each plan.

Impact TRANS-2: The project would not conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). (*Less than Significant*)

Project

As shown in Table 4.6-4, the project without a TDM program is expected to generate 17.5 HBW VMT per employee under existing conditions, which is greater than the City's significance threshold of 12.7 HBW VMT. However, implementation of a TDM program is expected to reduce VMT to below the threshold of significance.

Per the City of South San Francisco Zoning Code Chapter 20.400, the project is required to implement a combination of TDM programs, services, and infrastructure improvements as well as annual reporting and monitoring to reduce VMT. The project's TDM plan identifies several TDM

measures consistent with the City's ordinance, including transit subsidies, participation in Commute.org programs, carpool/vanpool programs, bicycle storage and amenities, designation of a TDM coordinator, bicycle- and pedestrian-oriented site access, encouraging telecommuting, first/last mile shuttle services, active transportation gap closures, on-site amenities, and bicycle repair stations.

Quantification of TDM reductions is based on the *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity* by the California Air Pollution Control Officer's Association (CAPCOA) published in 2021. The project would implement the following measures consistent with CAPCOA guidance:

- *Measure T-6 (Implement Commute Trip Reduction Program Mandatory Implementation and Monitoring)* defines a commute trip reduction program with mandatory implementation and monitoring, which is consistent with several project TDM measures defined in the City's ordinance along with City requirements for annual monitoring and reporting to ensure compliance. Project TDM measures that would be included in the mandatory trip reduction program include participation in commute.org programs, carpool/vanpool programs and parking, bicycle storage, showers, and lockers, designation of a TDM coordinator, and fully subsidized transit passes. The project would be subject to annual surveys and trip cap monitoring as described in the following section.
- *Measure T-20 (Expand Bikeway Network)* covers bikeway network expansion, which is consistent with the proposed active transportation gap closure measure covering both on-site and off-site bicycle improvements.
- *Measure T-25 (Extend Transit Network Coverage)* covers transit network expansion consistent with the proposed shuttle to connect the project site with the existing BART station and Caltrain station to provide first/last-mile connectivity for employees and the public. This will add seven additional hours per day of transit service to the area. Prior to the expansion, there was no service within a half-mile radius surrounding the site. The free shuttles will connect the site with existing SamTrans, Caltrain, and BART service.

As shown in Table 4.6-5, the combination of these measures is expected to achieve a VMT reduction of 29.5 percent, which exceeds the 28 percent reduction needed to achieve a less-than-significant impact on VMT.

Implementation of the project's TDM program would reduce VMT below the City's threshold of significance of 12.7 HBW VMT per employee. Therefore, the project's impact would be *less than significant*. No mitigation is required.

Off-Site Redesignation Parcels

The proposed project would require amendments to the General Plan and Specific Plan and an associated zone change from MIH to BTP-H for the off-site redesignation parcels. The purpose of the off-site redesignation is to ensure that future development is similar to and consistent with the development proposed as part of the project. The MIH designation currently allows for development of a wide range of warehousing, manufacturing, processing, service commercial, and storage and distribution uses. The redesignation would allow for high-density corporate headquarters, R&D facilities, and office uses. More specifically, the General Plan and Specific Plan describe the permitted uses for BTP-H as incubator research, prototype manufacturing, testing, repairing, packaging,

South San Francisco TDM Ordinance Requirements		CAPCOA Quantification of VMT Reductions ^a				
TDM Measure Description	Potential Points	project Points	Measure	Title	Project Reduction	
Fully Subsidized Transit Passes	15	15	T-6	Implement Commute Trip	26.0%	
Participation in Commute.org Programs	5	5		Reduction Program (Mandatory		
Designated TDM Coordinator	1	1		and Monitoring)		
Carpool/Vanpool Programs and Parking	3	3				
Bicycle Storage, Showers, and Lockers	2	2				
Bicycle Repair Station	1	1				
Active Transportation Gap Closure	Up to 6	6	T-20	Expand Bikeway Network	0.2%	
Enhanced Shuttle Commitment	10	10	T-25	Expand Transit Network	4.6%	
Transit Capital Improvements	Up to 6	2		Coverage		
Bicycle- and Pedestrian- Oriented Site Access	1	1	N/A	N/A	N/A	
On-Site Pedestrian- Oriented Amenities	3	3				
Encourage Telecommuting and Flexible Work Schedules	1	1	-			
Total Project	Points	50	Total Pro	oject Reduction	29.5%	
Required Po	oints	50	Required F	Project Reduction	28%	

Table 4.6-5. TDM Program Elements

Source: California Air Pollution Control Officer's Association. 2021. City of South San Francisco TIA Guidelines and Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity.

Note:

Each of the CAPCOA TDM strategies can be combined with others to increase the effectiveness of vehicle trip and VMT mitigation; however, the interaction between the various strategies is complex. Generally, with each additional measure implemented, a vehicle trip and VMT reduction is achieved, but the incremental benefit of vehicle trip and VMT reduction may be less than the benefit that measure would have if it was considered on its own. Thus, the list provides the maximum reductions expected and the effect of TDM measures should not be considered to be purely additive.

publishing, and printing, along with office and R&D uses. Warehousing, distribution, manufacturing, retail services, personal services, and grocery and hotel uses are also permitted under this designation. The BTP-H land use designation was created to encourage campus-like environments for offices, R&D facilities, and corporate headquarters.

The five off-site redesignation parcels are also subject to the City of South San Francisco's TDM ordinance, which would require implementation of a TDM program to reduce VMT. With implementation of a TDM program consistent with City requirements, the redevelopment of the five off-site redesignation parcels would reduce VMT below the City's thresholds of significance of 12.7 HBW VMT per employee. As such, impacts would be *less than significant*. No further evaluation is required.

Whole Project

By incorporating a TDM program consistent with City requirements, both the project and the off-site redesignation parcels would reduce VMT below the City's threshold of significance of 12.7 HBW VMT per employee. In addition, the off-site redesignation parcels would be subject to a TDM program to reduce VMT, resulting in no impact. Therefore, the whole project's VMT impact would be *less than significant*. No mitigation is required.

Impact TRANS-3: The project would substantially increase hazards due to a geometric design feature or incompatible uses. (*Significant and Unavoidable*)

Project

The project would increase vehicle trips at several streets and freeway ramps with unsignalized intersections adjacent to the project site. The following sections analyze the effects project-generated trips on these streets and freeway ramps, as well as site access and circulation.

U.S. 101 Southbound Off-ramp/Produce Avenue Intersection

The project would increase vehicle trips along southbound Produce Avenue and the southbound U.S. 101 Produce Avenue off-ramp, which is presently a side-street stop-controlled off-ramp. The project would contribute a net increase of approximately 170 vehicle trips in the AM peak hour and 30 vehicle trips in the PM peak hour to the westbound left-turn movement from U.S. 101 to Produce Avenue. The addition of vehicle trips in a side-street stop-controlled condition is expected to increase 95th percentile vehicle queues to spill back onto the U.S. 101 off-ramp, which could present a hazardous condition (southbound vehicles on Produce Avenue do not have a stop sign, so vehicles turning left onto Produce Avenue would have to wait for gaps to turn left, and these queues are likely to block right-turning vehicles as well). In addition, the intersection meets AM and PM peakhour traffic signal warrants. Queueing conflicts at this intersection would pose a potentially significant impact.

The South San Francisco General Plan EIR (Impact TRANS-4) determined that implementation of the General Plan is likely to increase vehicle trips on City freeway ramps, which could exacerbate vehicle queues on ramps already in excess of their storage capacity. The project would result in a significant impact by exacerbating freeway ramp queueing and potential for conflicts at this intersection.

The project shall fund adjacent improvements identified in the General Plan, Lindenville Specific Plan, and Active South City Plan via **Mitigation Measure TRANS-1** (or reimburse the City or another developer if these improvements have already been implemented as mentioned in

Mitigation Measure TRANS-1). This includes the signalization of the U.S. 101 Off-ramp/Produce Avenue intersection consistent with the conditions of approval for the Terminal 101 project. Implementation of a traffic signal and associated lane reconfigurations would reduce vehicle queues while alleviating potential conflicts at the intersection. The project would be responsible for implementing the traffic signal in collaboration with the City of South San Francisco and Caltrans.

With the implementation of this improvement measure, 95th percentile vehicle queues would not spill over onto the freeway mainline. The project would be responsible for implementing the traffic signal in collaboration with the City of South San Francisco and Caltrans.

U.S. 101 Southbound Off-ramp/Terminal Court/Produce Avenue Intersection

The project would increase vehicle trips entering and exiting Terminal Court at Produce Avenue, which is presently a side-street stop-controlled intersection. The project would contribute approximately 730 vehicle trips in the AM peak hour and 700 vehicle trips in the PM peak hour to Terminal Court. The intersection meets the PM peak-hour signal warrant with the project. The substantial increase in vehicle trips exiting Terminal Court during the PM peak hour would create a hazardous condition due to the lack of signal control and high-speed vehicle travel southbound on Produce Avenue onto U.S. 101. Pedestrians and bicyclists crossing Terminal Court may also encounter conflicts with vehicles. The project would therefore result in a significant impact.

The project shall fund adjacent improvements identified in the General Plan, Lindenville Specific Plan, and Active South City Plan via **Mitigation Measure TRANS-1** (or reimburse the City or another developer if these improvements have already been implemented as mentioned in Mitigation Measure TRANS-1). This includes the addition of a traffic signal that would address the intersection's traffic control needs. The project would be responsible for implementing the traffic signal in collaboration with the City of South San Francisco and Caltrans.

San Mateo Avenue/Shaw Road/Tanforan Avenue intersection

The project would increase vehicle trips entering and exiting via Shaw Road, which is presently sidestreet stop-controlled at San Mateo Avenue. The project would contribute approximately 360 vehicle trips in the AM peak hour and 400 vehicle trips in the PM peak hour to Shaw Road movements. The intersection meets the PM peak-hour signal warrant with the project. The increase in vehicle trips exiting Terminal Court during the PM peak hour would create a hazardous condition due to the lack of signal control. The project would therefore result in a significant impact.

The project shall fund the addition of a traffic signal that would address the intersection's traffic control needs via **Mitigation Measure TRANS-1** (or reimburse the City or another developer if these improvements have already been implemented as mentioned in Mitigation Measure TRANS-1). The project would be responsible for implementing the traffic signal in collaboration with the City of South San Francisco and City of San Bruno.

Site Circulation

The project's site plan is not expected to pose any on-site design hazards or incompatible land uses. The project's internal streets, bicycle facilities, and pedestrian facilities would be designed consistent with applicable design standards and do not appear to pose potential conflicts. The project realigns Terminal Court to remove the existing cul-de-sac, allowing the street to function as an extension of the project's driveway. This realignment will improve operations and queueing capacity entering and exiting the project site.

In reviewing the project's preliminary site plan, the City identified potential conflicts associated with the proximity of the Infinite 131 driveways in relation to Infinite 101 driveways. In response, the project's site plan was amended to clarify circulation and access controls along Terminal Court. Access to Infinite 101 and Infinite 131 would occur via two driveways about 200 to 300 feet from the Terminal Court/Produce Avenue intersection, while the third driveway adjacent to the Terminal Court/Produce Avenue intersection would be restricted for service vehicles only to limit potential conflicts. With these updates, the project's site plan would not present any design hazards.

Impact Summary

Implementation of new traffic signals along Produce Avenue and San Mateo Avenue would reduce the potential for conflicts and queueing at affected intersections. However, part of this right-of-way is under the jurisdiction of Caltrans and the jurisdiction of the City of San Bruno, and neither jurisdiction has a mechanism for funding this mitigation. Therefore, the impact due to design hazards would be *significant and unavoidable* because the City of South San Francisco cannot ensure full implementation of mitigation.

Off-Site Redesignation Parcels

The proposed project would require amendments to the General Plan and Specific Plan and an associated zone change from MIH to BTP-H for the off-site redesignation parcels. The purpose of the off-site redesignation is to ensure that future development is similar to and consistent with the development proposed as part of the project. The MIH designation currently allows for development of a wide range of warehousing, manufacturing, processing, service commercial, and storage and distribution uses. The redesignation would allow for high-density corporate headquarters, R&D facilities, and office uses. More specifically, the General Plan and Specific Plan describe the permitted uses for BTP-H as incubator research, prototype manufacturing, testing, repairing, packaging, publishing, and printing, along with office and R&D uses. Warehousing, distribution, manufacturing, retail services, personal services, and grocery and hotel uses are also permitted under this designation. The BTP-H land use designation was created to encourage campus-like environments for offices, R&D facilities, and corporate headquarters.

The five off-site redesignation parcels are also located along the Produce Avenue corridor and share similarly constrained access and circulation conditions due to the lack of traffic signals at the U.S. 101 southbound off-ramp/Produce Avenue intersection and the U.S. 101 southbound off-ramp/Terminal Court/Produce Avenue intersection. Implementation of new traffic signals at these intersections would reduce the potential for conflicts and queueing. However, part of this right-of-way is under the jurisdiction of Caltrans and the jurisdiction of the City of San Bruno, and neither jurisdiction has a mechanism for funding this mitigation. Therefore, the impact to design hazards would be *significant and unavoidable*.

Whole Project

The whole project's implementation of new traffic signals along Produce Avenue and San Mateo Avenue through Mitigation Measure TRANS-1 would reduce the potential for conflicts and queueing at affected intersections. However, part of this right-of-way is under the jurisdiction of Caltrans and the jurisdiction of the City of San Bruno, and neither jurisdiction has a mechanism for funding this mitigation. Therefore, the impact due to design hazards would be significant and unavoidable with mitigation because the City of South San Francisco cannot ensure full implementation of mitigation. Both the project and off-site redesignation parcels would pose a *significant and unavoidable impact with mitigation*.

Impact TRANS-4: The project would not result in inadequate emergency access. (*Less than Significant*)

Project

The project would not include features that would alter emergency vehicle access routes or roadway facilities; fire and police vehicles would continue to have access to all facilities around the entire City. Emergency vehicles would have full access to the project site from all driveways connecting to adjacent streets; each driveway would be equipped to handle all types of emergency vehicles. Therefore, the project would result in adequate emergency access. As such, the project would not result in inadequate emergency vehicle access, and the project's impacts to emergency access would be *less than significant*. No mitigation is required.

Off-Site Redesignation Parcels

The proposed project would require amendments to the General Plan and Specific Plan and an associated zone change from MIH to BTP-H for the off-site redesignation parcels. The purpose of the off-site redesignation is to ensure that future development is similar to and consistent with the development proposed as part of the project. The MIH designation currently allows for development of a wide range of warehousing, manufacturing, processing, service commercial, and storage and distribution uses. The redesignation would allow for high-density corporate headquarters, R&D facilities, and office uses. More specifically, the General Plan and Specific Plan describe the permitted uses for BTP-H as incubator research, prototype manufacturing, testing, repairing, packaging, publishing, and printing, along with office and R&D uses. Warehousing, distribution, manufacturing, retail services, personal services, and grocery and hotel uses are also permitted under this designation. The BTP-H land use designation was created to encourage campus-like environments for offices, R&D facilities, and corporate headquarters.

The proposed project does not include the construction of any new uses on the off-site redesignation parcels; however, city code would require future development to provide adequate emergency vehicle access and not preclude emergency vehicle circulation. Therefore, the off-site redesignation parcels would result in adequate emergency access. As such, impacts would be *less than significant*. No further evaluation is required.

Whole Project

The project and future redevelopment of the off-site redesignation parcels would not include features that would alter emergency vehicle access routes or roadway facilities; fire and police vehicles would continue to have access to all facilities around the entire city. Emergency vehicles would have full access to the project site from all driveways connecting to adjacent streets; each driveway would be equipped to handle all types of emergency vehicles. Therefore, the whole project would result in adequate emergency access. Impacts would be *less than significant* for the whole project and off-site redesignation parcels.

4.6.4.4 Cumulative Impacts

Cumulative plus-project conditions represent the 2040 future baseline condition with the addition of the project at buildout. Therefore, the impact evaluation above considered cumulative plus project conditions; as a result, the analysis above considers cumulative impacts. Cumulative impacts are restated here for ease of reference.

Impact TRANS-1: The project, inclusive of the off-site redesignation parcels, together with the cumulative projects identified, would conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. (*Significant and Unavoidable with Mitigation*)

As discussed under **Impact TRANS-1**, the project would have a significant and unavoidable impact. Although the project's site plan and TDM plan exhibit features that are consistent with goals, policies, and actions identified in the General Plan and Lindenville Specific Plan, the project overall remains inconsistent because it would add 1.7 million square feet of R&D uses and amenities to the Produce Avenue corridor, an area where additional density was not identified or studied in the Lindenville Specific Plan or General Plan. The project's lack of consistency with the General Plan and Lindenville Specific Plan would constitute a significant impact. Although mitigation exists that could reduce the impact to a less-than-significant level, two of these intersections are under the jurisdiction of Caltrans and one is under the jurisdiction of the City of San Bruno, and neither jurisdiction has a mechanism for funding this mitigation. Therefore, cumulative impacts would be *significant and unavoidable*, and the project's contribution would be cumulatively considerable.

Impact TRANS-2: The project, inclusive of the off-site redesignation parcels, together with the cumulative projects identified, would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). (*Less than Significant*)

As discussed under **Impact TRANS-2**, the project, with implementation of the TDM plan, meets the criteria set by OPR and CEQA statutes to establish the presumption of a less-than-significant impact on VMT. Thus, the project's VMT impact is also considered to be *less than cumulatively considerable*. No mitigation is required.

Impact TRANS-3: The project, inclusive of the off-site redesignation parcels, together with the cumulative projects identified, would substantially increase hazards due to a geometric design feature or incompatible uses. (*Significant and Unavoidable with Mitigation*)

As discussed under **Impact TRANS -3**, the project would increase vehicle trips along Produce Avenue at the intersections of U.S. 101 off-ramp/Produce Avenue and U.S. 101 on-ramp/Produce Avenue/Terminal Court. The addition of vehicle trips along the U.S. 101 southbound off-ramp would cause vehicle queues to spill over onto U.S. 101, while both intersections would meet peak-hour signal warrants. The South San Francisco General Plan EIR determined that implementation of the General Plan is likely to increase vehicle trips on city freeway ramps, which could exacerbate vehicle queues on ramps already in excess of their storage capacity. The project would exacerbate this impact.

Although mitigation exists that could reduce the impact to a less-than-significant level, part of the corridor is under the jurisdiction of Caltrans and the City of San Bruno, and neither jurisdiction has a mechanism for funding this mitigation. Therefore, cumulative impacts would be *significant and unavoidable*, and the project's contribution would be cumulatively considerable.

Impact TRANS-4: The project, inclusive of the off-site redesignation parcels, together with the cumulative projects identified would not result in inadequate emergency access. (*Less than Significant*)

As discussed under **Impact TRANS -4**, the project would provide adequate emergency vehicle access consistent with applicable design standards. Both driveways would accommodate all types of emergency vehicles accessing the project site via Terminal Court and Shaw Road. The project would not be expected to introduce or exacerbate conflicts for emergency vehicles. Therefore, the project would not result in inadequate emergency vehicle access, and the project's impacts to emergency access would be **less-than-significant**, and the project's impact would be less than cumulatively considerable. No mitigation is required.

5.1 Introduction

This chapter evaluates alternatives to the proposed project and examines the potential environmental impacts associated with each alternative. By comparing the alternatives to the proposed project, the relative environmental advantages and disadvantages of each may be analyzed and weighed. California Environmental Quality Act (CEQA) Guidelines Section 15126.6(a) states that an environmental impact report (EIR) must describe and evaluate a reasonable range of alternatives to a proposed project that would feasibly attain most of the proposed project's basic objectives identified in Chapter 3, *Project Description*, but would avoid or substantially lessen any identified significant adverse environmental impacts of the proposed project identified in Chapter 4, *Environmental Setting, Impacts, and Mitigation*.

Seven alternatives to the project were considered, including the required No Project Alternative. To determine which of the alternatives should be evaluated in this EIR, each alternative was screened to determine whether it would meet most of the objectives of the project, reduce any of the significant impacts identified in the EIR, and be potentially feasible.

This chapter provides a description of the four alternatives considered but rejected, followed by an analysis of the No Project Alternative (Alternative A) and two additional alternatives selected for evaluation: the Business Technology Park-Medium (BTP-M) Alternative (Alternative B) and the Increased Office Space Alternative (Alternative C). This chapter concludes with a matrix comparing the project to all three alternatives analyzed in this chapter and a discussion of the "environmentally superior" alternative.

5.1.1 Requirements for Alternatives Analysis

The range of alternatives required in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those potentially feasible alternatives necessary to foster informed public participation and an informed and reasoned choice by the decision-making body (per CEQA Guidelines Section 15126.6[f]). Therefore, an EIR does not need to address every conceivable alternative or consider infeasible alternatives. CEQA Guidelines Section 15364 generally defines "feasible" to mean the ability to be accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, technological, and legal factors. CEQA Guidelines Section 15126.6(f)(1) lists the following factors that may be considered when determining the feasibility of alternatives to be evaluated:

- Site suitability
- Economic viability
- Availability of infrastructure
- General plan consistency
- Other plans or regulatory limitations
- Jurisdictional boundaries

An EIR does not need to consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative (per CEQA Guidelines Section 15126.6[f][3]).

5.1.2 Project Objectives

Pursuant to CEQA Guidelines Section 15124(b), the EIR must include a statement of objectives, including the underlying purpose of the project. Refer to Section 3.4 in Chapter 3, *Project Description*, of this EIR for a list of project objectives that have been identified by the project applicant.

5.1.3 Significant and Unavoidable Impacts

Based on the analysis provided in Chapter 4 of this draft EIR, the project would have the significant and unavoidable impacts discussed below.

Air Quality

Impact AQ-2: The project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is classified as nonattainment under an applicable federal or state ambient air quality standard. (*Significant and Unavoidable*)

Construction associated with the proposed project would result in PM_{2.5} concentrations that could exceed the BAAQMD threshold. However, it was determined that emissions would be below the BAAQMD threshold for all pollutant emissions for all years. Best management practices during construction activities would also be implemented to minimize impacts in accordance with BAAQMD guidelines as well as the City of South San Francisco's (City's) standard conditions of approval.

During project operation, the proposed project would result in area-source emissions—specifically, ROG emissions—from the use of consumer products such as cleaning products within the buildings, as well as landscaping equipment, and off-gassing from architectural coatings (e.g., paint); other emissions would result from mobile, stationary, and laboratory sources. It was determined that unmitigated daily ROG emissions from operation of the proposed project would exceed BAAQMD's threshold, but no other pollutants would exceed the threshold. Implementation of **Mitigation Measures AQ-1**, **AQ-2**, and **AQ-3**, which would require low-VOC coatings during project operation, low-VOC cleaning supplies, and use of zero-emission landscape equipment would help reduce emissions, but impacts would still remain *significant and unavoidable*.

Off-site redesignations parcels: Although the exact type and magnitude of impacts from the rezoning, relative to the existing zoning, are unknown at this time, it is conservatively assumed that the off-site redesignation could expose sensitive receptors to substantial ROG concentrations. This is due to the potential development of industrial uses at the off-site redesignation parcels, as these parcels are currently zoned for industrial uses. Therefore, the off-site redesignation parcels portion of this proposed project could expose sensitive receptors to substantial pollutant concentrations. This impact would be *significant and unavoidable*. Mitigation measures similar to those required for the proposed project may reduce emissions and thus pollutant concentrations, but the impact could remain significant.

Impact AQ-3: The project would expose sensitive receptors to substantial pollutant concentrations. (*Significant and Unavoidable*)

During construction activities, sensitive worker receptors would be exposed to substantial concentrations of $PM_{2.5}$ from off-road equipment and heavy-duty trucks. To reduce $PM_{2.5}$ concentrations during construction, the project sponsor would need to implement **Mitigation**

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Measure AQ-4, which would require construction mitigation measures to reduce dust emissions. In addition, operational sources of PM_{2.5} exhaust and fugitive dust emissions would be generated by emergency generators and employees' vehicles. Without implementation of dust reduction measures, the maximum PM_{2.5} concentration would result from construction activities. However, with the reduction measures implemented, construction PM_{2.5} concentrations would be reduced, and the annual PM_{2.5} concentration during operations would become the maximum value, as shown in Table 4.2-9. The primary reason for the PM_{2.5} exceedance is the proximity of worker receptors to sources of PM_{2.5} from project operations (e.g., on-road vehicle trips to and from the site). The worker receptors who would be exposed to the PM_{2.5} exceedance would be those at the adjacent site east of the Infinite 101 site. The distance between workers at the adjacent site and operations at the project site would be minimal and would not allow pollutant concentrations to disperse. As such, the exceedance of the threshold would be largely due to the proximity of the receptors. No additional measures have been identified to avoid this exceedance. This impact would be *significant and unavoidable*, even with implementation of **Mitigation Measure AQ-4**.

Off-site Redesignation Parcels: For the proposed project, cancer risks would be below the applicable threshold; however, PM_{2.5} concentrations would exceed the threshold due from off-road equipment and heavy-duty trucks that generate dust. If the off-site parcels are redesignated to allow for R&D uses, the relatively higher vehicle volumes associated with R&D facilities compared to the industrial uses allowed under the existing zoning could result in PM_{2.5} concentration exceedances, resulting in a significant cancer risk. Although no construction or development is currently proposed at the off-site redesignation parcels, potential impacts were analyzed based on the existing zoning. It was determined that the off-site redesignation parcels could expose sensitive receptors to substantial pollutant concentrations if industrial uses are developed at these sites. As such, this impact would be *significant and unavoidable*. Mitigation measures similar to those required for the proposed project may reduce emissions and thus pollutant concentrations, but the impact could remain significant.

Impact C-AQ-2: The project, inclusive of the off-site redesignation parcels, together with the cumulative projects identified, would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. (*Significant and Unavoidable*)

As discussed under Impact AQ-2, the proposed project would generate ROG in excess of BAAQMD's construction and operational thresholds. Implementation of **Mitigation Measures AQ-1, AQ-2**, and **AQ-3**, which would require low-VOC coatings during project operation, low-VOC cleaning supplies, and use of zero-emission landscape equipment would help reduce emissions. Accordingly, the proposed project's contribution to a cumulative criteria pollutant emissions impact would be *significant and unavoidable*.

Impact C-AQ-3: The project, inclusive of the off-site redesignation parcels, together with the cumulative projects identified, would expose sensitive receptors to substantial pollutant concentrations. (*Significant and Unavoidable*)

As discussed previously, sensitive worker receptors would be exposed to substantial concentrations of PM_{2.5} from off-road equipment and heavy-duty trucks. To reduce PM_{2.5} concentrations during construction, the project sponsor would need to implement **Mitigation Measure AQ-4**. However, PM_{2.5} levels would continue to exceed threshold levels. Therefore, the proposed project's contribution to cumulative impacts during construction would be *significant and unavoidable*.

During operation, existing stationary, roadway, and railway sources in combination with the proposed project would not exceed BAAQMD cumulative thresholds for cancer risk or the hazard index. However, annual $PM_{2.5}$ concentrations would exceed BAAQMD's cumulative threshold of 0.8 µg/m³ for both types of receptors. Accordingly, worker and day-care sensitive receptors would be exposed to substantial cumulative concentrations of $PM_{2.5}$.

The primary reason for the exceedances is the high level of ambient PM_{2.5} emissions generated by two facilities within 1,000 feet of the project site, the Granite Rock Company at 1321 Lowrie Avenue and Central Concrete Supply at 1305 San Mateo Avenue, even though the maximally affected receptors would be at least 860 feet from the two facilities. The contribution from the project would be substantially less than the contribution from the existing stationary sources; however, as discussed for project-level impacts, the contribution of the project alone would exceed BAAQMD's project-level threshold. Therefore, the health risks associated with toxic air contaminants (TACs) emitted by the proposed project in combination with health risks associated with existing TAC sources would result in a cumulatively considerable local health risk at worker and day-care receptors near the project site. Therefore, the proposed project's contribution to cumulative impacts during operation would be *significant and unavoidable*, and the project's contribution would be cumulatively considerable.

Cultural Resources

Impact CULT-1: The project would cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5. (*Significant and Unavoidable*)

The proposed project would demolish the Golden Gate Produce Terminal facility, surface parking, and limited landscaping to construct the proposed project. The Golden Gate Produce Terminal is recommended as eligible for listing in the CRHR and NRHP and is therefore considered a historical resource for CEQA compliance. Therefore, the demolition of Golden Gate Produce Terminal within the project site would result in a substantial adverse change to the historical resource. Implementation of **Mitigation Measure CULT-1** and **Mitigation Measure CULT-2** would reduce impacts on these historic features; however, impacts would remain *significant and unavoidable*.

Transportation and Circulation

Impact TRANS-1: The project would conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicyclist, and pedestrian facilities. (*Significant and Unavoidable*)

The project includes various design features that are consistent with goals, policies, and actions identified in the General Plan and Lindenville Specific Plan, such as General Plan Goals MOB-1, MOB-2, MOB-4, and MOB-5, Lindenville Specific Plan goals MOB-1, MOB-2, and MOB-3, as well as the Active South City Plan, and the TDM ordinance. Although the project's site plan and TDM plan exhibit features that are consistent with goals, policies, and actions identified in the General Plan and Lindenville Specific Plan, the project overall remains inconsistent as it would add 1.7 million square feet (sf) of land use growth beyond what the City had planned for and analyzed along the Produce Avenue corridor, Lindenville, and citywide. This intensification of uses would occur in a location with insufficient access and circulation facilities, limited transportation options, and challenging connectivity to the regional transportation network, which would result in a significant impact due to conflicts with the goals and policies of the General Plan and Lindenville Specific Plan.

With implementation of **Mitigation Measure TRANS-1**, the proposed project would advance off-site improvements consistent with Actions MOB-1.2.1, MOB-2.1.1, 2.1.3, 2.1.4, 3.2.1, and 3.2.2 to adequately address its effects on the transportation network. However, this mitigation is not applicable to the right-of-way changes within the jurisdiction of Caltrans and the City of San Bruno that would be required as part of the proposed project. Therefore, even with the implementation of **Mitigation Measure TRANS-1**, impacts would remain *significant and unavoidable* because the City of South San Francisco cannot ensure its implementation.

Impact TRANS-3: The project would increase hazards due to a geometric design feature or incompatible uses. (*Significant and Unavoidable*)

The project would increase vehicle trips along southbound Produce Avenue and the southbound U.S. -101 Produce Avenue off-ramp, resulting in a net increase of approximately 170 vehicle trips in the AM peak hour and 30 vehicle trips in the PM peak hour. The South San Francisco General Plan EIR (Impact TRANS-4) determined that implementation of the General Plan is likely to increase vehicle trips on City freeway ramps, which could exacerbate vehicle queues on ramps already in excess of their storage capacity. As such, the proposed project would result in a significant impact by exacerbating freeway ramp queueing and potential for conflicts at this intersection. To reduce impacts, the proposed project shall fund adjacent improvements identified in the General Plan, Lindenville Specific Plan, and Active South City Plan via Mitigation Measure TRANS-1. In addition, the proposed project would increase vehicle trips entering and exiting Terminal Court at Produce Avenue, resulting in a net increase of approximately 730 vehicle trips in the AM peak hour and 700 vehicle trips in the PM peak hour to Terminal Court. The substantial increase in vehicle trips exiting Terminal Court during the PM peak hour would create a hazardous condition due to high-speeds and signal control. In addition, pedestrians and bicyclists crossing Terminal Court may also encounter conflicts with vehicles. As discussed above, to reduce impacts, the proposed project would implement Mitigation Measure TRANS-1.

The project would also increase vehicle trips entering and exiting via Shaw Road, resulting in a net increase of approximately 360 vehicle trips in the AM peak hour and 400 vehicle trips in the PM peak hour. The increase in vehicle trips exiting Terminal Court during the PM peak hour would create a hazardous condition due to the lack of signal control. As discussed above, to reduce impacts, the proposed project would implement **Mitigation Measure TRANS-1**.

Overall, the project's implementation of new traffic signals along Produce Avenue and San Mateo Avenue via **Mitigation Measure TRANS-1** would reduce the potential for conflicts and queueing at affected intersections. However, two of the intersections on Produce Avenue are under the jurisdiction of Caltrans and one is under the jurisdiction of the City of San Bruno, and neither jurisdiction has a mechanism for funding this mitigation. Therefore, even with the implementation of **Mitigation Measure TRANS-1**, impacts would remain *significant and unavoidable* because the City of South San Francisco cannot ensure its implementation.

Impact C-TRANS-1: The project inclusive of the off-site redesignation parcels, together with the cumulative projects identified, would conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. (*Significant and Unavoidable*)

As discussed under Impact TRANS-1, the project would have a significant and unavoidable impact. Although the project's site plan and TDM plan exhibit features that are consistent with goals, policies, and actions identified in the General Plan and Lindenville Specific Plan, the project remains inconsistent overall as it would exceed the level of multimodal travel that the City had planned for the Produce Avenue corridor, Lindenville, and citywide. The project's lack of consistency with the General Plan and Lindenville Specific Plan would constitute a significant impact. Therefore, cumulative impacts would be *significant and unavoidable*, and the project's contribution would be cumulatively considerable.

Impact C-TRANS-3: The project, inclusive of the off-site redesignation parcels, together with the cumulative projects identified, would substantially increase hazards due to a geometric design feature or incompatible uses. (*Significant and Unavoidable*)

As discussed under Impact TRANS -3, the project would increase vehicle trips along Produce Avenue at the intersections of U.S. 101 off_ramp/Produce Avenue and U.S. 101 on_ramp/Produce Avenue/Terminal Court. The addition of vehicle trips along the U.S. 101 southbound off-ramp would cause vehicle queues to spill over onto U.S. 101; both intersections would meet peak-hour signal warrants. The South San Francisco General Plan EIR determined that implementation of the General Plan is likely to increase vehicle trips on city freeway ramps, which could exacerbate vehicle queues on ramps already in excess of their storage capacity. The project would exacerbate this impact. Therefore, cumulative impacts would be *significant and unavoidable*, and the project's contribution would be cumulatively considerable.

5.2 Significant Impacts that Can Be Mitigated to Lessthan-Significant Levels

As stated above, a focus of the discussion of alternatives is to determine whether there are potentially feasible alternatives that could avoid or substantially lessen the significant impacts of the proposed project. This can include significant impacts for which mitigation measures have been identified to reduce the severity of project impacts to less than significant.

As discussed throughout the Initial Study (Appendix B of this EIR), Chapter 4, *Environmental Setting, Impacts, and Mitigation,* of this EIR, and summarized in Table 2-1, *Summary of Impacts and Mitigation,* in Chapter 2, *Executive Summary,* the project would result in potentially significant impacts related to the following resources, which can be reduced to a less-than-significant level with mitigation:

- Biological Resources (special-status species and wildlife movement)
- Cultural Resources (archaeological resources)
- Geology and Soils (paleontological resources)
- Noise (ground-borne vibration)

5.3 Alternatives Considered but Rejected

Section 15126.6(c) of the CEQA Guidelines provides that an EIR should "identify any alternatives that were considered by the lead agency but rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination." The screening process for identifying the viable EIR alternatives included consideration of the following criteria:

- Ability to meet the project objectives
- Potential ability to substantially lessen or avoid environmental effects associated with the proposed project
- Potential feasibility, taking into account economic, environmental, social, technological, and legal factors

The discussion below describes the alternatives that were considered during preparation and scoping of this EIR, and gives the rationale for eliminating these alternatives from detailed consideration, including because they would not fulfill most of the basic objectives of the project, would not avoid or substantially lessen significant environmental impacts, and/or would be infeasible.

5.3.1 Reconfigured Project Alternative

A Reconfigured Project Alternative was considered to see if the proposed new R&D uses and potential pollutant sources (e.g., operational PM_{2.5} generation, and construction activity, generally) by concentrating new development farther from the sensitive receptors (e.g., future workers and day-care center users) within 1,000 feet of the project site. This alternative was considered for its potential to reduce or avoid the project's construction and operational health risks on sensitive receptors (Impact AQ-2 and AQ-3). The Reconfigured Alternative would also reduce and potentially avoid the project's contribution to significant cumulative impacts with respect to those topics (Impact C-AQ-2 and C-AQ-3).

Like the proposed project, under a Reconfigured Project Alternative, the future worker receptors who would be exposed to the PM_{2.5} impacts would be those at the adjacent Infinite 101 site east of the project site. Similarly, this impact would be primarily driven by the proximity of worker receptors to sources of PM_{2.5} from project operations, which would include on-road vehicle trips to and from the site. Given that the sensitive receptors are immediately adjacent to the eastern boundary of the project site and the distance between workers at the adjacent site and operations of the proposed project would be minimal, there is no feasible setback that would allow pollutant concentrations to disperse. As such, air quality impacts under a Reconfigured Project Alternative would still be significant largely due to the proximity of the receptors. Furthermore, even if such a setback were possible to reduce impacts related to off-site sensitive receptors, maintaining any such length of setback would likely greatly reduce the portion of the project site available for project buildings to be developed. Therefore, there is no feasible setback that would allow for the proposed uses to be developed at such a distance without substantially reducing the project's size to the extent where the project objectives are no longer met. Therefore, this alternative was rejected based on its infeasibility and inability to meet the basic project objectives, and reduce the proposed project's significant impacts.

5.3.2 Increased Lab Space Alternative

Generally, R&D uses in the city include a mix of lab and office spaces. An alternative that would include more lab space than what was assumed for the project (80 percent compared to the project's 50 percent) was considered, based on its potential to reduce the project's significant transportation impacts related to conflicts with a transportation program, plan, ordinance, or policy (Impact TRANS-1) and hazards due to a geometric design or incompatible uses (Impact TRANS-3), because lab uses typically generate fewer vehicle trips than office uses on a per-square-foot basis. The Increased Lab Space Alternative would develop the project site with the same total building area that would be developed under the proposed project, approximately 1,704,050 sf. The site plan for the Increased Lab Space Alternative would be similar to that of the proposed project, and all other proposed uses (e.g., the conference space, fitness center, restaurant, and day care) would remain the same.

Although lab spaces typically generate fewer vehicle trips than office uses, the Increased Lab Space Alternative would still increase vehicle trips at several streets and freeway ramps with unsignalized intersections adjacent to the project site, including the U.S. 101 southbound off-ramp/Produce Avenue intersection, U.S. 101 southbound off-ramp/Terminal Court/ Produce Avenue intersection, and San Mateo Avenue/Shaw Road/Tanforan Avenue intersection, compared to existing conditions.¹ Increases in the number of vehicle trips at these intersections would create hazardous conditions from the lack of signal control, along with worsened freeway ramp queuing and potential vehicle conflicts with pedestrians and bicyclists at crossings, resulting in a significant and unavoidable impact, albeit a reduced impact compared to the proposed project. Furthermore, this alternative would have a greater potential to result in impacts on sensitive receptors from operational laboratory-generated TACs. Thus, although some significant impacts could be reduced, other impacts would be increased in severity. Furthermore, the market feasibility of this alternative is uncertain. Ultimately, this alternative was rejected because it would not substantially reduce or eliminate the project's significant transportation impacts (Impact TRANS-1 and TRANS-3) and air quality impacts (Impact AQ-2 and AQ-3) for the proposed lab and office uses. In addition, impacts related to historic resources (Impact CULT-1) and archaeological resources (Impact CULT-2) would not be any different from those of the proposed project and would remain significant and unavoidable and less than significant with mitigation, respectively.

5.3.3 Alternative Project Location

An alternative that would construct the proposed project at a different location in the City was considered based on its potential to reduce or avoid the project's significant impacts related to criteria pollutants (Impact AQ-2), health risks at sensitive receptors (Impact AQ-3), historic resources (Impact CULT-1), conflicts with a transportation program, plan, ordinance, or policy (Impact TRANS-1), and hazards due to geometric design feature or incompatible uses (Impact TRANS-3). An alternative project location could also potentially reduce or avoid the project's contribution to significant cumulative impacts with respect to those topics (Impacts C-AQ-2, C-AQ-3, C-TRANS-1, and C-TRANS-3).

It is anticipated that an alternative that would construct the proposed project in another area of the city would not reduce the project's significant impacts related to air quality as it is likely that a similarly sized project with the same proposed R&D and amenity uses would be constructed. As such, the project constructed in an alternative location would likely result in the same operational ROG emissions and exposure of sensitive receptors to PM_{2.5} concentrations. In addition, this alternative would not reduce the project's significant transportation impacts because any new construction resulting in new project-generated jobs would likely attract employees throughout the Bay Area, which would generate substantially more vehicle trips, and increase vehicle trips on City freeway ramps, which would exacerbate vehicle queues on ramps already in excess of their storage resulting in potential for conflicts.

¹ Lab uses typically serve fewer employees than office uses, and vehicle trips and travel demand tend to correlate with employee populations. For example, based on a review of land use intensities conducted for the South San Francisco General Plan, lab uses typically serve one employee per 500 to 700 square feet, whereas the employee generation rate for office uses is one employee per 425 square feet.

Most of the significant impacts of the proposed project would most likely occur regardless of location, meaning that an off-site alternative would not necessarily reduce or avoid any identified or potential environmental impacts. In addition, alternative locations for the proposed project are considered infeasible because the project sponsor owns the parcel that makes up the project site. An alternate location not owned by the project sponsor where R&D uses would be permitted would therefore require additional land acquisition, which is not included in the project sponsor's plans or objectives. Furthermore, although it is possible that the proposed project could be constructed on parcels of similar size in proximity to the project site in surrounding jurisdictions (e.g., San Bruno), developing outside of South San Francisco would not meet the objective of generating property tax and development fees for the city, and providing a positive fiscal impact on the local economy through the creation of jobs. Therefore, because of the aforementioned issues related to site suitability, economic viability, acquisition and control, and inconsistency with project objectives, consideration of an alternative site for the proposed project has been rejected.

5.3.4 Preservation Alternative

A Preservation Alternative was considered based on potential to reduce or avoid the project's significant impact related to historic resources (Impact CULT-1). As detailed under Impact CULT-1, Caltrans determined that the Golden Gate Produce Terminal was eligible for listing in the NRHP/CRHR under Criterion A/1 as a resource that is associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States for its association with the development of the South San Francisco Industrial Park and the produce industry in the San Francisco Bay Area. However, the possibility of preserving the Golden Gate Produce Terminal, either via relocation or retention, was considered but rejected as infeasible. Although retaining historic resources in their original location is always preferred treatment, relocation, retention, or even partial retention of existing buildings is often considered as an alternative to demolition. The relocation, retention, or partial retention of the existing Golden Gate Produce Terminal buildings would be technically challenging and expensive due to its size, construction methods, materials, and configuration. Furthermore, preservation of the Golden Gate Produce Terminal would not allow the proposed uses to be developed to such an extent where the project objectives are no longer met. Therefore, this alternative was rejected based on its infeasibility and inability to meet the basic project objectives.

5.4 Alternatives Selected for Further Review

In selecting alternatives for analysis in this chapter, the City considered: the project objectives and significant impacts identified above; the potential feasibility of alternatives based on factors in CEQA Guidelines Section 15126.6(f)(1); and whether the alternative would substantially reduce or eliminate environmental impacts of the projects, with a particular emphasis on significant and unavoidable impacts. Based on these considerations, and CEQA's requirement that No Project Alternative be evaluated, this chapter evaluates the following alternatives:

- Alternative A—No Project Alternative
- Alternative B—BTP-M Alternative
- Alternative C—Increased Office Space (80 Percent Office/20 Percent Lab) Alternative

Under Alternative A—No Project Alternative, there would be no change in existing land uses and conditions at the project site. Under Alternative B—BTP-M Alternative, the project would construct the same R&D campus as the proposed project; however, in accordance with the requirements of the BTP-M zoning designation, it would result in a floor area ratio (FAR) of 1.0 instead of 2.0, as allowed under the proposed Business Technology Park High (BTP-H) designation. All other features of the project would remain the same. Alternative C—Increased Office Space Alternative would construct the same building area as the proposed project (e.g., approximately 1,704,050 sf), but total buildout would be made up of approximately 80 percent office uses and no more than 20 percent lab uses (compared to approximately 50 percent lab uses under the proposed project).

Table 5-1 compares the main features of the proposed project to the three alternatives evaluated in this chapter, each of which is further described below. In order to assist with a comparison of the impacts of the project and the evaluated alternatives, **Table 5-4**, at the end of this chapter, indicates, for each significant impact, whether the impacts of the project alternatives would be equal to, less than, or more severe than those of the project.

Feature	Proposed Project	Alternative A— No Project Alternative	Alternative B— BTP-M Alternative	Alternative C— Increased Office Space (80 Percent Office/20 Percent Lab) Alternative
Total Building Area (sf)	1,704,050	Same as existing	768,440	1,704,050
Number of New Buildings	7	None (existing buildings to remain)	7	7
Maximum Building Height (ft)	114	Same as existing	57	114
Emergency Generators	24	Same as existing	17	17
Total Excavation volume (cy)	40,214	None	28,150	34,181
Maximum Depth of Excavation (ft)	5	None	16	30
Demolition, Grading, and Excavation Material (cy)	40,214	None	40,214	40,214
Imported Soil (cy)	70,000ª	None	70,000	70,000
Building Area to Be Demolished (sf)	126,750 sf warehouse and administrative uses; 116,572 sf open-air structures	None	126,750 sf warehouse and administrative uses; 116,572 sf open-air structures	126,750 sf warehouse and administrative uses; 116,572 sf open-air structures

Table 5-1. Comparison of Main Features of the Proposed Project to the Alternatives

Feature	Proposed Project	Alternative A— No Project Alternative	Alternative B— BTP-M Alternative	Alternative C— Increased Office Space (80 Percent Office/20 Percent Lab) Alternative
Vehicle Parking	2,976	Same as existing	1,433	3,843
Employees	3,787	Same as existing (475)	1,708	3,957

Notes:

a. The analysis of construction impacts on air quality, noise, and transportation, in Sections 4.2, *Air Quality*; 4.5, *Transportation and Circulation*; and 4.6, *Noise*, assumes the import of 170,000 cy of soil to provide a conservative estimate.

sf = square feet; cy = cubic yards

5.5 Alternative A – No Project Alternative

CEQA Guidelines Section 15126.6(e) requires evaluation of a "no project" alternative, stating "The purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project." CEQA Guidelines Section 15126.6(e)(2) requires that the no project alternative analysis "discuss the existing conditions...as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and policies and consistent with the available infrastructure and community services." As noted in CEQA Guidelines Section 15126.6, an EIR for "a development project on identifiable property" typically analyzes a no project alternative (i.e., "the circumstance under which the project does not proceed. Such a discussion would compare the environmental effects of the property remaining in its existing state against environmental effects that would occur if the project were approved. If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this 'no project' consequence should be discussed"). In this case, the City determined that a "no build" scenario is the most likely outcome of not approving the project because no predictable actions by others, such as proposal of another reasonably foreseeable project, have been identified that could result from disapproval of the project. CEQA Guidelines Section 15126.6(e)(3)(B) states that the lead agency is not required to speculate, or create and analyze a set of artificial assumptions about what would occur in the future, if it cannot reasonably be known.

5.5.1 Description

Under Alternative A—No Project Alternative, the project would not be implemented. No demolition of existing structures, i.e., warehouse buildings, administrative building, or open-air structures would occur. No new R&D or amenity buildings would be built, nor would any parking garages. Existing land uses would remain unchanged and in their current physical state. No new open space, curbs, or sidewalks would be constructed and there would be no improvements to pedestrian and bicyclist circulation and access. No new restaurant space, outdoor terraces, conference space, or day-care center would be constructed. Existing General Plan and Specific Plan land use designations and zoning districts would be maintained for the project site and off-site redesignation parcels. Alternative A would not preclude potential future development at the project site with a range of land uses that are permitted under existing land use policies at the Project Site. Permitted uses under the existing MIH land use designation and zoning allow for development of a wide range of

warehousing, manufacturing, processing, service commercial, and storage and distribution uses. As required under the MIH designation, truck docks, loading areas, and service areas must be located at the rear or interior side of buildings and must be screened so that they are not visible from surrounding public streets, including highways.

5.5.2 Ability to Meet Project Objectives

Under Alternative A, the physical environment of the project site would remain unchanged. Therefore, Alternative A would fail to meet all of the project objectives. Refer to **Table 5-5**, for an evaluation of the ability of this alternative to meet the objectives of the proposed project.

5.5.3 Impacts

The impact analysis below evaluates the potential environmental impacts of Alternative A and compares them to the impacts of the proposed project for each of the topics evaluated in Chapter 4, *Environmental Setting, Impacts, and Mitigation*, of this EIR. In accordance with CEQA Guidelines Section 15128, the preliminary analysis provided in the Initial Study (Appendix B) determined that the proposed project would have no impact or less-than-significant impacts in all topics of the following analysis areas: aesthetics; agricultural and forestry resources; energy; hazards and hazardous materials; hydrology and water quality; land use; mineral resources; population and housing; public services; recreation; tribal cultural resources; utilities and service systems; and wildfire. As such, these topics are not evaluated further in this alternatives analysis. This analysis includes project impacts that were found to be significant and unavoidable, and less than significant with mitigation. Cumulative impacts are discussed for the cumulative impacts that were found to be significant and unavoidable for the project.

5.5.3.1 Air Quality

Under Alternative A, there would be no demolition, grading, excavation, or construction activities on the project site, and no new operational sources of air pollutants would be introduced to the project site. The project site would remain in its current condition. The mitigation measures required for the project would not be required for this alternative. Therefore, Alternative A would avoid the project's significant and unavoidable project-level and cumulative air quality impacts. No new impact would occur relative to baseline conditions, and impacts would be less than those of the proposed project.

5.5.3.2 Biological Resources

Under Alternative A, there would be no demolition, grading, excavation, or construction activities on the project site. There would be no potential to affect special-status species, sensitive natural communities, wetlands, wildlife movement, or conflict with tree ordinances or habitat conservation plans. The project site would remain in its current condition. The mitigation measures required for the project would not be required for this alternative. No new impact would occur relative to baseline conditions, and impacts would be less than those of the proposed project.

5.5.3.3 Cultural Resources

Under Alternative A, there would be no demolition, grading, excavation, or construction activities on the project site. There would be no potential to affect historic resources or encounter previously unknown archaeological resources or human remains. The project site would remain in its current

condition. The mitigation measures required for the project would not be required for this alternative. No new impact would occur relative to baseline conditions, and impacts would be less than those of the proposed project.

5.5.3.4 Geology and Soils

Under Alternative A, there would be no demolition, grading, excavation, or construction activities on the project site. There would be no potential for impacts due to surface faulting and secondary ground failure; strong seismic ground shaking; soil erosion; expansive soil; soils that would be incapable of supporting septic tanks or alternative wastewater disposal systems; seismically related ground failure due to liquefaction, lateral spreading, subsidence, or landslides; or paleontological resources. The project site would remain in its current condition. The mitigation measures required for the project would not be required for this alternative. No new impact would occur relative to baseline conditions, and impacts would be less than those of the proposed project.

5.5.3.5 Greenhouse Gas Emissions

Under Alternative A, there would be no demolition, grading, excavation, or construction activities on the project site, and no new operational sources of GHG emissions would be introduced to the project site. The project site would remain in its current condition. The mitigation measures required for the project would not be required for this alternative. No new impact would occur relative to baseline conditions, and impacts would be less than those of the proposed project, which would be less than significant with mitigation.

5.5.3.6 Noise and Vibration

Under Alternative A, there would be no demolition, grading, excavation, or construction activities on the project site, and no new sources of noise would be introduced to the project site during construction or operation. The project site would remain in its current condition. The mitigation measure required for the project would not be required for this alternative. Therefore, Alternative A would avoid the project's less-than-significant impacts related to noise and the less-than-significant impact with mitigation related to vibration. No new impact would occur relative to baseline conditions, and impacts would be less than those of the proposed project.

5.5.3.7 Transportation and Circulation

Under Alternative A, there would be no demolition, grading, excavation, or construction activities on the project site, and no new traffic sources would be introduced to the project site during construction or operation. The project site would remain in its current condition. The mitigation measures required for the project would not be required for this alternative. Therefore, Alternative A would avoid the project's significant and unavoidable project-level and cumulative impacts related to transportation and circulation. No new impact would occur relative to baseline conditions, and impacts would be less than those of the proposed project.

5.6 Alternative B—BTP-M Alternative

5.6.1 Description

Alternative B—BTP-M Alternative would develop the proposed project in accordance with the requirements for the BTP-M zoning designation, resulting in a FAR of 1.0 instead of a FAR of 2.0, as allowed under the proposed BTP-H zoning designation. Consequently, there would be a reduction in the amount of floor area for R&D and amenity uses as well as the number of project-generated employees. With the reduction in FAR, maximum building heights under Alternative B would be reduced to 57 feet, or three stories, compared to the maximum height that would be developed under the proposed project of approximately 114 feet, or six stories. The amount of new development would be reduced to approximately 768,440 sf compared to approximately 1,7040,050 sf under the proposed project. As a result, Alternative B would result in the generation of approximately 1,708 employees total compared to the approximately 3,787 total employees that would be generated under the proposed project. Alternative B was selected for evaluation because of its potential to reduce impacts related to criteria pollutant emissions; substantial pollutant concentrations; conflicts with a program, plan, ordinance, or policy addressing the circulation system; and hazards due to a geometric design.

Table 5-2 provides estimates of the amount of new development that could be constructed atbuildout under Alternative C.

Proposed Use	Square Footage
R&D	734,500
Conference	9,200
Fitness Center	8,800
Restaurant	11,890
Day Care	4,050
Total	768,440

Table 5-2. Summary of Proposed Land Uses under Alternative B

The site plan for Alternative B would be similar to that of the proposed project but at a reduced scale. However, all other proposed uses (e.g., the conference space, fitness center, restaurant, and day care) would continue to be incorporated as part of the alternative to a reduced extent and would be accessible from a network of interconnected pathways as well as the central courtyards. In addition, the overall design of Alternative B would be similar to that of the proposed project, and would incorporate two central courtyards located along the interior of the project site that would be framed by the proposed buildings to prioritize pedestrian and bike-friendly connections and outdoor amenities. Alternative B would also achieve LEED Gold rating for building design and construction, as well as WELL v2 Core certification. Furthermore, the TDM program, which would be implemented to reduce the amount of traffic generated by the alternative, would be similar to that for the proposed project. As with the proposed project, access to the site under Alternative B would be provided via driveway on Terminal Court and a right-of-way connection from the southwestern portion of the project site to Shaw Road, to the south, through an existing access easement, similar to the proposed project. Internal roads would also be configured to circle the entire site in a loop formation, providing access to buildings, parking, and on-site amenities.

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As mentioned above, Alternative B would not change the permitted uses that would be allowed to occur under the project or the footprint of proposed buildings, however, it would change the intensity at which they would occur due to the reduced intensity, and consequently, building height of 57 feet or three stories. Alternative B would still include R&D, conference, fitness center, restaurant, and day-care uses. Specifically, Alternative B would involve approximately 734,500 sf of new R&D uses and 33,940 sf of amenity uses, instead of 1,632,000 sf of R&D uses and 72,050 sf of amenity uses as proposed under the project. However, because Alternative B would result in less building area for R&D and amenity uses and fewer employees, the amount of parking would be reduced. Alternative B would provide 1,433 total parking spaces, including approximately 1,102 parking spaces primarily for R&D uses and 331 parking spaces primarily for amenity uses. With the reduction in required parking spaces, Alternative B would eliminate two levels of below-grade parking, resulting in only one below-grade level of parking.

All other features of Alternative B would be the same as, or substantially similar to, those of the proposed project, including the potential R&D and amenity uses, the proposed circulation and infrastructure improvements, the pedestrian realm and open space improvements, building design, TDM program, and sustainability features. It is assumed that there would be no change in the amount of landscaped area. Even though reduced amounts of development would occur under Alternative B, the overall total lot coverage, including the amount of pervious and impervious surfaces, would be the same as under the proposed project. Utility improvements associated with Alternative B would be similar to those described for the proposed project. The project site is serviced by existing water, wastewater, stormwater, electricity, telecommunications, and waste and recycling services. New on-site facilities would be connected to new services through the installation of new localized connections. Any expansion or increase in the capacity of off-site infrastructure would occur as required by utility providers. Street improvements along Terminal Court and the right-of-way connection to Shaw Road would include new curbs, landscaping, and sidewalks.

The construction activities and the types of construction equipment used for Alternative B would be similar to the proposed project, however, there would be a few key differences. The construction schedule for Alternative B may be substantially shorter than the proposed project, and would occur over approximately 46 months or approximately 4 years. In addition, Alternative B would require less ground disturbance compared to the proposed project. Approximately 28,150 cubic yards (cy) of material would be excavated under Alternative B versus approximately 40,214 cy under the proposed project. Overall, Alternative B would result in a substantially reduced construction program in terms of timeline and activity.

The existing land use and zoning designation on the site is Mixed Industrial High (MIH). Therefore, Alternative B would still require a general plan amendment, specific plan amendment, zoning map and text amendment, TDM plan approval, design review, tentative map approval, and development agreement. Alternative B would also require standard City engineering, building, and fire permits, along with other agency approvals (e.g., California Department of Transportation, Bay Area Regional Water Quality Control Board, BAAQMD, City/County Association of Governments Airport Land Use Commission, Federal Aviation Administration, and Bay Conservation and Development Commission).

Under Alternative B, the five off-site redesignation parcels that are currently designated as MIH under the General Plan, Specific Plan, and City Zoning Code would be redesignated to BTP-M, consistent with the proposed land use and designation for the alternative. This would ensure that future development would be cohesive and consistent with the development proposed under Alternative B. Alternative B would not include the construction of any new uses on the off-site redesignation parcels.

5.6.2 Ability to Meet Project Objectives

Alternative B would only partially meet the project objective to "create an iconic, inspiring, and dynamic gateway presence along U.S. 101 with high visibility" because it would involve constructing buildings that would range from one to three stories, or up to 57 feet tall, and would not be as visible as the proposed project buildings, which would be up to six stories, or 114 feet tall. In addition, Alternative B would only partially meet the project objective to "redevelop the property with R&D, biotechnology, and office uses in a secure and integrated campus setting" because it would involve constructing buildings that are at reduced height when compared to the project, but with the same ratio of R&D and amenity uses at approximately 50 percent less square footage. Similarly, Alternative B would only partially meet the project objective to "incorporate a building and landscape design that sets a unique identity within the city" because it would not maximize the site's potential uses to the same extent as the project. Alternative B would generate fewer jobs than the proposed project. Alternative B would only partially meet the project objectives to "provide well-designed, flexible buildings and floor plates that can accommodate a variety of tenants to ensure the proposed project will be responsive to market conditions and demands" and to "provide a positive fiscal impact on the local economy through the creation of jobs, enhancement of property values, support for local infrastructure, and the generation of property tax and development fees" because it would be less viable, generate fewer jobs, enhance the property to a lesser extent, and generate fewer taxes and fees compared to the proposed project. Therefore, Alternative B would meet some but not all of the project objectives (refer to Section 3.4 in Chapter 3, Project Description, of this draft EIR for a list of the project objectives that have been identified by the project sponsor and **Table 5-5** for a comparison of the ability of this alternative to meet the objectives of the proposed project).

5.6.3 Impacts

The impact analysis below focuses on those impacts that were determined to be significant and unavoidable and less than significant with mitigation under the proposed project. In accordance with CEQA Guidelines Section 15128, the preliminary analysis provided in the Initial Study (Appendix B) determined that the proposed project would have no impact or less-than-significant impacts in all topics of the following analysis areas: aesthetics; agricultural and forestry resources; energy; hazards and hazardous materials; hydrology and water quality; land use; mineral resources; population and housing; public services; recreation; tribal cultural resources; utilities and service systems; and wildfire. As such, these topics are not evaluated further in this alternatives analysis.

5.6.3.1 Air Quality

Similar to the Proposed Project, construction of Alternative B would require the use of heavy equipment and other mobile sources that would generate criteria pollutants. However, this alternative would result in a shorter construction period due to the reduced square footage and shorter building heights. Therefore, this alternative would require less construction equipment and fewer vehicles compared with the proposed project. As a result, the total construction emissions generated during construction would be less than those of the proposed project; however, daily emissions for this alternative could be similar to the proposed project, depending on the occurrence of overlap among construction phases. Daily construction emissions from use of equipment and onroad vehicles for the proposed project would be below the BAAQMD's significance thresholds for all pollutants; therefore, Alternative B would not exceed any BAAQMD threshold. BAAQMD's-required

BMPs, along with the City's standard conditions of approval would be implemented to reduce fugitive PM_{10} and $PM_{2.5}$ emissions. This impact would be less than the proposed project's impact and *less than significant*.

Operational emissions from both the proposed project and Alternative B would have the potential to create air quality impacts. Alternative B would result in fewer area sources of emissions and fewer vehicle trips because of the reduction in both floor area and the number of employees. Overall, Alternative B would have approximately 45 percent of the total floor space compared with the proposed project and 45 percent of the employees. This alternative also would have emergency generators but only 17; the proposed project would have 24. Therefore, stationary-source emissions would be lower as well.

Impacts from operational emissions were found to be above the BAAQMD-recommended mass emission thresholds for the proposed project, both with and without mitigation measures (see Tables 4.2-6 and 4.2-7). ROG-related impacts during operations are primarily the result of direct emissions from area and mobile sources, although stationary and laboratory sources contribute a portion of ROG emissions. Because Alternative B would be a smaller project than the proposed project, the operational emissions are expected to be less compared with the proposed project. The quantity of area-source ROG emissions generated is correlated to square footage. Areasource emissions from Alternative B would thus be approximately 45 percent of the proposed project's emissions, given the reduction in square footage. A similar reduction is expected for mobile sources because Alternative B would have approximately 45 percent of the employees compared with the proposed project. The 45 percent value is an approximation but yields a relatively accurate estimation of this alternative's emissions that is consistent with the lower level of detail warranted for evaluating project alternatives under CEQA. The reduction in stationary-source emissions would be less for area and mobile sources because Alternative B would have about 71 percent of the generators compared with the proposed project; however, generators contribute the lowest level of direct ROG emissions during operations.

Unlike the proposed project, operation of Alternative B would not result in a cumulatively considerable net increase in any criteria air pollutant for which the San Francisco Bay Area Air Basin is designated as a nonattainment area with respect to the federal or state ambient air quality standards. With the reduction in square footage, number of employees, and number of generators, daily operational emissions of ROG would likely be reduced enough to be below the BAAQMD's threshold of significance. Emissions of all other pollutants would be well below the BAAQMD's thresholds for Alternative B because emissions of the other pollutants would be below the thresholds for the proposed project. **Mitigation Measures AQ-1**, **AQ-2**, and **AQ-3** would not be required; this impact would be less than the proposed project's impact and *less than significant*.

Diesel-fueled engines, which generate DPM, would be used during construction of Alternative B, similar to the proposed project. Multiple sensitive receptors are within 1,000 feet of the Project site, including a day care and many off-site worker receptors. The proposed project's construction would result in an increase in the cancer risk, hazard index, and annual PM_{2.5} concentration for receptors near the project site. Alternative B would result in a reduction in floor area compared to the proposed project; therefore, total construction activity would be less than the proposed project. Alternative B's cancer risk, hazard index, and PM_{2.5} concentration could be less than that of the proposed project, because the construction period, and thus overall duration that sensitive receptors would be exposed to DPM and PM_{2.5}, would be shorter.

However, as noted in Section 4.2, *Air Quality*, with implementation of **Mitigation Measure AQ-4**, the contribution from construction would be reduced such that the annual PM_{2.5} concentration during project operations would become the maximum value. The same result is expected for Alternative B in that the contribution from project operations would be the dominant contributor to the annual concentration rather than construction.

During operations, Alternative B would result in the same types of sources of TACs and $PM_{2.5}$. Overall, Alternative B would include fewer sources of emissions because it would have 17 emergency generators (compared to the proposed project's 24) and 45 percent of the employees as the proposed project. As such, emissions resulting from the generators and vehicle trips would be less than the proposed project. However, as shown in Table 4.2-9, $PM_{2.5}$ emissions from the proposed project (0.46 µg/m³) would be above the BAAQMD threshold of 0.3 µg/m³ by a large margin, even with implementation of **Mitigation Measure AQ-4**. Therefore, it cannot be concluded that Alternative B would have an operational $PM_{2.5}$ concentration below the BAAQMD threshold, because Alternative B may not reduce $PM_{2.5}$ concentrations sufficiently relative to the proposed project's results. This impact would be less than the impact of the proposed project; however, like the proposed project, it would be *significant and unavoidable*.

Traffic generated by the proposed project would have the potential to create CO hot spots at nearby roadways and intersections. However, because Alternative B would generate less traffic than the proposed project, the CO emissions and concentrations would also be lower. Regardless, for both the proposed project and Alternative B, CO concentrations are not expected to contribute to any new localized violations of the 1-hour or 8-hour ambient air quality standards, resulting in an impact that would be less than that of the proposed project and *less than significant*.

For the reasons described above, Alternative B in combination with other development in the City would not conflict with or obstruct implementation of the applicable air quality plan and would not result in a cumulatively significant impact. In addition, Alternative B in combination with other development would be consistent with the Clean Air Plan. With respect to cumulative PM_{2.5} concentrations, Alternative B would exceed BAAQMD's cumulative thresholds for PM_{2.5} concentrations during operations, for the reasons described above. Like the proposed project, Alternative B would contribute a cumulative considerable impact to an already-significant existing cumulative impact. Consequently, the cumulative impact for PM_{2.5} for sensitive receptors would be less than the impact of the proposed project but *significant and unavoidable*.

Regarding the off-site redesignation parcels, under Alternative B, these parcels, which are currently designated as MIH under the General Plan, Specific Plan, and City Zoning Code, would be redesignated to BTP-M. It is not possible to definitively conclude if the existing zoning or rezoning would result in higher emissions because that conclusion is highly dependent on the specific uses that would have been constructed under existing zoning and would be constructed under the rezoning. Similarly, construction emissions may differ between existing zoning and the rezoning of the off-site parcels. As with the proposed project, emissions during operations could exceed the BAAQMD's thresholds of significance at R&D facilities if the off-site parcels are rezoned; however, such exceedances could also occur under the existing zoning. Because the magnitude of emissions exceedances from the rezoning, relative to the existing zoning, cannot be known at this time, it is conservatively assumed that the off-site redesignation could result in a cumulatively considerable net increase in criteria pollutants for which the project region is classified as a nonattainment area. This impact would be significant and unavoidable for criteria pollutant and ozone precursor emissions. In addition, for health risk-related impacts, the exact type and magnitude of impacts

from the rezoning, relative to the existing zoning, cannot be known at this time. It is thus conservatively assumed that the off-site redesignation could expose sensitive receptors to substantial pollutant concentrations. Therefore, the off-site redesignation parcels, as with the proposed project, could expose sensitive receptors to substantial pollutant concentrations, resulting in a *significant and unavoidable* impact.

5.6.3.2 Biological Resources

Alternative B would be located on the same site as the proposed project and would require the same amount of building area demolition and similar construction activities as the proposed project. Potential impacts on special-status species, sensitive natural communities, wetlands, wildlife movement, or conflict with tree ordinances or habitat conservation plans that would occur under the proposed project would also occur under Alternative B; thus, implementation of **Mitigation Measure BIO-1** from the General Plan EIR, Special-status Species, Migratory Birds, and Nesting Birds, would continue to apply to this alternative. Overall, impacts would be *less than significant with mitigation* and similar to those identified for the proposed project.

In addition, Alternative B would not include the construction of any new uses on the off-site redesignation parcels. However, if future development in the off-site redesignation parcels would require tree removal, compliance with the City Tree Preservation Ordinance (No. 1271-2000) would be required. In addition, future development on the parcels would also be required to comply with the City's bird-safe design ordinance, City Municipal Code Chapter 20.310.002. Future development under the BTP-M zoning designation within the off-site redesignation parcels could affect special-status species, as well as the movement of wildlife, and impede the use of native wildlife nursery sites. However, impacts on special-status species, wildlife nursery site, and movement of wildlife, would be less than significant through implementation of **Mitigation Measure BIO-1** from the General Plan EIR, or other types of similar measures enforced through conditions of approval, and compliance with the City Ordinances (including the zoning ordinance, Tree Preservation Ordinance, bird-safe design, and lighting regulations), and the California Building Standards Code (Title 24, Building Energy Efficiency Standards). Therefore, impacts on biological resources associated with the redesignation parcels under Alternative B would be *less than significant* and similar to those identified for the proposed project.

5.6.3.3 Cultural Resources

Alternative B would be located on the same project site as the proposed project and would require the same amount of building area demolition as the proposed project but slightly reduced construction activities due to the reduced size of the project. Potential impacts on historical resources, archaeological resources, and human remains that would occur under the proposed project would also occur under Alternative B; thus, implementation of **Mitigation Measure CULT-1**, Prepare Documentation in the Likeness of the Historic American Building Survey (HABS) in Consultation with Interested Parties; CULT-2, Initiate Public Interpretation Program; CULT-3, Train Workers to Respond to the Discovery of Cultural Resources; and CULT-4, Retain a Qualified Archaeologist to Perform Construction Monitoring, Evaluate Uncovered Archaeological Features, and Mitigate Potential Disturbance for Identified Significant Resources at the Project Site, would continue to apply to this alternative. Overall, as with the proposed project, impacts would be *significant and unavoidable* for historical resources. Impacts on archaeological resources would be *less than significant with mitigation*.
Under Alternative B, the off-site redesignation parcels currently designated as MIH under the General Plan, Specific Plan, and City Zoning Code would be redesignated to BTP-M (as is the case with the proposed project). Alternative B would not include the demolition of existing buildings or the construction of any new uses on the off-site redesignation parcels. Although the proposed project does not include the construction of any new uses on the off-site redesignation parcels, construction could occur following the redesignation under Alternative B. However, future projects would be required to undergo the appropriate environmental review, including the identification, protection, enhancement, perpetuation, and use of historical and archaeological resources, to ensure no impacts on the broad spectrum of cultural resources. In addition, the City of South San Francisco maintains General Plan policies and actions pertaining to cultural resources that would help ensure impacts from future development at these parcels would be less than significant. Impacts on historical resources depend on the age and character of existing on-site uses. Changing the type of use that could be developed in the future would have no effect on existing on-site uses. Cultural resources impacts associated with the redesignation parcels under Alternative B, including historical resources, archaeological resources, and human remains, would be *less than significant*, as is the case for the proposed project.

5.6.3.4 Geology and Soils

Alternative B would be located on the same project site as the proposed project and would require the same amount of demolition and similar construction activities as the proposed project. Potential impacts due to surface faulting and secondary ground failure; strong seismic ground shaking, soil erosion, expansive soil; soils that would be incapable of supporting septic tanks or alternative wastewater disposal systems; seismically related ground failure due to liquefaction, lateral spreading, subsidence, or landslides; or paleontological resources that would occur under the proposed project would also occur under Alternative B. Thus, implementation of **Mitigation Measure GEO-6**, Paleontological Monitoring, from the General Plan EIR, would continue to apply to this alternative. Overall, impacts would be *less than significant with mitigation* and similar to those identified for the proposed project.

Alternative B would not include the construction of any new uses on the off-site redesignation parcels. However, future projects would be required to undergo the appropriate environmental review to ensure impacts on geology and soils would not be significant. In addition, policies and requirements included in the General Plan Update, City Municipal Code, and City Zoning Ordinance, as well as the California Building Code, would apply to any future development on the five off-site redesignation parcels, which could minimize impacts related to geology and soils. Therefore, impacts on geology and soils associated with the redesignation parcels under Alternative B would be *less than significant* and similar to those identified for the proposed project.

5.6.3.5 Greenhouse Gas Emissions

Construction of Alternative B would generate carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O) from the exhaust of mobile and stationary construction equipment, employees' vehicles, and haul trucks. However, the construction period would be shorter with this alternative because of the reduced square footage and shorter buildings, and thus total GHG emissions would be reduced. BAAQMD's CEQA Guidelines do not recommend a GHG emission threshold for construction-related emissions; therefore, construction of this alternative would not exceed thresholds. However, the guidelines recommend implementation of BMPs to help control or reduce GHG emissions. Therefore, the impact from construction of Alternative B would be less than the GHG construction impact from the proposed project and would thus be considered *less than significant* with implementation of the BMPs listed in Section 4.4, *Greenhouse Gases*.

Operation of Alternative B would generate fewer direct and indirect GHG emissions than the proposed project because of the decrease in building area and the number of employees. Therefore, this alternative would result in fewer vehicle trips, less electricity consumption, and less waste and wastewater generation. Although this alternative would still increase direct and indirect GHG emissions compared with existing conditions, there would be a reduction in the number of employees relative to the proposed project, which would result in less mobile source GHG emissions.

Like the proposed project, this alternative would also be consistent with the BAAQMD's land use thresholds (see Table 4.4-7). It is expected that this alternative would not include natural gas infrastructure, would not result in wasteful energy usage, would meet the CALGreen Tier 2 nonresidential voluntary requirements for EV parking, and would achieve a VMT reduction greater than 15 percent relative to existing regional VMT. The project design features that would result in attainment of the BAAQMD land use thresholds (i.e., all-electric design, EV parking allotments, required TDM plan) would be carried through to this alternative, similar to the proposed project. Thus, like the proposed project, this alternative would be consistent with the BAAQMD GHG thresholds for land-use projects. Similarly, the design features that ensure consistency with the City's Climate Action Plan, 2022 Scoping Plan, and other plans, as discussed in Section 4.4, *Greenhouse Gases*, would also be carried through to this alternative B would not conflict with state, regional, or local plans designed to achieve the GHG reduction goals mandated by SB 32 and AB 1279 for 2030 and 2045. This impact would be similar to the impact of the proposed project and **less than significant**.

Climate change is a global problem, and GHG impacts are inherently cumulative. This is because GHGs contribute to the global phenomenon that is climate change, regardless of where GHGs are emitted. Climate change is the result of the individual contributions of countless past, present, and future sources. Therefore, GHG impacts are inherently cumulative, and the analysis above is inclusive of cumulative impacts.

Regarding the off-site redesignation parcels, under Alternative B, these parcels, which are currently designated as MIH under the General Plan, Specific Plan, and City Zoning Code, would be redesignated to BTP-M. Alternative B would not include the construction of any new uses on the off-site redesignation parcels. Although the proposed project does not include the construction of any new uses on the off-site redesignation parcels, construction could occur following the redesignation under Alternative B. However, future projects would be required to undergo the appropriate environmental review to ensure GHG-related impacts would not be significant. The redesignation would allow for highdensity corporate headquarters, R&D facilities, and office uses. The baseline for this evaluation is the existing zoning of the site, which, as noted above, currently allows for industrial-type uses. As discussed in Section 4.2, if R&D uses are developed instead of industrial uses the potential to conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases would be reduced. R&D uses are more likely to align with the CARB's 2022 Scoping Plan and the City's CAP objectives. Thus, redesignating to R&D uses can contribute to achieving the climate action goals set out in these plans. As such, the future uses associated with the off-site redesignation parcels would not result in significant impacts related to the emissions of greenhouse gases, similar to the proposed project, and the impact would be less than significant.

5.6.3.6 Noise and Vibration

Alternative B would involve buildout at reduced height and density in comparison to the proposed project. Accordingly, the construction schedule for the project is expected to be slightly reduced. However, since the footprint of the proposed structures would not change, overall construction activities near off-site sensitive land uses (e.g., the hotels east of U.S. 101, the planned development at 100 Produce Ave/124 Airport Boulevard, and the nearest San Bruno residences) would be similar under Alternative B. In addition, the types of equipment required and the intensity of construction activity near off-site noise-sensitive uses would also be similar. Therefore, construction noise levels under this alternative at nearby noise-sensitive uses would be similar to those under the project. As is the case with the proposed project, construction that occurs during "daytime hours" would therefore be expected to comply with local standards and would result in *less-than-significant* noise impacts for Alternative B.

Construction during non-daytime hours would be expected for Alternative B, as is the case with the proposed project. However, similar to non-daytime construction noise for the proposed project, non-daytime construction noise from Alternative B (including concrete pours, crane and drill work, and interior building work) would not be expected to exceed the applicable noise criterion. Non-daytime construction noise effects would be similar to those of the project under Alternative B. As is the case for the proposed project, non-daytime construction noise impacts would be considered *less-than-significant* for Alternative B.

With regard to construction haul truck noise, Alternative B would result in similar, or slightly fewer, haul truck trips than the proposed project and would use the same haul routes as the project. Haul truck noise effects would be similar to, or slightly less than, those of the project under Alternative B. Therefore, as is the case with the proposed project, temporary noise impacts related to haul truck use for Alternative B would be *less than significant*.

Under Alternative B, the types and amount of rooftop heating and cooling equipment would be similar. However, with a reduced building height, it is possible that equipment would be located closer to adjacent sensitive land uses because the height of the buildings where the equipment is located would be lower. It is therefore possible that unattenuated noise from this equipment would be slightly greater under Alternative B than under the proposed project. Similar to the proposed project, however, noise from heating, cooling, and ventilation equipment at the project site would be required to demonstrate compliance with noise standards shown in Table 8.32.030 of the current South San Francisco municipal code and Action NOI-1.1.5 of the South San Francisco General Plan prior to the issuance of building permits (once final makes, models, sizes, and locations for equipment have been determined). Therefore, under this alternative, although unattenuated mechanical equipment noise could be slightly greater than under project, impacts related to mechanical equipment noise would be **less than significant** for Alternative B, as is the case for the proposed project.

With regard to emergency generator testing, Alternative B would be expected to include a similar number of and similar sizes of on-site emergency generators. Specifically, there would be 17 generators proposed under Alternative B as compared to the project's 24 proposed generators. As with the proposed project, even though the testing of emergency generators would be short term (i.e., 30 minutes each time) and intermittent (i.e., approximately once per month), unattenuated noise from the testing of emergency generators under Alternative B would result in audible noise at nearby sensitive uses. However, attenuation measures would be evaluated and included in the

generator design prior to installation to ensure compliance with applicable General Plan policies and actions, such as Action NOI-1.1.5. The compliance of emergency generator testing noise with the noise standards in Municipal Code Table 8.32.030 would be demonstrated prior to issuance of building permits, once the final makes, models, sizes, and locations of the generators have been determined. Therefore, as is the case with the proposed project, noise impacts from emergency generator testing would be less than significant under Alternative B and would be slightly less under Alternative B than with the project (because fewer generators are proposed for this Alternative). In addition, with regard to loading docks, Alternative B would result in a similar amount (or possibly a slightly less) of loading activities as the proposed project. Therefore, loading dock noise would be similar to the project under this alternative. As with the proposed project, temporary and short-term increases in noise from project loading activity would not be considered substantial. Impacts related to loading dock noise from Alternative B would be *less than significant*, as is the case for the proposed project.

During operations, Alternative B would generate fewer vehicle trips than the proposed project because there would be fewer employees at the project site. Therefore, traffic noise at nearby sensitive uses from Alternative B would be similar to, or slightly lower than, project-related traffic noise. As project-related traffic noise impacts were determined to be less than significant, traffic noise impacts from Alternative B would also be *less than significant*.

Regarding parking garage noise, as part of Alternative B, two of the three below grade parking levels would be removed, however noise from below-grade parking levels do not contribute meaningfully to overall parking garage noise because noise is dominated by activity at the above-grade parking garage levels. Therefore, noise associated with parking garages would be similar to the proposed project under Alternative B. As is the case for the proposed project, parking garage noise impacts would be *less than significant* for Alternative B.

Alternative B would also include an on-site day care with outdoor play area. It is assumed that the day care would have a similar capacity as compared to the proposed project. Therefore, outdoor play area noise under Alternative B would be expected to result in overall noise levels similar to those of the project; this alternative would result in *less-than-significant* noise impacts at nearby sensitive receptors from the outdoor play area associated with the day care, as is the case with the proposed project.

With regard to damage-related vibration impacts, the heavy construction equipment proposed for use, and the proximity of equipment to adjacent off-site structures, would be essentially the same under Alternative B as the proposed project. This is because the footprint of development is not expected to change under this alternative. The nearest structures to the project site (and Alternative B site) are categorized as "historic" and "some old buildings" according to Caltrans vibration guidelines, and could be as close as 10 feet from project construction activities. As is the case with the proposed project, the use of vibration-intensive equipment within approximately 13 feet of off-site structures for the construction of Alternative B has the potential to result in vibration levels in excess of the applicable damage criterion for the nearest structures. Vibration-related damage impacts would be considered significant prior to mitigation for Alternative B, as is the case for the proposed project. Implementation of project **Mitigation Measure NOI-1** would also be required under Alternative B. Project **Mitigation Measure NOI-1** would ensure that vibration would be kept below the level that may cause damage to nearby sensitive structures. It would also

measure would reduce vibration related damage impacts on a less-than-significant level. As is the case with the proposed project, vibration-related damage impacts would be *less than significant with mitigation*.

Regarding annoyance-related vibration impacts, since the proximity of construction activities to nearby sensitive land uses would be similar under this alternative (e.g., the hotels east of U.S. 101, the planned development at 100 Produce Ave/124 Airport Boulevard, and the nearest San Bruno residences), vibration impacts related to annoyance would also be similar. Most construction activities would occur during daytime hours (when people are less sensitive to vibration). The limited nighttime construction activities would all occur at least 250 feet from the nearest sensitive use (i.e., the Travelodge hotel) and would generate vibration levels well below the "strongly perceptible" level at this location, and at other sensitive locations. For these reasons, annoyance-related vibration impacts would be similar to those identified for the proposed project, and would be *less than significant* for Alternative B.

Overall, noise and vibration impacts under Alternative B at the project site would be similar to, or slightly less than, disclosed for the proposed project for most noise and vibration topics. Unattenuated mechanical equipment noise could be slightly greater, but compliance with noise standards shown in Table 8.32.030 of the current South San Francisco municipal code and Action NOI-1.1.5 of the South San Francisco General Plan would be demonstrated prior to the issuance of building permits; noise impacts from mechanical equipment would be less than significant, as is the case with the proposed project. In summary, noise and vibration impacts at the project site would remain *less than significant with mitigation* under Alternative B, and would generally be slightly reduced as compared to the project due to the reduced duration of construction, the reduced number of generators, and the slightly smaller number of expected employees.

Regarding the off-site redesignation parcels, under Alternative B these parcels which are currently designated as MIH under the General Plan, Specific Plan, and City Zoning Code would be redesignated to BTP-M. Alternative B would not include the construction of any new uses on the off-site redesignation parcels. Although the proposed project does not include the construction of any new uses on the off-site redesignation parcels, construction could occur following the redesignation under Alternative B. However, future projects would be required to undergo the appropriate environmental review to ensure noise and vibration-related impacts would not be significant. During this process, compliance with applicable thresholds would be evaluated prior to a specific project receiving environmental clearance and/or building permits. In addition, the City of South San Francisco contains General Plan policies and actions pertaining to noise and vibration that would help ensure impacts from future development at these parcels would be less than significant. Noise and vibration impacts associated with the redesignation parcels under Alternative B would be similar to those under the proposed project and *less than significant* (as is the case for the proposed project).

5.6.3.7 Transportation and Circulation

Alternative B would include the same types of land uses as the proposed project but at a reduced density and with fewer employees. Alternative B would remain inconsistent with the City's plans and policies because it would substantially increase land uses along the Produce Avenue corridor, an area where additional density was not identified or studied in the Lindenville Specific Plan or General Plan. With implementation of **Mitigation Measure TRANS-1**, Alternative B would advance off-site improvements consistent with buildout of the General Plan and Lindenville Specific Plan to

adequately address its effects on the transportation network. Nonetheless part of the right-of-way within **Mitigation Measure TRANS-1** is under the jurisdiction of Caltrans and the jurisdiction of the City of San Bruno, and neither jurisdiction has a mechanism for funding this mitigation. Therefore, Impact TRANS-1 would remain significant and unavoidable under Alternative B, but would be less than the project's impact. Together with cumulative projects identified, Alternative B would also have a *significant and unavoidable* impact consistent with C-TRANS-1, but would be less than the project's impact.

Alternative B would have the same TDM program as the proposed project. The TDM program would include the same combination of a trip reduction program, bikeway network expansion, and extension of transit network coverage, resulting in a VMT reduction of 29.5 percent. The TDM program would reduce VMT below the City's threshold of significance of 12.7 HBW VMT per employee. Therefore, Impact TRANS-2 would be *less than significant*, as with the project.

Alternative B would have the same access plan as the proposed project. Consequently, Alternative B would result in similar safety hazards at unsignalized intersections along Produce Avenue and Shaw Road and freeway ramp queueing onto US-101. The implementation of new traffic signals along Produce Avenue and San Mateo Avenue via **Mitigation Measure TRANS-1** would reduce the potential for conflicts and queueing under Alternative B. However, part of this right-of-way is under the jurisdiction of Caltrans and the jurisdiction of the City of San Bruno, and neither jurisdiction has a mechanism for funding this mitigation. Alternative B would not include features that would alter emergency vehicle access routes or roadway facilities; emergency vehicles would have full access, and each driveway would be equipped to handle all types of emergency vehicles. Therefore, impact TRANS-3 would remain *significant and unavoidable* but less than the impact of the proposed project. Together with cumulative projects identified, Alternative B would also have a *significant and unavoidable* impact consistent with C-TRANS-3, but would be less than the project's impact. Impact TRANS-Impact TRANS-4 related to emergency access would remain *less than significant*, as with the project.

Under Alternative B, the off-site redevelopment parcels would be redesignated to BTP-M. Alternative B would not include the construction of any new uses on the off-site redesignation parcels. Although the proposed project does not include the construction of any new uses on the offsite redesignation parcels, construction could occur following the redesignation under Alternative B. Compared to the City's land use forecasts in the General Plan and Lindenville Specific Plan, Alternative B would not materially affect the projected number of employees or travel demand along the Produce Avenue corridor and Lindenville as a whole. For these reasons, transportation impacts associated with the redesignation parcels under Alternative B would be *less than significant*, as is the case for the proposed project.

5.7 Alternative C – Increased Office Space (80 Percent Office/20 Percent Lab)

5.7.1 Description

Generally, R&D uses in the city include a mix of lab and office spaces. Alternative C—the Increased Office Space Alternative would develop the project site with the same total building area that would be developed under the proposed project, approximately 1,704,050 sf, but the

total buildout would comprise approximately 80 percent office uses and no more than 20 percent lab uses, instead of approximately 50 percent lab uses as currently proposed. Alternative C would reduce the amount of floor area for lab uses as well as the number of lab and amenity employees compared with the proposed project, resulting in approximately 876 employees. However, there would be more total on-site employees under this alternative due to the increase in office space. Alternative C would result in approximately 3,072 office employees. The number of day-care employees (i.e., nine) would remain the same under Alternative C as with the proposed project. Therefore, there would be a total of 3,957 total employees on the project site under Alternative C, compared to 3,787 total employees under the proposed project. Alternative C was selected for evaluation based on its potential to reduce impacts related to criteria pollutant emissions, and substantial pollutant concentrations.

Table 5-3 provides estimates of the amount of new development that could be constructed atbuildout under Alternative C.

Proposed Use	Square Footage
Lab	326,400
Office	1,305,600
Conference	21,000
Fitness Center	20,000
Restaurant	27,000
Day Care	4,050
Total	1,704,050

Table 5-3. Summary of Proposed Land Uses under Alternative C

The site plan for Alternative C would be similar to that of the proposed project but with internal building reconfigurations to account for the reduced amount of lab space and an increase in the amount of office space. However, all other proposed uses (e.g., the conference space, fitness center, restaurant, and day care) would remain the same, and would be accessible from a network of interconnected pathways as well as the central courtyards. Because the building footprints would be the same, all footprint-based impacts would be the same as those of the proposed project. The maximum building height, approximately 114 feet, would be the same as under the proposed project. In addition, the overall design of Alternative C would be similar to that of the proposed project, and would incorporate two central courtyards located along the interior of the project site that would be framed by the proposed buildings to prioritize pedestrian and bike-friendly connections and outdoor amenities.

The landscape and circulation features under Alternative C would be similar to those the proposed project would incorporate. This would include providing approximately 115,130 sf of open space in the courtyards, which would be publicly accessible, and provide space for outdoor work, recreation, and socializing through the use of seat walls, paved areas, turf, as well as shade structures. Alternative C would also achieve LEED Gold rating for building design and construction, as well as WELL v2 Core certification. Furthermore, the TDM program, which would be implemented to reduce the amount of traffic generated by the Alternative, would be similar to that for the proposed project. As with the proposed project, the site for the Alternative C would be accessible from the same access points as proposed under the project:

vehicular access to the project site would be provided via a driveway on Terminal Court and a right-of-way connection from the southwestern portion of the project site to Shaw Road, to the south, through an existing access easement. Internal roads would be configured to circle the entire project site in a loop formation, providing access to buildings, parking, and on-site amenities. However, because Alternative C would result in less building area for lab uses and fewer lab employees, but additional office space with more office employees, the amount of parking would increase. The proposed project in total would provide 2,976 parking spaces, including approximately 2,434 parking spaces primarily for R&D uses, and approximately 542 parking spaces for proposed amenity uses and the day-care center. Alternative C would provide 3,843 total parking spaces, including approximately 490 parking spaces for amenity uses. It is assumed that there would be no reduction in the amount of landscaped area. The additional parking would be accommodated in the underground parking garage under the I131S building by adding one additional level of underground parking.

As described above, all other features of Alternative C would be the same as, or substantially similar to those of the proposed project, including the proposed circulation and infrastructure improvements, the pedestrian realm and open space improvements, building design, TDM program, and sustainability features. Utility improvements associated with Alternative C would be similar to those described for the proposed project. The project site is serviced by existing water, wastewater, stormwater, electricity, telecommunications, and waste and recycling services. New on-site facilities would be connected to new services through the installation of new localized connections. Any expansion or increase in the capacity of off-site infrastructure would occur as required by utility providers. Street improvements along Terminal Court and the right-of-way connection to Shaw Road would include new curbs, landscaping, and sidewalks. Alternative C would also provide pedestrian pathways along the exterior and throughout the interior of the project site to provide connections between the buildings and the courtyards.

Overall, construction activities and the types of equipment used for Alternative C would be similar to the proposed project, and would include similar construction and demolition activities within the project site as the proposed project. Construction activities under Alternative C would be slightly reduced compared to the proposed project, and would occur over an approximately four and a half year construction period, instead of an approximately five years under the proposed project.

As for anticipated approvals, Alternative C would still require a general plan amendment, specific plan amendment, zoning map and text amendment, TDM plan approval, design review, tentative map approval, and development agreement. Alternative C would also require standard City engineering, building, and fire permits, along with other agency approvals (e.g., California Department of Transportation, Bay Area Regional Water Quality Control Board, BAAQMD, City/County Association of Governments Airport Land Use Commission, Federal Aviation Administration, and Bay Conservation and Development Commission).

Under Alternative C, the five off-site redesignation parcels that are currently designated as MIH under the General Plan, Specific Plan, and City Zoning Code would be redesignated to BTP-H, consistent with the proposed land use and designation for the alternative. This would ensure that future development would be cohesive and consistent with the development proposed under Alternative C. Alternative C would not include the construction of any new uses on the off-site redesignation parcels.

5.7.2 Ability to Meet Project Objectives

Alternative C would achieve some of the project objectives but to a reduced degree. Alternative C would develop the proposed campus with the same building as under the proposed project but with a reduction in lab uses. Alternative C would achieve the project objective of providing well-designed, flexible buildings and floor plates that can accommodate a variety of tenants. With incorporation of the office uses under this alternative, the proposed buildings could accommodate multiple tenants for lab and office uses. Because of the reduced amount of lab space and increase in office space, Alternative C would translate into approximately 3,957 employees instead of 3,787 as under the proposed project, which would meet the project objective related to creating jobs. It is likely that Alternative C could generate similar tax revenue and development fees for the City consistent with the project objective of providing "a positive fiscal impact on the local economy through...the generation of property taxes and development fees."

Because it is assumed that the building would not be substantially different under Alternative C, the objective to redevelop the property with R&D, biotechnology, and office uses in a secure and integrated campus setting, would be achieved, as under the proposed project. Alternative C would also provide new open spaces and additional landscaped areas with water-conserving plant species, similar to the proposed project and consistent with the project objectives of providing activated landscape and integrating sustainable strategies including water-saving strategies. Alternative C would develop a highly connected campus, similar to the proposed project. Specifically, Alternative C would include bicycle lanes, pedestrian paths, and open spaces and promote alternative modes of transportation by encouraging walking and biking.

5.7.3 Impacts

The impact analysis below focuses on those impacts that were determined to be significant and unavoidable and less than significant with mitigation under the proposed project. In accordance with CEQA Guidelines Section 15128, the preliminary analysis provided in the Initial Study (Appendix B) determined that the proposed project would have no impact or less-thansignificant impacts in all topics of the following analysis areas: aesthetics; agricultural and forestry resources; energy; hazards and hazardous materials; hydrology and water quality; land use; mineral resources; population and housing; public services; recreation; tribal cultural resources; utilities and service systems; and wildfire. As such, these topics are not evaluated further in this alternatives analysis.

5.7.3.1 Air Quality

Similar to the Proposed Project, construction of Alternative C would require the use of heavy equipment and other mobile sources that would generate criteria pollutants. However, this alternative would result in a 6-month shorter construction period. Overall, this alternative would likely require the same quantity of construction equipment and vehicles as the proposed project. Because of the slightly shorter schedule, the total emissions generated during construction would be less than those of the proposed project; however, daily emissions for this alternative could be similar to the proposed project, depending on the occurrence of overlap among construction phases. Daily construction emissions from use of equipment and on-road vehicles for the proposed project would be below the BAAQMD's significance thresholds for all pollutants;

therefore, Alternative C would not exceed any BAAQMD threshold. BAAQMD's-required BMPs, along with the City's standard conditions of approval would be implemented to reduce fugitive PM₁₀ and PM_{2.5} emissions. This impact would be similar to that of the proposed project and *less than significant*.

Operational emissions from both the proposed project and Alternative C have the potential to create air quality impacts. Alternative C would result in fewer laboratory sources of emissions but more vehicle trips because of the reduction in lab space and increase in the number of employees, respectively. This alternative also would have emergency generators but only 17; the proposed project would have 24. Therefore, stationary source emissions would be lower as well.

Impacts from operational emissions were found to above the BAAOMD-recommended mass emission thresholds for the proposed project both without and with mitigation measures (see Tables 4.2-6 and 4.2-7). Impacts during operations are primarily the result of direct emissions from area and mobile sources, although stationary and laboratory sources contribute a portion of the emissions. Because Alternative C would have less lab space and fewer generators than the proposed project, the operational emissions are expected to be less than that of the proposed project. Some of the reduction would be countered by the fact that Alternative C would have slightly more employees (i.e., approximately 4 percent more) and thus more mobile source emissions than the proposed project. Overall, Alternative C would have less emissions than the proposed project but not less than the BAAQMD thresholds, because the overall square footage of both would be the same. As noted above, area source emissions are the largest ROG emissions contributor and are correlated to square footage; thus, Alternative C would still result in ROG emissions that would be above the threshold of significance, even with implementation of Mitigation Measures AQ-1, AQ-2, and AQ-3. The reduction in stationary source and laboratory emissions of ROG would lessen the severity of the impact relative to the proposed project, but the impact would be *significant and unavoidable*. Emissions of all other pollutants would be well below the BAAQMD's thresholds for Alternative C, because emissions of the other pollutants would be below the thresholds for the proposed project.

Diesel-fueled engines, which generate DPM, would be used during construction of Alternative C, similar to the proposed project. Multiple sensitive receptors are within 1,000 feet of the Project site, including a day care and many off-site worker receptors. The proposed project's construction would result in an increase in the cancer risk, hazard index, and annual PM_{2.5} concentration for receptors near the project site. Alternative C would result in the same floor area compared to the proposed project; therefore, total construction activity would be similar to that of the proposed project. Alternative C's cancer risk, hazard index, and PM_{2.5} concentration would be similar to that of the proposed project because the construction period, and thus the overall duration when sensitive receptors would be exposed to DPM and PM_{2.5}, would be similar. As noted in Section 4.2, *Air Quality*, with implementation of **Mitigation Measure AQ-4**, the contribution from construction would be reduced such that the annual PM_{2.5} concentration during project operations would become the maximum value. The same result is expected for Alternative C in that the contribution from project operations would be the dominant contributor to the annual concentration rather than construction.

During operations, Alternative C would result in the same types of sources of TACs and PM_{2.5}. Overall, Alternative C would include fewer of one type of source (i.e., emergency generators) but more of other types of sources (i.e., vehicle trips), because it would have 17 emergency generators (compared to the proposed project's 24) but slightly more (approximately 4 percent) employees than the proposed project. Detailed dispersion modeling would be required to determine the actual impact results of Alternative C, which is beyond the level of detail warranted for evaluating project alternatives under

CEQA. As shown in Table 4.2-9, $PM_{2.5}$ emissions from the proposed project (0.46 µg/m³) would be above the BAAQMD threshold of 0.3 µg/m³ by a large margin, even with implementation of **Mitigation Measure AQ-4**. Therefore, it is likely that Alternative C would have an operational $PM_{2.5}$ concentration that is also above the BAAQMD threshold by a large margin. This impact would be slightly less than the impact of the proposed project and *significant and unavoidable*.

Traffic generated by the proposed project would have the potential to create CO hot spots at nearby roadways and intersections. However, because Alternative C would generate very similar traffic as the proposed project, the CO emissions and concentrations would also be similar. Regardless, for both the proposed project and Alternative C, CO concentrations are not expected to contribute to any new localized violations of the 1-hour or 8-hour ambient air quality standards, resulting in an impact less than the impact of the proposed project and a *less-than-significant* impact.

For the reasons described above, Alternative C in combination with other development in the City would not conflict with or obstruct implementation of the applicable air quality plan and would not result in a cumulatively significant impact. In addition, Alternative C in combination with other development would be consistent with the Clean Air Plan. With respect to cumulative PM_{2.5} concentrations, Alternative C would exceed BAAQMD's cumulative thresholds for PM_{2.5} concentrations during operations, for the reasons described above. Like the proposed project, Alternative C would contribute a cumulative considerable impact to an already-significant existing cumulative impact. Consequently, the cumulative impact for PM_{2.5} for sensitive receptors would be less than the impact of the proposed project but *significant and unavoidable* with mitigation.

Regarding the off-site redesignation parcels, under Alternative C these parcels which are currently designated as MIH under the General Plan, Specific Plan, and City Zoning Code would be redesignated to BTP-H (as is the case with the proposed project). It is not possible to definitively conclude if the existing zoning or rezoning would result in higher emissions, because that conclusion is highly dependent on the specific uses that would have been constructed under existing zoning and would be constructed under the rezoning. Similarly, construction emissions may differ between existing zoning and the rezoning of the off-site parcels. As with the proposed project, emissions during operations could exceed the BAAQMD's thresholds of significance at lab facilities if the off-site parcels are rezoned; however, such exceedances could also occur under the existing zoning. Because the magnitude of emissions exceedances from the rezoning, relative to the existing zoning, cannot be known at this time, it is conservatively assumed that the off-site redesignation could result in a cumulatively considerable net increase of criteria pollutants for which the project region is classified as nonattainment. This impact would be significant and unavoidable for criteria pollutant and ozone precursor emissions. In addition, for health risk-related impacts, the exact type and magnitude of impacts from the rezoning, relative to the existing zoning, cannot be known at this time. It is thus conservatively assumed that the off-site redesignation could expose sensitive receptors to substantial pollutant concentrations. Therefore, the off-site redesignation parcels, as with the proposed project, could expose sensitive receptors to substantial pollutant concentrations, resulting in a *significant and unavoidable* impact.

5.7.3.2 Biological Resources

Alternative C would be located on the same site as the proposed project and would require the same amount of building area demolition as the proposed project. In addition, the construction activities and types of equipment used for Alternative C would be similar to the activities and types under the proposed project. Potential impacts related to special-status species, sensitive natural communities, wetlands, wildlife movement, or conflicts with tree ordinances or habitat conservation plans that would occur under the proposed project would also occur under Alternative C; thus, implementation of **Mitigation Measure BIO-1** from the General Plan EIR, Special-status Species, Migratory Birds, and Nesting Birds, would continue to apply to this alternative. Overall, impacts would be *less than significant with mitigation* and similar to those identified for the proposed project.

Alternative C would not include the construction of any new uses on the off-site redesignation parcels. However, if future development in the off-site redesignation parcels would require tree removal, compliance with the City Tree Preservation Ordinance (No. 1271-2000) would be required. In addition, future development on the parcels would also be required to comply with the City's bird-safe design ordinance, City Municipal Code Chapter 20.310.002. Future development under the BTP-M zoning designation within the off-site redesignation parcels could affect special-status species, as well as the movement of wildlife, and impede the use of native wildlife nursery sites. However, impacts on specialstatus species, wildlife nursery site, and movement of wildlife, would be less than significant through implementation of **Mitigation Measure BIO-1** from the General Plan EIR, or other types of similar measures enforced through conditions of approval, and compliance with the City Ordinances (including the zoning ordinance, Tree Preservation Ordinance, bird-safe design, and lighting regulations), and the California Building Standards Code (Title 24, Building Energy Efficiency Standards). Therefore, impacts on biological resources associated with the redesignation parcels under Alternative C would be *less than significant* and similar to those identified for the proposed project.

5.7.3.3 Cultural Resources

Alternative C would be located on the same project site as the proposed project and would require the same amount of building area demolition as the proposed project. Moreover, the construction activities and types of equipment used for Alternative C would be similar to the activities and types under the proposed project; construction and demolition activities within the project site would also be similar to those under the proposed project. Potential impacts on historical resources, archaeological resources, and human remains that would occur under the proposed project would also occur under Alternative C; thus, implementation of **Mitigation Measures CULT-1**, Prepare Documentation in the Likeness of the Historic American Building Survey (HABS) in Consultation with Interested Parties; **CULT-2**, Initiate Public Interpretation Program; **CULT-3**, Train Workers to Respond to the Discovery of Cultural Resources; and **CULT-4**, Retain a Qualified Archaeologist to Perform Construction Monitoring, Evaluate Uncovered Archaeological Features, and Mitigate Potential Disturbance for Identified Significant Resources at the Project Site, would continue to apply to this alternative. Overall, as with the proposed project, impacts on historical resources would be *significant and unavoidable*. Impacts on archaeological resources would be *less than significant with mitigation*.

Under Alternative C, the off-site redesignation parcels currently designated as MIH under the General Plan, Specific Plan, and City Zoning Code would be redesignated to BTP-M (as is the case with the proposed project). Alternative C would not include the demolition of existing buildings or the construction of any new uses on the off-site redesignation parcels. Although the proposed project does not include the construction of any new uses on the off-site redesignation parcels, construction could occur following the redesignation under Alternative B. However, future projects would be required to undergo the appropriate environmental review, including the identification, protection, enhancement, perpetuation, and use of historical and archaeological resources, to ensure no impacts on the broad spectrum of cultural resources. In addition, the City of South San Francisco maintains General Plan policies and actions pertaining to cultural resources that would help ensure

impacts from future development at these parcels would be less than significant. Impacts on historical resources depend on the age and character of existing on-site uses. Changing the type of use that could be developed in the future would have no effect on existing on-site uses. Cultural resources impacts associated with the redesignation parcels under Alternative C, including historical resources, archaeological resources, and human remains, would be **less than significant**, as is the case for the proposed project.

5.7.3.4 Geology and Soils

Alternative C would be located on the same project site as the proposed project and would require the same amount of demolition as the proposed project. Moreover, construction activities and the types of equipment used for Alternative C would be similar to the proposed project. Potential impacts due to surface faulting and secondary ground failure; strong seismic ground shaking, soil erosion, expansive soil; soils that would be incapable of supporting septic tanks or alternative wastewater disposal systems; seismically related ground failure due to liquefaction, lateral spreading, subsidence, or landslides; or paleontological resources that would occur under the proposed project would also occur under Alternative C. Thus, implementation of **Mitigation Measure GEO-6**, Paleontological Monitoring, from the General Plan EIR, would continue to apply to this alternative. Overall, impacts would be *less than significant with mitigation* and similar to those identified for the proposed project.

Alternative C would not include the construction of any new uses on the off-site redesignation parcels. Future projects would be required to undergo the appropriate environmental review to ensure impacts on geology and soils would not be significant. In addition, policies and requirements included in the General Plan Update, City Municipal Code, and City Zoning Ordinance, as well as the California Building Code, would apply to any future development on the off-site redesignation parcels, which could minimize impacts related to geology and soils. Therefore, impacts on geology and soils associated with the redesignation parcels under Alternative C would be *less than significant* and similar to those identified for the proposed project.

5.7.3.5 Greenhouse Gas Emissions

Construction of Alternative C would generate carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O) from the exhaust of mobile and stationary construction equipment, employees' vehicles, and haul trucks. Overall, the construction period would be similar to the proposed project, because the square footage would be the same, and thus total GHG emissions would be similar. BAAQMD's CEQA Guidelines do not recommend a GHG emission threshold for construction-related emissions; therefore, construction of this alternative would not exceed thresholds. However, the guidelines recommend implementation of BMPs to help control or reduce GHG emissions. Therefore, the impact from construction of Alternative C would be less than the GHG construction impact from the proposed project and would thus be considered *less than significant* with implementation of the BMPs listed in Section 4.4, *Greenhouse Gases*.

Operation of Alternative C would similar direct and indirect GHG emissions than the proposed project because the total square footage would be the same. Some sources of emissions for this alternative would result in less emissions (i.e., emergency generators), while others would result in more emissions (i.e., vehicle trips). Like the proposed project, this alternative would also be consistent with the BAAQMD's land use thresholds (see Table 4.4-7). It is expected that this alternative would not include natural gas infrastructure, would not result in wasteful energy usage,

would meet the CALGreen Tier 2 nonresidential voluntary requirements for EV parking, and would achieve a VMT reduction greater than 15 percent relative to existing regional VMT. The project design features that would result in attainment of the BAAQMD land use thresholds (i.e., all-electric design, EV parking allotments, required TDM plan) are not necessarily unique to the proposed project and would likely be carried through to this alternative. Thus, like the proposed project, this alternative would be consistent with the BAAQMD GHG thresholds for land-use projects. Similarly, the design features that ensure consistency with the City's Climate Action Plan, 2022 Scoping Plan, and other plans, as discussed in Section 4.4, *Greenhouse Gases*, would also likely be carried through to this alternative. As such, Alternative C would not conflict with state, regional, or local plans designed to achieve the GHG reduction goals mandated by SB 32 and AB 1279 for 2030 and 2045. This impact would be similar to the impact of the proposed project and *less than significant*.

Climate change is a global problem, and GHG impacts are inherently cumulative. This is because GHGs contribute to the global phenomenon that is climate change, regardless of where GHGs are emitted. Climate change is the result of the individual contributions of countless past, present, and future sources. Therefore, GHG impacts are inherently cumulative, and the analysis above is inclusive of cumulative impacts.

Regarding the off-site redesignation parcels, under Alternative C these parcels which are currently designated as MIH under the General Plan, Specific Plan, and City Zoning Code would be redesignated to BTP-H (as is the case with the proposed project). Alternative C would not include the construction of any new uses on the off-site redesignation parcels. Although the proposed project does not include the construction of any new uses on the off-site redesignation parcels, construction could occur following the redesignation under Alternative C. However, future projects would be required to undergo the appropriate environmental review to ensure greenhouse gas-related impacts would not be significant. The redesignation would allow for high-density corporate headquarters, lab facilities, and office uses. The baseline for this evaluation is the existing zoning of the site, which, as noted above, currently allows for industrial-type uses. As discussed in Section 4.2, if lab uses are developed instead of industrial uses, the potential to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing emissions of GHGs would be reduced. Lab uses are more likely to align with the CARB's 2022 Scoping Plan and the City's CAP objectives. Thus, redesignating to lab uses can contribute to achieving the climate action goals set out in these plans. As such, the future uses associated with the off-site redesignation parcels would not result in significant impacts related to the emissions of greenhouse gases, similar to the proposed project, and the impact would be *less than significant*.

5.7.3.6 Noise and Vibration

Alternative C would result in buildout at the same height and density as the proposed project, but total buildout would comprise approximately 80 percent office uses and 20 percent lab uses instead of approximately 50 percent lab uses as currently proposed. Accordingly, the construction schedule under Alternative C would be reduced from approximately five years to four and a half years. However, since the footprint of the proposed structures would not change, overall construction activities near off-site sensitive land uses (e.g., the hotels east of U.S. 101, the planned development at 100 Produce Ave/124 Airport Boulevard, and San Bruno residences) would be similar under Alternative C. In addition, the types of equipment required and the intensity of construction activity near off-site noise-sensitive uses would also be similar. Therefore, construction noise levels at nearby noise-sensitive uses would be similar to the project under this alternative. As is the case with the proposed project, construction that occurs during "daytime hours" would be expected to comply with local standards and would result in *less-than-significant* noise impacts for Alternative C.

Construction during non-daytime hours would be expected for Alternative C, as is the case with the proposed project. However, similar to non-daytime construction noise for the project, non-daytime construction noise from Alternative C (including concrete pours, crane and drill work, and interior building work) would not be expected to exceed the applicable criterion. Non-daytime construction noise effects would be similar to the project under Alternative C. As is the case for the proposed project, non-daytime construction noise impacts would be considered *less-than-significant* for Alternative C.

With regard to construction haul truck noise, Alternative C would result in similar haul truck trips than the proposed project and would use the same haul routes as the project. Haul truck noise effects for Alternative C would therefore be similar to those disclosed for the project. As is the case with the proposed project, temporary noise impacts related to haul truck use for Alternative C would be *less than significant*.

Under Alternative C, the types and amount of rooftop heating and cooling equipment would be similar to types and amounts under the proposed project. In addition, building heights would remain the same (114 feet), resulting in mechanical equipment noise similar to that of the proposed project. Similar to the proposed project, noise from heating, cooling, and ventilation equipment at the project site would be required to demonstrate compliance with the noise standards in Table 8.32.030 of the South San Francisco Municipal Code and Action NOI-1.1.5 of the South San Francisco General Plan prior to the issuance of building permits (once final makes, models, sizes, and locations for equipment have been determined). Therefore, unattenuated mechanical equipment noise under Alternative C would be similar to that of the proposed project. Impacts related to mechanical equipment noise would be *less than significant* for Alternative C, as is the case for the proposed project.

With regard to emergency generator testing, Alternative C would be expected to include a similar number of and similar sizes of on-site emergency generators. Specifically, there would be 17 generators proposed under Alternative B as compared to the project's 24 proposed generators. As with the proposed project, even though the testing of emergency generators would be short term (i.e., 30 minutes each time) and intermittent (i.e., approximately once per month), unattenuated noise from the testing of emergency generators under Alternative C would result in audible noise at nearby sensitive uses. However, attenuation measures would be evaluated and included in the generator design prior to installation to ensure compliance with applicable General Plan policies and actions, such as Action NOI-1.1.5. The compliance of emergency generator testing noise with the noise standards in Municipal Code Table 8.32.030 would therefore be demonstrated prior to issuance of building permits once the final makes, models, sizes, and locations of the generators have been determined. As is the case with the proposed project, noise impacts from emergency generator testing would be less than significant under Alternative C and would be slightly less under Alternative C than with the project (because fewer generators are proposed for this Alternative). In addition, with regard to loading docks, Alternative C would be expected to result in a similar amount of loading activities as the proposed project. Therefore, loading dock noise would be similar to the project under this alternative. As with the proposed project, temporary and short-term increases in noise from project loading activity would not be considered substantial. Impacts related to loading dock noise from Alternative C would be *less than significant*.

During operations, Alternative C would result in 3,957 employees as opposed to the 3,787 employees estimated under the proposed project. This has the potential to result in slightly greater traffic volumes as compared to the proposed project. Specifically, the approximately 4 percent increase in employees could theoretically result in an approximately 4 percent increase in vehicle trips over the proposed

project. A four percent increase in traffic volumes would result in an approximately 0.2 dB increase in noise. Traffic noise impacts for the project were determined to be less than significant because existing ambient noise levels already exceed modeled existing plus traffic noise levels by at least 9 dB along all evaluated segments; therefore, existing ambient noise levels would essentially mask any noise from project-related increases in traffic. Even with a potential increase of 0.2 dB in traffic noise over the proposed project, traffic noise increases from Alternative C would also be less than significant. Therefore, although traffic noise might be slightly greater under Alternative C as compared to the proposed project (with an estimated increase of up to 0.2 dB predicted), traffic noise impacts under Alternative C would be **less than significant** (as is the case for the proposed project).

Regarding parking garage noise, as part of Alternative C, parking spaces would increase by approximately 29 percent. However, these new parking spaces would be located in below-grade parking levels of the proposed parking garages. Noise from below-grade parking levels do not contribute meaningfully to overall parking garage noise because noise is dominated by activity at the above-grade parking garage levels. Therefore, noise associated with parking garages would be similar to the proposed project under Alternative C. As is the case for the proposed project, parking garage noise impacts would be *less than significant* for Alternative C.

Alternative C would also include an on-site day care with outdoor play area. It is assumed that the day care would have a similar capacity as compared to the proposed project. Therefore, outdoor play area noise under Alternative C would be expected to result in similar overall noise levels as compared to the project; this alternative would result in *less-than-significant* noise impacts at nearby sensitive receptors from the outdoor play area associated with the day care, as is the case with the proposed project.

With regard to damage-related vibration impacts, the heavy construction equipment proposed for use, and the proximity of equipment to adjacent off-site structures, would be essentially the same under Alternative C as the proposed project. This is because the footprint of development is not expected to change under this alternative. The nearest structures to the project site (and Alternative C site), are categorized as "historic" and "some old buildings" according to Caltrans vibration guidelines, and could be as close as 10 feet from project and Alternative C construction activities. As is the case with the proposed project, the use of vibration-intensive equipment for the construction of Alternative C has the potential to result in vibration levels in excess of the applicable damage criterion for the nearest structures. Vibration-related damage impacts would be the same for Alternative C as for the proposed project. Therefore, vibration-related damage impacts would be considered significant before mitigation for Alternative C, as is the case for the proposed project. Implementation of project **Mitigation Measure NOI-1** would also be required under Alternative C. Project Mitigation Measure NOI-1 would ensure that vibration would be kept below the level that may cause damage to nearby sensitive structures. It would also require monitoring to ensure that vibration-related damage effects would not occur. This mitigation measure would reduce vibration related damage impacts to a less-than-significant level. As is the case with the proposed project, vibration-related damage impacts would be *less than significant with mitigation*.

Regarding annoyance-related vibration impacts, since the proximity of construction activities to nearby sensitive land uses would be similar under this alternative (e.g., the hotels east of U.S. 101, the planned development at 100 Produce Ave/124 Airport Boulevard, and San Bruno residences), vibration impacts related to annoyance would also be similar. Most construction activities would occur during daytime hours (when people are less sensitive to vibration). The limited nighttime construction activities would all occur at least 250 feet from the nearest sensitive use (i.e., the Travelodge hotel) and would generate vibration levels well below the "strongly perceptible" level at

this location, and at other sensitive locations. For these reasons, annoyance-related vibration impacts would be similar to those identified for the proposed project and *less than significant* for Alternative C.

Overall, noise and vibration impacts under Alternative C at the project site would be similar to those disclosed for the proposed project, with the exception of traffic noise which may increase slightly under this alternative. In addition, emergency generator noise and construction noise effects may be slightly reduced due to the fewer number of generators and the slightly reduced duration of construction under Alternative C. In summary, noise and vibration impacts at the project site would be similar to those disclosed for the project, and would remain *less than significant with mitigation*.

Regarding the off-site redesignation parcels, under Alternative C these parcels which are currently designated as MIH under the General Plan, Specific Plan, and City Zoning Code would be redesignated to BTP-H (as is the case with the proposed project). Alternative C would not include the construction of any new uses on the off-site redesignation parcels. Although the proposed project does not include the construction of any new uses on the off-site redesignation parcels, construction could occur following the redesignation under Alternative C. However, future projects would be required to undergo the appropriate environmental review to ensure noise and vibration-related impacts would not be significant. During this process, compliance with applicable thresholds would be evaluated prior to a specific project receiving environmental clearance and/or building permits. In addition, the City of South San Francisco contains General Plan policies and actions pertaining to noise and vibration that would help ensure impacts from future development at these parcels would be less than significant. Noise and vibration impacts associated with the redesignation parcels under Alternative C would be *less than significant*, as is the case for the proposed project.

5.7.3.7 Transportation and Circulation

Alternative C would increase the number of employees on-site by approximately 4 percent by shifting land uses to include more office and less lab. Alternative C would remain inconsistent with the City's plans and policies as it would substantially increase land uses along the Produce Avenue corridor, an area where additional density was not identified or studied in the Lindenville Specific Plan or General Plan. With implementation of **Mitigation Measure TRANS-1**, Alternative C would advance off-site improvements consistent with buildout of the General Plan and Lindenville Specific Plan to adequately address its effects on the transportation network. Nonetheless part of the right-of-way within **Mitigation Measure TRANS-1** is under the jurisdiction of Caltrans and the jurisdiction of the City of San Bruno, and neither jurisdiction has a mechanism for funding this mitigation. Therefore, Impact TRANS-1 would remain *significant and unavoidable* under Alternative C and greater than the project's impact. Together with cumulative projects identified, Alternative C would also have a *significant and unavoidable* impact consistent with C-TRANS-1, and would also be greater than the project's impact.

Alternative C would have the same TDM program as the proposed project. The TDM program would include the same combination of a trip reduction program, bikeway network expansion, and extension of transit network coverage, resulting in a VMT reduction of 29.5 percent. The TDM program would reduce VMT below the City's threshold of significance of 12.7 HBW VMT per employee. Therefore, Impact TRANS-2 would be *less than significant*, as with the project.

Alternative C would have the same access plan as the proposed project while serving more employees and travel demand. Consequently, Alternative C would exacerbate safety hazards along Produce Avenue and Shaw Road and freeway ramp queueing onto US-101. The implementation of new traffic signals along Produce Avenue and San Mateo Avenue via **Mitigation Measure TRANS-1** would reduce the potential for conflicts and queueing under Alternative C. However, part of this right-of-way is under the jurisdiction of Caltrans and the jurisdiction of the City of San Bruno, and neither jurisdiction has a mechanism for funding this mitigation. Alternative C would not include features that would alter emergency vehicle access routes or roadway facilities; emergency vehicles would have full access, and each driveway would be equipped to handle all types of emergency vehicles. Therefore, impact TRANS-3 would remain *significant and unavoidable* and greater than project's impact. Together with cumulative projects identified, Alternative B would also have a *significant and unavoidable* impact consistent with C-TRANS-3, and would be greater than the project's impact. Impact TRANS-Impact TRANS-4 related to emergency access would remain *less than significant*, as with the project.

Under Alternative C, the off-site redevelopment parcels would be redesignated to BTP-H (as is the case with the proposed project). Alternative C would not include the construction of any new uses on the off-site redesignation parcels. Although the proposed project does not include the construction of any new uses on the off-site redesignation parcels, construction could occur following the redesignation under Alternative C. Compared to the City's land use forecasts in the General Plan and Lindenville Specific Plan, Alternative C would not materially affect the projected number of employees or travel demand along the Produce Avenue corridor and Lindenville as a whole. For these reasons, transportation impacts associated with the redesignation parcels under Alternative C would be *less than significant*, as is the case for the proposed project.

5.8 Comparison of Alternatives

CEQA Guidelines Section 15126.6 requires a comparison of the alternatives to the project (presented above) and suggests that a matrix may be used to summarize the comparison. **Table 5-4** compares the significant impacts of the proposed project as well as the less-than-significant impacts with mitigation to those of the alternatives. **Table 5-5** compares the ability of the alternatives to meet the objectives of the proposed project.

5.9 Environmentally Superior Alternative

CEQA Guidelines Section 15126.6(e)(2) requires identification of an environmentally superior alternative (i.e., the alternative that has the fewest significant environmental impacts) from among the other alternatives evaluated if the proposed project has significant impacts that cannot be mitigated to a less-than-significant level. If the No Project Alternative (i.e., Alternative A) is found to be the environmentally superior alternative, the EIR must identify an environmentally superior alternative among the other alternatives.

Alternative C—the Increased Office Space Alternative would not avoid any of the significant and unavoidable impacts of the proposed project. In fact, Impact TRANS-1, TRANS-3, C-TRANS-1, and C-TRANS-3 would increase in severity under this alternative. Therefore, Alternative C is not the environmentally superior alternative.

As shown in **Table 5-4**, Alternative B—BTP-M Alternative would reduce, but would not avoid, all of the project's significant and unavoidable impacts. Alternative B also would not result in any new significant and unavoidable impacts. Therefore, Alternative B is the environmentally superior alternative.

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Table 5-4. Comparison of Proposed Project Significant Impacts and Less-than-Significant Impacts with Mitigation to Alternatives

Potential Environmental Impacts	Proposed Project	Alternative A — No Project Alternative	Alternative B—BTP-M Alternative
Significant and Unavoidable Impacts			
Impact AQ-2: The project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is classified as nonattainment under an applicable federal or state ambient air quality standard.	Significant and Unavoidable	No Impact (less than project)	Less than Significant (less than project)
Impact AQ-3: The project would expose sensitive receptors to substantial pollutant concentrations.	Significant and Unavoidable	No Impact (less than project)	Significant and Unavoidable (less than project)
Impact C-AQ-2: The project, inclusive of the off-site redesignation parcels, together with the cumulative projects identified, would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.	Significant and Unavoidable	No Impact (less than project)	Significant and Unavoidable (similar to project)
Impact C-AQ-3: The project, inclusive of the off-site redesignation parcels, together with the cumulative projects identified, would expose sensitive receptors to substantial pollutant concentrations.	Significant and Unavoidable	No Impact (less than project)	Significant and Unavoidable (similar to project)
Impact CULT-1: The project would cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.	Significant and Unavoidable	No Impact (less than project)	Significant and Unavoidable (similar to project)
Impact TRANS-1: The project would conflict with a program, plan, ordinance, or policy, addressing the circulation system, including transit, roadway, bicyclist, and pedestrian facilities.	Significant and Unavoidable	No Impact (less than project)	Significant and Unavoidable (less than the project)
Impact TRANS-3: The project would substantially increase hazards due to a geometric design feature or incompatible uses.	Significant and Unavoidable	No Impact (less than project)	Significant and Unavoidable (less than the project)
Impact C-TRANS-1: The project, inclusive of the off-site redesignation parcels, together with the cumulative projects identified, would conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.	Significant and Unavoidable	No Impact (less than project)	Significant and Unavoidable (less than the project)
Impact C-TRANS-3: The project, inclusive of the off-site redesignation parcels, together with the cumulative projects identified, would substantially increase hazards due to a geometric design feature or incompatible uses.	Significant and Unavoidable	No Impact (less than project)	Significant and Unavoidable (less than the project)
Less-than-Significant Impacts with Mitigation			
Impact CULT-2: The project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.	Less than Significant with Mitigation	No Impact (less than project)	Less than Significant with Mitigation (similar to project)
Impact C-CUL-2: The project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.	Less than Cumulatively Considerable with Mitigation	No Impact (less than project)	Less than Cumulatively Considerable with Mitigation (similar to project)

Alternatives

Alternative C—Increased Office Space Alternative

Significant and Unavoidable (less than project)

Significant and Unavoidable (less than project)

Significant and Unavoidable (similar to project)

Significant and Unavoidable (similar to project)

Significant and Unavoidable (similar to project)

Significant and Unavoidable (greater than the project)

Less than Significant with Mitigation (similar to project)

Less than Cumulatively Considerable with Mitigation (similar to the project)

City of South San Francisco

Potential Environmental Impacts	Proposed Project	Alternative A — No Project Alternative	Alternative B—BTP-M Alternative
Impact NOI-2: The project would not generate excessive ground-borne vibration or ground-borne noise levels.	Less than Significant with Mitigation	No Impact (less than project)	
Impact BIO-A : The project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as candidate, sensitive, or special-status species in local or regional plans, policies, or regulations by the California Department of Fish and Game or U.S. Fish and Wildlife Service.	Less than Significant with Mitigation	No Impact (less than project)	Less than Significant with Mitigation (similar to project)
Impact BIO-D: The project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	Less than Significant with Mitigation	No Impact (less than project)	Less than Significant with Mitigation (similar to project)
Impact GEO-F: The project would not directly or indirectly destroy a unique paleontological resource or site or unique geological feature.	Less than Significant with Mitigation	No Impact (less than project)	Less than Significant with Mitigation (similar to project)

Alternatives

Alternative C—Increased Office Space Alternative

Less than Significant with Mitigation (similar to project)

Less than Significant with Mitigation (similar to project)

Less than Significant with Mitigation (similar to project)

Table 5-5. Ability of Alternatives to Meet Project Objectives

Project Objective	Alternative A — No Project Alternative	Alternative B—BTP-M Alternative	Alternative C—Increased Office Space Alternative
Redevelop the property with R&D, biotechnology, and office uses in a secure and integrated campus setting.	No	Yes, but to a reduced extent	Yes
Create an iconic, inspiring, and dynamic gateway presence along U.S. 101 with high visibility.	No	Yes, but to a reduced extent	Yes
Incorporate a building and landscape design that sets a unique identity within the city.	No	Yes, but to a reduced extent	Yes
Utilize a shifting and articulated building massing that creates visual, desirable, and usable amenities, including outdoor terraces for tenants.	No	Yes	Yes
Provide an activated landscape area that, in addition to being pedestrian friendly, encourages walking and biking, interaction, and collaboration and provides a wide range of opportunities for wind-protected outdoor activities.	No	Yes	Yes
Integrate sustainable strategies to advocate an energy-efficient and performative design, including water-saving strategies.	No	Yes	Yes
Provide a highly efficient and flexible workplace with daylight for interior spaces and outward views of the surrounding areas.	No	Yes	Yes
Provide a positive fiscal impact on the local economy through the creation of jobs, enhancement of property values, support for local transportation infrastructure, and the generation of property tax and development fees.	No	Yes, but to a reduced extent	Yes
Provide well-designed, flexible buildings and floor plates that can accommodate a variety of tenants to ensure the proposed project will be responsive to market conditions and demands	No	Yes, but to a reduced extent	Yes

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Alternatives

Pursuant to CEQA Guidelines Section 15126.2, this chapter discusses significant environmental effects that cannot be avoided as identified in this environmental impact report (EIR); significant irreversible environmental changes, including those related to energy and the consumption of nonrenewable resources; and growth-inducing impacts. For a complete summary of the potential environmental impacts that could occur from implementation of the project, refer to Chapter 2, *Executive Summary*. For an evaluation of alternatives that could reduce or avoid the project's significant environmental effects of the project, refer to Chapter 5, *Alternatives*.

6.1 Significant Environmental Effects that Cannot Be Avoided

In accordance with CEQA Section 21067 and with CEQA Guidelines Sections 15126(b) and 15126.2(b), the purpose of this section is to identify significant environmental impacts that could not be eliminated or reduced to less than significant levels by implementation of mitigation measures included in the proposed project or identified in Chapter 4, *Environmental Setting, Impacts, and Mitigation*. The findings of significant impacts are subject to final determination by the City of South San Francisco (City) City Council as part of the certification process for this EIR.

Based on the analysis provided in Chapter 4 of this EIR, the following significant and unavoidable impacts were identified for the proposed project.

Air Quality

Impact AQ-2: The project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is classified as nonattainment under an applicable federal or state ambient air quality standard. (*Significant and Unavoidable*)

Construction associated with the proposed project would result in PM_{2.5} concentrations that could exceed the BAAQMD threshold. However, it was determined that emissions would be below the BAAQMD threshold for all pollutant emissions for all years. Best management practices during construction activities would also be implemented to minimize impacts in accordance with BAAQMD guidelines as well as the City of South San Francisco's (City's) standard conditions of approval.

During project operation, the proposed project would result in area source emissions, specifically ROG emissions, from the use of consumer products, such as cleaning products, within the buildings, as well as landscaping equipment, off-gassing from architectural coatings (e.g., paint), and mobile, stationary, and laboratory sources. It was determined that unmitigated daily ROG emissions from operation of the proposed project would exceed BAAQMD's threshold, but no other pollutants would exceed the threshold. Implementation of **Mitigation Measures Mitigation Measures AQ-1**, AQ-2, and AQ-3, which would require low-VOC coatings during project operation, low-VOC cleaning supplies, and use of zero-emission landscape equipment would help reduce emissions, but impacts would still remain *significant and unavoidable*.

Off-site redesignations parcels: Although the exact type and magnitude of impacts from the rezoning, relative to the existing zoning, are unknown at this time, it is conservatively assumed that the off-site redesignation could expose sensitive receptors to substantial ROG concentrations. This is due to the potential development of industrial uses at the off-site redesignation parcels because these parcels are currently zoned for industrial uses. Therefore, the off-site redesignation parcels portion of this proposed project could expose sensitive receptors to substantial pollutant concentrations. This impact would be *significant and unavoidable*. Mitigation measures similar to those required for the proposed project may reduce emissions and thus pollutant concentrations, but the impact could remain significant.

Impact AQ-3: The project would expose sensitive receptors to substantial pollutant concentrations. (*Significant and unavoidable*)

During construction activities, sensitive worker receptors would be exposed to substantial concentrations of PM_{2.5} from off-road equipment and heavy-duty trucks. To reduce PM_{2.5} concentrations during construction, the project sponsor would need to implement Mitigation Measure AQ-4, which would require construction mitigation measures to reduce dust emissions. In addition, operational sources of PM_{2.5} exhaust and fugitive dust emissions would be generated by emergency generators and employees' vehicles. Without implementation of dust reduction measures, the maximum PM_{2.5} concentration would result from construction activities. However, with the reduction measures implemented, construction PM_{2.5} concentrations would be reduced, and the annual $PM_{2.5}$ concentration during operations would become the maximum value, as shown in Table 4.2-9. The primary reason for the PM_{2.5} exceedance is the proximity of worker receptors to sources of $PM_{2.5}$ from project operations (e.g., on-road vehicle trips to and from the site). The worker receptors who would be exposed to the PM_{2.5} exceedance would be those at the adjacent site east of the Infinite 101 site. The distance between workers at the adjacent site and operations at the project site would be minimal and would not allow pollutant concentrations to disperse. As such, the exceedance of the threshold would be largely due to the proximity of the receptors. No additional measures have been identified to avoid this exceedance. This impact would be *significant and unavoidable*, even with implementation of Mitigation Measure AQ-4.

Off-site Redesignation Parcels: For the proposed project, cancer risks would be below the applicable threshold; however, PM_{2.5} concentrations would exceed the threshold due to off-road equipment and heavy-duty trucks that generate dust. If the off-site parcels are redesignated to allow R&D uses, the relatively higher vehicle volumes associated with R&D facilities compared to the industrial uses allowed under the existing zoning could result in PM_{2.5} concentration exceedances, resulting in a significant cancer risk. Although no construction or development is currently proposed at the off-site redesignation parcels, potential impacts were analyzed, based on the existing zoning. It was determined that the off-site redesignation parcels could expose sensitive receptors to substantial pollutant concentrations if industrial uses are developed at these sites. As such, this impact would be *significant and unavoidable*. Mitigation measures similar to those required for the proposed project may reduce emissions and thus pollutant concentrations, but the impact could remain significant.

Impact C-AQ-2: The project, inclusive of the off-site redesignation parcels, together with the cumulative projects identified, would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. (Significant *and Unavoidable*)

As discussed under Impact AQ-2, the proposed project would generate ROG in excess of BAAQMD's construction and operational thresholds. Implementation of **Mitigation Measures AQ-1, AQ-2**, and **AQ-3**, which would require low-VOC coatings during project operation, low-VOC cleaning supplies, and use of zero-emission landscape equipment would help reduce emissions. Accordingly, the proposed project's contribution to a cumulative criteria pollutant emissions impact would be *significant and unavoidable*.

Impact C-AQ-3: The project, inclusive of the off-site redesignation parcels, together with the cumulative projects identified, would expose sensitive receptors to substantial pollutant concentrations. (*Significant and Unavoidable*)

As discussed previously, sensitive worker receptors would be exposed to substantial concentrations of PM_{2.5} from off-road equipment and heavy-duty trucks. To reduce PM_{2.5} concentrations during construction, the project sponsor would need to implement **Mitigation Measure AQ-4**. However, PM_{2.5} levels would continue to exceed threshold levels. Therefore, the proposed project's contribution to cumulative impacts during construction would be *significant and unavoidable*.

During operation, existing stationary, roadway, and railway sources in combination with the proposed project would not exceed BAAQMD cumulative thresholds for cancer risk or the hazard index. However, annual $PM_{2.5}$ concentrations would exceed BAAQMD's cumulative threshold of 0.8 μ g/m³ for both types of receptors. Accordingly, worker and day-care sensitive receptors would be exposed to substantial cumulative concentrations of PM_{2.5}.

The primary reason for the exceedances is the high level of ambient PM_{2.5} emissions generated by two facilities within 1,000 feet of the project site, the Granite Rock Company at 1321 Lowrie Avenue and Central Concrete Supply at 1305 San Mateo Avenue, even though the maximally affected receptors would be at least 860 feet from the two facilities. The contribution from the project would be substantially less than the contribution from the existing stationary sources; however, as discussed for project-level impacts, the contribution of the project alone would exceed BAAQMD's project-level threshold. Therefore, the health risks associated with TACs emitted by the proposed project in combination with health risks associated with existing TAC sources would result in a cumulatively considerable local health risk at worker and day-care receptors near the project site. Therefore, the proposed project's contribution to cumulative impacts during operation would be *significant and unavoidable*, and the project's contribution would be cumulatively considerable.

Cultural Resources

Impact CULT-1: The project would cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5. (*Significant and Unavoidable*)

The proposed project would demolish the Golden Gate Produce Terminal facility, surface parking, and limited landscaping to construct the proposed project. The Golden Gate Produce Terminal is recommended as eligible for listing in the CRHR and NRHP and is therefore considered a historical resource for CEQA compliance. Therefore, the demolition of Golden Gate Produce Terminal within the project site would result in a substantial adverse change to the historical resource.

Implementation of **Mitigation Measure CULT-1** and **Mitigation Measure CULT-2** would reduce impacts to these historic features; however, impacts would remain significant and unavoidable impacts would remain *significant and unavoidable*.

Transportation & Circulation

Impact TRANS-1: The project would conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicyclist, and pedestrian facilities. (*Significant and Unavoidable*)

The project includes various design features that are consistent with goals, policies, and actions identified in the General Plan and Lindenville Specific Plan, such as General Plan Goals MOB-1, MOB-2, MOB-4, and MOB-5, Lindenville Specific Plan goals MOB-1, MOB-2, and MOB-3, as well as the Active South City Plan, and the TDM ordinance. Although the project's site plan and TDM plan exhibit features that are consistent with goals, policies, and actions identified in the General Plan and Lindenville Specific Plan, the project overall remains inconsistent as it would add 1.7 million square feet of land use growth beyond what the City had planned for and analyzed along the Produce Avenue corridor, Lindenville, and citywide. This intensification of uses would occur in a location with insufficient access and circulation facilities, limited transportation options, and challenging connectivity to the regional transportation network, which would result in a significant impact due to conflicts with the goals and policies of the General Plan and Lindenville Specific Plan. With implementation of Mitigation Measure TRANS-1, the proposed project would advance offsite improvements consistent with Actions MOB-1.2.1, MOB-2.1.1, 2.1.3, 2.1.4, 3.2.1, and 3.2.2 to adequately address its effects on the transportation network. However, this mitigation is not applicable to the right-of-way changes within the jurisdiction of Caltrans and the City of San Bruno that would be required as part of the proposed project. Therefore, even with the implementation of Mitigation Measure TRANS-1, impacts would remain *significant and unavoidable* because the City of South San Francisco cannot ensure its implementation.

Impact TRANS-3: The project would increase hazards due to a geometric design feature or incompatible uses. (*Significant and Unavoidable*)

The project would increase vehicle trips along southbound Produce Avenue and the southbound U.S. -101 Produce Avenue off-ramp, resulting in a net increase of approximately 170 vehicle trips in the AM peak hour and 30 vehicle trips in the PM peak hour. The South San Francisco General Plan EIR (Impact TRANS-4) determined that implementation of the General Plan is likely to increase vehicle trips on City freeway ramps, which could exacerbate vehicle queues on ramps already in excess of their storage capacity. As such, the proposed project would result in a significant impact by exacerbating freeway ramp queueing and potential for conflicts at this intersection. To reduce impacts, the proposed project shall fund adjacent improvements identified in the General Plan, Lindenville Specific Plan, and Active South City Plan via Mitigation Measure TRANS-1. In addition, the proposed project would increase vehicle trips entering and exiting Terminal Court at Produce Avenue, resulting in a net increase of approximately 730 vehicle trips in the AM peak hour and 700 vehicle trips in the PM peak hour to Terminal Court. The substantial increase in vehicle trips exiting Terminal Court during the PM peak hour would create a hazardous condition due to high-speeds and signal control. In addition, pedestrians and bicyclists crossing Terminal Court may also encounter conflicts with vehicles. As discussed above, to reduce impacts, the proposed project would implement Mitigation Measure TRANS-1.

The project would also increase vehicle trips entering and exiting via Shaw Road, resulting in a net increase of approximately 360 vehicle trips in the AM peak hour and 400 vehicle trips in the PM peak hour. The increase in vehicle trips exiting Terminal Court during the PM peak hour would create a hazardous condition due to the lack of signal control. As discussed above, to reduce impacts, the proposed project would implement **Mitigation Measure TRANS-1**.

Overall, the project's implementation of new traffic signals along Produce Avenue and San Mateo Avenue via **Mitigation Measure TRANS-1** would reduce the potential for conflicts and queueing at affected intersections. However, two of the intersections on Produce Avenue are under the jurisdiction of Caltrans and one is under the jurisdiction of the City of San Bruno, and neither jurisdiction has a mechanism for funding this mitigation. Therefore, even with the implementation of **Mitigation Measure TRANS-1**, impacts would remain *significant and unavoidable* because the City of South San Francisco cannot ensure its implementation.

Impact C-TRANS-1: The project inclusive of the off-site redesignation parcels, together with the cumulative projects identified, would conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities (*Significant and Unavoidable*)

As discussed under Impact TRANS-1, the project would have a significant and unavoidable impact. Although the project's site plan and TDM plan exhibit features that are consistent with goals, policies, and actions identified in the General Plan and Lindenville Specific Plan, the project remains inconsistent overall as it would exceed the level of multimodal travel that the City had planned for the Produce Avenue corridor, Lindenville, and citywide. The project's lack of consistency with the General Plan and Lindenville Specific Plan would constitute a significant impact. Therefore, cumulative impacts would be *significant and unavoidable*, and the project's contribution would be cumulatively considerable.

Impact C-TRANS-3: The project, inclusive of the off-site redesignation parcels, together with the cumulative projects identified, would substantially increase hazards due to a geometric design feature or incompatible uses. (*Significant and Unavoidable*)

As discussed under Impact TRANS -3, the project would increase vehicle trips along Produce Avenue at the intersections of U.S. 101 off_ramp/Produce Avenue and U.S. 101 on_ramp/Produce Avenue/Terminal Court. The addition of vehicle trips along the U.S. 101 southbound off-ramp would cause vehicle queues to spill over onto U.S. 101, while both intersections would meet peak-hour signal warrants. The South San Francisco General Plan EIR determined that implementation of the General Plan is likely to increase vehicle trips on city freeway ramps, which could exacerbate vehicle queues on ramps already in excess of their storage capacity. The project would exacerbate this impact. Therefore, cumulative impacts would be *significant and unavoidable*, and the project's contribution would be cumulatively considerable.

6.2 Significant Irreversible Environmental Changes

In accordance with CEQA Section 21100(b)(2)(B), and CEQA Guidelines Section 15126.2(c), an EIR must identify any significant irreversible environmental changes that could result from implementation of the proposed project. An EIR is required to consider whether "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 non-use thereafter unlikely" (per

CEQA Guidelines Section 15126.2[c]). "Nonrenewable resource" refers to the physical features of the natural environment, such as land, waterways, etc. This may include current or future uses of non-renewable resources and secondary or growth-inducing impacts that commit future generations to similar uses. According to the CEQA Guidelines, irretrievable commitments of resources should be evaluated to ensure that such current consumption is justified.

Chapter 4, *Environmental Setting, Impacts, and Mitigation*, and the Initial Study (Appendix B) discusses topics that could be affected by irreversible environmental impacts, such as agricultural and forestry resources, biological resources, energy, hydrology, and population and housing. None of these environmental topics were found to have significant impacts as a result of the proposed project.

No significant irreversible environmental damage related to hazardous materials is anticipated to occur with implementation of the proposed project. Compliance with federal, state, and local regulations related to research-and-development (R&D) uses, as well as implementation of the Phase II ESA recommendations idenfitied in Section 3.9, *Hazards and Hazardous Materials*, of the Initial Study, would ensure that the possibility that hazardous substances from the demolition, construction, and operation of the proposed project, would not cause significant and unavoidable environmental damage.

The proposed project would involve demolition of existing buildings, excavation of soils, construction activities to build new structures and below-grade parking, and the installation of new roadway, infrastructure, and landscaping improvments. Grading would be required for general site preparation, below-grade levels of the parking garages, and for proper on-site stormwater flows. However, grading would not be excessive or greater than what is necessary to complete the project and achieve compliance with stormwater requirements.

Construction and implementation of the proposed project would not result in a large commitment of natural resources, require highway improvements to previously inaccessible areas, or cause irreversible damage due to environmental accidents. No other irreversible permanent changes such as those that might result from construction of a large-scale mining project, hydroelectric dam, or other industrial project would result from development of the proposed project.

Energy and Consumption of Nonrenewable Resources

Section 21100(b)(3) of CEQA requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing any inefficient, wasteful, and unnecessary consumption of energy. Implementation of the proposed project would commit future generations to an irreversible commitment of energy resources in the form of usage of nonrenewable fossil fuels due to vehicle and equipment use during demolition, construction, and operation of the proposed project. See Section 3.6, *Energy*, of the Intial Study (Appendix B), for a discussion of the project's impacts related to electricity, natural gas, and transportation fuel demand. Consumption of nonrenewable resources, other than through energy consumption, may include conversion of agricultural lands to urban uses, and loss of access to mineral reserves. As discussed in Section 3.2, *Agriculture and Forestry Resources*, of the Initial Study, the project site is located in a developed, urban area of the city. No existing agricultural lands would be converted to non-agricultural uses. In addition, as discussed in Section 3.12, *Mineral Resources*, of the Initial Study, the project site does not contain known mineral deposits and is not a locally important mineral resource recovery site; thus, development of the proposed project would not result in the loss of access to mining reserves.

Resources consumed during demolition, construction, and operation would include concrete, gravel, asphalt, metals, and water. Similar to the existing uses on the project site, the proposed project would irreversibly use water and solid waste landfill resources, as described in more detail in Section 3.19, *Utilities and Service Systems*, of the Initial Study. However, the proposed project would not involve a large commitment of resources relative to existing conditions or relative to supply, nor would it consume any of those resources wastefully. Section 3.19, *Utilities and Service Systems*, describes the water supply and demand aspects of the proposed project. As discussed, through implementation of demand management measures to offset the proposed project's demand, as well as the Water Shortage Contingency Plan, the project would result in a less-than-significant impact on water supply. In addition, the project site is serviced by existing water, wastewater, stormwater, natural gas, electric, telecommunications, and waste and recycling services. New on-site facilities would be connected to new services through the installation of new, localized connections. Expansion of or an increase in capacity of off-site infrastructure would occur as required by the utility providers.

Project construction and operation would require the irreversible commitment of limited, slowly renewable, and non-renewable resources. However, consumption of such resources would not be considered substantial or wasteful. Therefore, for the reasons mentioned above, the proposed project would not result in the wasteful use of energy, water, and other non-renewable resources.

6.3 Growth-Inducing Impacts

As required by CEQA Guidelines Section 15126.2(d), an EIR must consider the ways in which the proposed project could directly or indirectly foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Growth-inducing impacts can result from the elimination of obstacles to growth; through increased stimulation of economic activity that would, in turn, generate increased employment or demand for housing and public services; or from the implementation of policies or measures that do not effectively minimize premature or unplanned growth.

This section of the EIR discusses the manner in which the project could affect growth in the City and the larger Bay Area. In accordance with the CEQA Guidelines, Section 15126.2(e), this discussion of growth inducement is not intended to characterize the project as necessarily beneficial, detrimental, or of little significance to the environment. This growth inducement discussion is provided for informational purposes so that the public and local decision-makers have an understanding of the potential long-term growth implications of the project. Although CEQA requires disclosure of growth inducement effects, an EIR is not required to anticipate and mitigate the effects of a particular project on growth in other areas.

Growth-inducing impacts such as those associated with job increases that might affect housing and retail demand in other areas over an extended time period are difficult to assess with precision, since future economic and population trends may be influenced by unforeseeable events and business development cycles. Moreover, long-term changes in economic and population growth are often regional in scope; they are not influenced solely by changes in policies or specific development projects. Business trends are influenced by economic conditions throughout the state and country as well as around the world.

Another consideration is that the creation of growth-inducing potential does not automatically lead to growth. Growth occurs through capital investment in new economic opportunities by the private and/or public sector. Investment patterns reflect, in turn, the desires of investors to mobilize and allocate their resources to development in particular localities and regions. A combination of these and other pressures serve to fashion local land use and development policy. The regulatory authority of local governments serves to mediate the growth-inducing potential or pressure created by a project or plan. In South San Francisco, growth is heavily influenced by the biotechnology and R&D industries, and business decisions to pursue new development within the City are generally guided by non-CEQA factors such as proximity to existing infrastructure (e.g., public transportation) and workforce talent. Despite these limitations on the analysis, it is still possible to qualitatively assess the general potential growth-inducing impacts of the proposed project.

6.3.1 Projected Growth

Development of infrastructure could remove obstacles to population growth if it would allow for development in an area that was not previously considered feasible for development because of infrastructure limitations. As discussed in Section 3.19, *Utilities and Service Systems*, of the Initial Study, infrastructure improvements required to serve the project would include new on-site facilities that would be connected to new services through the installation of new localized connections. This would include construction of a new 18-inch sanitary sewer main through the southwest corner of the project site to the existing 21-inch main on Shaw Road. However, this new utility connection would function as an extension to existing utility infrastructure that is in an urbanized setting, and therefore would not induce population growth.

As discussed in Chapter 4.6, Transportation and Circulation, the proposed project would increase vehicle trips at the intersections of U.S. 101 southbound off-ramp/Produce Avenue and U.S. 101 southbound on-ramp/Terminal Court/Produce Avenue as a result of adding approximately 1.7 million square feet of R&D and amenity uses to the Produce Avenue corridor, an area where additional density was not identified or studied in the Specific Plan or General Plan. This intensification of uses would occur in a location with insufficient access and circulation facilities. limited transportation options, and challenging connectivity to the regional transportation network. Specifically, the addition of vehicle trips along the U.S. 101 southbound off-ramp would cause vehicle queues to spill over onto U.S. 101 off-ramp. However, it should be noted that the General Plan EIR determined that implementation of the General Plan would increase vehicle trips on the City's freeway ramps, which would exacerbate vehicle queues on off-ramps that already experience queues exceeding storage capacity. Even with implementation of General Plan policies and actions, and implementation of General Plan EIR Mitigation Measures MM TRANS-1, Transportation Demand Management, and TRANS-4, Freeway Offramp Queue Improvements, build-out of the General Plan would result in a significant and unavoidable impact. Consistent with the General Plan EIR determination, and as stated previously, the proposed project would result in a significant impact by exacerbating freeway ramp queuing. As such, the project shall fund adjacent improvements identified in the General Plan, Lindenville Specific Plan, and Active South City Plan via Mitigation **Measure TRANS-1** (or reimburse the City or another developer if these improvements have already been implemented as mentioned in Mitigation Measure TRANS-1). This includes the signalization of the U.S. 101 Off-ramp/Produce Avenue intersection consistent with the conditions of approval for the Terminal 101 project. Implementation of a traffic signal and associated lane reconfigurations would reduce vehicle queues while alleviating potential conflicts at the intersection. With the implementation of this improvement measure, 95th percentile vehicle queues would not spill over

onto the freeway mainline. Therefore, the proposed transportation improvements would serve to alleviate existing deficiencies in the transportation and circulation system that would worsen with the project, and would not lead to substantial unplanned growth.

Overall, the project constitutes infill development within an already existing urban environment, and the other required infrastructure improvements would consist of localized improvements intended to serve project-related demand. Therefore, these improvements would not extend infrastructure into other unserved or underserved areas and, as such, no indirect impacts related to population growth as a result of expansion of infrastructure would occur.

Section 3.14, *Population and Housing*, of the Initial Study , discusses population and employment growth as a result of the proposed project and made the following findings. The proposed project does not include any new housing units and would not directly induce population growth. The proposed project would redevelop an existing infill site in an urbanized area that currently serves the Golden Gate Produce Terminal with a new R&D and amenity campus. The project site currently has 475 employees and no housing units. Therefore, no displacement of substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere, would occur with the project because no housing exists on-site, nor is housing proposed.

Operation of the proposed project would generate indirect population growth because the new R&D campus would increase employment by approximately 3,787 employees (3,778 R&D employees and nine day-care center employees), a net increase of 3,312 employees. Because the project would redesignate the project site from MIH to BTP-H, the project would result in additional employees under the BTP-H designation compared with the number of employees assumed in the General Plan and Specific Plan. Under the MIH designation, using an employee generation rate of one employee per 741 square foot of MIH space¹, the project site could result in 1,039 employees.² As mentioned previously, the project would generate 3,778 employees, resulting in 2,739 additional employees not accounted for in the General Plan or Specific Plan projections.

Employment impacts are largely social and economic impacts, and CEQA establishes that social and economic impacts are not considered significant impacts unless they contribute to, or are caused by, physical impacts on the environment (Public Resources Code Section 21080). Thus, the proposed project's additional employment growth not evaluated or considered in the General Plan and Specific Plan is not, in and of itself, a significant impact on the environment. As discussed above, project employees would not directly create significant impacts related to population or housing demand. Other potential impacts that could result from the new employees on the project site, including impacts related to vehicle travel, are evaluated throughout this Initial Study and the EIR. Refer to Chapter 4.2, *Air Quality*, Chapter 4.5, *Noise*, and Chapter 4.6, *Transportation and Circulation*, of the Draft EIR; and Section 3.11, *Land Use and Planning*, Section 3.15, *Public Services*, and Section 3.19, *Utilities and Service Systems*, of this Initial Study.

¹ As part of the analysis conducted for the General Plan EIR, it was assumed that the transportation analysis zone (TAZ) that the project site falls in would be approximately 73.50 acres (or 3,201,660 sf) and would result in approximately 4,138 employees. Using these numbers, the TAZ would result in an employee generation rate of 1 employee per 741 sf (i.e., 3,201,660sf/4,138 employee= 1 employee/741 sf).

² The project site is approximately 17.67 acres or approximately 769,705.2. Assuming the employee generation rate of 1 employee/741 sf, the project site under the MIH designation could result in approximately 1,039 employees (i.e., 769,705.2 sf/741 sf= 1,039 employees).

Although housing is not proposed, the increase in the number of employees in the area could generate a need for housing. The proposed project would result in a demand for 938 housing units,³ given the project's 3,312 additional employees. However, according to the City's Housing Element, 3,581 housing units⁴ are currently in the pipeline and expected to be built by 2040, which would accommodate the increased growth in employment in the city. Not all employees would live within South San Francisco. Other nearby jurisdictions have adopted Housing Elements that plan for housing to meet their Regional Housing Needs Allocation, which is each jurisdiction's share of the region's housing needs. This regional housing need is determined by the state using population projections, vacancy rate, overcrowding, and other factors. As a result, with the City and other jurisdictions planning for growth in their Housing Elements, this level of additional employees would not result in additional physical impacts from unplanned growth. The proposed project would also very likely employ existing workers within the region because the existing city and county workforce already has workers who support R&D. In addition, the proposed project would be required to pay the commercial linkage fee under Chapter 8.69 of the Municipal Code, which would contribute to the development of affordable housing in other locations within the City to address the demand for affordable housing that is created by new commercial development and mitigate impacts that accompany new commercial development. Furthermore, while the proposed project would result in employment growth in the City, continued job growth in the City will promote a greater regional balance between jobs and housing. The City has several residential projects that are either under construction or in the development pipeline, which would add to the City's housing supply and promote a greater regional balance between jobs and housing.

The five off-site redesignation parcels would be redesignated BTP-H, consistent with the proposed land use and zoning designation for the project site. The redesignation of these parcels would be consistent with Specific Plan Policy LU-5.2, Golden Gate Produce Terminal and Park N' Fly sites, which encourages parcel assemblage of the Park N' Fly site (160 Produce Avenue) and the Golden Gate Produce Terminal site (131 Terminal Court) to encourage developers to create a master plan and an appropriate environmental analysis for office and R&D uses on the site. The purpose of the off-site redesignation parcels is to ensure that future development is cohesive and consistent with the development proposed as part of the project. As the project sponsor does not own the five off-site redesignation parcels, the proposed project does not include the construction of any new uses on the off-site redesignation parcels. Therefore, no direct impacts on the environment or growth would occur. However, the analysis in Chapter 4 of the EIR as well as the Initial Study (Appendix B), evaluates the reasonably foreseeable indirect impacts that could result from the proposed off-site redesignation parcels. As detailed throughout, compared to the land use forecasts in the General Plan and Specific Plan, the proposed change in land use for the off-site redesignation parcels would not materially affect the projected number of employees or travel demand along the Produce Avenue corridor and Lindenville Specific Plan area as a whole. Furthermore, future development within the five parcels would be subject to environmental review in accordance with CEQA, and would be required to evaluate growth-inducing impacts in more project-specific detailed analysis. Overall, the proposed BTP-H designation would not be expected to generate substantial additional unplanned growth compared to the existing MIH designation because both designations generally allow for additional non-residential density on the parcels, and the parcels are located in a developed, urban environment.

³ Based on the city's jobs-to-housing ratio of 3.53 jobs per housing unit.

⁴ City of South San Francisco. 2023. *South San Francisco Housing Element 2023–2031.* Available: https://shapessf.com/the-housing-element/. Accessed: June 12, 2024.

The project would be developed within an area with compatible land uses. Due to the project's close proximity to existing local and regional transportation infrastructure, in addition to the project's proposed improvements intended to enhance multi-modal connections to Caltrain, BART, and bicyclists and pedestrian pathways, the project would provide new employment opportunities to existing residents within the region as the project would provide access to a variety of transportation options for reaching the project site. Overall, the proposed project would be an appropriate land use for the project site, and the indirect population and housing growth resulting from the proposed project would not generate substantial unplanned population growth. In addition, the project's proposed infrastructure improvements would not generate substantial unplanned population growth either.

6.4 Effects Found Not to Be Significant

Section 15128 of the CEQA Guidelines notes that "an EIR shall contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR." Implementation of the Proposed Project would not result in significant environmental impacts related to the topics discussed below. The analyses of these topics are provided in the Initial Study, which is included in Appendix B to this Draft EIR. Therefore, these issues are not discussed further in this Draft EIR but are briefly summarized below.

6.4.1 Aesthetics

The project site is located on the west side of the U.S. 101 corridor, within the Lindenville Specific Plan area, which is characterized as a low-density industrial area with large blocks of industrial and warehouse buildings of varying sizes, paved parking, and minimal landscaping. The project site is currently occupied by the Golden Gate Produce Terminal, a produce market, and associated surface parking. The site consists of two warehouse buildings and a smaller administration building. The site is also developed with open-air structures, including loading docks and trash compactors, which are associated with operations at the Golden Gate Produce Terminal. The topography of the project site is relatively flat, approximately 6 feet above mean sea level.⁵ There is little to no on-site landscaping, and there are no trees on the project site.⁶ In the vicinity of the project site, views of the South San Francisco hillside sign, Sign Hill, San Bruno Mountain, and the Coast Range are visible in the background when facing north or west. However, the Lindenville Specific Plan area is relatively flat, resulting in limited views.

The project site and its surroundings are not considered scenic vistas or scenic resources. The proposed project would not be located adjacent to, or in view of, a designated state scenic highway or corridor. The project would be consistent with all General Plan and Lindenville specific plan policies governing visual resources, and the project site is not near any light-sensitive receptors. Therefore, project impacts related to aesthetics would be **less than significant**.

Off-Site Redesignation Parcels. The five off-site redesignation parcels are currently designated as MIH under the General Plan, Specific Plan, and City Zoning Code. However, they would be redesignated BTP-H, consistent with the proposed land use and zoning designation for the

⁵ Haley & Aldrich, Inc. 2022. *ASTM Phase I Environmental Site Assessment 131 Terminal Court, South San Francisco*. April 2022.

⁶ HMH Engineers. 2022. *Terminal 131 Certified Tree Inventory*. July 27, 2022.

project site. Although the new BTP-H zoning would allow for taller buildings to be constructed in the future (65 feet under the MIH land use designation compared to height restrictions consistent with Federal Aviation Administration [FAA] regulations in the BTP-H land use designation), the allowance for taller buildings at the redesignation parcels would be consistent with that of the immediately surrounding properties. Future development on the redesignation parcels would be subject to the City's design review process (City Municipal Code Chapter 20.480, *Design Review*) as well as lighting requirements (City Municipal Code Section 20.300.009, *Lighting and Illumination*), which would ensure that developments would be consistent with relevant City design policies and include high-quality designs that preserve or enhance existing visual resources and scenic vistas. Therefore, implementation of the redesignation parcels would result in *less-than-significant* impacts related to scenic vistas, visual resources, plans, and policies governing scenic quality as well as light and glare.

6.4.2 Agricultural and Forestry Resources

The project site and all surrounding lands within the city are identified as Urban and Built-up Land by the California Department of Conservation, with no "important farmland" (i.e., Farmland). Consequently, there is no potential for the project to result in the conversion of important farmland to nonagricultural uses, and no land within the project site is agricultural land under a Williamson Act or Farmland Security Zone contract. In addition, the project site is not zoned for forestland, timberland, or timberland production under the General Plan, Specific Plan, or City Zoning Code. Therefore, the proposed project would have **no impact** on agricultural and forestry resources.

Off-Site Redesignation Parcels. The redesignation of five off-site parcels from MIH to BTP-H would not change the above conclusions because the same lands would be disturbed—lands that are not currently used for agricultural or forestry activities. Therefore, there would be *no impact* on agricultural and forestry resources as a result of the off-site redesignation parcels.

6.4.3 Air Quality

Impacts related to conflicts with applicable air quality plans and odors were scoped out from further review in the Initial Study. The analyses of these impacts are summarized in Chapter 4.2, *Air Quality*, in Section 4.2.4.5, *Topics Evaluated in the Initial Study*.

6.4.4 Biological Resources

The 17.67-acre project site is completely developed with buildings and pavement within a predominantly urbanized area. There is little to no on-site landscaping, and there are no existing trees on the project site.⁷ The site is bounded by Terminal Court, preceding the Park 'N Fly parking lot to the north; a pay booth, maintenance garage, and surface parking lot to the east; a navigable slough⁸ that feeds into San Bruno Canal to the south; and commercial and industrial

⁷ HMH Engineers. 2022. *Terminal 131 Certified Tree Inventory*. July 27, 2022.

⁸ The navigable slough is a remnant tidal channel that cuts through a commercial district in the city of South San Francisco. The slough is connected to San Francisco Bay. (ESA. 2019. Navigable Slough Flood Management Study, Prepared for County of San Mateo, City of South San Francisco, and City of San Bruno. Available: https://oneshoreline.org/wp-content/uploads/2020/06/Navigable-Slough-Flood-Management-Study.pdf. Accessed: April 12, 2023).

development to the west. Because the project site is completely developed, it does not contain natural land cover, protected wetlands/waters,⁹ riparian habitat, or other sensitive natural communities.¹⁰ There are no water features or waterways on the project site.

Because the project site is completely developed and no natural land cover or sensitive natural communities are present on the site, special-status wildlife species are not anticipated to occur on the site, with the exception of resident and migratory nesting birds protected under state law (California Fish and Game Code Sections 3503, 3503.5 and 3513) and federal law (e.g., Migratory Bird Treaty Act) and bats protected under state law (California Fish and Game Code Section 4150). However, the existing on-site structures, as well as landscaping (e.g., trees, shrubs, ornamental grasses) near the project site, could provide suitable nesting habitat for migratory Birds, and raptors. In accordance with Mitigation Measure BIO-1, Special-Status Species, Migratory Birds, and Nesting Birds, from the General Plan EIR, the project would be required to retain a qualified biologist to conduct pre-construction surveys for nesting birds and roosting bats. If nesting birds or roosting bats are identified on the project site or in an area that could be disturbed during project construction, measures would be identified to avoid or minimize impacts on the individuals. With implementaiton of this measure, impacts on nesting birds and roosting bats would be *less than significant with mitigation*.

No riparian habitat or other sensitive natural community is present on the project site. The limited landscaping on the project site is not considered part of a sensitive natural community. The proposed project would not result in any direct impacts on sensitive natural communities. No federally protected wetlands or other jurisdictional waters are present on the project site. The nearest jurisdictional waters to the project site are Colma Creek and the navigable slough, which are north and south of the project site, respectively. The proposed project would not result in any direct impacts on Colma Creek or the navigable slough. Additionally, because there are no trees on the site and the project would comply with the City-adopted a bird-safe design ordinance, the proposed project would not conflict with any local policies or ordinances that protect biological resources. The project site is not part of, or near, an area covered by an adopted or proposed habitat conservation plan (HCP) or natural community conservation plan (NCCP) or any other local, regional, or state HCP. Therefore, the proposed project would result in *less-than-significant* impacts on riparian habitat or other sensitive natural communities, federally protected wetlands, and conflicts with local policies or ordinances protecting biological species, as well as *no impact* related to conflicts with an adopted HCP or NCCP.

Off-Site Redesignation Parcels. The setting and land cover (i.e., developed with buildings and pavement) at the off-site redesignation parcels are similar to the setting and land cover on the project site, except that there is ornamental vegetation on-site, including trees. Similar to the project site, a waterway is located just south of the off-site redesignation parcels, and Colma Creek is located to the north. No riparian habitat or other sensitive natural communities, and no federally protected wetlands or other jurisdictional waters, are present within the off-site redesignation parcels; therefore, future development in the off-site redesignation parcels would have no impact. The off-site redesignation parcels are not part of, or near, an area covered by an adopted or proposed HCP or NCCP or any other local, regional, or state HCP. Therefore, future development in the off-site redesignation parcels would have no impact. No wetlands or running waters are present on the off-site redesignation parcels; therefore, future development in the off-site near the off-site redesignation parcels would have no impact. No wetlands or running waters are present on the off-site redesignation parcels; therefore, future development in the off-site redesignation parcels would have no impact. No wetlands or running waters are present on the off-site redesignation parcels; therefore, future development in the off-site redesignation parcels would have no impact. No wetlands or running waters are present on the off-site redesignation parcels; therefore, future development in the off-site redesignation parcels would have no impact. No wetlands or running waters are present on the off-site redesignation parcels; therefore, future development in the off-site redesignation parcels would have no impact on fish movement.

⁹ U.S. Fish and Wildlife Service. 2023. *National Wetland Inventory Wetland Mapper*. Available: https://www.fws.gov/program/national-wetlands-inventory/wetlands-mapper/. Accessed: October 13, 2023.

¹⁰ California Department of Fish and Wildlife. 2023. *California Sensitive Natural Communities*. June 1. Available: https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities. Accessed: October 13, 2023.
If future development in the off-site redesignation parcels would require tree removal, compliance with the City Tree Preservation Ordinance (No. 1271-2000) would be required. In addition, future development on the parcels would also be required to comply with the City's bird-safe design ordinance, City Municipal Code Chapter 20.310.002; therefore, impacts related to local policies or ordinances that protect biological resources would be less than significant. In addition, future development under the BTP-H zoning designation within the off-site redesignation parcels could affect special-status species, as well as the movement of wildlife, and impede the use of native wildlife nursery sites. However, impacts on special-status species, wildlife nursery site, and movement of wildlife, would be less than significant through implementation of Mitigation Measure BIO-1 from the General Plan EIR, or other types of similar measures enforced through conditions of approval, and compliance with the City Ordinances (including the zoning ordinance, Tree Preservation Ordinance, bird-safe design, and lighting regulations), and the California Building Standards Code (Title 24, Building Energy Efficiency Standards). Therefore, through implementation of Mitigation Measure BIO-1 and compliance with City Ordinances, the California Building Standards Code, and existing lighting regulations, impacts associated with the off-site redesignation would be *less than significant*.

6.4.5 Cultural Resources

Impacts related to human remains were scoped out from further review in the Initial Study. These impacts are summarized in Chapter 4.3, *Cultural Resources,* in Section 4.3.4.3, *Topics Evaluated in the Initial Study.*

6.4.6 Energy

Construction activities associated with the proposed project would result in temporary use and consumption of energy resources on the project site. Construction energy would include the electricity used to power electric construction equipment and deliver water to the construction site, along with the gasoline and diesel fuel used to transport workers and drive haul trucks to and from construction sites or operate off-road equipment. No natural gas would be used during project construction. Energy consumed during project construction would be temporary and would cease upon completion of construction. In addition, the project would be required to comply with City Municipal Code Chapter 15.60, which requires recycling of construction would not result in the wasteful, inefficient, or unnecessary consumption of energy resources, and impacts would be *less than significant*.

Energy would also be required to heat and cool the proposed buildings, provide indoor and outdoor lighting, and move water/wastewater. The proposed project would consume energy during normal day-to-day operations associated with the proposed R&D uses, including the use of personal and mass transit vehicles by employees and visitors/guests when traveling to and from the project site, which would require energy in the form of gasoline, diesel, and/or electricity. Because of the proposed project's size and location within an urban setting, build-out of the proposed project would not significantly increase energy demand within the service territory and would not require new energy facilities. The proposed project would be required by law to adhere to California Code of Regulations Title 24, the California Green Building Standards Code (CALGreen), as well as adopted City energy conservation ordinances and regulations. Furthermore, the proposed project would be required to implement relevant policies from the City's Climate Action Plan, which are geared toward reducing operational greenhouse gas (GHG) emissions. This would indirectly reduce energy consumption. Accordingly, the proposed project would encourage implementation of sustainability and transportation features and be required to comply with state and local renewable energy and energy efficiency plans. Therefore, energy impacts during proposed project operation would be *less than significant*.

Off-Site Redesignation Parcels. Similar to the proposed project, future development at the offsite redesignation parcels would most likely include features that would reduce energy consumption and increase renewable energy generation and be required to comply with all adopted state and local renewable energy and energy efficiency regulations and plans. Future development at the off-site redesignation parcels would not result in a significant impact related to energy. Therefore, energy impacts associated with the off-site redesignation parcels would be *less than significant*.

6.4.7 Geology and Soils

The major active faults closest to the project site are the San Andreas, San Gregorio, and Hayward-Rodgers faults, the latter being the closest, at less than 3 miles from the project site. The proposed project is not located within an Earthquake Fault Zone, and no known active or potentially active faults exist on the site.¹¹ In addition, the proposed project would be required to comply with California Building Code requirements and as well as City Municipal Code requirements, including design specifications for building foundations and structures, enabling them to withstand strong seismic ground shaking.

The project site would be located within a Liquefaction Zone,¹² and the potential for on-site liquefaction to occur across the site, within the upper 50 feet bgs, is considered moderate to high. In addition, the proposed project would be located near a free face at the southern edge of the project site, and the preliminary geotechnical investigation estimated that lateral spreading could occur within the range of 30 to 130 inches. However, compliance with the recommendations in the preliminary geotechnical investigation would be enforced as a condition of approval for the proposed project. Through compliance with the recommendations of the design-level geotechnical investigation, which would be a condition of approval and implement Action CR-4.41 of the General Plan, as well as the City Zoning Ordinance, impacts related to lateral spreading and liquefaction would be minimized.

The project site is in an area designated as having moderate incidence of landslide susceptibility.¹³ However, the topography of the project site is relatively flat,¹⁴ and the preliminary geotechnical investigation did not identify landslides as a geotechnical issue that would affect design and construction. The proposed project would disturb more than 1 acre of

¹¹ Haley & Aldrich, Inc. 2022. Preliminary Geotechnical Engineering Recommendations, 131 Terminal Court, South San Francisco, California, p. 3.

¹² First Carbon Solutions. 2022. Draft Program Environmental Impact Report General Plan Update, Zoning Code Amendments and Climate Action Plan, City of South San Francisco, San Mateo County, California. State Clearinghouse Number 2021020064. Exhibit 3.6-5, Liquefaction Potential.

¹³ First Carbon Solutions. 2022. Draft Program Environmental Impact Report General Plan Update, Zoning Code Amendments and Climate Action Plan, City of South San Francisco, San Mateo County, California. State Clearinghouse Number 2021020064. Exhibit 3.6-2, Landslide Potential.

¹⁴ Haley & Aldrich, Inc. 2022. ASTM Phase I Environmental Site Assessment, 131 Terminal Court, South San Francisco. April 2022.

soil on the 17.67-acre site and therefore must comply with the National Pollutant Discharge Elimination System (NPDES) Construction General Permit (Construction General Permit), which would require preparation of a Stormwater Pollution Prevention Plan (SWPPP). The proposed project would abide by Chapter 15.08 of the City Municipal Code, which includes drainage and erosion control requirements, and Section 14.04.132, which requires measures that call for minimizing land disturbance and impervious surfaces.¹⁵

The Merced Formation and the Colma Formation, which underlie portions of the city, are known to be potentially fossiliferous. The preliminary geotechnical investigation prepared for the proposed project by Haley & Aldrich determined that the project site is underlain by the Colma Formation, between 45 and 65 feet bgs.¹⁶ The proposed project would be subject to a project condition of approval that implements General Plan EIR Mitigation Measure GEO-6. With implementation of this measure, which would be enforced through project conditions of approval, impacts related to paleontological resources would be *less than significant with mitigation*.

Off-Site Redesignation Parcels. Although the off-site redesignation parcels are not located within an Earthquake Fault Zone, major active faults are close to the project site, including the San Andreas, San Gregorio, and Hayward-Rodgers faults, the latter being within 3 miles of the parcels. The parcels are located in an area designated as Zone VIII, which corresponds to "very strong" ground shaking; therefore, future development on the parcels would be subject to very strong ground shaking during a seismic event. The parcels are also located within a Liquefaction Zone, and the potential exists for on-site liquefaction to affect future development on the parcels. The potential for lateral spreading exists at the five off-site redesignation parcels because free faces, such as Colma Creek, are located nearby. Landslide susceptibility is expected to be low at the parcels and would most likely not affect future development. However, policies and requirements included in the General Plan Update, City Municipal Code, and City Zoning Ordinance, as well as the California Building Code, would apply to any future development on the five off-site redesignation parcels, which could minimize impacts related to geology and soils. Therefore, impacts related to geology and soils associated with the off-site redesignation would be *less than significant*.

6.4.8 Hazards and Hazardous Materials

Project construction would involve the routine transport, use, and disposal of hazardous materials such as solvents, paints, oils, grease, and caulking. Mandatory compliance with all applicable federal, state, and local regulations pertaining to the routine use, storage, transport, and disposal of hazardous materials would ensure that the proposed project would not create a significant hazard for the public or the environment during construction.

Because of the nature of R&D uses, the possibility exists for hazards related to the handling of hazardous materials. Any R&D tenant who handles hazardous materials would be required to adhere to all applicable federal, state, and local regulations for qualifying hazardous materials, seek consultation with SMCEH, and apply for applicable permits for any regulated substances that may pose a threat to public health and safety or the environment because of their highly toxic, flammable, or explosive nature. Tenants must comply with the safety procedures mandated by applicable

¹⁵ First Carbon Solutions. 2022. Draft Program Environmental Impact Report General Plan Update, Zoning Code Amendments and Climate Action Plan, City of South San Francisco, San Mateo County, California. State Clearinghouse Number 2021020064, p. 3.6-23.

¹⁶ Haley & Aldrich, Inc. 2022. Preliminary Geotechnical Engineering Recommendations, 131 Terminal Court, South San Francisco, California, p. 12.

federal, state, and local laws and regulations (e.g., Resource Conservation and Recovery Act, California Hazardous Waste Control Law, principles prescribed by the U.S. Department of Health Services) to ensure that risks resulting from the routine use of hazardous materials and disposal of hazardous wastes remain less than significant. In addition, prior to issuance of a certificate of occupancy for completed structures, the City would require a final inspection from the South San Francisco Fire Department (SSFFD) to ensure that all building systems were in conformance with the City Fire Code and National Fire Protection Association requirements. Impacts would be **less than significant**.

Implementation of the Phase II ESA recommendations as well as the asbestos, lead, and PCB sampling and analysis recommendations, which would be enforced through existing legal requirements, uniformly applied development policies and standards, and/or project conditions of approval, potential impacts associated with upset and accident conditions involving the release of hazardous materials would be *less than significant*. Furthermore, there are no schools within 0.25 mile of the project site. Therefore, there would be *no impact* with hazardous emissions within 0.25 mile of an existing school.

According to the Phase I ESA, a CREC was identified, associated with a former fueling facility in the northern portion of the site. The former fueling facility was also identified by the Phase I ESA as a Cortese List site. As mentioned, SMCEH issued a case closure letter for the site in 2014; however, hydrocarbon-affected soil and groundwater were allowed to remain on-site. It was noted in the Phase I ESA that proposed future redevelopment, a change in land use, or the removal of soil and/or groundwater from the site would require notification of SMCEH. With implementation of the Phase II ESA recommendations potential impacts associated with exposure to contaminated media from a site on the Cortese List would be *less than significant*.

The project site is within Airport Influence Area B of the SFO ALUCP and required to comply with policies and actions concerning interior noise levels and maximum building heights, as included in the General Plan, Specific Plan, and City Municipal Code and Zoning Ordinance. In addition, because the proposed project is within Area B, consultation with the C/CAG and FAA would be required prior to project construction. The project would, therefore, require a consistency determination with the ALUCP to comply with FAA regulations regarding height. The project applicant would be required to receive a determination of no hazard to air navigation as a condition of approval for a building permit for the proposed project. Therefore, impacts would be *less than significant*.

The proposed project would not include any permanent changes to existing public roadways that provide emergency access to the project site or surrounding area. During construction, it is possible that construction activity could affect emergency response or evacuation plans due to temporary construction barricades or other roadway obstructions that could impede emergency access on-site. However, compliance with City requirements regarding circulation and access during construction would minimize potential impacts associated with emergency response times. Impacts would be *less than significant.* Furthermore, because the project site is in a densely developed area of the city and not within or near an FHSZ or VHFHSZ (and away from wildlands), and because the proposed project would comply with all policies and regulation in the General Plan related to wildfire, impacts related to wildland fires would be *less than significant.*

Off-Site Redesignation Parcels. An environmental review would occur prior to future redevelopment, and environmental conditions would be addressed as they are identified. Hazardous waste generated during construction would be properly characterized and transported in compliance with all applicable regulations. Affected sites with the potential to affect future projects

within these parcels would undergo remediation with oversight from applicable state and local agencies. Because the off-site redesignation parcels are adjacent to the project analyzed above, similar considerations would be made with respect to the location of sensitive receptors, such as schools, and airports; emergency response and wildfire hazards would also be considered. Impacts would be *less than significant*.

6.4.9 Hydrology and Water Quality

Implementation of a SWPPP with BMPs would control erosion and protect water from potential contaminants in stormwater runoff from the construction site. BMPs may include damp street sweeping; appropriate covers, drains, and storage precautions for outdoor material storage areas; temporary cover for disturbed surfaces; and sediment basins or traps, earthen dikes or berms, silt fences, check dams, soil blankets or mats, covers for stock piles, or other BMPs to trap sediments. Such BMPs would help to protect surface water and groundwater quality. Construction impacts would be *less than significant*. Project design plans include the installation of bioretention ponds and Silva Cell units to provide LID treatment on the project site. The storm drain would use LID areas as well as oversized underground pipes to treat and control flows prior to discharge to the adjacent slough. The applicant would be required to submit the SMCWPPP checklist to the City to show compliance with NPDES regional permit requirements. For these reasons, the project would not violate water quality standards or waste discharge requirements during operation, including standards and requirements regarding surface water and groundwater quality. Operational impacts would be *less than significant*.

The proposed project would excavate from approximately 3 to 7 feet bgs. In the event that groundwater is encountered during construction, dewatering would be conducted on a one-time, temporary basis during the construction phase. It would not result in a significant impact on groundwater recharge or depletion of groundwater supplies. Construction-related dewatering activities, including handling/discharging water, monitoring, and reporting, would comply with the Construction General Permit and RWQCB dewatering requirements. Accordingly, impacts on groundwater supplies and groundwater recharge during project construction would be *less than significant*. The proposed project would increase the pervious surface area by approximately 18 percent. The increase in pervious surface area would increase infiltration and recharge of the underlying aquifer. It would also reduce the amount of precipitation running into storm sewers or nearby surface waters. In addition, native and/or adapted vegetation and other landscape features, including trees, would provide opportunities for improved groundwater infiltration. Landscaped spaces would allow for an increase in groundwater recharge. Furthermore, operation of the proposed project would not utilize groundwater supplies. Therefore, the project would not substantially deplete groundwater supplies or impede sustainable groundwater management of the basin. The project's impact would be *less than significant*.

Construction of the proposed project would not substantially alter the existing drainage pattern of the area in a manner that would result in substantial erosion or siltation or increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site. In addition, the project would include stormwater treatment controls, in compliance with the requirements of Provision C.3 of the MRP. Through compliance with state and local regulations, as well as implementation of BMPs, the project would not contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems, provide additional sources of polluted runoff, or impede or redirect floodflows. Therefore, the proposed project would not result in an exceedance of drainage system capacities and flooding, and the associated impact would be *less than significant*.

To reduce the risk of a pollutant release associated with a flood hazard, the project would comply with the requirements of local water quality programs and associated municipal stormwater NPDES permits as well as municipal separate storm sewer system and MRP permits to manage flood risks and water quality. Conformance with these requirements would ensure that any risk of a release of pollutants due to inundation associated with a flood hazard, tsunami, or seiche zone would be minimized. The project site would not release pollutants due to inundation associated with a flood hazard, tsunami, or seiche. The impact would be *less than significant*.

Off-Site Redesignation Parcels. As discussed in the General Plan EIR, future development (including redevelopment of existing developed sites) that disturbs 1 acre or more of soil must obtain permit coverage under the Construction General Permit. A SWPPP, as required by the Construction General Permit, must describe site erosion and sediment controls, maintenance responsibilities, and non-stormwater management controls. The General Plan Update and City Municipal Code also include policies and regulations to protect water quality and groundwater resources, as well as managing stormwater flows and discharge, and flooding. Therefore, rezoning to BTP-H would not have the potential to result in future development that would violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. Therefore, hydrology and water quality impacts associated with the off-site redesignation parcels would be *less than significant*.

6.4.10 Land Use and Planning

The project would replace the existing Golden Gate Produce Terminal, which consists of two warehouse buildings, a smaller administrative building, open-air structures, and surface parking, with new R&D uses, amenity space, and multi-story parking. Therefore, the project would not change the nature of the land uses or physically divide an established community.

The project proposes a General Plan, Specific Plan, and City Zoning Code amendment to redesignate the site as BTP-H. In addition, the proposed project would amend City Zoning Code Section 20.040.009.A.4 to add BTP-H zoning districts within the Lindenville Planning Sub-area to the covered zoning districts so that the proposed day-care center would be excluded from FAR calculations. With these amendments, the proposed project would be within the allowable FAR for the BTP-H zoning designation. The proposed project would construct approximately 1.7 million square feet of new R&D and amenity space across seven buildings, resulting in a project FAR of 2.0, consistent with the requirements of the BTP-H zoning designation but with specific exceptions. Overall, the project would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Impacts would be **less than significant**.

Off-Site Redesignation Parcels. By redesignating these off-site parcels, the project supports Specific Plan Policy LU-5.2, which encourages parcel assemblage for the Park 'N Fly site (160 Produce Avenue) and the Golden Gate Produce Terminal site (131 Terminal Court) and creation of a master plan for office and R&D development on the combined parcels. Future land uses could be R&D and would be consistent with the project site overall; that is, future development proposals would be reviewed for consistency with applicable plans, thereby avoiding future land use inconsistencies. Overall, land use impacts related to the amendments for these five parcels would be similar to those identified for the proposed project, and impacts would be *less than significant*.

6.4.11 Mineral Resources

There are no known mineral resources within the project vicinity. The project site is categorized as MRZ-1 and located in an area used or available for extraction of a regionally important mineral resource; therefore, *no impacts* on mineral resources of statewide or regional significance would occur.

Off-Site Redesignation Parcels. Redesignation of the five off-site parcels from MIH to BTP-H would not change this conclusion because the same lands would be disturbed, lands that are not currently used for any mining or other mineral extraction activities. Therefore, there would be *no impact* on mineral resources as a result of the off-site redesignation parcels. No further evaluation in an EIR is required.

6.4.12 Noise

Impacts related to aircraft noise were scoped out from further review in the Initial Study. These impacts are summarized in Chapter 4.5, *Noise*, in Section 4.5.5, *Topics Evaluated in the Initial Study.*

6.4.13 Population and Housing

Construction-related job opportunities due to the proposed project are not expected to result in any substantial population growth in the area, therefore no construction-related population growth impact would occur. In addition, the project site is served by existing water, wastewater, stormwater, natural gas, electric, telecommunications, and waste and recycling services. New on-site facilities would be connected to new services through the installation of new localized connections. In addition, the proposed project would not include the extension of area roadways. Because the proposed infrastructure would be sized to meet the needs of the proposed project, it would not lead to unplanned indirect population growth or the need for additional housing beyond that expected to be generated by the proposed project. This impact would be *less than significant*.

Operation of the proposed project would generate indirect population growth because the new R&D campus would increase employment by approximately 3,787 employees, a net increase of 3,312 employees. Because the project would redesignate the project site from MIH to BTP-H, the project would result in additional employees under the BTP-H designation compared with the number of employees assumed in the General Plan and Specific Plan. The project would generate 2,739 additional employees not accounted for in the General Plan or Specific Plan projections. The increase in the number of employees in the area could generate a need for housing. The proposed project would result in a demand for 938 housing units,¹⁷ given the project's 3,312 additional employees. However, according to the City's Housing Element, 3,581 housing units¹⁸ are currently in the pipeline and expected to be built by 2040, which would accommodate the increased growth in employment in the city. In addition, not all employees would live within South San Francisco. The proposed project would also very likely employ existing workers within the region because the existing city and county workforce already has workers who support R&D. Furthermore, the proposed project would be required to pay the commercial linkage fee under Chapter 8.69 of the Municipal Code, which would

¹⁷ Based on the city's jobs-to-housing ratio of 3.53 jobs per housing unit.

¹⁸ City of South San Francisco. 2023. South San Francisco Housing Element 2023–2031. Available: https://shapessf.com/the-housing-element/. Accessed: June 12, 2024.

contribute to the development of affordable housing in other locations within the City. Therefore, the proposed project would not lead to unplanned housing or employment growth. The population impacts would be *less than significant.*

Off-Site Redesignation. Future development of the off-site parcels would result in population and housing impacts similar to those of the proposed project and would generate a similar number of employees. The employees could be accommodated through the housing growth envisioned in the City's General Plan and Housing Element and other similar plans in nearby jurisdictions, consistent with regional growth projections. In addition, future development at the off-site redesignation parcels would be subject to project-specific CEQA review, which would ensure that population and housing impacts from future employees would be adequately evaluated and mitigated, as appropriate. Therefore, population and housing impacts associated with the off-site redesignation parcels would be *less than significant.*

6.4.14 Public Services

The proposed project would construct new R&D and amenity buildings on the project site, which is already developed and currently being served by the SSFFD and SSFPD. The proposed project would allow emergency vehicle access to all buildings through the proposed roadway network within the project site, and would be required to comply with all applicable fire and safety codes required in the City's Municipal Code. Furthermore, the proposed project would be subject to the public safety impact fee, which supports public services personnel, equipment, and facility maintenance, to offset potential impacts from additional demand generated by the proposed project. Therefore, the impact would be *less than significant.*

Because the proposed project would include the development of R&D/amenity uses, not residential uses, it would not directly result in the generation of new students who would enroll in the SSFUSD. However, the proposed project would be subject to SB 50 school impact fees, as established by the Leroy F. Greene School Facilities Act of 1998, which is deemed to constitute full and complete mitigation for school impacts from development. In addition, as part of the proposed project, an approximately 4,050 sf day-care center would be provided on-site. The proposed day-care center would accommodate up to 50 children and be open to employees of the proposed project as well as the public. Therefore, this impact would be *less than significant*.

Any new development would be subject to payment of the library impact fee and reviewed by the City for compliance with the policies and actions of the General Plan and the City Municipal Code; therefore, physical effects on the environment from the construction of new or expanded library facilities would not be expected to occur. The impacts of the proposed project would be *less than significant*.

Off-Site Redesignation Parcels. Future development at the off-site redesignation parcels would be subject to a SSFUSD development impact fee, based on the square footage of each project. In addition, future development at the parcels would be subject to payment of the public safety impact fee and library impact fee. Furthermore, future development at the off-site redesignation parcels would be required to comply with the same policies and actions provided in the General Plan and City Municipal Code, as described in the sections above, which would ensure that public service providers would be able to accommodate growth generated by any new development at the off-site redesignation parcels. Therefore, public services impacts associated with the off-site redesignation parcels would be *less than significant*.

6.4.15 Recreation

The proposed project would include approximately 115,130 square feet of open space in the courtyards, which would be publicly accessible, providing space for outdoor work, recreation, and socializing through the use of seat walls, paved areas, turf, and shade structures. Furthermore, development facilitated by the proposed project would be required to pay park and recreation impact fees in accordance with Chapter 8.67 of the City Municipal Code. Therefore, impacts would be *less than significant*.

Off-Site Redesignation Parcels. Similar to the proposed project, future development under the BTP-H designation could include life sciences and R&D office space, which would most likely have recreational impacts similar to those of the proposed project. As such, future development at the off-site redesignation parcels would be subject to the payment of the park and recreation impact fee, in accordance with Chapter 8.67 of the City Municipal Code. In addition, future development at the parcels would very likely incorporate open space and/or amenity uses as part of the future projects' designs, which would provide recreational opportunities for future employees and the public on-site. Therefore, recreational impacts associated with the off-site redesignation parcels would be *less than significant*.

6.4.16 Tribal Cultural Resources

The potential exists for previously undiscovered tribal cultural resources to be encountered during grading, excavation, or other ground-disturbing activities associated with the proposed project. Should archaeological deposits that qualify as tribal cultural resources be encountered during project excavation, any impacts on these potential unanticipated discoveries would be avoided through compliance with General Plan Policies ES-10.5 and ES-11.1. Therefore, compliance with federal, state, and General Plan policies that protect tribal cultural resources, would ensure that the proposed project would result in *less-than-significant* impacts on tribal cultural resources.

Off-Site Redesignation Parcels. Similar to the proposed project, future development under the BTP-H designation could include life sciences and R&D office space, which would most likely result in similar amounts and types of ground disturbing activities, and have similar impacts on tribal cultural resources as the proposed project. As such, future development under the off-site redesignation parcels would be subject to the same federal and State regulations protecting tribal cultural resources, including AB 52 consultation, as necessary. Furthermore, future development would be required to comply with the same policies in the General Plan, as described above for the proposed project, which would ensure that any potential impacts to tribal cultural resources would be avoided and *less than significant*.

6.4.17 Utilities and Service Systems

Construction of the proposed water, wastewater, stormwater, and electrical and telecommunication infrastructure improvements would have the potential to cause significant adverse environmental effects, such as fugitive dust generation, noise generation, sedimentation, and erosion. The proposed utility expansions are part of the project description, and the potential impacts that would result from construction of these facilities are evaluated throughout the Initial Study and in the EIR. Therefore, the project would not require or result in the relocation or construction of new or expanded utility facilities beyond those already included in the project description and evaluated in the Initial Study and EIR, the construction or relocation of which could cause significant environmental effects. This impact would be *less than significant*.

After adjusting for existing water use at the site (i.e., 5.5 acre-feet per year [afy]), the incremental increase in water demand associated with the proposed project at full build-out and full occupancy is estimated to be 345 afy. The WSA prepared for the proposed project determined that, through supply augmentation and implementation of demand management measures to offset the proposed project's estimated net new demand, consistent with Cal Water's Development Offset Program, the proposed project would not affect water supply reliability within the SSF District. In addition, based on currently available information and conservative estimates of projected demand, Cal Water expects to be able to meet all future demands within its existing SSF District service area, as well as the Mid-Peninsula and Bear Gulch Districts, inclusive of the proposed project, in normal hydrologic years. The shortfalls that are currently projected during dry years will be addressed through planned implementation of the SSF District WSCP. In addition, Cal Water and other regional agencies are pursuing development of additional water supplies to improve the regional water system and SSF District supply reliability. Therefore, project-related impacts on water supply would be *less than significant*.

Proposed sewer system improvements would include providing a new 18-inch sanitary sewer main through the southwest corner of the project site which would connect to an existing 21-inch main in Shaw Road. The proposed project would increase wastewater demand within the project site due to the intensification of land uses, however, the South San Francisco Water Quality Control Plant would have adequate capacity to accommodate the increase. In addition, the project's water conservation policies could also result in proportionate reductions in the project's wastewater generation. Lastly, the proposed project would be consistent with the City's sewer capacity charge through its fee contribution, ensuring that wastewater treatment capacity would be maintained. Based on the above, project-related impacts on wastewater treatment capacity would be *less than significant.*

The proposed project would increase solid waste generation within the project site from the intensification of land uses. Upon project completion, there would be approximately 3,787 employees on-site who would generate 18,935 pounds of solid waste per day (or 9.5 tons per day). This equates to approximately 2,480 tons of solid waste per year.¹⁹ According to the General Plan, the four landfills that serve the city have a combined remaining capacity of 43.43 million cubic yards.²⁰ Therefore, this capacity would be more than enough to accommodate the solid waste generated by the proposed project. In addition, state law requires the collection of trash in three separate streams: waste, mixed recycling, and compost, in accordance with the requirements of AB 341, AB 1826, and SB 1383. City requirements and regulations would reduce the amount of solid waste produced by construction and operation of the proposed project. Project-related impacts related to solid waste would be *less than significant*.

Off-Site Redesignation Parcels. Future development of the off-site redesignation parcels would be required to demonstrate the availability of water suppliers to service the development, as required and applicable, in the form of will-serve letters or, for larger projects, preparation of a water supply assessment, per SB 610. In accordance with City requirements, future development of the off-site redesignation parcels would also be required to install on-site storm drainage infrastructure that would detain stormwater and release runoff at a rate no greater than the pre-development

¹⁹ 9.5 tons per day × 261 working days per year = 2,480 tons per year.

²⁰ First Carbon Solutions. 2022. Final Program Environmental Impact Report, General Plan Update, Zoning Code Amendments, and Climate Action Plan, City of South San Francisco, San Mateo County, California. State Clearinghouse Number 2021020064.

condition of the project site. In addition, future development of the off-site redesignation parcels would not be expected to require or result in new or expanded electricity, natural gas, or telecommunications facilities beyond those already planned.

In accordance with City requirements, future development of the off-site redesignation parcels would be required to connect to the municipal sewer system. The amount of wastewater generated by future development of the off-site redesignation parcels would be substantially less than the remaining capacity of the treatment plants. Therefore, although future development of the off-site redesignation parcels would have sufficient capacity to support new this future development. In addition, future development of the off-site redesignation parcels would have sufficient capacity to support new this future development of solid waste. However, in accordance with City requirements, future development of the off-site redesignation parcels would be served by solid waste, recycling, and green waste services provided by the City's franchise hauler (City Municipal Code Chapter 8.16). Therefore, the impacts would be *less than significant*.

6.4.18 Wildfire

Because the project site is not located within or near an State Responsibility Area or a Very High Fire Hazard Severity Zone, and because the proposed project would comply with the South San Francisco Fire Code (Sections 15.24.101.1 and 15.24.5001.1 of the City Municipal Code) as well as architectural and developmental review requirements of the SSFFD, this impact would be *less than significant*.

Off-Site Redesignation Parcels. Future R&D uses would be subject to the South San Francisco Fire Code (Sections 15.24.101.1 and 15.24.5001.1 of the City Municipal Code) and the architectural and developmental review requirements of the SSFFD. Implementation of the redesignation parcels would not result in additional wildfire impacts. Therefore, impacts would remain *less than significant.*

7.1 Lead Agency

City of South San Francisco Community and Economic Development Department Planning Division 315 Maple Avenue South San Francisco, CA 94080 Billy Gross, Principal Planner

7.2 Consulting Team

ICF

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