RECIRCULATED INITIAL STUDY/MND STATE CLEARINGHOUSE NUMBER: 2009022013 328 ROEBLING ROAD (BRITANNIA MODULAR LABS 3)

PREPARED FOR:

City of South San Francisco

Originally Circulated: February 2009 Revised and Recirculated: July 2009 Revised and Recirculated: February 2012

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RECIRCULATION

RECIRCULATION

On January 28, 2009, the City of South San Francisco published an Initial Study/Mitigated Negative Declaration (IS/MND) for the 328 Roebling Road (Britannia Modular Labs 3) Project in the East of 101 Area of South San Francisco. That document concluded that, although the proposed Project could have a significant effect on the environment, the potentially significant effect could be reduced to less than significant levels through incorporation of mitigation measures.

A Recirculated IS/MND was subsequently circulated on July 2009. This document had been revised in response to comments received from public agencies and recirculated per California Environmental Quality Act (CEQA) Guidelines section 15073.5(b)(1) because a new potentially significant effect was identified (vehicle queuing at the Airport Boulevard/Grand Avenue U.S. 101 off-ramp) along with mitigation to reduce the impact to less than significant.

Neither the original January 2009 IS/MND, nor the July 2009 Recirculated IS/MND were adopted by the Lead Agency. During the intervening time, the area-wide East of 101 traffic was re-modeled and the East of 101 Traffic Improvement Program was revised, changing some of the assumptions used in the previous traffic analyses. Additionally, the Bay Area Air Quality Management District has published thresholds and guidelines for analyzing GHG emissions, which had not previously been in place, and revised threshold levels for criteria air pollutants. Because of the time that has gone by and the magnitude of traffic, air quality and GHG emissions impacts that have changed, the Lead Agency decided to recirculate this document.

Additional minor clarifying revisions have been made to other discussions and/or mitigation measures to be consistent with current documents, regulations and policies. However, these other minor clarifying revisions are not considered "substantial revisions" that would otherwise have necessitated recirculation of this document.

INTRODUCTION AND PROJECT DESCRIPTION

INTRODUCTION TO THIS DOCUMENT

This document serves as the IS/MND for the 328 Roebling Road Project. Per CEQA Guidelines (Section 15070), a Mitigated Negative Declaration can be prepared to meet the requirements of CEQA review when the Initial Study identifies potentially significant environmental effects, but revisions in the project would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur.

This document is organized in three sections as follows:

- Introduction and Project Description. This section introduces the document and discussed the project description including location, setting, and specifics of the lead agency and contacts.
- Mitigated Negative Declaration. This section lists the impacts and mitigation measures identified in the Initial Study and proposes findings that would allow adoption of this document as the CEQA review document for the proposed Project.
- Initial Study. This section discusses the CEQA environmental topics and checklist questions and identifies the potential impacts and proposed mitigation measures to avoid these impacts.

PUBLIC REVIEW

The IS/MND will be circulated for a 30-day public review period. Written comments may be submitted to the following address:

Linda Ajello, Associate Planner City of South San Francisco Planning Division P.O. Box 711 South San Francisco, CA 94083 Telephone: 650-877-8535 Fax: 650-829-6639 Linda.Ajello@ssf.net

Adoption of the Mitigated Negative Declaration does not constitute approval of the Project itself, which is a separate action to be taken by the Planning Commission. Approval of the Project can take place only after the Mitigated Negative Declaration has been adopted.

GENERAL PROJECT INFORMATION

PROJECT ENTITLEMENTS

Development of the Project as proposed would require a Lot Consolidation, Conditional Use Permit, Design Review, and Preliminary Transportation Demand Management (TDM) Plan.

LEAD AGENCY

City of South San Francisco Planning Division 315 Maple Avenue South San Francisco, CA 94083

CONTACT PERSON

Linda Ajello, Associate Planner City of South San Francisco Planning Department P.O. Box 711/315 Maple Avenue South San Francisco, CA 94083 650-877-8535 Linda.Ajello@ssf.net

PROJECT SPONSOR

HCP, Inc. 400 Oyster Point Boulevard, Suite 409 South San Francisco, CA 94080 Contact: Jonathan M. Bergschneider, Vice President

PROJECT LOCATION

The approximately 3 acre Project site is located at 328 Roebling Road, in South San Francisco's East of 101 Area, in San Mateo County. The Project would occupy three adjacent parcels that are currently occupied by warehouse, office, and industrial uses. The assessor's parcel numbers (APNs) are 015041290, 015041250, and 015041110. **Figure 1** shows the Project location.

GENERAL PLAN DESIGNATION

Business and Technology Park

ZONING

Business Technology Park (BTP)



FIGURE 1. PROJECT LOCATION

EXISTING USES

Three office/warehouse buildings currently occupy the Project site as shown in **Figure 2** and described as follows:

233 East Grand Avenue APN: 015-041-290 Site Area: 1.18 acres Overall Building Square Footage: 40,423 square feet Office Use Square Footage: 1,287 square feet Warehouse Use Square Footage: 39,136 square feet Tenant(s): United Cold Storage (Warehouse)

328 Roebling Road APN: 015-041-250 Site Area: 1.1 acres Overall Building Square Footage: 18,636 square feet Office Use Square Footage: 1,340 square feet Warehouse Use Square Footage: 17,296 square feet Tenant(s): Slakey Brothers (Warehouse)

340 Roebling Road APN: 015-041-110 Site Area: 0.7 acres Overall Building Square Footage: 20,442 square feet Office Use Square Footage: 5,088 square feet Warehouse Use Square Footage: 15,354 square feet Tenant(s): William Tuck (Attorney), Melon's Catering, Atlas Heating

The site is currently industrial in design with buildings and paved areas covering the majority of the site. The leases currently in place will extend for no more than 1 year from January 2012.

SURROUNDING LAND USES AND SETTING

The Project site is located on Roebling Road, a cul-de-sac off of East Grand Avenue, in the "East of 101 Area", the traditional and continued core of South San Francisco's industrial and technology businesses, including Research and Development (R&D) offices. The site is in a Business and Technology Park area, with Business Commercial and Mixed Industrial uses nearby.

The East of 101 Area consists of roughly 1,700 acres of land and is bounded by San Francisco Bay on the east side, Highway 101 and railway lines on the west, the City of Brisbane on the north, and San Francisco International Airport on the south. The area has a mix of land uses, including industry, warehousing, retail, offices, hotels, marinas, and bioscience research and development facilities. The area is separated from the majority of residential uses by U.S. 101, though some houseboats are permitted at the nearby Oyster Point. While the East of 101 Area is almost completely built out, redevelopment remains extremely active as existing facilities are upgraded as industry continues to evolve toward high-technology and research and development uses.

Adjacent and to the east of the Project site is the location of a recently developed office R&D project at 249 East Grand Avenue. The property to the west of the Project site, across Roebling Road, includes a number of buildings housing light industrial/warehousing/office uses, the majority of which is the site of

the 213 – 221 East Grand Avenue office and R&D redevelopment project, which obtained its entitlements from the City of South San Francisco in late 2008, including the approval of a 10 year development agreement.

PROJECT DESCRIPTION

The Project proposes the removal of 3 existing office/warehouse buildings containing 79,501 square feet total on an approximately 3 acre site at 328 Roebling Road, and the construction in their place of two 2-story office/R&D buildings each containing 52,768 square feet (105,536 square feet total) of office/laboratory space over a basement garage. The Project would also entail the development of at-grade and subterranean parking at a ratio of 2.8 spaces per 1,000 square feet. The site plan is included as **Figure 3**.

Proposed Aesthetics

The applicants have stated that this Project is intended to help diversify the office/research and development inventory in the East of 101 Area and provide a place for young life-sciences companies to grow. With a target of younger-stage companies, the Project includes smaller, more modest buildings (see **Figure 4**) than seen in other recent campus-style developments. The landscaping plan includes perimeter and frontage trees, additional parking lot trees for accent and shading, and a vegetated swale (see **Figure 5**). Usable outdoor open space is provided for each building in the form of first and second floor balconies along the northeastern side of each building.

Proposed Phasing

The Project is intended to be implemented in two phases. Phase 1 would involve demolition of the two buildings at 328 and 340 Roebling Road and grading and construction of Building A on that back (northeast) portion of the site. Phase 2 would complete the Project with demolition of the building at 233 Grand Avenue and grading and construction of Building B on that front (southwest) portion of the site.

Proposed Grading

The rear of the site is approximately 23 feet higher than the frontage along East Grand Avenue. The proposed grading plan shows a vegetated swale taking advantage of this existing elevation change to treat stormwater as it runs downward along the grade toward East Grand Avenue. The proposed grading would be generally similar to what it is now, with grades varying between 1% and 4.4% from northeast to southwest. From east to west, the site currently drains to Roebling Road. The grading of the site will be changed to allow drainage to the swale that is proposed to be installed along the site's eastern boundary. The proposed grading plan is included as **Figure 6**.

Proposed Circulation and Access

As proposed, the Project site would be accessed through three entrances, two on Roebling Road and one on East Grand Avenue (See Figure 2). The main entrance on Roebling Road is in the middle of the site between Building A and Building B. The second Roebling Road entrance is to the east of Building A. Due to a median on East Grand Avenue that would prevent left turns into the site, this entrance could only be accessed via a right turn from northbound East Grand Avenue, and vehicles exiting the site could only make a right turn. There is a left turn lane for southbound vehicles on East Grand Avenue directing vehicles onto Roebling Road.



FIGURE 2. EXISTING SITE PLAN

Source: DES Architects/Engineers for HCP, Inc. (Applicants)



FIGURE 3. PROPOSED SITE PLAN

Source: DES Architects/Engineers for HCP, Inc. (Applicants), dated 11/24/09



4 SOUTH-WEST ELEVATION

NORTH-WEST ELEVATION









FIGURE 4. PROPOSED BUILDING ELEVATIONS, BUILDING A (BUILDING B IS SIMILAR)

Source: DES Architects/Engineers for HCP, Inc. (Applicants), dated 11/24/09



FIGURE 5. PROPOSED LANDSCAPING PLAN

Source: DES Architects/Engineers for HCP, Inc. (Applicants), dated 11/24/09



Source: Wilsey Ham for HCP, Inc. (Applicants), undated



TRUE NORTH

AREAS

SITE DESCRIPTION	AREA (ACRES)	PERCENTAGE (%)
AREA COVERED BY STRUCTURES	1.27	43
AREA TO BE LANDSCAPED	0.53	18
AREA TO BE PAVING AND WALKWAYS	1.15	39
TOTAL	2.95	100
EXISTING IMPERVIOUS AREA	2.89	98

LEGEND



ABBREVIATIONS

BOW	BOTTOM OF WALL
EX	EXISTING
FF	FINISHED FLOOR
FG	FINISHED GRADE
FP	FINISHED PAVEMENT
GB	GRADE BREAK
LS	LANDSCAPE
RET.	RETAINING
TC	TOP OF CURB
TG	TOP OF GRATE
TOW	TOP OF WALL
TYP	TYPICAL

VEGETATED SWALE SITE PROPERTY LINE LIMIT OF WORK STORM DRAIN PIPE DIRECTION OF DRAINAGE SLOPE CATCH BASIN BUBBLE UP MEDIA FILTER CHECK DAM

FIGURE 6. PROPOSED GRADING AND DRAINAGE PLAN

MITIGATED NEGATIVE DECLARATION

PROJECT DESCRIPTION, LOCATION, AND SETTING

This Mitigated Negative Declaration has been prepared for the 328 Roebling Road Project. See the Introduction and Project Description section of this document for details of the Project.

POTENTIALLY SIGNIFICANT IMPACTS REQUIRING MITIGATION

The following is a list of potential Project impacts and the mitigation measures recommended to reduce these impacts to a less-than-significant level. Refer to the Initial Study Checklist section of this document for a more detailed discussion.

Table 1: Potentially Significant Impacts and Mitigation Measures	
Potentially Significant Impact	Mitigation Measure Reduces Impact to a Less Than Significant Level
Impact Air-1: Construction Dust and Exhaust. Construction activities would generate exhaust emissions from vehicles/equipment and fugitive dust particles that could affect local air quality. This impact is considered to be potentially significant.	Air-1: Basic Construction Best Management Practices. The Project shall demonstrate proposed compliance with all applicable regulations and operating procedures prior to issuance of demolition, building or grading permits, including implementation of the following BAAQMD "Basic Construction Mitigation Measures".
	a. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
	b. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
	c. 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.
	d. All vehicle speeds on unpaved roads shall be limited to 15 mph.
	e. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads

Table 1: Potentially Significant Impacts and Mitigation Measures	
Potentially Significant Impact	Mitigation Measure Reduces Impact to a Less Than Significant Level
	shall be laid as soon as possible after grading unless seeding or soil binders are used.
	f. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
	g. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
	 h. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.
Impact Bio-1: Disturbance of Nesting Birds. Construction activities could adversely affect nesting birds protected by the Migratory Bird Treaty Act and/or Fish and Game Code of California. This is a potentially significant impact.	Bio-1: Pre-Construction Nesting Bird Survey. Pre- construction surveys for nesting birds protected by the Migratory Bird Treaty Act of 1918 and/or Fish and Game Code of California within 100 feet of a development site in the Project area shall be conducted within 30 days of initiation of construction activities. If active nests are found, the Project shall follow recommendations of a qualified biologist regarding the appropriate buffer in consideration of species, stage of nesting, location of the nest, and type of construction activity. The buffer shall be maintained until after the nestlings have fledged and left the nest. If there is a complete stoppage in construction activities for 30 days or more, a new nesting-survey shall be completed prior to re-initiation of construction activities.
Impact Geo-1: Seismic Ground Shaking. Buildings and occupants of the Project site would be subject to ground shaking in the event of a seismic event, which could be high intensity (Mercalli intensity level of IX, violent). Development of the Project would increase the number of structures and people potentially exposed to hazards associated with a major earthquake in the region. This is a potentially significant impact.	Geo-1a: Compliance with California Building Code. Project development shall meet requirements of the California Building Code as modified by the amendments, additions and deletions adopted by the City of South San Francisco. Incorporation of seismic construction standards would reduce the potential for catastrophic effects of ground shaking, such as complete structural failure.
	Geo-1b: Compliance with a design level Geotechnical Investigation report and with Structural Design Plans. Proper foundation engineering and construction shall be performed in accordance with the recommendations of a

Table 1: Potentially Significant Impacts and Mitigation Measures		
Potentially Significant Impact	Mitigation Measure Reduces Impact to a Less Than Significant Level	
	Registered Geotechnical Engineer or Civil Engineer experienced in geotechnical design and a Registered Structural Engineer or Civil Engineer experienced in structural design.	
	The structural engineering design shall incorporate seismic parameters as outlined in the California Building Code. The Project Geotechnical Investigation shall establish the seismic design parameters, as determined by the geotechnical engineer in accordance with requirements of the California Building Code.	
	Geo-1c: Obtain a building permit and complete final plan review. The Project applicant shall obtain a building permit through the City of South San Francisco Building Division. Plan Review of planned buildings and structures shall be completed by the Building Division for adherence to the seismic design criteria for planned commercial and industrial sites in the East of 101 Area of the City of South San Francisco. According to the East of 101 Area Plan, Geotechnical Safety Element, buildings shall not be subject to catastrophic collapse under foreseeable seismic events, and will allow egress of occupants in the event of damage following a strong earthquake.	
Impact Geo-2: Liquefaction, Densification, and Ground Surface Settlement. Due to the site's location at the border between the competent bedrock of Oyster Point to the north, and artificial fill placed over tidal flats to the south, the southern portion of the Project area is identified as an area of high hazard for liquefaction. The northern portion is identified as having a very low hazard for liquefaction. Liquefaction or densification of soils underlying the site could result in settlement and differential settlement of site improvements including buildings, pavements, and utilities and pose a threat to human health. The potential for liquefaction of site soils is considered a potentially significant impact.	Geo-2a: Compliance with recommendations of a Geotechnical Investigation and in conformance with Structural Design Plans. A Design Level Geotechnical Investigation shall be prepared for the site under the direction of a California Registered Geotechnical Engineer, or Civil Engineer experienced in geotechnical engineering, and shall include analysis for liquefaction potential of the underlying sediments. Proper foundation engineering and construction shall be performed in accordance with the recommendations of the Geotechnical Investigation. The Geotechnical Investigation shall be reviewed and approved by the City's Geotechnical Consultant and by the City Engineer. A Registered Structural Engineer, or civil engineer experienced in structural engineering shall prepare Project structural design plans. Structures shall be designed to minimize the effects of anticipated seismic settlements. The Geotechnical Engineer shall review the Structural Design Plans and provide approval for the geotechnical elements of the plans. The design plans shall identify specific mitigation measures to reduce the liquefaction potential of surface soils. Mitigation measures may include excavation and replacement as engineered fill, reduced foundation	

Table 1: Potentially Significant Impacts and Mitigation Measures		
Potentially Significant Impact	Mitigation Measure Reduces Impact to a Less Than Significant Level	
	stone columns or pressure grouting.	
	Geo-2b: Obtain a building permit and complete plan review. The Project applicant shall obtain a building permit through the City of South San Francisco Building Division. Plan Review of planned buildings and structures shall be completed by the Building Division for adherence to the seismic design criteria for planned commercial and industrial sites in the East of 101 Area of the City of South San Francisco. According to the East of 101 Area Plan, Geotechnical Safety Element, buildings shall not be subject to catastrophic collapse under foreseeable seismic events, and will allow egress of occupants in the event of damage following a strong earthquake.	
Impact Geo-3: Landslides and Slope Stability. A landslide is a mass of rock, soil and debris displaced down slope by sliding, flowing or falling. The site is located on gently sloping ground, and as such natural slope stability is not expected to be an issue. However, cuts currently exist in the northern part of the site, and more cuts will be necessary to provide level building pads. These cuts will require construction of retaining walls, which could fail if improperly designed. The impacts of slope stability and landslides are potentially significant.	Geo-3: Compliance with recommendations of a Geotechnical Investigation. A Design Level Geotechnical Investigation shall be prepared for the site under the direction of a California Registered Geotechnical Engineer, or Civil Engineer experienced in geotechnical engineering, and shall include analysis of the site slope stability. Proper foundation engineering and retaining wall design shall be performed in accordance with the recommendations of the Geotechnical Investigation. The Geotechnical Investigation shall be reviewed and approved by the City's Geotechnical Consultant and by the City Engineer.	
Impact Geo-4: Soil Erosion. The Project would involve mass grading at the site. Excavation of soil for construction of new buildings and pavement sections would also be performed and temporary stockpiles of loose soil will be created. Soils exposed during construction activities would be subject to erosion during storm events. This would be a potentially significant impact during and following site construction activities.	Geo-4: Storm Water Pollution Prevention Plan (SWPPP). In accordance with the Clean Water Act and the State Water Resources Control Board, the Applicant shall file a SWPPP prior to the start of construction. The SWPPP shall include specific best management practices to reduce soil erosion. This is required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity.	
Impact Geo-5: Unstable Soils and Bay Mud. Undocumented fill soils are present on portions of the subject site. Fill soils may settle due to new building loads. Bay Mud and alluvial soil deposits are present on adjacent sites and also constitute areas of potentially unstable soils. Bay Mud may be present under the southern portion of the Project site and may settle under design loading conditions resulting in differential settlement of structures. The presence of unstable fill soil and Bay Mud is a potentially significant impact.	Geo-5: Investigate unstable fill soils and Bay Mud. A Design Level Geotechnical Investigation shall be performed to determine the depth and extent of potentially unstable fill soil and Bay Mud. Based on results of this study, the Geotechnical Engineer shall determine appropriate measures to stabilize the potentially unstable site soils. Consolidation testing of any Bay Mud soils present shall be performed, as part of the Design Level Geotechnical Investigation, and estimates of settlement for the site shall be developed.	

Table 1: Potentially Significant Impacts and Mitigation Measures		
Potentially Significant Impact	Mitigation Measure Reduces Impact to a Less Than Significant Level	
	Methods of unstable soil stabilization may include construction of driven pile foundations that support structures on materials located below fill soils and Bay Mud, and other methods as recommended by the Geotechnical Engineer.	
Impact Geo-6: Expansive Soils. Expansive soils are present in the existing fill on the site and in Bay Mud sediments that underlie the site. The presence of expansive soils could cause damage to proposed improvements but are unlikely to create substantial risk of life. The impact of expansive soil is potentially significant.	Geo-6: Compliance with recommendations of a Geotechnical Investigation and in conformance with Structural Design Plans. A Design Level Geotechnical Investigation shall be prepared for the site under the direction of a California Registered Geotechnical Engineer and shall include analysis for expansion potential of the site soils. Proper foundation engineering and construction shall be performed in accordance with the recommendations of the Geotechnical Investigation. The Geotechnical Investigation shall be reviewed and approved by the City's Geotechnical Consultant and by the City Engineer. A Registered Structural Engineer shall prepare Project structural design plans. The design plans shall identify specific mitigation measures to reduce the effects of expansive surface soils. Mitigations measures may include the following: Excavate expansive soils and replace with at least one foot of non-expansive fill. Design and construct structures to withstand expected stresses by the implementation of the following: minimize use of slab- on-grade floors; support buildings and slabs on non- expansive materials; chemically treat expansive materials to reduce expansion potential; avoid siting structures across soil materials of substantially different expansive properties; extend foundations below the zone of seasonal moisture change; utilize pier-and-grade- beam foundation systems where appropriate; utilize special bending resistant design; and prevent accumulation of surface water adjacent to buildings.	
Impact Haz-1: Routine Use of Hazardous Materials. The proposed development includes construction of Class-A office and laboratory buildings. Class A refers to a research laboratory, not merely an instructional laboratory. Depending upon the nature of research planned at the proposed facilities, for which detailed information is not currently available, there are likely to be both hazardous and potentially hazardous materials stored and used on the site that will eventually require disposal. This could include both biohazards, as well as chemical hazards. There will also likely be transportation of hazardous materials to and from the site, probably traveling along Highway 101 and East Grand Avenue.	 Haz-1a: Registration in the Hazardous Materials Business Plan Program. Qualifying businesses occupying and/or operating at the development must submit a Hazardous Materials Business Plan for the safe storage and use of chemicals to the San Mateo County Environmental Health Department prior to the start of operations, and must review and update the entire Business Plan at least once every two years, or within 30 days of any significant change. Plans shall be submitted to the San Mateo County Environmental Health Business Plan Program, which may be contacted at (650) 363-4305 for more information. Businesses qualify for the Hazardous Materials Business 	

Table 1: Potentially Significant Impacts and Mitigation Measures		
Potentially Significant Impact	Mitigation Measure Reduces Impact to a Less Than Significant Level	
The risk of accidental upset and environmental contamination from routine transport, storage, use and disposal of hazardous and potentially hazardous materials to the public and environment is a potentially significant impact.	Plan Program if they store a hazardous material equal to or greater than the minimum reportable quantities. These quantities are 55 gallons for liquids, 500 pounds for solids and 200 cubic feet (at standard temperature and pressure) for compressed gases. Exemptions include businesses selling only pre-packaged consumer goods; medical professionals who store oxygen, nitrogen, and/or nitrous oxide in quantities not more than 1,000 cubic feet for each material, and whom store or use no other hazardous materials; or facilities that store no more than 55 gallons of a specific type of lubricating oil, and for which the total quantity of lubricating oil not exceed 275 gallons for all types of lubricating oil. These exemptions are not expected to apply to Class A laboratory facilities.	
	The Business Plan must include the type and quantity of hazardous materials, a site map showing storage locations of hazardous materials and where they may be used and transported from, risks of using these materials, included in material safety data sheets for each material, a spill prevention plan, an emergency response plan, employee training consistent with OSHA guidelines, and emergency contact information.	
	Haz-1b: Compliance with US Department of Transportation, State of California and local laws, ordinances and procedures for transportation of hazardous materials and hazardous wastes. All transportation of hazardous materials and hazardous waste to and from the site will be in accordance with Title 49 of the Code of Federal Regulations, US Department of Transportation, State of California, and local laws, ordinances and procedures including placards, signs and other identifying information.	
Impact Haz-2: Accidental Hazardous Materials Release. Existing buildings potentially contain hazardous materials including waste oil, asbestos, lead paint, and PCBs. Underlying site soils may contain hazardous materials including toxic heavy metals related to the history of heavy industry in the area. The historic railroad grade along the northeast edge of the Project site may be a source of additional hazardous materials, including arsenic, chromium, creosote, zinc chloride, or other wood preservatives. During demolition operations hazardous materials could be released from structures at the site or from the underlying soils. Following construction, operations at the proposed facilities are expected to represent a continuing threat to the	Haz-2a: Demolition Plan and Permitting. A demolition plan with permit applications shall be submitted to the City of South San Francisco Building Department for approval prior to demolition. The Demolition Plan for safe demolition of existing structures shall include asbestos dust control and incorporate recommendations from the site surveys for the presence of potentially hazardous building materials, as well as additional surveys when required by the City. The Demolition Plan shall address both on-site worker protection and off-site resident protection from both chemical and physical hazards. All contaminated building materials shall be tested for contaminant concentrations and shall be disposed of to appropriate licensed landfill facilities.	

Table 1: Potentially Significant Impacts and Mitigation Measures	
Potentially Significant Impact	Mitigation Measure Reduces Impact to a Less Than Significant Level
environment through accidental release of hazardous materials since the site is proposed to include Class A laboratory facilities, where hazardous materials may be stored, used, and disposed of. This represents a potentially significant impact.	Prior to building demolition, hazardous building materials such as peeling, chipping and friable lead based paint and asbestos containing building materials shall be removed in accordance with all applicable guidelines, laws, and ordinances. The Demolition Plan shall include a program of air monitoring for dust particulates and attached contaminants. Dust control and suspension of work during dry windy days shall be addressed in the plan. Prior to obtaining a demolition permit from BAAQMD, an asbestos demolition survey shall be conducted in accordance with the requirements of BAAQMD Regulation 11, Rule 2.
	Haz-2b: Additional Soil Sampling of Site Soils. The applicant shall retain a licensed Civil Engineer or Professional Geologist to complete additional surface and subsurface soil sampling to determine if elevated levels of toxic metals, herbicides, motor oil, or wood preservatives are present in site soils. These tests shall take place throughout the Project site. If contamination exceeding commercial/industrial guidelines including the Regional Water Quality Control Board Environmental Screening Levels for commercial/ industrial sites, USEPA Preliminary Remediation Goals for commercial/ industrial sites, and the California Department of Toxic Substances Control Human Health Screening Levels is detected, then a Site Soil Management Plan and Health and Safety Plan shall be prepared and implemented, as discussed in Mitigation Measure Haz-2c.
	Haz-2c: Implementation of a Site Soil Management Plan. If contamination of site soils is detected, then results shall be submitted to the State of California EPA, pursuant to the Brownfield Memorandum of Agreement, Request for Oversight of a Brownfield Site process, and a Site Soil Management Plan shall be prepared in accordance with recommendations of the environmental consultant and established procedures for safe removal. Specific mitigation measures designed to protect human health and the environment will be provided in the plan. At a minimum the plan shall include, but not be limited to the following:
	(1) Documentation of the extent of previous environmental investigation and remediation at the site.
	(2) Requirements for site specific Health and Safety Plans (HASPs) to be prepared by all contractors at the Project site. This includes a HASP for all

1

Table 1: Potentially Significant Impacts and Mitigation Measures	
Potentially Significant Impact	Mitigation Measure Reduces Impact to a Less Than Significant Level
	demolition, grading and excavation on the site, as well as for future subsurface maintenance work. The HASP shall include appropriate training, any required personal protective equipment, and monitoring of contaminants to determine exposure. The HASP will be reviewed and approved by a Certified Industrial Hygienist.
	(3) Description of protocols for the investigation and evaluation of previously unidentified hazardous materials that could be encountered during Project development, including engineering controls that may be required to reduce exposure to construction workers and future users of the site.
	 (4) Requirements for site-specific construction techniques that would minimize exposure to any subsurface contamination found to occur. This shall include treatment and disposal measures for any contaminated groundwater removed from excavations, trenches, and dewatering systems in accordance with San Francisco Bay Regional Water Quality Control Board guidelines.
	(5) Sampling and testing plan for excavated soils to determine suitability for reuse or acceptability for disposal at a state licensed landfill facility.
	 (6) Restrictions limiting future excavation or development of the subsurface by residents and visitors to the proposed development if determined necessary through coordination with California EPA.
	(7) The plan shall be reviewed and approved by the responsible jurisdiction prior to issuance of any demolition, grading and construction permits for the Project.
	Haz-2d: California Accidental Release Prevention Program (CalARP). Future businesses at the development shall check the state and federal lists of regulated substances available from the San Mateo County Environmental Health Department (SMCEHD). Chemicals on the list are chemicals that pose a major threat to public health and safety or the environment because they are highly toxic, flammable or explosive. Businesses shall determine which list to use in consultation with the SMCEHD.
	Should businesses qualify for the program they shall complete a CalARP registration form and submit it to

Table 1: Potentially Significant Impacts and Mitigation Measures		
Potentially Significant Impact	Mitigation Measure Reduces Impact to a Less Than Significant Level	
	Environmental Health. Following registration, they shall submit a Risk Management Plan (RMP). RMPs are designed to handle accidental releases and ensure that businesses have the proper information to provide to emergency response teams if an accidental release occurs. All businesses that store or handle more than a threshold quantity (TQ) of a regulated substance must develop a RMP and follow it.	
	Risk Management Plans describe impacts to public health and the environment in the event that a regulated substance is released near schools, residential areas, hospitals and childcare facilities. RMPs must include procedures for: keeping employees and customers safe, handling regulated substances, training staff, maintaining equipment, checking that substances are stored safely, and responding to an accidental release.	
Impact Haz-3: Hazardous Materials Near Schools. The nearest school or childcare sites to the Project are the Gateway Child Care Center, located 0.21 miles northwest of the proposed Project, the Early Years Preschool, located 0.27 miles southeast of the Project site, and the Genentech Childcare Center, located 0.40 miles northeast of the Project site. Hazardous materials potentially present at the Project site could lead to a hazardous materials release during site demolition or future on-site activities. The impact of hazardous materials emissions within one-quarter mile of a school is a potentially significant impact.	Haz-3: Mitigation Measures Haz-2a, Haz-2b, Haz-2c, and Haz-2d. Implementation of mitigation measures Haz-2a through Haz-2d shall be performed. These mitigation measures include requirements for preparing a Demolition Plan and obtaining permits for the demolition work, performing additional soil sampling of site soils to identify any contaminated soils present, and preparation and implementation of a Site Soil Management Plan under the oversight of the Department of Toxic Substances Control if contaminated soil is identified, as well as future business participation in the California Accidental Release Prevention Program if listed chemicals are used at the Project site.	
Impact Haz-4: Hazardous Materials on Site. The site is not currently included on the "Cortese List" but Phase I studies indicate the possibility for hazardous material contamination of the site that could qualify the site for listing pursuant to Government Code Section 65962.5. This would be considered a potentially significant impact.	Haz-4: Mitigation Measures Haz-2a, Haz-2b, Haz-2c, and Haz-2d. As described above, these mitigation measures comprehensively address on-site hazardous materials.	
Impact Hydro-1: Violate any water quality standards or waste discharge requirements. Exposure and disturbance of site soils during construction and delivery of post construction surface runoff containing industrial pollutants to receiving waters could allow eroded soils and pollution to enter storm water and downstream waters. This is a potentially significant impact.	 Hydro-1: Preparation and Implementation of Project SWPPP. Pursuant to NPDES requirements, the Project applicant shall develop a SWPPP to protect water quality during construction and submit the SWPPP as part of project application submittals with the Planning Permit Application and Building Permit Application. The Project SWPPP shall include, but is not limited, to the following mitigation measures for the construction period: 1) Grading and earthwork shall be allowed with the 	

Table 1: Potentially Significant Impacts and Mitigation Measures	
Potentially Significant Impact	Mitigation Measure Reduces Impact to a Less Than Significant Level
	appropriate SWPPP measures during the wet season (October 1 through April 30) and such work shall be stopped before pending storm events.
	2) Erosion control/soil stabilization techniques such as straw mulching, erosion control blankets, erosion control matting, and hydro-seeding, shall be utilized, in accordance with the regulations outlined in the Association of Bay Area Governments Manual of Standards for Erosion and Sediment Control Measures. Silt fences used in combination with fiber rolls shall be installed down slope of all graded slopes. Fiber rolls shall be installed in the flow path of graded areas receiving concentrated flows and around storm drain inlets.
	 "Best management practices" (BMPs) for preventing the discharge of other construction- related NPDES pollutants beside sediment (i.e. paint, concrete, trash, etc.) to downstream waters such as covered and contained storage areas, contained wash-out areas, and prompt and appropriate disposal.
	4) After construction is completed, all drainage facilities shall be inspected for accumulated sediment and trash, and these drainage structures shall be cleared of debris and sediment.
	In accordance with the handbook C.3 Stormwater Technical Guidance, permanent mitigation measures for stormwater shall be submitted as part of project application submittals with the Planning Permit Application and Building Permit Application. Elements that shall be addressed in the submittals include the following:
	5) Description of potential sources of erosion, sediment, and trash at the Project site. Industrial activities and significant materials and chemicals that could be used at the proposed Project site should be described. This will include a thorough assessment of existing and potential pollutant sources.
	6) Identification of BMPs to be implemented at the Project site based on identified industrial activities and potential pollutant sources, including non-point source pollutants. Emphasis shall be placed on source control BMPs, with treatment controls used as needed.
	7) Development of a monitoring and implementation plan. Maintenance requirements and frequency shall

Table 1: Potentially Significant Impacts and Mitigation Measures	
Potentially Significant Impact	Mitigation Measure Reduces Impact to a Less Than Significant Level
	be carefully described including vector control, clearing of clogged or obstructed inlet or outlet structures, trash removal, vegetation/landscape maintenance, replacement of media filters, regular sweeping of parking lots and other paced areas, etc. Wastes removed as a result of the BMPs described above may be hazardous, therefore, maintenance costs shall be budgeted to include disposal at a proper site. Parking lot areas shall be cleared of debris that may enter the storm drain system on a daily basis.
	8) The monitoring and maintenance program shall be conducted at the frequency agreed upon by the RWQCB and/or City of South San Francisco. Monitoring and maintenance shall be recorded and submitted annually to the State Water Resources Control Board. The SWPPP shall be adjusted, as necessary, to address any inadequacies identified through the monitoring.
	 Proposed locations and sizing of stormwater treatment measures shall be included.
	The applicant shall prepare informational literature and guidance on industrial and commercial BMPs to minimize pollutant contributions from the proposed development. This information shall be distributed to all employees at the Project site. At a minimum the information shall cover: a) proper disposal of commercial cleaning chemicals; b) proper use of landscaping chemicals; c) clean-up and appropriate disposal of hazardous materials and chemicals; and d) prohibition of any washing and dumping of materials and chemicals into storm drains.
Impact Hydro-2: Altered Drainage Patterns. Construction operations associated with the Project would present a threat of soil erosion from soil disturbance by subjecting unprotected bare soil areas to the erosional forces of runoff and post construction runoff that could increase and/or could contain soil and sediment.	Hydro-2: Mitigation Measure Hydro-1. Implementation of mitigation measure Hydro-1 for construction related sources of erosion and post construction BMPs will reduce the impact of altered drainage patterns to less than significant.
Impact Hydro-3: Degrade Water Quality. Construction and operation of the Project have the potential to degrade water quality through discharge of stormwater.	Hydro-3: Mitigation Measure Hydro-1. Implementation of mitigation measure Hydro-1for construction related sources of erosion and post construction BMPs will reduce the impact on water quality to less than significant.
Impact Noise-1: Construction-Related Noise. Project	Noise-1: Construction Noise Abatement and Limitation

Table 1: Potentially Significant Impacts and Mitigation Measures		
Potentially Significant Impact	Mitigation Measure Reduces Impact to a Less Than Significant Level	
construction could result in temporary short-term noise increases due to the operation of heavy construction equipment. Construction noise typically ranges from about 82 to 90 dBA at 25 feet for most types of construction equipment, and slightly higher levels of about 94 to 97 dBA at 25 feet for certain types of earthmoving and impact equipment. This impact is considered to be potentially significant.	of Construction Hours. Construction hours shall be limited to the hourly restrictions specified in the City Noise Ordinance, and the Project sponsor shall require by contract specification that construction best management practices be implemented by contractors to reduce noise levels to the 90-dBA at 25 feet noise limit specified in the City Noise Ordinance. Required practices shall include but not be limited to:	
	• Ensuring that construction equipment is properly muffled according to industry standards,	
	• Implementing noise attenuation measures such as noise barriers or noise blankets, and	
	• Requiring heavily loaded trucks used during construction to be routed away from noise and vibration sensitive uses.	
Impact Traf-1: 95th Percentile Vehicle Queuing, Airport Blvd. Addition of Project traffic would significantly increase volumes for the left turn on the southbound approach to Grand Avenue, which already exceeds available queuing capacity. This is a potentially significant impact.	Traf-1: Airport Boulevard / Grand Avenue Signal Timing. Adjust signal timing to the approval of the South San Francisco Public Works Department in order to reduce Base Case + Project 95th percentile vehicle queuing for the left turn movement on the southbound Airport Boulevard approach to Grand Avenue to a shorter distance than Base Case queuing for this movement.	
Impact Traf-2: 95th Percentile Vehicle Queuing, E. Grand Avenue. The addition of Project traffic would degrade existing acceptable queuing in the left turn lane on the approach to the unsignalized Roebling Road intersection to an unacceptable storage demand.	Traf-2: E. Grand Avenue / Roebling Road Turn Lane Extension. The following improvement is not included in the East of 101 Transportation Improvement Program and will not be funded via the Project's traffic impact fee contribution for this program. The Project proponent will be responsible for implementation of the following improvement:	
	Extend the left turn lane on the eastbound E. Grand Avenue approach to Roebling Road from 75 feet up to at least 125 feet (as determined by the City Engineer).	
Impact Traf-3: East Grand Avenue / Roebling Road Signal Warrant. This unsignalized intersection would receive a significant signal warrant impact due to the addition of Project traffic to cumulative PM peak hour volumes. This would be a significant impact.	 Traf-3: E. Grand Avenue / Roebling Road Signalization. The following improvements are not currently included as part of the East of 101 Transportation Improvement Program and will not be funded via the Project's traffic impact fee contribution to this program. The Project proponent will be responsible for implementation of the following improvement or fair-share reimbursement (as determined by the City Engineer) if implemented by another party prior to initiation of construction for this Project: a) Signalize the intersection and coordinate operation 	

Table 1: Potentially Significant Impacts and Mitigation Measures	
Potentially Significant Impact	Mitigation Measure Reduces Impact to a Less Than Significant Level
	with the signal at East Grand Avenue / Forbes Boulevard / Harbor Way.
	 b) Lengthen the single left turn lane on the westbound E. Grand Avenue approach to the Forbes/Harbor intersection to at least 225 feet (as determined by the City Engineer). Prohibit left turns to/from all driveways along E. Grand Avenue between these two locations. Mitigation Measure Traf-2, the E. Grand Avenue / Roebling Road left turn lane extension, would also
	reduce this impact.
Impact Traf-4: Grade Crossing Approaches Missing Signing and Pavement Striping. The State Public Utilities Commission (September 26, 2006 letter to City of South San Francisco) has noted in a recent inspection that the East Grand Avenue / Forbes Boulevard / Harbor Way intersection grade crossing is not up to minimum standards on one or more approaches for required advanced warning signing and pavement striping (i.e. R15-1 and W-10-1 signs as well as RxR pavement striping). This results in an existing safety concern that would be aggravated by the addition of Project traffic. This would be a significant impact.	Traf-4: Impacts to Grade Crossing Approach Signing & Pavement Striping. The Project shall provide a fair share contribution towards all needed signs and pavement markings on the approaches to the East Grand Avenue / Forbes Boulevard / Harbor Way intersection "at grade railroad crossing" to meet minimum State Public Utilities Commission requirements as detailed in the 2003 Manual of Uniform Traffic Control Services by the Federal Highway Commission.

PROPOSED FINDINGS

The report preparers, in consultation with City of South San Francisco staff, have determined that with the implementation of mitigation measures identified in this Mitigated Negative Declaration, the proposed Project will not have a significant effect on the environment. If this Mitigated Negative Declaration is adopted by the City of South San Francisco, the requirements of CEQA will be met by the preparation of this Mitigated Negative Declaration and the Project will not require the preparation of an Environmental Impact Report. This decision is supported by the following findings:

a. The Project does not have the potential to degrade the quality of the environment, substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels or threaten to eliminate a plant or animal community. It does not reduce the number or restrict the range of a rare or endangered plant or animal. It does not eliminate important examples of the major periods of California history or pre-history, since there is no identified area at the Project site which is habitat for rare or endangered species, or which represents unique examples of California history or prehistory. In addition, the Project is within the scope of use contemplated in the General Plan and the Project does not have any significant, unavoidable adverse impacts. Implementation of specified mitigation measures will avoid or reduce the effects of the Project on the environment and thereby avoid any significant impacts.

b. The Project does not involve impacts which are individually limited but cumulatively considerable, because the described Project will incorporate both Project-specific mitigation measures and cumulative mitigation measures to avoid significant impacts of the Project in the context of continued growth and development in the City of South San Francisco.

c. The Project does not have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly, because all adverse effects of the Project will be mitigated to an insignificant level.
INITIAL STUDY

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

Environmental factors which may be affected by the Project, as defined by CEQA are listed alphabetically below. Factors marked with a filled in block (\blacksquare) were determined to be potentially affected by the Project, involving at least one impact that has been identified as a "Potentially Significant Impact" with mitigation measures identified that would reduce the impact to a less than significant level, as indicated in the Environmental Evaluation Form Checklist and related discussion that follows. Unmarked factors (\Box) would not be significantly affected by the Project, as described in the Checklist.

□ Aesthetics	□ Greenhouse Gas Emissions	\Box Population and Housing
□ Agriculture Resources	Hazards and Hazardous Materials	Public Services
⊠ Air Quality	Hydrology and Water Quality	□ Recreation
Biological Resources	Land Use and Planning	☑ Transportation and Circulation
Cultural Resources	□ Mineral Resources	Utilities and Service Systems
☑ Geology and Soils	⊠ Noise	

LEAD AGENCY DETERMINATION

The Lead Agency for this Mitigated Negative Declaration is the City of South San Francisco.

On the basis of this initial evaluation:

I find that the proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

 \mathbf{V}

I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the Project have been made by or agreed to by the Project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

I find that the proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

I find that the proposed Project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

I find that although the proposed Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed Project, an EIR Addendum is required.

hief Planner

2/14/12 Date

INITIAL STUDY CHECKLIST

The Checklist portion of the Initial Study begins below, with explanations of each answer. A "**no** *impact*" response indicates that the impact simply does not apply to the Project or any action that would occur due to the Project. A "**less than significant**" response indicates that while there may be potential for an environmental impact, there are standard procedures or regulations in place, or other features of the Project as proposed, which would limit the extent of this impact to below significant with mitigation" have been identified as potentially significant impacts but indicate that mitigation measures, identified in the subsequent discussion, will be required as a condition of Project approval to effectively reduce potential Project-related environmental effects to a level below significance thresholds. Finally, while this is not the case for any topics in this IS/MND, topics with a "**potentially significant impact**" response would indicate the inability to identify mitigation measures to reduce the impact below significance thresholds and would need to be analyzed in an Environmental Impact Report.

	Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
I.	AESTHETICS — Would the Project:				
	 a) Have a substantial adverse effect on a scenic vista? 				
	b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				V
	c) Substantially degrade the existing visual character or quality of the site and its surroundings?			V	
	d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?				

The Project site is located on Roebling Road, off of East Grand Avenue. The Project would replace three existing office/warehouse buildings with two 2-story office/R&D buildings.

South San Francisco

South San Francisco's urban character is one of contrast within a visually well-defined setting. San Bruno Mountains to the north, the ridge along Skyline Boulevard to the west, and the San Francisco Bay to the east provide the City with distinctive edges.¹ The City is contained in almost a bowl-like fashion by hills on three sides. The City's terrain ranges from the flatlands along the water to hills east and north. Hills are visible from all parts of the City and Sign Hill and San Bruno Mountain in the distance are visual landmarks. Much of the City's topography is rolling, resulting in distant views from many neighborhoods. Geographically, the City is relatively small, extending approximately two miles in a north-south direction and about five miles from east to west.

East of 101 Area

The Project site is located in the East of 101 planning sub-area of South San Francisco. The East of 101 Area was part of the first industrial development in South San Francisco about 100 years ago. Since then, the area has undergone many transformations. Pioneering industrial uses, such as steel manufacturing, and meat packaging gave way to industrial park and warehousing and distribution uses that came to dominate the area in the 50s and 60s. The recent emergence of modern office buildings marks the third major wave of land use change in the area. The newly emerging office areas are unique in their use of consistent and conscious street tree planting. Older manufacturing uses, industrial park structures and tilt-up warehousing buildings can all be found in the area. Blocks are generally very

¹ City of South San Francisco, prepared by Dyett & Bhatia, *South San Francisco General Plan: Existing Conditions and Planning Issues*, 1997, p.4-2, 4-10, 4-15.

large in size and the area is in an obvious transition from a very stark industrial look to office/R&D campuses with an emphasis on quality architectural and landscape designs.²

Design Guidelines

East of 101 Area Plan Design Element

In 1995, the East of 101 Area Plan established goals and policies for the City and East of 101 Area. Although the South San Francisco General Plan (adopted in 1999) supersedes the East of 101 Area Plan, the policies contained in the Plan's design element still apply to development at the Project site.

The stated goals of the East of 101 Area Plan's design element are to promote quality design, to promote a functional, safe and attractive environment, preserve the character of South San Francisco's heritage, protect public investment and land values, protect the natural environment, and facilitate evaluation of individual development proposals through the use of the Plan's design guidelines. The East of 101 Area's development policies for the Project site encourage the creation of campus-like environments for corporate headquarters, research and development facilities, and other high quality multi-tenant office or warehouse developments.

The East of 101 Area Plan design element sets area-wide design policies for streetscape, parking, loading and access, site design and open space, landscaping and lighting, fencing and screening, building design, signage and rooftop mechanical equipment. Additionally, the Plan sets more specific guidelines for individual land use categories. For the Project site, the design guidelines include specific requirements for street trees, landscape buffers, minimizing visual impacts of blank walls, building orientation, design guidelines, parking lot trees and parking lot shrubs.

IMPACTS

a) Scenic Vistas

The Project site is not located within a scenic vista. CEQA generally protects against significant adverse impacts to public views of such scenic vistas, taking into consideration the environmental context—i.e., whether the view is from a recreation area or scenic expanse, as opposed to a developed urban area. San Bruno Mountain is a prominent visual landmark in South San Francisco, and can be seen from many locations throughout the city, including many portions of the East of 101 Area. Construction of the proposed Project may block a small portion of the existing views to the north from locations to the south. However, the areas from which views of the mountain may be blocked are not designated scenic overlooks; and are not places where people gather in order to gain a view of San Bruno Mountain. Therefore, blockage of existing views by the proposed Project, particularly given the Project site's urban setting, would be considered *less than significant*.

b) Scenic Highways

Within South San Francisco, sections of Interstate-280 (I-280) have been designated as scenic corridors under the State Scenic Highway program; however, these are not in the vicinity of the Project site. U.S.

² City of South San Francisco, *East of 101 Area Plan*, 1994.

101 has not been designated or identified as eligible in the vicinity.³ The Project site would not impact views from a scenic highway. (*No impact*)

c) Visual Character

The proposed Project would involve the demolition of three existing office/warehouse buildings, and replacement with two 2-story office/R&D buildings. The Project site is directly across Roebling Road from an entitled, but not yet constructed, $\pm 292,000$ square foot R&D/biotech development at 213 - 221 East Grand Avenue. The proposed Project is consistent with surrounding development and design guidelines contemplated for the East of 101 Area, and would not result in development incongruous to the existing and proposed development in the area. This impact would be *less than significant*.

d) Light and Glare

Sources of light and glare in the Project vicinity include interior and exterior building lights, service areas and surface parking lots, and city street lights. Light and glare associated with vehicular traffic along major thoroughfares in the area also create sources of glare. The existing level and sources of light and glare are typical of those in a developed urban setting.

Residential uses and natural areas are particularly sensitive to light and glare impacts, particularly from nearby non-residential sources. However, the Project is located in a commercial and industrial area with no adjacent residential uses or natural areas.

The Project would increase the active building area on the Project site and therefore would increase the amount of nighttime lighting and glare. However, it is not expected that the Project could substantially affect the overall ambient light levels in the Project vicinity, a fully developed, urban context. As a standard condition of project approval, new lighting would be required to conform to standards that limit the amount of light that can spill over to other properties, through the use of downcast lighting fixtures.

In summary, since the Project would consist of development and lighting treatments typical of the existing commercial/industrial urban settings and would incorporate standard lighting measures to address undue lighting on adjacent areas, it would not result in new sources of substantial adverse light or glare. The impact would be *less than significant*.

³ California Department of Transportation, Scenic Highway Program, Eligible and Designated Routes, website: http://www.dot.ca.gov/hq/LandArch/scenic_highways/scenic_hwy.htm, accessed on November 6, 2010.

	Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant	No
II.	AGRICULTURE AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the Project:	inpact	wittgation	πρατι	πιμαει
	a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				V
	b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				$\mathbf{\overline{\mathbf{A}}}$
	c) Conflict with existing zoning for, or cause rezoning of, forest land (As defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resource Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				
	d) Result in loss of forest land or conversion of forest land to non-forest use?				
	e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				V

The Project site is a currently developed industrial site. It is not farmland and is not under Williamson Act contract.

IMPACTS

a) through e) Farmland and Forest Land

No land designated for or used as agricultural land, forest land or timberland is located on the Project site. No land on the Project site is under a Williamson Act contract. (*No Impact*)

	Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
III.	AIR QUALITY — Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the Project:			, i	
	a) Conflict with or obstruct implementation of the applicable air quality plan?				Ø
	b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?		Ø		
	c) 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 (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?				
	d) Expose sensitive receptors to substantial pollutant concentrations?			\checkmark	
	 e) Create objectionable odors affecting a substantial number of people? 			V	

The amount of a given pollutant in the atmosphere is determined by the rate of release and the atmosphere's ability to transport and dilute the pollutant. The major determinants of transport and dilution are wind, atmospheric stability, terrain, and for photochemical pollutants, sunshine.

Northwest winds are most common in South San Francisco, reflecting the orientation of wind gaps within the mountains of the San Francisco Peninsula. Winds are persistent and strong, providing excellent ventilation and carrying pollutants downwind. Winds are lightest on average in the fall and winter.

The persistent winds in South San Francisco result in a relatively low potential for air pollution in the city, but their northwesterly orientation can contribute to poor air quality in regions east of the city. Even so, in fall and winter especially there can be periods of several days when winds are very light and local pollutants can build up.

State of California and Federal Air Quality Standards

Both the California Air Resource Board and the U.S. Environmental Protection Agency have established ambient air quality standards for common pollutants, including ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, suspended particulate matter (PM_{10} and $PM_{2.5}$) and lead. These ambient air quality standards are levels of contaminants that represent safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards include what are called "criteria" pollutants, because the health and other effects of each pollutant are described in

criteria documents. For some of these pollutants, notably ozone and PM_{10} , the State standards are more stringent than the national standards.

In addition to the criteria pollutants, Toxic Air Contaminants (TACs) are another group of pollutants of concern in the Bay Area. TACs are injurious in small quantities and are regulated despite the absence of criteria documents. The identification, regulation and monitoring of TACs is relatively recent compared to that for criteria pollutants.

Bay Area Air Quality Management District

The local air quality agency is the Bay Area Air Quality Management District (BAAQMD). BAAQMD enforces rules and regulations regarding air pollution sources and is the primary agency preparing the regional air quality plans mandated under state and federal law. BAAQMD has prepared air quality impact guidelines for use in preparing environmental documents under CEQA.⁴

BAAQMD monitors air quality at several locations within the San Francisco Bay Air Basin, although none are located in South San Francisco. The monitoring stations closest to the Project site are located in San Francisco to the north and Redwood City to the south. **Table 2** summarizes the air quality data recorded at these two sites. The table shows that from 2007 through 2009, the ambient air quality in the areas of San Francisco and Redwood City exceeded the state standard for ozone, the state standard for PM₁₀, and the federal standard for PM_{2.5}. According to the standards of the federal Clean Air Act, the Bay Area is in attainment with all federal ambient air quality standards except for ozone and particulate matter.

Table 2: Air Quality Data Summary for Closest Monitoring Sites, 2007-2009						
Dellaste at	Stern de rul	M	Da	ys Standard Excee	ded	
Pollutant	Standard	Monitoring Site	2007	2008	2009	
07000	Fadaral 1 Hour	San Francisco	0	0	0	
Ozone	reactal 1-flour	Redwood City	0	0	0	
Ozona	State 1 Hour	San Francisco	0	0	0	
Ozone	State 1-Hour	Redwood City	0	0	0	
Ozona	Enderel 9 Hour	San Francisco	0	0	0	
Ozone	Federal 8-Hour	Redwood City	0	0	0	
DM	Endorel 24 Hour	San Francisco	0	0	0	
P1 v1 10	rederal 24-nour	Redwood City	0	*	*	
DM	State 24 Hour	San Francisco	2	0	0	
F 1 v1 10	State 24-Hour	Redwood City	1	*	*	
DM	Endorel 24 Hour	San Francisco	5	0	1	
PINI _{2.5}	rederal 24-nour	Redwood City	1	0	0	
Carbon	State/Federal	San Francisco	0	0	0	
Monoxide	8-Hour	Redwood City	0	0	0	
Nitrogen	State 1 Hours	San Francisco	0	0	0	
Dioxide	State 1-Hour	Redwood City	0	0	0	
Source: BAAQMD A	Source: BAAQMD Air Pollution Summaries, http://www.baaqmd.gov/pio/aq_summaries/index.htm					

* PM₁₀ monitoring was discontinued at Redwood City on June 30, 2008.

Note that PM₁₀ and PM_{2.5} are measured every sixth day, so the number of days exceeding the standard is estimated.

2009 is the latest year to be reported by BAAQMD.

⁴ BAAQMD, California Environmental Quality Act Air Quality Guidelines, Updated May 2011.

IMPACTS

a) Conflict with Air Quality Plan

Significance Criteria: The Project would be considered to have a significant impact if it were to be in conflict with the current air quality plan. BAAQMD recommends thresholds for local plans, but not for project-level analysis.

BAAQMD recommends thresholds for local plans, but not for project-level analysis under this criterion, as consistency is based on regional conformance with the population growth assumptions or regional growth in vehicle miles traveled. ⁵ The Clean Air Plan also includes control measures, but many of these are intended to be applied on a jurisdictional level and/or to select projects.⁶

The Project site is in an area designated as Business and Technology Park in the 1999 General Plan. The South San Francisco General Plan specifies an average Floor Area Ratio (FAR) of 0.5 for the Business and Technology Park designation, but permits increases up to a FAR of 1.0 for research and development uses.⁷ At a FAR of 0.8, the proposed Project would therefore be within the anticipated range. The Project site's proposed use is also consistent with the zoning for the area, Business Technology Park (BTP). The City's General Plan designations and future land use types and intensities would have been taken into account during preparation of the BAAQMD's most recent *Clean Air Plan*, released in 2010.

Many of the Clean Air Plan's control measures are not applicable to the proposed Project, however, the Project would include implementation of an employer-based trip reduction program (Transportation Control Measure C-1) and would include bicycles and pedestrian access (Transportation Control Measures D-1 and D-2) and incorporate energy efficiency measures required under Title 24 (Energy and Climate Measure 1).

The Project would not conflict with development assumptions or prevent implementation of applicable control measures and would therefore have a *less than significant* impact related to a conflict with the air quality plan.

b) and c) Air Quality Standards

Significance Criteria: The Project would have a significant environmental impact if it would exceed BAAQMD's emission rate threshold or result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors).

The BAAQMD CEQA Guidelines provide thresholds of significance for air pollutants which include an assumption of 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

⁵ BAAQMD, *California Environmental Quality Act Air Quality Guidelines*, Updated May 2011.

⁶ BAAQMD, the Metropolitan Transportation Commission and ABAG, *Bay Area 2010 Clean Air Plan*, September 2010.

⁷ City of South San Francisco, prepared by Dyett and Bhatia, *South San Francisco General Plan*, 1999.

cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions.

The BAAQMD CEQA Guidelines also contain screening criteria to provide a conservative indication of whether the proposed Project could result in potentially significant air quality impacts. If all of the screening criteria are met by a proposed project, quantification of the project's air pollutant emissions is not necessary to make a determination that the impact will be below significance levels.

Construction Activities

Demolition, earth-moving activities, and exhaust emissions from construction-related vehicles and equipment comprise the major sources of construction dust and diesel emissions. Screening Criteria are included on Table 3-1 of the BAAQMD CEQA Guidelines, which provides construction-period screening levels of 277,000 square feet for office-type uses. ⁸ The Project involves construction of 105,536 square feet for R&D/office uses, which is well below the conservative screening thresholds established by the BAAQMD. Therefore, it can be concluded that construction-period criteria pollutant emissions would be below applicable thresholds without the need to quantify emissions. Fugitive dust is also a concern during the construction-period. BAAQMD does not have a threshold of significance for fugitive dust impacts, but instead regards fugitive dust impacts as mitigated if appropriate management practices are implemented, as outlined in the mitigation below.

Impact Air-1Construction Dust and Exhaust. Construction activities would generate exhaust
emissions from vehicles/equipment and fugitive dust particles that could affect
local air quality. This impact is considered to be *potentially significant*.

Mitigation Measure

- Air-1: Basic Construction Best Management Practices. The Project shall demonstrate proposed compliance with all applicable regulations and operating procedures prior to issuance of demolition, building or grading permits, including implementation of the following BAAQMD "Basic Construction Mitigation Measures".
 - a. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
 - b. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
 - c. 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.
 - d. All vehicle speeds on unpaved roads shall be limited to 15 mph.
 - e. 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.
 - f. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the

⁸ BAAQMD, California Environmental Quality Act Air Quality Guidelines, Updated May 2011.

California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

- g. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- h. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

The BAAQMD significance thresholds for construction dust impacts are based on the appropriateness of construction dust controls. With implementation of the Basic Construction Best Management Practices detailed in Mitigation Measure Air-1, impacts related to construction period emissions and dust would be considered *less than significant* with mitigation. Because construction-period emissions do not exceed applicable significance thresholds, additional construction mitigation measures would not be required.

Operational Activities

Emissions from operation of the Project could cumulatively contribute to air pollutant levels in the region. Since the Bay Area is considered nonattainment for ozone, PM_{10} and $PM_{2.5}$, emissions of these pollutants or their precursors could contribute to existing air quality problems.⁹ For this reason, BAAQMD has adopted emission-based significance thresholds to measure the significance of a project's contribution, as detailed below.

The URBEMIS2007 model, version 9.2.4, was used to calculate the Project's emissions from mobile sources (vehicles) and area sources. Default URBEMIS settings were used for San Mateo County except for the specifics of the Project size and trip generation from the traffic study, as detailed in the model output included in Attachment A. These results are total for the proposed Project, without subtracting existing emissions or accounting for mitigating characteristics, other than that already accounted for in the trip generation rates, as discussed in more detail in the traffic section. Operational Project emissions and BAAQMD thresholds are reported in **Table 3**, below.

Table 3: Criteria Air Pollutant Emissions for Project Operations

	Reactive	Nitrogen	Particulate	Fine Particulate
Description	Organic Gases	Oxides	Matter (PM ₁₀)	Matter (PM _{2.5})
Daily (Pounds per Day)	5.11	5.06	11.55	2.18
BAAQMD Daily Thresholds	54.00	54.00	82.00	54.00
Annual (Tons per Year)	0.92	1.06	2.11	0.40
BAAQMD Annual Thresholds	10.00	10.00	15.00	10.00

⁹ BAAQMD, Air Quality Standards and Attainment Status, available at <u>http://hank.baaqmd.gov/pln/air_quality/ambient_air_quality.htm</u>.

The Project emissions would be below the significance thresholds established by BAAQMD. Therefore, the Project would have a *less-than-significant* impact on regional air quality during the operational period.

BAAQMD also presents the screening level that localized carbon monoxide concentrations should be studied at affected intersections where traffic is increased to more than 44,000 vehicles per hour (or 24,000 vehicles per hour where mixing is substantially limited, such as in a tunnel).¹⁰ This screening level represents the volume of traffic at which a significant impact related to carbon monoxide would be possible. Based on traffic volumes in the vicinity, it is not anticipated the Project will affect intersections of that volume and therefore, the impact related to carbon monoxide is *less than significant*.

d) Exposure of Sensitive Receptors to Substantial Pollution Concentrations

Significance Criteria: For the purpose of assessing impacts of a proposed Project on exposure of sensitive receptors to risks and hazards, the threshold of significance is exceeded when the project-specific cancer risk exceeds 10 in one million, the non-cancer risk exceeds a Hazard Index of 1.0 (or cumulative risk of 100 in one million or a Hazard Index of 10.0 respectively is exceeded), and/or the annual average $PM_{2.5}$ concentration would exceed 0.3 ug/m³ (0.8 ug/m³ on a cumulative level). ¹¹ Examples of sensitive receptors are places where people live, play or convalesce and include schools, hospitals, residential areas and recreation facilities.

Construction Activities

The closest sensitive receptors are the Early Years Children's Center located at 371 Allerton Avenue, 0.27 miles east of the proposed Project, the Genentech Childcare Center at 444 Allerton, 0.40 miles east of the proposed Project site, and the Gateway Child Care Center at 599 Gateway Boulevard, 0.21 miles (approximately 1,100 feet) west of the Project site.

BAAQMD provides *Screening Tables for Air Toxics Evaluation During Construction*. These tables provide distances to the nearest sensitive receptor for construction projects of certain types and sizes within which impacts could be significant. The screening distance for an approximately 100,000 square foot commercial project is 150 meters (492 feet).¹² The closest sensitive receptor to this construction site is 1,100 feet away. Therefore, it can be concluded that construction-period health risk would be below applicable thresholds without the need to quantify risk levels.

Additionally, the California Health and Safety Code requires local agencies not to issue demolition permits until an applicant has demonstrated compliance with notification requirements under applicable federal regulations regarding asbestos, lead-based paint and other potentially hazardous materials. The BAAQMD is vested by the California Legislature with authority to regulate airborne pollutants through both inspection and law enforcement, and is to be notified ten days in advance of any proposed demolition and must provide information on the amount and nature of any hazardous pollutants, nature of planned work and methods to be employed, and the name and location of the waste disposal site to

¹⁰ BAAQMD, California Environmental Quality Act Air Quality Guidelines, Updated May 2011, pp. 3-3 to 3-4.

¹¹ BAAQMD, California Environmental Quality Act Air Quality Guidelines, Updated May 2011, Table 2-1.

¹² BAAQMD, Screening Tables for Air Toxics Evaluation During Construction, May 2010, available at <u>http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx.</u>

be used. The purpose of BAAQMD regulations is the minimization of potential hazards to the public and surrounding land uses.

The Project must also comply with California Occupational Safety and Health Administration (Cal/OSHA) regulations, standards and procedures and California Department of Health Services (DHS) Lead Work Practice Standards. These regulations are designed to minimize worker and general public exposure to hazardous building materials, as may be encountered during building demolition and construction.

The above regulations and procedures, already established and enforced as part of the permit review process, would ensure that the impact of hazardous emissions during construction of the Project would be *less than significant*.

Operational Activities

The Project could include laboratory facilities or stationary equipment (e.g., standby emergency generators) that emit air pollution. These sources could emit small amounts of toxic air contaminants with the potential to affect sensitive receptors within a quarter mile of the Project site. While the specific tenants of the proposed site have not been identified, stationary equipment or laboratories that are subject to BAAQMD permitting requirements will be required to show that impacts to the public would be negligible. Therefore, because the Project would comply with standard BAAQMD permitting requirements, the impact would be considered *less than significant*.

e) Odors

Significance Criteria: The BAAQMD defines public exposure to offensive odors as a potentially significant impact. Potential odor impacts are based on a list of specific types of facilities, such as wastewater treatment plants, landfills, refineries, etc. ¹³

Many construction vehicles run on diesel gasoline, the exhaust of which has a distinct smell generally considered an objectionable odor. However, these odors would be temporary, as they are only associated with construction, and would not be expected to reach substantially beyond the boundaries of the Project site as such odors do not generally remain noticeable at any substantial distance from their source.

As a laboratory use, the Project also theoretically has the potential to generate chemical smells during operations. However, the Project will be subject to BAAQMD's Regulation 7, which restricts noticeable odors beyond the Project boundary.¹⁴

The impact of the Project with regard to odors is considered to be *less than significant*. This impact would be further reduced by implementation of mitigation measure Air-1, which would reduce construction diesel exhaust.

¹³ BAAQMD, California Environmental Quality Act Air Quality Guidelines, Updated May 2011, p. 3-4.

¹⁴ BAAQMD, Regulation 7, last amended 1982, available at <u>http://www.baaqmd.gov/?sc_itemid=D39A3015-453E-4A0D-9C76-6F7F4DA5AED5</u>.

	Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
IV.	BIOLOGICAL RESOURCES — Would the Project:				
	a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				
	b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?				
	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, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				
	d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				
	e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				
	f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				V

The Project site is located in a largely industrial area, on a site that has previously been developed, and is predominantly covered with asphalt and buildings. The existing limited vegetation consists of parking lot and screening landscaping.

IMPACTS

a) and b) Special Status Species and Habitat

Due to the historic industrial use of the East of 101 Area, natural resources are limited in this area and primarily consist of wetlands and their associated plan and animal species and slopes with native

vegetation. The Project site is not identified as a location with sensitive biological resources. ^{15, 16} This is consistent with the fully developed character of the site and surroundings, which offer little or no habitat value, and would not have a substantial adverse effect, either directly or through habitat modifications on special status species, except for possibly migrating birds, discussed below.

The federal Migratory Bird Treaty Act and Fish and Game Code of California protect special-status bird species year-round, as well as their eggs and nests during the nesting season. The list of migratory birds includes almost every native bird in the United States. On-site or adjacent trees could be used by protected birds. Construction activities could adversely affect nesting birds protected by the Migratory Bird Treaty Act and/or Fish and Game Code of California.

Impact Bio-1:Disturbance of Nesting Birds. Construction activities could adversely affect
nesting birds protected by the Migratory Bird Treaty Act and/or Fish and Game
Code of California. This is a *potentially significant* impact.

The federal Migratory Bird Treaty Act and Fish and Game Code of California protect special-status bird species year-round, as well as their eggs and nests during the nesting season. The list of migratory birds includes almost every native bird in the United States. On-site or adjacent trees could be used by protected birds.

Mitigation Measure

Bio-1: Pre-Construction Nesting Bird Survey. Pre-construction surveys for nesting birds protected by the Migratory Bird Treaty Act of 1918 and/or Fish and Game Code of California within 100 feet of a development site in the Project area shall be conducted within 30 days of initiation of construction activities. If active nests are found, the project shall follow recommendations of a qualified biologist regarding the appropriate buffer in consideration of species, stage of nesting, location of the nest, and type of construction activity. The buffer shall be maintained until after the nestlings have fledged and left the nest. If there is a complete stoppage in construction activities for 30 days or more, a new nesting-survey shall be completed prior to re-initiation of construction activities.

With implementation of Mitigation Measure Bio-1, which requires a nesting survey close to initiation of construction activities, the impacts on special status species or their habitat would be *less than significant with mitigation*.

c) and d) Wetlands and Wildlife Corridors

The proposed Project site is fully developed and does not contain wetland areas. It is an area that is currently developed with urban land uses. ^{17, 18} The Project has *no impact* on wetlands and wildlife corridors.

¹⁵ City of South San Francisco, prepared by Brady and Associates, *East of 101 Area Plan*, 1994, pp. 169 to 174.

¹⁶ City of South San Francisco, prepared by Dyett and Bhatia, *South San Francisco General Plan*, 1999, Figure 7-1.

¹⁷ City of South San Francisco, prepared by Brady and Associates, *East of 101 Area Plan*, 1994, pp. 170.

¹⁸ City of South San Francisco, prepared by Dyett and Bhatia, *South San Francisco General Plan*, 1999, Figure 7-1.

e) and f) Plan and Policy Conflicts

Significance Criteria: The Project would have a significant environmental impact if it were to conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

The existing vegetation on site consists of parking lot and screening landscaping. None of the trees on site are large enough to be considered protected trees under the City of South San Francisco Tree Protection Ordinance (Chapter 13.30 of the South San Francisco Municipal Code), which defines protected trees as those with a circumference of 48 inches or greater at 54 inches above the natural grade or those otherwise so designated by the Parks and Recreation director);

The Project has *no impact* on General Plan policies or ordinances protecting biological resources.

	Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
V.	CULTURAL RESOURCES — Would the Project:				
	 a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? 				V
	 b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? 				
	c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				V
	d) Disturb any human remains, including those interred outside of formal cemeteries?				

The Historic and Cultural Resources Element of South San Francisco's General Plan provides the following description of the cultural and historic context:

"South San Francisco's growth is notable for the close relationship between industry and community. The development of a residential town in support of new industrial plants was the calculated strategy of local industrialists. With the success of the city's industries, South San Francisco earned an important role as "The Industrial City" of the region. The conservation of this unique history is the objective of historic and cultural preservation in South San Francisco. In addition to Sign Hill, designated resources in South San Francisco include several residential and commercial buildings in the downtown area. The City's Municipal Code and State and federal law, protect these local, State, and national historic resources from alteration and demolition.

Although industry played a critical role in South San Francisco's history, no industrial buildings or sites are currently designated historic resources."

No historic resources were identified on the Project site or in the whole of the East of 101 Area.¹⁹

Additionally, South San Francisco's Historic Preservation Commission has identified fifty historically or culturally significant sites through the Historic Marker Program. While none of these sites have been designated a Historic Resource, each has been identified for its historic or cultural significance and is identified by a marker that describes its significance as part of the history of this City.²⁰

¹⁹ City of South San Francisco, prepared by Dyett and Bhatia, *South San Francisco General Plan*, 1999, Figure 7-3.

²⁰ City of South San Francisco, Historic Marker Program webpage, <u>http://www.ssf.net/index.aspx?NID=275</u>.

IMPACTS

a) Historical Resource

Significance Criteria: The Project would have a significant environmental impact if it were to cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.

The corner lot, 233 East Grand Avenue, is marker site #38 in the City's Historic Marker Program. Created by the City's Historic Preservation Commission, the Historic Marker Program is an effort to identify and provide information about sites with significance as part of the history of this City, though none of these sites have been designated as Historic Resources. This site's marker notes that the lot was once the site of the United Packing Co. from 1929 to 1958 with its significance described as follows: "Built on the site of the Metzger Packing Plant. Owned by A.C. Freeman. Housed a butcher's slaughterhouse and a broker's commission house."²¹ This marker references previous uses no longer on the site and would not be considered to indicate a cultural or historic resource under CEQA.

The Project site is currently developed with 1980s era industrial buildings, which are not eligible for designation on the California Register of Historic Resources. The Project has *no impact* on historical resources.

b) Archaeological Resources

Significant Criteria: The Project would have a significant environmental impact if it were to cause a substantial adverse change in the significance of archaeological resources as defined in CEQA Section 15064.5.

According to the City of South San Francisco General Plan, South San Francisco's coastal location, and its rich history as a center of industry, makes the existence of prehistoric and historic archaeological resources likely. It is possible that buried prehistoric resources may be found in the City, although currently there is insufficient data to predict that they may be found at the Project site, especially because the site has been previously disturbed. If archaeological resources are discovered on site, these resources shall be handled according to CEQA Section 15064.5(c), which calls on lead agencies to refer to the provisions of Section 21083.2 of the Public Resources Code dealing with the treatment and handling of archaeological resources, or Section 21084.1 dealing with the treatment of handling of historical resource. This would be a standard condition of any project approval so the impact is considered *less than significant*.

c) Geologic/Paleontological Features

There are no unique geologic or paleontological features associated with the Project site. ²² The Project has *no impact* on paleontological resources or geologic features.

²¹ City of South San Francisco, Historic Marker Program webpage, <u>http://www.ssf.net/index.aspx?NID=275</u>.

²² City of South San Francisco, prepared by Dyett and Bhatia, *South San Francisco General Plan*, 1999, Figure 7-3.

d) Human Remains

Significance Criteria: The Project would have a significant environmental impact if it were to result in the disturbance of any human remains.

There are no known human remains that would be disturbed by the proposed Project. As mentioned under b) above, most of the Project site has already been disturbed by urban development. No formal cemeteries have been located on the Project site. If human remains are found within the Project site, they will be handled according to Section 7050.5 of the Health and Safety Code which disallows intentional disturbance, requires ceasing activity until a county coroner makes a report and requires the county coroner to contact the Native American Heritage Commission if the coroner determines that the remains are those of a Native American. If the remains are Native American, they will be handled according to Section 5097.98 of the Public Resources Code requiring notification of likely descendants, inspection, and recommendations for removal. This would be a standard condition of any project approval so the impact is considered *less than significant*.

	Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
VI.	GEOLOGY AND SOILS — Would the Project:				
	 a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: 				
	i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				
	ii) Strong seismic ground shaking?		$\mathbf{\overline{\mathbf{A}}}$		
	iii) Seismic-related ground failure, including liquefaction?		V		
	iv) Landslides?		\checkmark		
	 b) Result in substantial soil erosion or the loss of topsoil? 		V		
	c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of roadway improvements, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?		M		
	d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?		Ø		
	e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				V

Regional Seismicity

The Project site lies in the tectonically active Coast Ranges Geomorphic Province of Northern California, on the east side of the San Francisco Peninsula. The geologic and geomorphic structure of the northwest trending ridges and valleys in the region, including the Santa Cruz Mountains and San Francisco Bay, are controlled by active tectonism along the boundary between the North American and Pacific Tectonic Plates, defined by the San Andreas Fault System. Regional faults have predominantly right-lateral strike-slip (horizontal) movement, with lesser dip-slip (vertical) components of displacement. Horizontal and vertical movement is distributed on the various fault strands within a fault zone. Throughout geologic time the fault strands experiencing active deformation change in response to regional shifts in stress and strain from plate motions. Within 15 miles of the Project site there are three major active faults that display large right-lateral strike-slip offsets, the San Andreas Fault, the San Gregorio Fault, and the Hayward Fault. The nearest known active fault is the San Andreas Fault trace, located approximately 3 miles (5 km) southwest of the site. Other nearby active faults include the Hayward Fault 15 miles (24 km) northeast, the San Gregorio Fault (Seal Cove Fault) located approximately 8.6 miles to the southwest, the Calaveras Fault located 25 miles northeast and the Concord/Green Valley Fault located 30 miles northeast.²³

Other faults are nearer than the San Andreas but not considered active since they show no evidence of Holocene rupture or movement during the past 11,000 years. This includes the San Bruno and Serra Faults mapped approximately 1.4 and 2.6 miles (2.2 km and 4.2 km) west of the site. The nearest mapped fault of any type is the Hillside Fault mapped about 0.35 miles (0.55 km) northeast. While this is near the subject property the fault shows no evidence of rupture during at least the past 2 million years.

Seismicity of the Project region has resulted in several major earthquakes during the historic period, including the 1868 Hayward Earthquake, the 1906 San Francisco Earthquake, and most recently, the 1989 Loma Prieta Earthquake.²⁴ According to the Association of Bay Area Governments (ABAG), violent ground shaking (Modified Mercalli Intensity, MMI Level IX) is possible in response to a large earthquake along the nearby San Andreas Fault. A major rupture of the Hayward Fault is expected to produce strong ground shaking (MMI VII).

Regional Geology

The Project site is located at the edge of the San Francisco Bay, a submerged valley in the Central Coast Ranges of California. This area is characterized by northwest trending mountain ranges and valleys oriented sub-parallel to faults of the San Andreas Fault System. In the San Francisco Bay area, Tertiary strata commonly rest in angular unconformity on rocks of the Franciscan complex, which is composed of weakly to strongly metamorphosed greywacke (sandstone), argillite, limestone, basalt, serpentinite, and chert. The rocks of the Franciscan Complex are ancient Jurassic oceanic crust and deep marine (pelagic) deposits accreted onto the edge of the North American Continent and metamorphosed as a result of accretion and partial subduction. These deposits have been overlain by Late Jurassic to Late Cretaceous sedimentary deposits. Deposits of these rocks may be found outcropping along San Bruno Mountain in the Project vicinity. Little metamorphosed, high-pressure, low-temperature metamorphic minerals are common in the Franciscan complex, but there are also high grade metamorphic blocks in sheared but relatively un-metamorphosed argillite matrix which reflect the complicated history of the Franciscan.²⁵

These rocks have been offset by movement along the San Andreas Fault System, which traverses the Santa Cruz Mountains prior to heading offshore in Southern Daly City, on the other side of the Peninsula. Several northwest trending and structurally controlled valleys dissect the San Francisco Peninsula, including the valley of Colma Creek, which contains the Project site. During the Quaternary Period of rising and falling sea level in response to patterns of global glaciation, these valleys were incised and then backfilled with sediment to form the suite of alluvial deposits that can be found today,

²³ Review of Official California Geologic Survey (formerly the California Division of Mines and Geology) Maps, including the South San Francisco Alquist-Priolo Earthquake Fault Zone Map (1982), and Fault Activity Map of California (1994).

²⁴ California Division of Mines and Geology, 2002. Fault Evaluation Reports Prepared Under the Alquist-Priolo Earthquake Fault Zoning Act, California Geological Survey CD 2002-01

²⁵ Bonilla, M.G. 1998, Geologic Map of the South San Francisco 7.5' Quadrangle and Part of the Hunter's Point 7.5' Quadrangle, USGS Open-File Report 98-354

including the Pleistocene Colma Formation. Along the bay margin, deposits of Holocene Bay Mud, marsh deposits, and other fine grained sediment accumulated by currents along the shore.

Site Geology and Soils

According to a geologic map of the area, the Project site is at the northern edge of an area underlain by fill, described as clay, silt, sand, rock fragments, organic matter, and man-made debris, placed over tidal flats. However, just north of the site is a large outcrop of Franciscan bedrock, indicating that the site is likely underlain at a relatively shallow depth by the Franciscan Complex. Sandstone bedrock typical of the Franciscan Complex was penetrated in two boreholes at the site located approximately 350 feet south of the site.²⁶

A geotechnical investigation was not completed for the Project, but several geotechnical studies of the surrounding parcels have been completed in association with recent construction activities. In four geotechnical studies of adjacent properties, subsurface conditions were found to consist of fill materials overlying soft Bay Mud deposits, which are underlain by medium dense to very dense granular alluvial soils (Colma Formation).²⁷ The thickness of fill and Bay Mud varied considerably on the adjacent properties. Fill soils ranged from five to twelve feet deep; Bay Mud varied from three feet to 30-feet in thickness under the fill soils. Bedrock was not encountered in boreholes, with the exception of two boreholes in which weathered sandstone was encountered at depths of 68.5 feet and 73 feet below ground surface. These boreholes were located 350 to 400 feet south of the Project site.²⁸

It is expected that subsurface conditions at the Project site are generally similar to those encountered during the geotechnical studies of the surrounding parcels. The thickness of the surficial fill materials, Bay Mud, alluvial sediments, and depth to bedrock could vary considerably.

REGULATORY SETTING

State Laws and Regulations

Alquist-Priolo Earthquake Fault Zoning Act

The California Legislature passed the Alquist-Priolo Earthquake Fault Zoning Act in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. ²⁹ The Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The Act addresses only the hazard of surface fault rupture and is not directed toward other earthquake hazards. Local agencies must regulate most development in fault zones established by the State Geologist. Before a project can be permitted in a designated Alquist-Priolo Earthquake Fault Zone, the

²⁶ Bonilla, M.G. 1998, Geologic Map of the South San Francisco 7.5' Quadrangle and Part of the Hunter's Point 7.5' Quadrangle, USGS Open-File Report 98-354

²⁷ Review of Geotechnical Study Sugen Phase II Building, Britannia Pointe Grand, Geomatrix, January 1999; Geotechnical Study, Exelis II, Britannia Pointe Grand, Geomatrix, May 2000; Geotechnical Study Sugen and Metaxen Buildings, Britannia Pointe Grand Business Park, Geomatrix, August 1997; and Geotechnical Study Sugen Phase III Building Britannia Pointe Grand, Geomatrix, May 23, 2002.

²⁸ Geomatrix Consultants, 1997, Geotechnical Study Sugen and Metaxen Buildings Britannia Pointe Grand Business Park.

²⁹ California Division of Mines and Geology, 1997 revision, *Fault-Rupture Hazard Zones in California*, DMG Special Publication 42.

city or county with jurisdiction must require a geologic investigation to demonstrate that proposed buildings would not be constructed across active or potentially active faults.

California Seismic Hazards Mapping Act

The California Seismic Hazards Mapping Act of 1990 (California Public Resources Code Sections 2690-2699.6) addresses seismic hazards other than surface rupture, such as liquefaction and seismically induced landslides. The Seismic Hazards Mapping Act specifies that the lead agency for a project may withhold development permits until geologic or soils investigations are conducted for specific sites and mitigation measures are incorporated into plans to reduce hazards associated with seismicity and unstable soils.

California Building Code

The California Building Code was developed to incorporate modifications to the International Building Code (developed by the International Conference of Building Officials) required by California law and statute and has been adopted by most jurisdictions in California, including the City of South San Francisco, to oversee construction. The California Building Code defines four Seismic Zones in California, which are ranked according to their seismic hazard potential. Zone 1 has the least seismic potential and Zone 4 has the highest seismic potential. The City of South San Francisco is located in Seismic Zone 4 and thus development is required to comply with all design standards applicable to Seismic Zone 4. The earthquake protection law (California Health and Safety Code section 19100 et seq.) requires that structures be designed to resist stresses produced by lateral forces caused by wind and earthquakes. Specific minimum standards for seismic safety and structural design to meet earthquake protection requirements are set forth in Chapter 16 of the California Building Code.

Local Regulations and Policies

City of South San Francisco General Plan Update

The General Plan Update Health and Safety Element includes a section on Geological and Seismic Hazards. This section identifies geotechnical and geologic impacts to the general City of South San Francisco area. The most recent General Plan update was completed in October 1999.

East of 101 Area Plan

The 1999 General Plan update also includes a summary of the East of 101 Area Plan, providing specific policies for the area located east of U.S. Highway 101.

City of South San Francisco Municipal Code

The City of South San Francisco Municipal Code Title 15 includes information on the Construction Codes and Amendments adopted by the City of South San Francisco. This includes the California Building Code, among other codes used in construction in the City of South San Francisco.

IMPACTS

a) Seismic Hazards

Seismic hazards are generally classified as two types, primary and secondary. The primary seismic hazard is surface fault rupture. Secondary seismic hazards, caused by the sudden movement along a

fault, include strong ground shaking, liquefaction, dynamic densification and seismically induced ground failure.

i) Surface Fault Rupture

Significance Criteria: The Project would have a significant environmental impact if it were to expose people or structures to potential substantial adverse effects associated with the surface rupture of a known earthquake fault.

A number of active and potentially active faults are present in the region. Many active and potentially active faults in San Mateo County have undergone extensive investigation in the past. ABAG has summarized results from many of these studies to quantify the potential impact to certain areas, while the California Geological Survey has established Earthquake Fault Zone boundaries where primary seismic hazards are very high. According to these maps, the proposed development is not located within an Earthquake Fault Zone. No faults zoned as active by the State of California are mapped across the Project site.³⁰ As such, it has been determined that the risk of ground rupture along a fault trace is low at the Project site.

The Project would have a *less than significant* impact on exposing people or structures to danger from surface rupture of a known earthquake fault.

ii) Strong Seismic Ground Shaking

Significance Criteria: The Project would have a significant environmental impact if it were to expose people or structures to potential substantial adverse effects associated with strong seismic ground shaking.

The San Francisco Bay Region has experienced several historic earthquakes from movement along the San Andreas and other associated active faults. Mapped active faults (those experiencing surface rupture within the past 11,000 years) nearest the site are characterized in **Table 4**.

Data presented by the Working Group on California Earthquake Probabilities estimates the chance of one or more large earthquakes (Magnitude 6.7 or greater) occurring in the San Francisco Bay region by the year 2031 to be 62 percent.³¹ Consequently, the site will likely be subject to strong seismic shaking during the life of the improvements. The site is not located immediately adjacent to a known active fault, but the presence of deep soft underlying alluvium and marsh or bay mud deposits overlain by fill is expected to amplify seismic waves significantly.

³⁰ State of California Department of Conservation, Alquist-Priolo Earthquake Fault Zone Maps accessed at <u>http://www.quake.ca.gov/gmaps/ap/ap_maps.htm</u>

³¹ Working Group on California Earthquakes, Earthquake Probabilities in the San Francisco Bay Region: 2003-2031, USGS Open File Report 03-214

Fault System	Distance From	Direction From	MCE Moment	Modified Mercalli
	Site (Miles/Km) ¹	Site to Fault	Magnitude ²	Shaking Intensity ³
San Andreas	3.5/5.6	Southwest	7.9	IX
San Gregorio	9/14.5	Southwest	7.3	VIII
Hayward	15/24	Northeast	7.1	VII
Calaveras	24/39	East	7.5	VI
Rodgers Creek	32/51.5	North	7.0	VII
1 Early Astronomy of Oslifernia and Advisory Anness, Oslifernia Division of Misses and Oselamy 4004				

Table 4: Nearest Active Faults

¹ Fault Activity map of California and Adjacent Areas, California Division of Mines and Geology, 1994.

² Caltrans California Seismic Hazards Map based on Maximum Credible Earthquakes, California Department of Transportation, 1996

³ Association of Bay Area Governments Shaking Intensity Map <u>http://www.abag.ca.gov/bayarea/eqmaps/mapsba.html</u>

The intensity of ground shaking will vary with the distance and magnitude of the earthquake causing the ground shaking, as well as the density and consistency of underlying materials. This ground shaking intensity has been predicted by the U.S. Geological Survey (USGS) and California Geological Survey for most of the Bay Area, including the Project site, and is summarized on the ABAG website.³² The maximum intensity ground shaking expected to occur at the site would be a modified Mercalli intensity level of IX (violent) in response to a major rupture along the San Andreas Fault equivalent to the 1906 earthquake. A major rupture on the San Gregorio, Hayward or Rodgers Creek faults is predicted to cause strong to very strong ground shaking (MMI=VII to VIII), while a major earthquake on more distant faults is expected to cause moderate to strong ground shaking of the site. Strong ground shaking could severely damage unreinforced masonry or poorly built structures, while violent shaking is expected to cause extensive damage to even well-constructed buildings.

The California Geological Survey has developed a probabilistic seismic hazards map to predict the peak ground acceleration that can be expected at a given site. The probabilistic seismic hazard assessment for this site predicts a peak ground acceleration of approximately 61% that of gravity, with a 10 percent chance of being exceeded in 50 years.³³

Impact Geo-1: Seismic Ground Shaking. Buildings and occupants of the Project site would be subject to ground shaking in the event of a seismic event, which could be high intensity (Mercalli intensity level of IX, violent). Development of the Project would increase the number of structures and people potentially exposed to hazards associated with a major earthquake in the region. This is a potentially significant impact.

Mitigation Measures

Geo-1a: Compliance with California Building Code. Project development shall meet requirements of the California Building Code as modified by the amendments, additions and deletions adopted by the City of South San Francisco. Incorporation of seismic construction standards would reduce the potential for catastrophic effects of ground shaking, such as complete structural failure.

³² ABAG, Earthquake Shaking Potential Map, 2003, available at <u>http://quake.abag.ca.gov/shaking/</u>.

³³ California Geological Survey, Probabilistic Seismic Hazards Assessment <u>http://redirect.conservation.ca.gov/cgs/rghm/pshamap/pshamain.html</u>

Geo-1b: Compliance with a design level Geotechnical Investigation report and with Structural Design Plans. Proper foundation engineering and construction shall be performed in accordance with the recommendations of a Registered Geotechnical Engineer or Civil Engineer experienced in geotechnical design and a Registered Structural Engineer or Civil Engineer experienced in structural design.

> The structural engineering design shall incorporate seismic parameters as outlined in the California Building Code. The Project Geotechnical Investigation shall establish the seismic design parameters, as determined by the geotechnical engineer in accordance with requirements of the California Building Code.

Geo-1c: Obtain a building permit and complete final plan review. The Project applicant shall obtain a building permit through the City of South San Francisco Building Division. Plan Review of planned buildings and structures shall be completed by the Building Division for adherence to the seismic design criteria for planned commercial and industrial sites in the East of 101 Area of the City of South San Francisco. According to the East of 101 Area Plan, Geotechnical Safety Element, buildings shall not be subject to catastrophic collapse under foreseeable seismic events, and will allow egress of occupants in the event of damage following a strong earthquake.

Implementation of mitigation measures Geo-1a through Geo-1c would reduce the impact of exposing people or structures to potential substantial adverse effects associated with strong seismic ground shaking to a level of *less than significant* by implementation of current building code requirements and the design level recommendations for construction prepared by Geotechnical and Structural Engineers to minimize the risk of loss, injury or death related to seismic ground shaking. Building Division Plan Review will verify that the code requirements and geotechnical and structural engineer recommendations are implemented.

iii) Liquefaction and Lateral Spreading

Significance Criteria: The Project would have a significant environmental impact if it were to expose people or structures to potential substantial adverse effects associated with seismic-related ground failure, including liquefaction and lateral spreading.

Impact Geo-2: Liquefaction, Densification, and Ground Surface Settlement. Due to the site's location at the border between the competent bedrock of Oyster Point to the north, and artificial fill placed over tidal flats to the south, the southern portion of the Project area is identified as an area of high hazard for liquefaction. The northern portion is identified as having a very low hazard for liquefaction. Liquefaction or densification of soils underlying the site could result in settlement and differential settlement of site improvements including buildings, pavements, and utilities and pose a threat to human health. The potential for liquefaction of site soils is considered a *potentially significant impact*.

Mitigation Measures

Geo-2a: Compliance with recommendations of a Geotechnical Investigation and in conformance with Structural Design Plans. A Design Level Geotechnical Investigation shall be prepared for the site under the direction of a California Registered Geotechnical Engineer, or Civil Engineer experienced in geotechnical engineering, and shall include analysis for liquefaction potential of the underlying

sediments. Proper foundation engineering and construction shall be performed in accordance with the recommendations of the Geotechnical Investigation. The Geotechnical Investigation shall be reviewed and approved by the City's Geotechnical Consultant and by the City Engineer. A Registered Structural Engineer, or civil engineer experienced in structural engineering shall prepare Project structural design plans. Structures shall be designed to minimize the effects of anticipated seismic settlements. The Geotechnical Engineer shall review the Structural Design Plans and provide approval for the geotechnical elements of the plans. The design plans shall identify specific mitigation measures to reduce the liquefaction potential of surface soils. Mitigation measures may include excavation and replacement as engineered fill, reduced foundation loading, and ground improvement by methods such as stone columns or pressure grouting.

Geo-2b: Obtain a building permit and complete plan review. The Project applicant shall obtain a building permit through the City of South San Francisco Building Division. Plan Review of planned buildings and structures shall be completed by the Building Division for adherence to the seismic design criteria for planned commercial and industrial sites in the East of 101 Area of the City of South San Francisco. According to the East of 101 Area Plan, Geotechnical Safety Element, buildings shall not be subject to catastrophic collapse under foreseeable seismic events, and will allow egress of occupants in the event of damage following a strong earthquake.

Implementation of mitigation measures Geo-2a and Geo-2b would reduce the impact of exposing people or structures to potential substantial adverse effects associated with seismic-related ground failure, including liquefaction and lateral spreading to a *less than significant* level by implementation of current building code requirements and the design level recommendations for construction prepared by Geotechnical and Structural Engineers. Building Division Plan Review will verify that the code requirements and geotechnical and structural engineer recommendations are implemented.

iv) Landslides

Significance Criteria: The Project would have a significant environmental impact if it were to expose people or structures to substantial hazards from landslides.

Impact Geo-3. Landslides and Slope Stability. A landslide is a mass of rock, soil and debris displaced down slope by sliding, flowing or falling. The site is located on gently sloping ground, and as such natural slope stability is not expected to be an issue. However, cuts currently exist in the northern part of the site, and more cuts will be necessary to provide level building pads. These cuts will require construction of retaining walls, which could fail if improperly designed. The impacts of slope stability and landslides are *potentially significant*.

Mitigation Measure

Geo-3: Compliance with recommendations of a Geotechnical Investigation. A Design Level Geotechnical Investigation shall be prepared for the site under the direction of a California Registered Geotechnical Engineer, or Civil Engineer experienced in geotechnical engineering, and shall include analysis of the site slope stability. Proper foundation engineering and retaining wall design shall be performed in accordance with the recommendations of the Geotechnical Investigation. The Geotechnical Investigation shall be reviewed and approved by the City's Geotechnical Consultant and by the City Engineer.

Implementation of mitigation measure Geo-3 would reduce the impact of exposing people or structures to substantial hazards from landslides to a *less than significant* level by design and construction in accordance with recommendations of the Geotechnical Investigation. Review and approval by the City's Geotechnical Consultant and City Engineer will verify that the recommendations are sound and that they are implemented for the Project.

b) Erosion or Loss of Topsoil

Significance Criteria: The Project would result in a significant environmental impact if it were to result in substantial soil erosion or in the loss of topsoil.

Impact Geo-4.Soil Erosion. The Project would involve mass grading at the site. Excavation of
soil for construction of new buildings and pavement sections would also be
performed and temporary stockpiles of loose soil will be created. Soils exposed
during construction activities would be subject to erosion during storm events.
This would be a *potentially significant* impact during and following site
construction activities.

Mitigation Measure

Geo-4: Storm Water Pollution Prevention Plan (SWPPP). In accordance with the Clean Water Act and the State Water Resources Control Board, the Applicant shall file a SWPPP prior to the start of construction. The SWPPP shall include specific best management practices to reduce soil erosion. This is required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity.

Implementation of a storm water pollution prevention plan (mitigation measure Geo-4) will reduce the impact of soil erosion to a level of *less-than-significant*.

c) Unstable Geologic Unit

Significance Criteria: The Project would have a significant environmental impact if located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.

Impact Geo-5: Unstable Soils and Bay Mud. Undocumented fill soils are present on portions of the subject site. Fill soils may settle due to new building loads. Bay Mud and alluvial soil deposits are present on adjacent sites and also constitute areas of potentially unstable soils. Bay Mud may be present under the southern portion of the Project site and may settle under design loading conditions resulting in differential settlement of structures. The presence of unstable fill soil and Bay Mud is a *potentially significant* impact.

Mitigation Measure

Geo-5:

Investigate unstable fill soils and Bay Mud. A Design Level Geotechnical Investigation shall be performed to determine the depth and extent of potentially unstable fill soil and Bay Mud. Based on results of this study, the Geotechnical Engineer shall determine appropriate measures to stabilize the potentially unstable site soils. Consolidation testing of any Bay Mud soils present shall be performed, as part of the Design Level Geotechnical Investigation, and estimates of settlement for the site shall be developed.

Methods of unstable soil stabilization may include construction of driven pile foundations that support structures on materials located below fill soils and Bay Mud, and other methods as recommended by the Geotechnical Engineer.

Implementation of mitigation measure **Geo-5** will reduce the impact of the Project being located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project to a *less than significant* level by construction of foundations that support structures on materials located below fill soils and Bay Mud.

d) Expansive Soils

Significance Criteria: The Project would have a significant environmental impact if located on expansive soil, creating substantial risks to life or property.

Impact Geo-6Expansive Soils. Expansive soils are present in the existing fill on the site and in
Bay Mud sediments that underlie the site. The presence of expansive soils could
cause damage to proposed improvements but are unlikely to create substantial risk
of life. The impact of expansive soil is potentially significant.

Mitigation Measure

Geo-6: Compliance with recommendations of a Geotechnical Investigation and in conformance with Structural Design Plans. A Design Level Geotechnical Investigation shall be prepared for the site under the direction of a California Registered Geotechnical Engineer and shall include analysis for expansion potential of the site soils. Proper foundation engineering and construction shall be performed in accordance with the recommendations of the Geotechnical Investigation. The Geotechnical Investigation shall be reviewed and approved by the City's Geotechnical Consultant and by the City Engineer. A Registered Structural Engineer shall prepare Project structural design plans. The design plans shall identify specific mitigation measures to reduce the effects of expansive surface soils. Mitigations measures may include the following: Excavate expansive soils and replace with at least one foot of non-expansive fill. Design and construct structures to withstand expected stresses by the implementation of the following: minimize use of slab-on-grade floors; support buildings and slabs on non-expansive materials; chemically treat expansive materials to reduce expansion potential; avoid siting structures across soil materials of substantially different expansive properties; extend foundations below the zone of seasonal moisture change; utilize pier-and-grade-beam foundation systems where appropriate; utilize special bending resistant design; and prevent accumulation of surface water adjacent to buildings.

Implementation of mitigation measure Geo-6 will reduce the impact of locating Project improvements on expansive soil to a level of *less than significant*.

e) Capability of Soils to Support Septic Tanks

Significance Criteria: The Project would have a significant environmental impact if it involved construction of septic systems in soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems.

The Project does not propose to build any new septic tank or alternate waste disposal systems. The wastewater generated by the Project would be pumped into the local sewer system. Therefore, there is *no impact* due to soils incapable of supporting septic systems.

	Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
VII.	GREENHOUSE GAS EMISSIONS —Would the Project:				
	a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			V	
	b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			V	

In addition to the air pollutants discussed in the Air Quality section, other emissions may not be directly associated with adverse health effects, but are suspected of contributing to "global warming". Global warming has occurred in the past as a result of natural processes, but the term is often used now to refer to the warming predicted by computer models to occur as a result of increased emissions of greenhouse gases (GHGs).

The State of California is concerned about GHG emissions and their effect on global warming. The State recognizes that there appears to be a close relationship between the concentration of GHG in the atmosphere and global temperatures and that the evidence for global warming is overwhelming. The effects of global warming on California, in terms of how it would affect the ecosystem and economy, remain uncertain. According to the 2006 Climate Action Team Report³⁴ the following global warming effects and conditions can be expected in California over the course of the next century:

- A diminishing Sierra snow pack declining by 70 percent to 90 percent, threatening the state's water supply;
- Increasing temperatures from eight to 10.4 degrees Fahrenheit (F) under the higher emission scenarios, leading to a 25 to 35 percent increase in the number of days ozone pollution levels are exceeded in most urban areas;
- Coastal erosion along the length of California and seawater intrusion into the Sacramento River Delta from a four-to 33-inch rise in sea level. This would exacerbate flooding in already vulnerable regions;
- Increased vulnerability of forests due to pest infestation and increased temperatures;
- Increased challenges for the state's important agricultural industry from water shortages, increasing temperatures, and saltwater intrusion into the Delta; and
- Increased electricity demand, particularly in the hot summer months.

The Global Warming Potential (GWP) concept is used to compare the ability of each GHG to trap heat in the atmosphere relative to carbon dioxide (CO_2), which is the most abundant GHG. CO_2 has a GWP

³⁴ California Environmental Protection Agency. 2006. *Climate Action Team Report to Governor Schwarzenegger and the Legislature*. (http://www.climatechange.ca.gov/climate_action_team/reports/2006-04-03_FINAL_CAT_REPORT.PDF)

of 1. Other GHGs, such as methane and nitrous oxide are commonly found in the atmosphere at much lower concentrations, but with higher warming potentials, having GWP ratings of 21 and 310, respectively. When the GHG emissions are weighted by GWP and added together, the result is expressed as CO_2 equivalent (CO_2e). Other trace gases, such as chlorofluorocarbons and hydro chlorofluorocarbons, which are halocarbons that contain chlorine, have much greater warming potential. Fortunately these gases are found at much lower concentrations and many are being phased out as a result of global efforts to reduce destruction of stratospheric ozone.³⁵

California Green Building Standards Code

The Green Building Standards Code (California Code of Regulations, Title 24, Part 11, better known as CALGreen), requiring all new buildings in the state to be more energy efficient and environmentally responsible, took effect on January 1, 2011. These comprehensive regulations are targeted to achieve major reductions in GHG emissions, energy consumption and water use to create a greener California.

CALGreen requires that every new building constructed in California:

- Reduce water consumption by 20 percent
- Divert 50 percent of construction waste from landfills
- Install low pollutant-emitting materials
- Requires separate water meters for nonresidential buildings' indoor and outdoor water use
- Requires moisture-sensing irrigation systems for larger landscape projects
- Requires mandatory inspections of energy systems (e.g., heat furnace, air conditioner and mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity and according to their design efficiencies.

Bay Area Air Quality Management District

The Project site falls within the San Francisco Bay Area Air Basin and therefore under the jurisdiction of BAAQMD. BAAQMD provides a document titled *California Environmental Quality Act Air Quality Guidelines* ("BAAQMD CEQA Guidelines"), which provides guidance for consideration by lead agencies, consultants, and other parties evaluating air quality impacts in the San Francisco Bay Area Air Basin conducted pursuant to CEQA. The document includes guidance on evaluating and mitigating GHG emissions impacts.³⁶

City of South San Francisco Emissions

At present, the City of South San Francisco does not have an adopted plan or specific policies to reduce GHG emissions, although many of the City's policies and ordinances—such as one of the region's most aggressive TDM programs—achieve the same objective. The City is completing an emissions survey that will provide a basis for formally developing such tools. Although the General Plan did not specify policies and programs designed to reduce GHG emissions, many of the Plan's policies will contribute to this objective by promoting development that is less reliant on motor vehicles. According

³⁵ Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990 – 2008. U.S. EPA. April 15, 2010, Table 2-1: Recent Trends in U.S. Greenhouse Gas Emissions and Sinks.

³⁶ BAAQMD, California Environmental Quality Act Air Quality Guidelines, May 2011.

to the City of South San Francisco Zoning Ordinance Update (December 17, 2009), South San Francisco emitted approximately 527,000 tons of CO_2e in 2005 from all major sources, nearly half of which were from transportation.

It is easy to dismiss the impact any single community can have on GHG emissions. In the context of the State of California, the City of South San Francisco accounts for .001 percent (perhaps slightly higher, if we account for traffic outside the city borders and waste impacts) of GHG emissions. However, it is important to understand that reduction of GHG emissions is partially a matter of the availability of options in transportation and other energy use. Achievement of the reductions required by Measure G and State law require local action.

IMPACTS

a) Greenhouse Gas Emissions

Significance Criteria: BAAQMD provides two alternative quantitative thresholds for operational emissions, a brightline threshold of 1,100 MT of CO_2e per year to assess smaller projects or, if a project's emissions are greater than the brightline threshold, an efficiency-based threshold of 4.6 MT CO_2e per Service Population per year. As shown below, the proposed Project has been compared against the brightline threshold of 1,100 MT of CO_2e per year.³⁷

BAAQMD does not have an adopted threshold of significance for construction-related GHG emissions. Construction-period emissions would be temporary only, and a project of this size would not be anticipated to contribute substantially to regional GHG levels. Construction-period GHG emissions would also be further reduced by mitigation measure Air-1, which includes measures to reduce exhaust emissions during construction.

The Project's direct emissions refer to emissions produced from mobile sources (vehicles) and area sources such as natural gas used on-site for heating. Direct CO_2 emissions have been calculated using the URBEMIS2007 model, relying on the same inputs used to calculate emissions of air pollutants and precursors. (See Attachment A for URBEMIS results.)

The BAAQMD GHG Model (BGM) was used to estimate the Project's CO₂e emissions from direct and indirect emission sources, using the URBEMIS CO₂ emission results as an input. BAAQMD developed this model to calculate GHG emissions not included in URBEMIS, such as indirect emissions from electricity use and waste. The BGM also adjusts for state regulations not included in URBEMIS, specifically California's low carbon fuel rules and Pavley regulations, which regulate emissions from new passenger vehicles. ³⁸ Changes from model defaults included trip generation from the Project traffic study as well as a 50% reduction in solid waste, consistent with that seen for developments of this type in this area. A summary of the results are included in **Table 5** and the model results sheets can be found in Attachment A.

³⁷ BAAQMD, California Environmental Quality Act Air Quality Guidelines, Updated May 2011, Table 2-1.

³⁸ BAAQMD, California Environmental Quality Act Air Quality Guidelines, Updated May 2011, p. 4-5.

	Proposed Project CO ₂ e (net
Emissions Source	increase, metric tons/year)
Transportation:	498.26
Area Source:	(0.24)
Electricity:	228.90
Natural Gas:	104.42
Water & Wastewater:	10.86
Solid Waste:	193.73
Total:	1,035.94

Table 5: Annual Operational GHG Emissions

Source: Lamphier-Gregory results from BAAQMD's Greenhouse Gas Calculator v. 1.1.9 Beta available at http://www.urbemis.com/software/download.html.

Operation of the Project as proposed would result in the net increase in GHG emissions of approximately 1,036 metric tons CO_2e per year. This is below the BAAQMD threshold of 1,100 metric tons CO_2e per year and would therefore be *less than significant*.

b) Greenhouse Gas Reduction Plan

The Project is not located in a community with an adopted qualified GHG Reduction Strategy, so consistency with such a plan cannot be analyzed. Emissions associated with the development of the proposed Project were analyzed per the BAAQMD CEQA Air Quality Guidelines. BAAQMD's thresholds and methodologies take into account implementation of state-wide regulations and plans, such as the AB 32 Scoping Plan and adopted state regulations such as Pavley and the low carbon fuel standard. See the Air Quality section of this document for a discussion of consistency with the Clean Air Plan, including applicable control measures. The impact related to conflict with a GHG reduction plan would be *less than significant*.

	Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
VIII.	HAZARDS AND HAZARDOUS MATERIALS — Would the Project:				
	a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?		V		
	b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				
	c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				
	d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?		Ø		
	e) For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard for people residing or working in the Project area?			V	
	f) For a Project within the vicinity of a private airstrip, would the Project result in a safety hazard for people residing or working in the Project area?				V
	g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				V
	h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				Ø

Site Use History

Originally a tidal marsh, the Project area was filled and developed in the late 19th century. Development was hastened by construction of the railroad, which facilitated transport of heavy industrial materials along the railroad and from nearby barges on San Francisco Bay. In the site vicinity, the chief industries were metal plating and de-tinning operations from the 1920s until the early 1980s. Many small railroad spurs, all connecting to a large rail yard located north of the site, served the various industrial facilities in the area. While the area in the Project vicinity has been associated with heavy industry, the Project site itself has historically been used as part of a livestock and meat packing operation, a cold storage facility, and for commercial uses.
A site history for 328 Roebling Road was documented by GeoSyntec Consultants (GeoSyntec) as part of an environmental due diligence report completed in general conformance with American Society for Testing and Materials Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. GeoSyntec obtained Sanborn fire insurance maps, which identify use and owners of sites for the years 1950, 1956, and 1970. In the 1950 map, the site and surrounding areas are shown as owned by the United Packing Company, with hay barns, livestock feeding sheds, and cold storage buildings. The 1956 map shows the site and surrounding areas labeled as the South San Francisco Cold Storage Company. The 1970 map shows Roebling Road and lists 328 Roebling Road as a radio parts store, constructed of reinforced concrete, wood trusses, and a concrete floor. The cold storage facility is still shown south of the site with a plastic products company occupying the building north of the site. In 1988 the site was leased to the current tenant, Slakey Brothers. The site is currently being used as a wholesale warehouse for heating and air conditioning related equipment, as well as other small construction related equipment, including plumbing supplies.³⁹

Secor International Incorporated (Secor) documented a site history for 340 Roebling as part of a Phase I Environmental Site Assessment, dated 3 December 2003. From 1908 to approximately 1956 the site was part of the Western Meat Company or Union Meat's stock yards. The warehouse/ manufacturing building currently on-site was occupied by Roebling Wire Rope – The Colorado Fuel & Iron Corp from 1958 to 1968, and Precision Plastics has occupied the site since 1968.⁴⁰

GeoSyntec also documented a site history for 233 East Grand Avenue as part of a Phase I Environmental Site Assessment, dated 14 August 2006. 233 East Grand was also part of the Western Meat Company/Union Meat Company stockyard/feedlot. Since at least 1966, when Ed Willig Jr. purchased the property, it has been used solely for cold storage.⁴¹

Current Site Use and Potential Contamination

GeoSyntec conducted a site visit to 328 Roebling Road as part of their Phase I Site Assessment. They observed one small (10 gallon), unlabeled, closed-top plastic tank inside the building. The branch manager indicated that the tank contained waste oil, collected from compressors that were brought into Slakey Brothers for repair. The tank was approximately two-thirds full and appeared to be in good condition, however it was not stored in an area of secondary containment. Additionally, GeoSyntec observed a few isolated areas of concrete staining on the warehouse floor. The stains were of unknown origin, generally small and did not appear fresh. No obvious evidence of stains, releases, or spills was noted in the large outdoor storage area located north of the warehouse. There were no chemical storage areas located in the outdoor storage area.⁴²

The Project site is listed on two environmental databases, the HAZNET database for disposing (via recycler) of small quantities (0.22 tons) of liquids containing halogenated organic compounds (>1000mg/l) and the San Mateo Business Plan database as a small quantity (<27 gallons per year) generator. Over 90 other sites within one mile of the Project site were identified by the EDR report as appearing on one or more of the environmental databases. However, information in the EDR report

³⁹ GeoSyntec, Environmental and Geotechnical Due Diligence, 328 Roebling Road, South San Francisco, 2006.

⁴⁰ Secor International Incorporated, *Phase I Environmental Site Assessment for 340 Roebling Road*, December 2003.

⁴¹ GeoSyntec, Phase I Environmental Site Assessment for 233 East Grand Avenue, August 2006.

⁴² GeoSyntec, Environmental and Geotechnical Due Diligence, 328 Roebling Road, South San Francisco, 2006.

indicated a southerly groundwater flow, therefore GeoSyntec concluded that none of the properties identified in the report are likely to affect the Project site.⁴³

United Cold Storage has filed a Hazardous Materials Business Plan with the San Mateo County Division of Environmental Health as a site that generates waste oil/solvent. GeoSyntec observed regularly maintained compressors located in various areas of the building, with waste oil collected in 55-gallon drums within secondary containment. Freon in the refrigerant system was replaced with anhydrous ammonia in approximately 1992. Potentially asbestos-containing tiles and ceilings were observed in the office portion of the warehouse. A dry transformer had been installed in 2004, the current owner did not know if the previous transformer contained Polychlorinated Biphenyls (PCBs). A hydraulic elevator in the building was replaced in 1992, however there is no information as to whether the hydraulic oil was replaced, and/or whether it contains or previously contained PCBs. No indications of belowground structures were observed in the areas around the building.⁴⁴

Secor conducted a site visit to 340 Roebling Road for their Phase I Site Assessment. They observed 55-gallon drums in the hydraulic oil storage area, with moderate to major staining nearby. The floor of the storage area was concrete with no floor drains and no evidence of significant staining. Additionally, four 55–gallon drums stored within secondary containment on wooden pallets on an asphalt surface were observed near the south corner of the site. The drums appeared to be in good shape, with two containing waste oil and two containing oily water. Fluorescent lighting was observed throughout the building, and due to the age of the building may contain PCBs within their ballasts.⁴⁵

Based on review of the Phase I Site Assessments for the subject properties there are five main hazardous materials concerns at the site. There is evidence of improper storage of waste oil with unknown quantities spilled over the years. The cold storage facility at 233 East Grand stores large quantities of anhydrous ammonia, which, if spilled would be an acute human health hazard, but would be unlikely to lead to a lasting environmental concern. Due to the ages of the existing buildings, they are likely to have asbestos containing building materials and/or lead based paint. The transformers on site may, or may not have previously contained PCBs; fluorescent light ballasts are another potential source of PCBs. Additionally this area has a long history of heavy industrial uses, with a nearby rail yard and numerous active and inactive rail spurs, one of which runs just north of the Project site. The long history of heavy industry in the area indicates potential contamination including toxic heavy metals such as lead in the subsurface. Historic railroad grades are potential sources of a number of hazardous materials. These include herbicides used to clear unwanted vegetative growth in rail yards and along tracks and toxic metal contamination including arsenic and chromium associated with railroads. Wooden rail ties are another potential source of contamination due to the spills.⁴⁶

⁴³ GeoSyntec, Environmental and Geotechnical Due Diligence, 328 Roebling Road, South San Francisco, 2006.

⁴⁴ GeoSyntec, Environmental and Geotechnical Due Diligence, 328 Roebling Road, South San Francisco, 2006.

⁴⁵ Secor International Incorporated, *Phase I Environmental Site Assessment for 340 Roebling Road*, December 2003.

⁴⁶ GeoSyntec, *Phase I Environmental Site Assessment for 233 East Grand Avenue*, August 2006.

REGULATORY SETTING

Federal and State Level

United States Environmental Protection Agency

The chief environmental regulator at the federal level is the United States Environmental Protection Agency (EPA), Region IX for Northern California. In California the department of Toxic Substances Control is chiefly responsible for regulating the safe, handling, use, and disposal of toxic materials in the state of California, while the State Water Resources Control Board regulates discharge of potentially hazardous materials into waterways and aquifers. Programs intended to protect workers from exposure to hazardous materials and from accidental upset are covered under the Occupational Health and Safety Administration (OSHA) at the federal level and at the state level through CAL/OSHA, as well as through DHS.

Resource Conservation and Recovery Act

The RCRA is the United States primary law governing the handling and disposal of solid hazardous waste. The RCRA is actually an amendment, made in 1976, to the solid waste disposal act of 1965, but the amendments were so comprehensive that it is generally referred to as a new act. The RCRA defines solid and hazardous waste, authorizes the Environmental Protection Agency (EPA) to set standards for facilities that generate or manage hazardous waste, and establishes a permit program for hazardous waste treatment, storage, and disposal facilities. The RCRA was last re-authorized by the Hazardous and Solid Waste Amendments of 1984. The authorization for appropriations under the Act expired September 30, 1988, but funding for the EPA's programs in this area has continued; the Act's other authorities do not expire.⁴⁷

Department of Transportation

Transportation of hazardous materials on the highways is regulated through the Federal Department of Transportation (DOT) and the California Department of Transportation (Caltrans). This includes a system of placards, labels, and shipping papers required to identify the hazards of shipping each class of hazardous materials. Existing federal and state laws address risks associated with the transport of hazardous materials. These laws include regulations outlined in the Hazardous Materials Transportation Act administered by the DOT. Caltrans is mandated to implement the regulations established by the DOT, which is published as the Federal Code of Regulations, Title 49, commonly referred to as 49 CFR. The California Highway Patrol (CHP) enforces these regulations. Regulations of hazardous materials and wastes include the manufacture of packaging and transport containers; packing and repacking; labeling; marking or placarding; handling; spill reporting; routing of transports; training of transport personnel; and registration of highly hazardous material transport.

State Water Resource Control Board

The State Water Resource Control Board was created by the state legislature in 1967, with the joint authority of water allocation and water quality protection. The State Water Resources Control Board runs Geo Tracker, a database of environmentally regulated facilities in California. Within the State of

⁴⁷ McCarthy, J and Tiemann, M, Congressional Research Service Report RL30032 – Solid Waste Disposal Act/Resource Conservation and Recovery Act, National Council for Science and the Environment, obtained from <u>http://www.cnie.org/NLE/CRSreports/BriefingBooks/Laws/h.cfm</u>

California there are nine regional water quality control boards. The mission of the regional boards is to develop and enforce water quality objectives and implementation plans that will best protect the state's waters, recognizing local differences in climate, topography, geology and hydrology. The City of South San Francisco is under the purview of the San Francisco Bay Area Regional Water Quality Control Board.

Local and Regional Level

The City of South San Francisco Planning, Engineering, and Building Divisions shall review all architectural, structural, civil, electrical, and landscape plans and specifications associated with the entire development. Alarm systems, sprinklers, vents and secondary containment structures within the buildings are reviewed by the South San Francisco Fire Departments as a part of the plan check process.

IMPACTS

a) Routine Transport, Use, and Disposal of Hazardous Materials

Significance Criteria: The Project would have a significant environmental impact if it were to create a significant hazard to the public or the environment through the routine transport, use, storage, or disposal of hazardous materials.

Impact Haz-1: Routine Use of Hazardous Materials. The proposed development includes construction of Class-A office and laboratory buildings. Class A refers to a research laboratory, not merely an instructional laboratory. Depending upon the nature of research planned at the proposed facilities, for which detailed information is not currently available, there are likely to be both hazardous and potentially hazardous materials stored and used on the site that will eventually require disposal. This could include both biohazards, as well as chemical hazards. There will also likely be transportation of hazardous materials to and from the site, probably traveling along Highway 101 and East Grand Avenue.

The risk of accidental upset and environmental contamination from routine transport, storage, use and disposal of hazardous and potentially hazardous materials to the public and environment is a *potentially significant impact*.

Mitigation Measure

Haz-1a:

Registration in the Hazardous Materials Business Plan Program. Qualifying businesses occupying and/or operating at the development must submit a Hazardous Materials Business Plan for the safe storage and use of chemicals to the San Mateo County Environmental Health Department prior to the start of operations, and must review and update the entire Business Plan at least once every two years, or within 30 days of any significant change. Plans shall be submitted to the San Mateo County Environmental Health Business Plan Program, which may be contacted at (650) 363-4305 for more information.

Businesses qualify for the Hazardous Materials Business Plan Program if they store a hazardous material equal to or greater than the minimum reportable quantities. These quantities are 55 gallons for liquids, 500 pounds for solids and 200 cubic feet (at standard temperature and pressure) for compressed gases. Exemptions include businesses selling only pre-packaged consumer goods; medical professionals who store oxygen, nitrogen, and/or nitrous oxide in quantities not more than 1,000 cubic feet for each material, and whom store or use no other hazardous materials; or facilities that store no more than 55 gallons of a specific type of lubricating oil, and for which the total quantity of lubricating oil not exceed 275 gallons for all types of lubricating oil. These exemptions are not expected to apply to Class A laboratory facilities.

The Business Plan must include the type and quantity of hazardous materials, a site map showing storage locations of hazardous materials and where they may be used and transported from, risks of using these materials, included in material safety data sheets for each material, a spill prevention plan, an emergency response plan, employee training consistent with OSHA guidelines, and emergency contact information.

Mitigation Measure

Haz-1b:

Compliance with US Department of Transportation, State of California and local laws, ordinances and procedures for transportation of hazardous materials and hazardous wastes. All transportation of hazardous materials and hazardous waste to and from the site will be in accordance with Title 49 of the Code of Federal Regulations, US Department of Transportation, State of California, and local laws, ordinances and procedures including placards, signs and other identifying information.

Implementation of Mitigation Measures **Haz-1a** and **Haz-1b** would reduce the impact of creating a significant hazard to the public or the environment through the routine transport, use, storage, or disposal of hazardous materials to a level of *less than significant* by registration in the Hazardous Materials Business Plan Program, which includes development of a written plan and oversight by the County Environmental Health Department. The impact will also be mitigated to a level of less than significant by compliance with federal, state and local laws, ordinances, and procedures for the safe transport of hazardous materials and hazardous waste.

b) Risk from accidental upset of hazardous materials

Significance Criteria: The Project would have a significant environmental impact if it were to 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.

Impact Haz-2: Accidental Hazardous Materials Release. Existing buildings potentially contain hazardous materials including waste oil, asbestos, lead paint, and PCBs. Underlying site soils may contain hazardous materials including toxic heavy metals related to the history of heavy industry in the area. The historic railroad grade along the northeast edge of the Project site may be a source of additional hazardous materials, including arsenic, chromium, creosote, zinc chloride, or other wood preservatives. During demolition operations hazardous materials could be released from structures at the site or from the underlying soils. Following construction, operations at the proposed facilities are expected to represent a continuing threat to the environment through accidental release of hazardous materials since the site is proposed to include Class A laboratory facilities, where hazardous materials may be stored, used, and disposed of. This represents a *potentially significant* impact.

Mitigation Measures

- Haz-2a: **Demolition Plan and Permitting.** A demolition plan with permit applications shall be submitted to the City of South San Francisco Building Department for approval prior to demolition. The Demolition Plan for safe demolition of existing structures shall include asbestos dust control and incorporate recommendations from the site surveys for the presence of potentially hazardous building materials, as well as additional surveys when required by the City. The Demolition Plan shall address both on-site worker protection and off-site resident protection from both chemical and physical hazards. All contaminated building materials shall be tested for contaminant concentrations and shall be disposed of to appropriate licensed landfill facilities. Prior to building demolition, hazardous building materials such as peeling, chipping and friable lead based paint and asbestos containing building materials shall be removed in accordance with all applicable guidelines, laws, and ordinances. The Demolition Plan shall include a program of air monitoring for dust particulates and attached contaminants. Dust control and suspension of work during dry windy days shall be addressed in the plan. Prior to obtaining a demolition permit from the BAAOMD, an asbestos demolition survey shall be conducted in accordance with the requirements of BAAQMD Regulation 11, Rule 2.
- Haz-2b: Additional Soil Sampling of Site Soils. The applicant shall retain a licensed Civil Engineer or Professional Geologist to complete additional surface and subsurface soil sampling to determine if elevated levels of toxic metals, herbicides, motor oil, or wood preservatives are present in site soils. These tests shall take place throughout the Project site. If contamination exceeding commercial/industrial guidelines including the Regional Water Quality Control Board Environmental Screening Levels for commercial/ industrial sites, USEPA Preliminary Remediation Goals for commercial/ industrial sites, and the California Department of Toxic Substances Control Human Health Screening Levels is detected, then a Site Soil Management Plan and Health and Safety Plan shall be prepared and implemented, as discussed in Mitigation Measure Haz-2c.
- Haz-2c: Implementation of a Site Soil Management Plan. If contamination of site soils is detected, then results shall be submitted to the State of California EPA, pursuant to the Brownfield Memorandum of Agreement, Request for Oversight of a Brownfield Site process, and a Site Soil Management Plan shall be prepared in accordance with recommendations of the environmental consultant and established procedures for safe removal. Specific mitigation measures designed to protect human health and the environment will be provided in the plan. At a minimum the plan shall include, but not be limited to the following:

(1) Documentation of the extent of previous environmental investigation and remediation at the site.

(2) Requirements for site specific Health and Safety Plans (HASPs) to be prepared by all contractors at the Project site. This includes a HASP for all demolition, grading and excavation on the site, as well as for future subsurface maintenance work. The HASP shall include appropriate training, any required personal protective equipment, and monitoring of contaminants to determine exposure. The HASP will be reviewed and approved by a Certified Industrial Hygienist. (3) Description of protocols for the investigation and evaluation of previously unidentified hazardous materials that could be encountered during Project development, including engineering controls that may be required to reduce exposure to construction workers and future users of the site.

(4) Requirements for site-specific construction techniques that would minimize exposure to any subsurface contamination found to occur. This shall include treatment and disposal measures for any contaminated groundwater removed from excavations, trenches, and dewatering systems in accordance with San Francisco Bay Regional Water Quality Control Board guidelines.

(5) Sampling and testing plan for excavated soils to determine suitability for reuse or acceptability for disposal at a state licensed landfill facility.

(6) Restrictions limiting future excavation or development of the subsurface by residents and visitors to the proposed development if determined necessary through coordination with California EPA.

(7) The plan shall be reviewed and approved by the responsible jurisdiction prior to issuance of any demolition, grading and construction permits for the Project.

Haz-2d: California Accidental Release Prevention Program (CalARP). Future businesses at the development shall check the state and federal lists of regulated substances available from the San Mateo County Environmental Health Department (SMCEHD). Chemicals on the list are chemicals that pose a major threat to public health and safety or the environment because they are highly toxic, flammable or explosive. Businesses shall determine which list to use in consultation with the SMCEHD.

Should businesses qualify for the program they shall complete a CalARP registration form and submit it to Environmental Health. Following registration, they shall submit a Risk Management Plan (RMP). RMPs are designed to handle accidental releases and ensure that businesses have the proper information to provide to emergency response teams if an accidental release occurs. All businesses that store or handle more than a threshold quantity (TQ)⁴⁸ of a regulated substance must develop a RMP and follow it.

Risk Management Plans describe impacts to public health and the environment in the event that a regulated substance is released near schools, residential areas, hospitals and childcare facilities. RMPs must include procedures for: keeping employees and customers safe, handling regulated substances, training staff, maintaining equipment, checking that substances are stored safely, and responding to an accidental release.

Implementation of mitigation measures **Haz-2a** through **Haz-2d** will reduce the impact of creating a significant hazard to the public or the environment through reasonably foreseeable upset and accidents

⁴⁸ California Code of Regulations; Title 19. Public Safety; Division 2. Office of Emergency Services; Chapter 4.5 California Accidental Release Prevention Program, § 2770.5.

involving the release of hazardous materials into the environment to a *less than significant* level by implementation of the identified mitigation measures. These mitigation measures include preparing a Demolition Plan and obtaining permits for the demolition work, performing additional soil sampling of site soils to identify any contaminated soils present, and preparation and implementation of a Site Soil Management Plan under the oversight of the Department of Toxic Substances Control if contaminated soil is identified. Additionally, future businesses shall participate in the California Accidental Release Prevention Program if listed chemicals are used at the Project site.

c) Hazardous materials emissions or handling near school

Significance Criteria: The Project would have a significant environmental impact if it were to result in hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste within a quarter-mile of an existing or proposed school.

Impact Haz-3: Hazardous Materials Near Schools. The nearest school or childcare sites to the Project are the Gateway Child Care Center, located 0.21 miles northwest of the proposed Project, the Early Years Preschool, located 0.27 miles southeast of the Project site, and the Genentech Childcare Center, located 0.40 miles northeast of the Project site. Hazardous materials potentially present at the Project site could lead to a hazardous materials release during site demolition or future on-site activities. The impact of hazardous materials emissions within one-quarter mile of a school is a *potentially significant impact*.

Mitigation Measure

Haz-3: Mitigation Measures Haz-2a, Haz-2b, Haz-2c, and Haz-2d. Implementation of mitigation measures Haz-2a through Haz-2d shall be performed. These mitigation measures include requirements for preparing a Demolition Plan and obtaining permits for the demolition work, performing additional soil sampling of site soils to identify any contaminated soils present, and preparation and implementation of a Site Soil Management Plan under the oversight of the Department of Toxic Substances Control if contaminated soil is identified, as well as future business participation in the California Accidental Release Prevention Program if listed chemicals are used at the Project site.

Implementation of mitigation measures **Haz-2a**, **Haz-2b**, **Haz-2c** and **Haz-2d** would reduce the impact of the potential release of hazardous materials within one quarter mile from a school to a *less than significant* impact through proper characterization and control of any hazardous materials currently present or planned to be used in the future at the Project site.

d) Hazardous Materials on the site

Significance Criteria: The Project would have a significant environmental impact if it were to create a significant hazard to the public or the environment through being included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 ("Cortese List").

The site is not included on the "Cortese List". The Phase I ESAs performed by GeoSyntec and Secor indicated that the Project site was not listed within any of the databases requiring inclusion on the "Cortese List". Sources reviewed include the National Priorities List (NPL), Comprehensive Environmental Response Compensation and Liability Information System list (CERCLIS), CERCLIS No Further Remedial Action Planned (NFRAP) list, Federal Resource Conservation and Recovery Act (RCRA) CORRACTS Facility List, RCRA TSD Facilities list, RCRA Generator list, Federal

Emergency Response Notification System (ERNS) database, State Priority and CERCLIS-Equivalent list (SMBRP), State Spills Leaks Investigations and Cleanups List (SLIC), Solid Waste/Landfill Facilities (SWLF) database, State Leaking Underground Storage Tank List (LUST), State Underground Storage Tank List (UST), and Dry Cleaners List. .^{49, 50}

However, the businesses currently operating do handle hazardous materials and show up on the HAZNET database for disposal of waste oil/solvents, and have filed hazardous materials business plans with San Mateo County. Additionally, the Phase I ESAs indicated potential sources of hazardous materials including unknown quantities of waste oil spilled over the years; anhydrous ammonia used for cold storage; asbestos containing building materials; lead based paint; PCBs associated with fluorescent light ballasts, hydraulic elevator oil, and transformers; heavy metal contamination in soil due to the history of heavy industry in the area; as well as herbicides and wood preservatives associated with the railroad grade at the northern edge of the Project site.^{51, 52}

Impact Haz-4:Hazardous Materials on Site. The site is not currently included on the "Cortese
List" but Phase I studies indicate the possibility for hazardous material
contamination of the site that could qualify the site for listing pursuant to
Government Code Section 65962.5. This would be considered a *potentially*
significant impact.

Mitigation Measure Haz-4: Mitigation Measures Haz-2a, Haz-2b, Haz-2c, and Haz-2d. As described above, these mitigation measures comprehensively address on-site hazardous materials.

The impact of being listed on a list of hazardous materials sites and the possible presence of hazardous materials on the Project site would be mitigated by implementation of mitigation measures **Haz-2a**, **Haz-2b**, **Haz-2c**, **and Haz-2d** to a *less than significant* level. Theses mitigation measures include requirements for preparing a Demolition Plan and obtaining permits for the demolition work, performing additional soil sampling of site soils to identify any contaminated soils present, preparation and implementation of a Site Soil Management Plan under the oversight of the Department of Toxic Substances Control if contaminated soil is identified, and future business participation in the California Accidental Release Prevention Program if listed chemicals are used at the Project site.

e) and f) Safety Hazards Due to Nearby Airport or Airstrip

Significance Criteria: The Project would have a significant environmental impact if it were located within an airport land use plan (or, where such a plan has not been adopted, within two miles of a public airport or public use airport), if it would result in a safety hazard for people residing or working in the Project area; or if it were located within the vicinity of a private airstrip, if it would result in a safety hazard for people residing or working in the Project area.

The proposed Project is located within the jurisdiction of the Airport Land Use Plan for the San Francisco International Airport. According to the East of 101 Area Plan, the most stringent height

⁴⁹ Secor International Incorporated, *Phase I Environmental Site Assessment for 340 Roebling Road*, December 2003.

⁵⁰ GeoSyntec, Phase I Environmental Site Assessment for 233 East Grand Avenue, August 2006.

⁵¹ Secor International Incorporated, *Phase I Environmental Site Assessment for 340 Roebling Road*, December 2003.

⁵² GeoSyntec, Phase I Environmental Site Assessment for 233 East Grand Avenue, August 2006.

limits in South San Francisco are south of Forbes Boulevard and Lindenville (the area between Railroad Avenue, South Spruce Avenue, and San Mateo Avenue), including the Project area. In this area, Federal Aviation Regulations, Part 77, limits building heights to an elevation of 161 feet above mean sea level, approximately 12 to14 stories. These height limitations are in place to insure the safety of the workers in the Project area and to prevent interference of new construction with the Airport operations.⁵³ No proposed building would exceed the 161 feet height limitation; therefore, the structures would be in compliance with the Airport Land Use Plan and will not create a safety hazard. The impact of the Project on the Airport Land Use Plan is *less than significant* with no mitigation warranted.

The Project area is not located within the vicinity of a private airstrip. Private aircraft are sometimes granted air space in the East of 101 Area, but consistency with the San Francisco International Airport regulations will ensure the Project is compliant with safety regulations in relation to private aircraft as well.

g) Conflict with Emergency Response Plan or Emergency Evacuation Plan

Significance Criteria: The Project would have a significant environmental impact if it were to impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.

No changes to the major access and evacuation routes along East Grand Avenue and Roebling Road are planned since the Project calls for redevelopment rather than reconstruction or new development of an entire area. Therefore, the Project would have *no impact* relating to an adopted emergency response plan.

h) Exposure of People or Structures to Wildland Fires

Significance Criteria: The Project would have a significant environmental impact if it were to expose people or structures to a significant risk of loss, injury or death involving wildland fires.

The area is urbanized and there are no wildland corridors containing high fire fuel loads in the immediate vicinity of the Project site. ⁵⁴ The Project site is bordered on all sides by urban land uses, which do not contain vegetation conducive to wildland fires. There is *no impact* related to wildland fires.

⁵³ City/County Association of Governments of San Mateo County, San Mateo County Comprehensive Airport Land Use Plan, December 1996.

⁵⁴ City of South San Francisco, prepared by Dyett and Bhatia, *South San Francisco General Plan*, 1999, Figure 8-4.

	Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
IX.	HYDROLOGY AND WATER QUALITY — Would the Project:				
	a) Violate any water quality standards or waste discharge requirements?			\checkmark	
	b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				V
	c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?				
	d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?		M		
	e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?				V
	f) Otherwise substantially degrade water quality?		\checkmark		
	g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				V
	 Place within a 100-year flood hazard area structures, which would impede or redirect flood flows? 				Ø
	 Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? 				
	j) Inundation by seiche, tsunami, or mudflow?				\checkmark

SETTING

Climate and Topography

The Project site is located in a slightly sloped portion of the generally flat area east of U.S. 101 in the City of South San Francisco. The San Francisco Bay is located approximately 3,000 feet southeast of the site. The regional climate is typical of the San Francisco Bay Area and is characterized by dry, mild summers and moist, cool winters. About 80 percent of the total annual precipitation occurs during

the months of November through March, with an average annual precipitation of 20 inches. Average monthly temperatures range from a high of 74 degrees Fahrenheit in the summer to a low of 42 degrees Fahrenheit in the winter. ⁵⁵

Regional Hydrology

The site drains to the Colma Creek. The Colma Creek watershed includes portions of San Bruno Mountain as well as urbanized areas of Daly City, Colma, and South San Francisco. Most of this urbanized creek is channelized and/or conveyed underground to allow for urban development. The percent of impervious surface area in the Colma Creek watershed was estimated at 63 percent, the highest in the County. ⁵⁶ Colma Creek is maintained by the San Mateo County Department of Public Works. The Creek discharges into the San Francisco Bay just north of the San Francisco International Airport. Improvements to and maintenance of the creek and its flood control infrastructure are funded by assessment district properties that fall within the county-designated Colma Creek Flood Control Zone.⁵⁷ The Project site is located within the designated boundaries of the Zone as shown in **Figure 7**.⁵⁸

Existing Drainage Concept:

Approximately 98 percent of the 2.95-acre Project site is currently covered by buildings, paved yards, and parking areas. Stormwater runoff from the Project site begins as sheet flow on roofs and parking lots and is primarily carried westward to Roebling Avenue, where it then flows down the street gutter to a storm drain inlet at South San Francisco Avenue. A few minor storm drain inlets currently exist in the parking areas. A small portion of roof and pavement runoff may also be directed to the vegetated fill slope east of the Project site.

Proposed Drainage Concept:

Redevelopment of the Project site would replace the three buildings currently occupying the property with two buildings while utilizing landscaped drainage features to reduce the total stormwater runoff from the site. Runoff from the northern portion of the site would drain to drop inlets located in the parking area north of Building A. This runoff would be conveyed via an underground pipe to bubble up to a vegetated swale (with check dams) that follows the southeast property line (flows to southwest). Runoff from the southeast parking area and the southeast portion of the middle parking area would also flow into this swale via a number of curb cuts along the edge of the lot. From this ditch runoff would be conveyed via an underground pipe to a large vegetated bioswale located between proposed Building B and the Roebling Rd/East Grand Ave intersection. Runoff would then pass through a sand media filter and finally be delivered to the storm-drain at East Grand Ave.

⁵⁵ Western Regional Climate Center, 2005. Weather Station: San Francisco WSO AP, California (047769).

⁵⁶ City of Daly City Water and Wastewater Resources webpage, <u>http://www.dalycity.org/City_Hall/Departments/wwr/Divisions/waste_source.htm</u>, referencing 1998 Center for Watershed Protection study of impervious surfaces.

⁵⁷ San Mateo Public Works Flood control webpage, <u>http://www.co.sanmateo.ca.us/portal/site/publicworks/menuitem.a4bfacf14e50a00d82439054d17332a0/?vgnextoid=b79d4</u> <u>b3a4b71f110VgnVCM1000001d37230aRCRD&vgnextfmt=DivisionsLanding</u>.

⁵⁸ San Mateo Public Works, Colma Creek Flood Control Zone map, available at <u>http://www.co.sanmateo.ca.us/vgn/images/portal/cit_609/10658749colma-creek-flood-control-zone.pdf.</u>



Figure 7: Colma Creek Flood Protection Zone

Prepared by Questa Engineering

Runoff from the northwestern portion of the site would drain to drop inlets in the parking area and flow to a vegetated bioswale along the northwestern side of Building A. Once it passes the bioswale runoff would flow through an underground pipe and sand media filter before outfalling to the gutter along Roebling Road to flow to the stormdrain on East Grand Ave.

Groundwater

The California Department of Water Resources (DWR) defines state groundwater basins based on geologic and hydrogeologic conditions. According to the DWR, the Project site is located within the Westside Groundwater Basin. The Westside Groundwater Basin consists of bedrock and unconsolidated materials. Unconsolidated materials overlying the basin represent the primary waterbearing strata and are comprised of dune sands, the Colma Formation, and the Merced Formation. While groundwater quality in the basin is generally in compliance with drinking water quality standards, some wells in the basin have experienced nitrate-nitrogen concentration in excess of the primary maximum contaminant levels.⁵⁹

⁵⁹ California Department of Water Resources, *California's Groundwater Bulletin 118, Westside Groundwater Basin*, last updated 1/20/2006.

REGULATORY SETTING

The proposed Project must be constructed in accordance with several regulatory programs, laws, and regulations that aim to protect surface water resources. In some cases, Federal laws are administered and enforced by state and local government. In other cases, state and local regulations in California are stricter than those imposed by Federal law. This section summarizes relevant regulatory programs, laws, and regulations with respect to hydrology and water quality and how they relate to the proposed Project.

Federal Laws and Regulations

Clean Water Act

The Clean Water Act (CWA) was enacted by Congress in 1972 and amended several times since inception. It is the primary federal law regulating water quality in the United States, and forms the basis for several state and local laws throughout the country. Its objective is to reduce or eliminate water pollution in the nation's rivers, streams, lakes, and coastal waters. The CWA prescribed the basic federal laws for regulating discharges of pollutants as well as set minimum water quality standards for all waters of the United States. Several mechanisms are employed to control domestic, industrial, and agricultural pollution under the CWA. At the Federal level, the U.S. Environmental Protection Agency (EPA) administers the CWA. At the state and regional level, the CWA is administered and enforced by the State of California has developed a number of water quality laws, rules, and regulations, in part to assist in the implementation of the CWA and related Federally mandated water quality requirements. In many cases, the Federal requirements set minimum standards and policies and the laws, rules, and regulations adopted by the State and Regional Boards exceed them.

State Laws and Regulations

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act established the State Water Resources Control Board and the RWQCB as the principal state agencies having primary responsibility for coordinating and controlling water quality in California. The Porter-Cologne Act established the responsibility of the RWQCB for adopting, implementing, and enforcing water quality control plans (Basin Plans), which set forth the water quality standards of the state (i.e. beneficial uses of surface waters and groundwater) and the objectives or criteria necessary to protect those beneficial uses. The National Pollutant Elimination System permits must be consistent with the Basin Plans.

NPDES Permit Requirements

The CWA has nationally regulated the discharge of pollutants to the waters of the U.S. from any point source since 1972. In 1987, amendments to the CWA added section 402(p), which established a framework for regulating nonpoint source (NPS) storm water discharges under the National Pollutant Elimination System (NPDES). The Phase I NPDES storm water program regulates storm water discharges from industrial facilities, large and medium-sized municipal separate storm sewer systems (those serving more than 100,000 persons), and construction sites that disturb five or more acres of land. Under the program, the applicant shall be required to comply with NPDES permit requirements.

The NPDES General Construction Permit Requirements apply to clearing, grading, and disturbances to the ground such as excavation. The applicant is required to submit a Notice of Intent (NOI) with the

State Water Resource Control Board's Division of Water Quality. The NOI includes general information on the types of construction activities that will occur on the site. The applicant shall also be required to submit a site-specific SWPPP for construction activities. The SWPPP shall include a description of Best Management Practices (BMPs) to minimize the discharge of pollutants from the site during construction. It is the responsibility of the property owner to obtain coverage under the permit prior to site construction.

The NPDES General Industrial Permit Requirements apply to the discharge of storm water associated with industrial sites. It is assumed that the future R&D labs would require compliance with the requirements because it is likely that the Standard Industrial Code for the R&D labs would be 2834 (Pharmaceutical Preparations). The permit requires the implementation of management measures that will achieve the performance standard of best available technology (BAT) economically achievable and best conventional pollutant control technology (BCT). Under the statute, operators of new facilities must implement industrial BMPs in the Plan SWPPP and perform monitoring of storm water discharges and unauthorized non-storm water discharges. An annual report must be submitted to the RWQCB each July 1. Operators of new facilities must file an NOI at least 14 days prior to the beginning of operations.

Sea Level Rise and Executive Order S-13-08

In November 2008, Governor Arnold Schwarzenegger issued Executive Order S-13-08. The order indicates that future potential sea level rise associated with climate change may have a substantial effect on coastal development, and provided for the formation of an independent panel to complete a California Sea Level Rise Assessment Report by December 1, 2010. This panel, the California Adaptation Advisory Panel to the State of California, published the required report in November 2010 titled *Preparing for the Effects of Climate Change – A Strategy for California.*⁶⁰ This study notes that the State has requested an assessment of defensible sea level rise projections for the West Coast from the National Research Council, but that this study has not yet been completed.

In the interim, BCDC has proposed Bay Plan amendment language, which includes guidance for addressing future sea level rise scenarios associated with planning and permitting development in potentially susceptible areas in the San Francisco Bay Area. These scenarios are:

- a sea level rise of 16 inches by 2050; and
- a sea level rise of 55 inches by 2100.

These values represent the upper end of the range of sea level rise estimates and are consistent with preliminary state recommendations for 100-year sea level rise. These values are meant to ensure that projects take these potentially high estimates into account when planning infrastructure and development projects, prior to the release of official sea level rise projections.

Local Programs and Regulations

San Mateo Countywide Stormwater Pollution Prevention Program

⁶⁰ California Adaptation Advisory Panel to the State of California, prepared by Pacific Council, *Preparing for the Effects of Climate Change – A Strategy for California*, November 2010.

To comply with the CWA, San Mateo County and the 20 cities and towns in the County formed the San Mateo Countywide Stormwater Pollution Prevention Program (STOPPP). STOPPP holds a joint municipal NPDES permit from the San Francisco Bay RWQCB. The permit includes a comprehensive plan to reduce the discharge of pollutants to creeks, San Francisco Bay, and the ocean to the maximum extent possible.

San Francisco Bay Water Quality Control Plan (Basin Plan)

The San Francisco Bay RWQCB is responsible for the development, adoption, and implementation of the Water Quality Control Plan for the San Francisco Bay region. The Basin Plan is the master policy document that contains descriptions of the legal, technical, and programmatic bases of water quality regulation in the San Francisco Bay Region. The Basin Plan identifies beneficial uses of surface waters and groundwater within its region and specifies water quality objectives to maintain the continued beneficial uses of these waters. Projects under the proposed Project are required to adhere to all water quality objectives identified in the Basin Plan.

The Basin Plan defines beneficial uses for surface waters and groundwater in its corresponding jurisdiction. The beneficial uses of groundwater in the Visitacion Valley Groundwater Basin include municipal and domestic supply, industrial process supply, industrial supply, and agricultural supply.

East of 101 Area Plan

The East of 101 area plan provides detailed planning policies that are consistent with policies of the adopted South San Francisco General Plan. With respect to hydrology and water quality, the plan aims to reduce flooding by evaluating specific development proposals to determine drainage and flood protection requirements, and to prevent the degradation of water quality by minimizing erosion and sedimentation, and requiring that projects under the Plan comply with NPDES permit requirements.⁶¹

City of South San Francisco

The South San Francisco – San Bruno Water Quality Control Plant requires Source Control Measures of Stormwater Pollutants to comply with their NPDES permit, including methods for managing pollution sources. Applicable control measures include utilization of stormwater pollution prevention devices, management of refuse areas, management of pesticide/fertilizer application for landscaping, use of treatment devices for interior level parking garage floor drains, and marking of on-site storm drains.62

IMPACTS

a) Violate water quality standards or waste discharge requirements

Significance Criteria: The Project would have a significant environmental impact if it violated any water quality standards or waste discharge requirements.

⁶¹ City of South San Francisco, East of 101 Area Plan, 1994.

⁶² California EPA, California Regional Water Quality Control Board, San Francisco Bay Region, Cities of South San Francisco and San Bruno Water Quality Control Plan Limitations and Discharge Requirements, Order No. R2-2008-0094, NPDES No. CA0038130, available at

Impact Hydro-1: Violate any water quality standards or waste discharge requirements.

Exposure and disturbance of site soils during construction and delivery of post construction surface runoff containing industrial pollutants to receiving waters could allow eroded soils and pollution to enter storm water and downstream waters. This is a *potentially significant* impact.

Increased Non-Point Source Pollutants (NPS) to Receiving Waters

Non-point source pollutants (NPS) are washed by rainwater from roofs, landscape areas, and streets and parking areas into the drainage network. Typical industrial NPS pollutants for various industrial activities are listed in **Table 6**. An increase in NPS pollutants could have adverse effects on wildlife, vegetation, and human health. NPS pollutants could also infiltrate into groundwater and degrade the quality of potential groundwater sources. Under existing conditions, almost all of the site runoff drains to Roebling Road, or minor underground stormdrains, before entering the municipal stormdrain network at East Grand Avenue, and then discharging to the San Francisco Bay.

The proposed Project includes a decrease in the amount of impervious surfaces, and an increase in landscaped areas. Of the 2.95 acre site, 2.89 acres (98%) are currently covered in hardscape, impervious to rainfall infiltration. The Project will include 2.42 acres (82%) of impermeable hardscape, a reduction of 16%. Planted stormwater treatment areas and landscaping will cover 18% of the site. The proposed Project also includes an increase in parking areas, and a general reduction in rooftop areas.

Under the NPDES storm water permit, the proposed Project is required to provide permanent treatment for site runoff. To meet this requirement, the proposed Project would reduce the quantity and the levels of NPS pollutants and litter entering the San Francisco Bay by redirecting site runoff from roofs and parking areas into newly constructed vegetated swales and into new onsite storm drain network systems with inline, underground sand filtration systems. ⁶³

The current plan for stormwater collection and drainage on site includes sand filters, Which require appropriate design configuration and sizing as well as requires periodic cleaning and maintenance. As part of the stormwater information to be included with application submittals with the Planning Permit Application and the Building Permit Application, the Project applicant is required to submit hydraulic computations to support site-specific hydraulic sizing for the sand filters and other elements and establish there will be no increased run off from the site.

Increased Erosion or Siltation to Receiving Waters

Construction of the proposed Project would involve the demolition of existing structures and pavement areas and grading activities. Existing structures and pavement that currently help to stabilize site soils would be removed during Project construction. Construction operations associated with the Project would present a threat of soil erosion by subjecting unprotected bare soil areas to runoff during construction.

⁶³ California EPA, California Regional Water Quality Control Board, San Francisco Bay Region, *Municipal Regional Stormwater NPDES Permit*, Order No. R2-2009-0074, NPDES No. CAS612008, available at http://www.waterboards.ca.gov/sanfranciscobay/board_decisions/adopted_orders_db/index.php.

INDUSTRIAL ACTIVITY	Sediments	Nutrients	Metals	Organics and Toxicants	Floatable Materials	Oxygen-Demanding Substances	Oil & Grease	Bacteria	Pesticides
Vehicle & Equipment Fueling			Х	Х			Х		
Vehicle & Equipment Washing	Х	Х	Х	Х		Х	Х		
Vehicle & Equipment Maintenance & Repair			Х	Х			Х		
Outdoor Loading & Unloading of Materials	Х	Х	Х	Х	Х	Х	Х		
Outdoor Container Storage of Liquids		Х	Х	Х		Х	Х		Х
Outdoor Process Equipment Operations & Maintenance	Х		Х	Х			Х		
Outdoor Storage of Raw Materials, Products, & Byproducts	Х	Х	Х	Х	Х	Х	Х		
Waste Handling & Disposal			Х	Х	Х	Х	Х	Х	
Contaminated or Erodible Surface Areas	Х	Х	Х	Х	Х	Х	Х	Х	
Building & Grounds Maintenance	Х	Х	Х		Х	Х		Х	Х
Building Repair, Remodeling, & Construction	Х		Х		Х	Х			
Parking/Storage Area Maintenance			Х	Х	Х		Х		
Source: California Stormwater Quality Association, 2003. California Stormwater BMP Handbook, Industrial & Commercial.									

Table 6: Potential Pollutants From Industrial Activities

Mitigation Measure

Hydro-1:

Preparation and Implementation of Project SWPPP. Pursuant to NPDES requirements, the Project applicant shall develop a SWPPP to protect water quality during construction and submit the SWPPP as part of project application submittals with the Planning Permit Application and Building Permit Application. The Project SWPPP shall include, but is not limited, to the following mitigation measures for the construction period:

1) Grading and earthwork shall be allowed with the appropriate SWPPP measures during the wet season (October 1 through April 30) and such work shall be stopped before pending storm events.

2) Erosion control/soil stabilization techniques such as straw mulching, erosion control blankets, erosion control matting, and hydro-seeding, shall be utilized, in accordance with the regulations outlined in the Association of Bay Area Governments Manual of Standards for Erosion and Sediment Control Measures. Silt fences used in combination with fiber rolls shall be installed down slope of all graded slopes. Fiber rolls shall be installed in the flow path of graded areas receiving concentrated flows and around storm drain inlets.

3) "Best Management Practices" (BMPs) for preventing the discharge of other construction-related NPDES pollutants beside sediment (i.e. paint, concrete, trash, etc.) to downstream waters such as covered and contained storage areas, contained wash-out areas, and prompt and appropriate disposal.

4) After construction is completed, all drainage facilities shall be inspected for accumulated sediment and trash, and these drainage structures shall be cleared of debris and sediment.

In accordance with the handbook C.3 Stormwater Technical Guidance, permanent mitigation measures for stormwater shall be submitted as part of project application submittals with the Planning Permit Application and Building Permit Application. Elements that shall be addressed in the submittals include the following:

5) Description of potential sources of erosion, sediment, and trash at the Project site. Industrial activities and significant materials and chemicals that could be used at the proposed Project site should be described. This will include a thorough assessment of existing and potential pollutant sources.

6) Identification of BMPs to be implemented at the Project site based on identified industrial activities and potential pollutant sources, including non-point source pollutants. Emphasis shall be placed on source control BMPs, with treatment controls used as needed.

7) Development of a monitoring and implementation plan. Maintenance requirements and frequency shall be carefully described including vector control, clearing of clogged or obstructed inlet or outlet structures, trash removal, vegetation/landscape maintenance, replacement of media filters, regular sweeping of parking lots and other paced areas, etc. Wastes removed as a result of BMPs described above may be hazardous, therefore, maintenance costs shall be budgeted to include disposal at a proper site. Parking lot areas shall be cleared of debris that may enter the storm drain system on a daily basis. 8) The monitoring and maintenance program shall be conducted at the frequency agreed upon by the RWQCB and/or City of South San Francisco. Monitoring and maintenance shall be recorded and submitted annually to the State Water Resources Control Board. The SWPPP shall be adjusted, as necessary, to address any inadequacies identified through the monitoring.

9) Proposed locations and sizing of stormwater treatment measures shall be included.

The applicant shall prepare informational literature and guidance on industrial and commercial BMPs to minimize pollutant contributions from the proposed development. This information shall be distributed to all employees at the Project site. At a minimum the information shall cover: a) proper disposal of commercial cleaning chemicals; b) proper use of landscaping chemicals; c) clean-up and appropriate disposal of hazardous materials and chemicals; and d) prohibition of any washing and dumping of materials and chemicals into storm drains.

The impact of violating any water quality standards or waste discharge requirements would be reduced to a *less than significant* level by implementation of mitigation measures Hydro-1, which includes erosion control and identifies Best Management Practices for control of discharge of runoff, sediment, pollution, refuse, landscaping and cleaning chemicals and other potential sources of water quality degradation.

b) Groundwater supplies and groundwater recharge

Significance Criteria: The Project would have a significant environmental impact if it substantially depleted groundwater supplies or interfered substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).

Construction of the proposed Project would increase the amount of pervious surface areas including planted landscape areas and vegetated bio swales. (See discussion in the setting section above for additional detail.) Increasing permeable surface area allows for a greater rate infiltration of rainfall, therefore there is *no impact* related to groundwater recharge.

c) and d) Alter the existing drainage pattern resulting in erosion or siltation or flooding on- or <u>off-site</u>

Significance Criteria: The Project would have a significant environmental impact if it substantially altered the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion, siltation or flooding on- or off-site.

The design of the proposed Project would not ultimately alter the drainage pattern in a manner that would increase erosion, siltation, or flooding on- or off-site. However, temporary impacts could occur during site grading and construction activities.

Impact Hydro-2: Altered Drainage Patterns. Construction operations associated with the Project would present a threat of soil erosion from soil disturbance by subjecting unprotected bare soil areas to the erosional forces of runoff and post construction runoff that could increase and/or could contain soil and sediment.

Mitigation Measure

Hydro-2: Mitigation Measure Hydro-1. Implementation of mitigation measure Hydro-1 for construction related sources of erosion and post construction BMPs will reduce the impact of altered drainage patterns to *less than significant*.

The impact of alterations to existing drainage patterns resulting in construction related sources of erosion would be reduced to less than significant by implementation of mitigation measure Hydro-1, which includes preparation of a SWPPP and implementation of Best Management Practices for sediment control. Post Construction BMPs, if properly maintained following standard requirements under the SWPPP would reduce the potential for erosion. Review and approval of the SWPPP and BMPs by the City of South San Francisco will provide supporting documentation that the mitigation measures are properly designed and implemented. The impact of altered drainage patterns will be mitigated to a level of *less than significant* following implementation of mitigation measure Hydro-1.

e) Exceed capacity of stormwater drainage system.

Significance Criteria: The Project would have a significant environmental impact if it created or contributed runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

Relative to existing conditions, the proposed Project would reduce impervious surface areas and increase landscape areas where water can infiltrate into site soils instead of flowing into the stormwater system. (See discussion in the setting section above for additional detail.) Inclusion of stormwater treatment features, such as vegetated swales, will also serve to reduce stormwater flows. The rational method for calculating peak flow uses a runoff coefficient weighted to account for percentages of impervious cover. In this case, the proposed site conditions will decrease the amount of impervious surfaces, thereby decreasing the runoff coefficient. Peak flows due to a 10-year design storm for existing and proposed site conditions are summarized in **Table 7**. Therefore the proposed Project would have *no impact* on the existing or planned stormwater drainage system.

	Existing Conditions			Proposed Conditions						
	Runoff coeff.	Precipitation Intensity**	Drainage area	Peak flow	Runoff coeff.	Precipitation Intensity**	Drainage area	Peak flow	Flow Inc	rease***
		(in/hr)	(acres)	(cfs*)		(in/hr)	(acres)	(cfs*)	(cfs*)	(percent)
Impervious Surfaces	0.95	3.2	2.89	8.8	0.95	3.2	2.42	7.4		
Landscaped Areas	0.35	3.2	0.06	0.1	0.35	3.2	0.53	0.6		
Weighted Totals	0.94	3.2	2.95	8.9	0.84	3.2	2.95	8.0	-0.9	-10%

Table 7: Existing and Proposed Drainage Conditions for the 10-Year Design Storm

* CFS = CUBIC FEET PER SECOND

** OBTAINED VIA TELEPHONE COMMUNICATION WITH SOUTH SF PUBLIC WORKS DEPARTMENT

***A NEGATIVE FLOW INCREASE REPRESENTS A FLOW DECREASE.

Source: Prepared by Questa Engineering

f) Substantially degrade water quality.

Significance Criteria: The Project would have a significant environmental impact if it increased pollution or otherwise degraded water quality.

Impact Hydro-3: Degrade Water Quality. Construction and operation of the Project have the potential to degrade water quality through discharge of stormwater.

Mitigation Measure

Hydro-3:

Mitigation Measure Hydro-1. Implementation of mitigation measure Hydro-1 for construction related sources of erosion and post construction BMPs will reduce the impact on water quality to *less than significant*.

The impact of a degradation water quality would be reduced to less than significant by elements of the proposed Project including a reduction in impervious surface areas and an increase in storm water treatment features, such as vegetated swales, curb cuts, and stormwater sand filters. Mitigation Measure Hydro-1, preparation and implementation of Project SWPPP, including required maintenance and monitoring, would further reduce Project related impacts that could otherwise degraded water quality to a *less than significant* level.

g) Place housing in a flood zone.

Significance Criteria: The Project would have a significant environmental impact if it placed housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.

The proposed Project does not include housing, and according to current Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) (1981), the Project is not located within a 100-year flood zone. Therefore, there would be *no impact* from placing housing in a flood zone.

h) Impede or redirect flood flows.

Significance Criteria: The Project would have a significant environmental impact if it placed structures within a 100-year flood hazard area, which would impede or redirect flood flows.

According to FEMA flood maps, the Project is not located within a 100-year flood zone. Therefore, there would be *no impact* from impeding or redirecting flood flows.

i) Flooding as a result of the failure of a levee or dam

Significance Criteria: The Project would have a significant environmental impact if located in an area mapped as being within the inundation area after the failure of a dam or levee.

According to maps published by ABAG, the Project is not located downstream of a dam, nor are there any levees near the Project area.⁶⁴ Therefore, there would be no inundation and *no impact* resulting from a dam or levee failure.

⁶⁴ ABAG, Dam Failure Inundation Map, last updated 2003, available at <u>http://quake.abag.ca.gov/dam-failure/</u>.

j) Inundation by seiche, tsunami, mudflow or sea level rise

Significance Criteria: The Project would have a significant environmental impact if located in an area susceptible to seiche (a wave caused by oscillation in an enclosed body of water such as a lake or reservoir), a tsunami, mudflow or climate-induced sea level rise.

The proposed Project is located over 3000 feet from the San Francisco Bay, and over 6 miles from the Pacific Ocean. Wave run up from a tsunami is estimated at 6 feet above mean sea level for a 500-year tsunami.⁶⁵ Project site elevations range from 12 feet to 31 feet above mean sea level, therefore, the site is not in danger of inundation from a tsunami or climate induced sea level rise (16 inches by 2050 and 55 inches by 2100). Further, the site is not located near an inland body of water, nor is it located adjacent to a soil slope susceptible to rapid mass wasting or mudflows. Therefore, there would a *less than significant impact* due to inundation by seiche, tsunami, mudflow or sea level rise.

⁶⁵ City of South San Francisco, prepared by Dyett and Bhatia, South San Francisco General Plan: Health and Safety Element, 1999, p. 250.

	Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Х.	LAND USE AND PLANNING — Would the Project:				
	a) Physically divide an established community?				\checkmark
	b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				Ø
	c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				\square

SETTING

South San Francisco has a distinctive land use pattern that reflects the decision to initially locate industrial areas east of the majority of homes and businesses in order to take advantage of the topography and winds on Point San Bruno. Another development trend that shaped the arrangement of uses was the extensive residential development that occurred during the 1940s and 1950s, creating large areas almost entirely developed with single-family housing. As a result, South San Francisco is largely comprised of single-use areas, with industry in the eastern and southeastern portions of the City, single family housing clustered in those same corridors and on hillsides. ⁶⁶

In some ways a microcosm of American industry, South San Francisco has been making a slow industrial transformation over the past 30 years. Steel production and other heavy industries have largely been replaced by warehousing, research, development and biotechnology.⁶⁷

As high technology businesses have moved into many of these older industrial areas, conflicts, such as between automobile and truck traffic, and land use and visual character have become increasingly pronounced. Business centers have somewhat different needs than industrial and warehousing uses, including smaller blocks, more through street connections, ancillary facilities such as restaurants, easier connections to transit, sidewalks and bikeways, and higher landscape standards. The City attempts to balance regional growth objectives with conservation of residential and industrial neighborhoods. ⁶⁸

The East of 101 Area Plan, adopted in 1994, was prepared to maximize the potential of undeveloped or underused properties in the City's traditional industrial east of U.S. 101. Upgrading of existing uses and provisions for quality design are important components of the Plan. In addition to policies relating to land use dispersion, intensities, and transportation, the Plan includes a Design Element to help achieve a high standard of development.

⁶⁶ City of South San Francisco, prepared by Dyett and Bhatia, *South San Francisco General Plan*, 1999, p. 26.

⁶⁷ City of South San Francisco, prepared by Dyett and Bhatia, *South San Francisco General Plan*, 1999, p. 11.

⁶⁸ City of South San Francisco, prepared by Dyett and Bhatia, *South San Francisco General Plan*, 1999, p. 13.

GOVERNING PLANNING DOCUMENTS AND ORDINANCES OVERVIEW

South San Francisco General Plan

Adopted in October 1999, the South San Francisco General Plan recognizes that the biotech/R&D industry is South San Francisco's largest industrial cluster. The General Plan establishes goals and policies for the City and East of 101 Area, such as:

- Establishes an economic development program that promotes the biotechnology/R&D industrial cluster,
- Encourages the development of R&D campuses,
- Establishes infrastructure capacity,
- Establishes transportation improvements, and
- Promotes employee amenities, open space and recreation areas.

General Plan Designation

The Project site is within the area subject to the provisions of the East of 101 planning subarea of the City of South San Francisco's General Plan. The plan designates the Project site for "Business and Technology Park" uses, and gives the following summary of Business and Technology Park designation:

This designation accommodates campus-like environments for corporate headquarters, research and development facilities, and offices. Permitted uses include incubator-research facilities, testing, repairing, packaging, publishing and printing, marinas, shoreline-oriented recreation, and offices, and research and development facilities. Warehousing and distribution facilities and retail are permitted as ancillary uses only. All development is subject to high design and landscape standards. Maximum Floor Area Ratio is 0.5, but increases may be permitted, up to a total FAR of 1.0 for uses such as research and development establishments, or for development meeting specific transportation demand management (TDM), off-site improvement, or specific design standards.

City of South San Francisco East of 101 Area Plan

In 1994, the East of 101 Area Plan established goals/policies for the City and East of 101 Area. Although the South San Francisco General Plan (adopted in 1999) supersedes the East of 101 Area Plan, most of the Plan's original design, noise, opens space and development standards still apply to campus development. Specifically, it:

- Encourages economic development,
- Establishes design and development standards for all development, and
- Encourages regulatory incentives for facility-wide planning.

BTP (Business Technology Park) Zone

Under the City's existing zoning regulations, the Project site is subject to the provisions of the SSFMC Chapter 20.110 (Employment Districts). Zoning regulations prescribe the allowable uses within specific zoning districts and impose standards on those uses. The proposed Project is consistent with the regulations of this zone assuming approval of conditional use permit per the SSFMC Sections 20.110 and 20.330.

County of San Mateo Airport Land Use Commission (ALUC)

The San Mateo County Comprehensive Airport Land Use Plan, in coordination with Federal Aviation Regulation Part 77, established a 161-foot above mean sea level height limit around San Francisco International Airport. This height limit would apply to the Project site.

IMPACTS

a) Division of an Established Community

Significance Criteria: The Project would have a significant environmental impact if it were to physically divide an established community.

The Project would involve construction of an office/research and development facility located on an already urbanized site. The Project has *no impact* related to division of an established community.

b) Conflicts with Land Use Plan and Zoning

Significance Criteria: The Project would have a significant environmental impact if it were to result in a conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project adopted for the purpose of avoiding or mitigating an environmental effect.

The Project proposes development of a R&D facility of the type and size consistent with the General Plan and Zoning Ordinance as summarized above and would require a Lot Consolidation, Use Permit, and TDM Plan as well as design review consistent with existing plans and policies. R&D facilities are explicitly allowed and encouraged for the area in the General Plan and Zoning Ordinance and the Project proposes development within the allowable development intensity at a proposed FAR (Floor Area Ratio) of 0.81, where a FAR up to 1.0 could be allowed. The aesthetics of the proposal have been analyzed from an environmental perspective in the previous Aesthetics section and found to have no significant impacts.

While it is ultimately in the domain of the City's decision-makers to decide project consistency with applicable City plans and policies related to project approval, from a CEQA perspective, the Project would not conflict with plans or policies in any way that could have an adverse environmental impact. The Project would have *no impact* related to a conflict with policies and plans.

c) Conflict with Conservation Plan

Significance Criteria: The Project would have a significant environmental impact if it were to result in a conflict with any applicable habitat conservation plan or natural community conservation plan.

There are no conservation plans either currently in force or proposed that are applicable to the subject property. ⁶⁹ Therefore, the Project would have *no impact* on conservation plans.

⁶⁹ City of South San Francisco, prepared by Dyett and Bhatia, *South San Francisco General Plan*, 1999, Chapter 7, Open Space and Conservation.

	Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XI.	MINERAL RESOURCES — Would the Project:				
	a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				
	b) Result in the loss of availability of a locally- important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				V

SETTING

Mineral resources of concern include metals, industrial minerals (e.g., aggregate, sand and gravel), oil and gas, and geothermal resources that would be of value to the region and residents of the state.

Loss of mineral resources would primarily be the result of conversion of lands underlain by these resources to other uses, or within close proximity to the resources, such that the construction and occupancy of the Project would restrict or eliminate sage and environmentally sound measures to implement extractive operations. Loss of access could also be the result of changes in land ownership.

Important mineral resource areas are recognized at the federal and state levels through environmental resource management plans and adopted mineral resource mapping, and at the local level through land use planning documents such as General Plans that incorporate such information.

IMPACTS

a) and b) Loss of Mineral Resources

Significance Criteria: The Project would have a significant environmental impact if it were to result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state, or if it were to 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.

The Project site has not been delineated as a locally important mineral recovery site on the City of South San Francisco General Plan, on any specific plan, or on any other land use plan.⁷⁰ In addition, as the Project site exists above Bay Fill, it can be conclusively stated that there are no subsurface mineral resources of value to the region and the residents of the state. Therefore, the proposed Project would have *no impact* on mineral resources.

⁷⁰ USGS, Mineral Resources Data System, Edition 20120207, 2005, available at <u>http://tin.er.usgs.gov/mrds/</u>.

	Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XII.	NOISE — Would the Project:				
	 a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? 		M		
	b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?				
	c) A substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?				
	d) A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?				
	e) For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?				
	f) For a Project within the vicinity of a private airstrip, would the Project expose people residing or working in the Project area to excessive noise levels?				V

SETTING

Noise is generally defined as unwanted sound. Whether a sound is unwanted depends on when and where it occurs, what the listener is doing when it occurs, characteristics of the sound (loudness, pitch and duration, speech or music content, irregularity) and how intrusive it is above background sound levels. In determining the daily level of environmental noise, it is important to account for the difference in response of people to daytime and nighttime noises. During nighttime, exterior background noises are generally lower than daytime levels. However, most household noise also decreases at night and exterior noise becomes more noticeable. Further, most people sleep at night and are very sensitive to noise intrusion.

The Noise Element of the 1999 General Plan contains land use criteria for noise-impacted areas in South San Francisco. These criteria define the desirable maximum noise exposure of various land uses in addition to certain conditionally acceptable levels contingent upon the implementation of noise reduction measures. These criteria indicate that noise levels of less than 75 dBA (CNEL)⁷¹are acceptable noise levels for industrial and open space uses.

The South San Francisco Noise Ordinance (Chapter 8.32 of the Municipal Code, Noise Regulations, Section 8.32.030) specifies the maximum permissible sound levels for residential, commercial and

⁷¹ City of South San Francisco, prepared by Dyett and Bhatia, South San Francisco General Plan, 1999, Table 9.2-1.

industrial uses. The noise level standard for the Project site is 70 dBA(L_{50}). Shorter periods of noise levels higher than these limits are allowed, but only for specified periods of time. Specifically, the standard + 5 dB for more than 15 minutes, the standard + 10 dB for more than 5 minutes, and the standard + 15 dB for more than one minute in any hour are used. The standard + 20 dB cannot be exceeded for any period of time. However, where the existing ambient noise level already exceeds the above noise limits, the ambient noise level becomes the standard.

The South San Francisco Noise Ordinance (Chapter 8.32 of the Municipal Code, Section 8.32.050) restricts construction activities to the hours of 8:00 a.m. to 8:00 p.m. on 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. This ordinance also limits noise generation of any individual piece of equipment to 90 dBA at 25 feet or at the property line.

IMPACTS

<u>a) - d) Exposure of Persons to or Generation of Noise Levels in Excess of Standards or to</u> Excessive Groundborne Noise Levels, or a Substantial Temporary or Permanent Increase in Ambient Noise Levels in the Project Vicinity

Significance Criteria: The Project would have a significant environmental impact if it were to result in exposure of persons to or generation of noise levels in excess of standards established in the South San Francisco General Plan or the City's Noise Ordinance.

Construction Noise

During site preparation and construction at the Project site, operation of heavy equipment could result in a substantial temporary increase in ambient noise levels in the vicinity of the Project site.

Impact Noise-1:Construction-Related Noise. Project construction could result in temporary short-
term noise increases due to the operation of heavy construction equipment.
Construction noise typically ranges from about 82 to 90 dBA at 25 feet for most
types of construction equipment, and slightly higher levels of about 94 to 97 dBA
at 25 feet for certain types of earthmoving and impact equipment. This impact is
considered to be *potentially significant*.

Mitigation Measure

Noise-1:

Construction Noise Abatement and Limitation of Construction Hours. Construction hours shall be limited to the hourly restrictions specified in the City Noise Ordinance, and the Project sponsor shall require by contract specification that construction best management practices be implemented by contractors to reduce noise levels to the 90-dBA at 25 feet noise limit specified in the City Noise Ordinance. Required practices shall include but not be limited to:

- Ensuring that construction equipment is properly muffled according to industry standards,
- Implementing noise attenuation measures such as noise barriers or noise blankets, and
- Requiring heavily loaded trucks used during construction to be routed away from noise and vibration sensitive uses.

Implementation of the above mitigation measure would reduce the impact of construction-related noise to a level of *less than significant*.

Operational Noise

The operation of the Project would increase ambient noise levels in two ways, through the generation of additional traffic and the operation of exterior mechanical equipment.

Traffic. Implementation of the proposed Project would increase traffic noise levels along local streets due to Project generated traffic. As a rule of thumb, a doubling of traffic volumes would result in a 3-dBA noise increase in a traffic dominated noise environment, and a 3-dBA noise increase is barely perceptible to most people. Per the Transportation and Circulation checklist section, the Project would increase traffic activity. This would lead to a small but possibly perceptible increase in traffic noise levels at the Project site and on the Roebling Road cul-de-sac, but would be unlikely to increase noise by a perceptible amount elsewhere. The increase in traffic noise levels would be considered *less than significant*.

Mechanical Equipment. Implementation of the proposed Project could increase ambient noise levels in the Project vicinity due to the operation of rooftop mechanical equipment, such as an HVAC system. However, such equipment would be required to conform to standards of the City of South San Francisco Noise Ordinance and the impact would be considered *less than significant*.

Vibration. It is not expected that future land uses at the Project site would generate excessive groundborne vibration or groundborne noise. Therefore, it is expected that the Project would have *no impact* related to excessive groundborne vibration or excessive groundborne noise.

Project-generated traffic noise and noise from operation of exterior mechanical equipment could increase but would not exceed noise standards and would not significantly increase ambient noise levels nor substantially impact noise-sensitive receptors. This would be considered a *less than significant* impact.

e) and f) Aircraft Noise

Significance Criteria: The Project would have a significant environmental impact if it were located within an airport land use plan (or, where such a plan has not been adopted, within two miles of a public airport or public use airport) or in the vicinity of a private airstrip and were to expose people residing or working in the Project area to excessive noise levels.

The Project site is located about 2.5 miles north of the San Francisco International Airport. Flights leaving from and arriving at the airport can occasionally be heard at the Project site. The 1999 General Plan Noise Element contains existing and future airport noise contours associated with San Francisco International Airport. These contours indicated the Project site is located outside the 65-dBA (CNEL) existing and future airport noise contours. Projected contours for road and railroad noise are also included in the Noise Element. These contours indicate that the Project site is located in an area where noise levels generated by major road and railroad noise sources would continue to be less than 60 dBA (CNEL).⁷² Based on the City's land use criteria, the proposed Project's office type land use would be compatible with future noise level projections in the Project vicinity of less than 60 to 65 dBA (CNEL), thereby representing *no impact*.

⁷² City of South San Francisco, prepared by Dyett and Bhatia, *South San Francisco General Plan*, 1999, Figures 9-1 and 9-2.

	Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XIII.	POPULATION AND HOUSING — Would the Project:				
	a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				
	b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				V
	c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				V

SETTING

South San Francisco has a distinctive land use pattern with industry in the eastern and southeastern portions of the city, single-family homes to the north and west, commercial uses along the few transportation corridors, and multi-family housing clustered in those same corridors and on hillsides.

According to the General Plan Housing Element, which was prepared in 2007, the City has a history of imbalance in its jobs/housing ratio. South San Francisco is a "jobs rich" City with substantial incommuting from other jurisdictions. At the time of preparation of the General Plan, there were approximately 30,000 employed residents in the City compared to 50,000 jobs, a ratio of 1.7 jobs per every working resident of the City. By comparison, at the time, San Mateo County had a much closer balance between the number of employed residents and total jobs with approximately 370,000 employed residents and 340,000 jobs, a ratio of 0.9 jobs per every working resident of the County. The City's jobs-housing balance is a measure for land use planning purposes. The City does not currently have an adopted jobs-housing ratio goal.

Given that much of the land in the City, including all of the East of 101 Area, is not zoned for residential development, attainment of a jobs and housing balance in South San Francisco is doubtful. On the other hand, continued job growth in the City will promote a greater regional balance between jobs and housing. As an inner Bay Area community well served by all modes of transit—including air and rail, BART and ferry service in the near future—future employees from and traveling to the City will have varied means of reaching employment sites.

As South San Francisco's employment base, the East of 101 Area is expected to accommodate a major share of South San Francisco's new non-residential development. While under the General Plan total building floor space is expected to increase by about 50 percent (from 12.0 million square feet to about 17.4 million sf), overall employment levels are expected to more than double (from 22,200 in 1997 to 42,000 at General Plan buildout in 2020).

Consistent with this, ABAG Projections 2009 (the most recent available) projects the City's total employment number to be 48,290 in 2020. This represents an increase in employment in the City of 6,050 to 2020.⁷³ Both the Traffic Impact Fee Study Update and the ABAG Projections 2009 are based upon existing planning documentation; therefore, as new projects are approved, the projection numbers would also change. As such, the employment buildout projections are not treated as limits, rather they project the employment for the region based upon the best available data.

IMPACTS

a) Substantial Population Growth

Significance Criteria: The Project would have a significant environmental impact if it were to induce either directly or indirectly substantial population growth.

The existing buildings on site could support approximately 62 employees. Depending on the set-up and mix between office and R&D, the proposed Project could support between 192 and 264 employees for a net increase of 130 to 202 employees on site.⁷⁴

ABAG projects an increase in employment in the City of 6,050 by 2020. Therefore, the Project's contributions to the increase in employment in the City would be within ABAG's employment projections for the City, accounting for 2.1% to 3.3% of the projected growth.

The increase in employees in the City could result in an increase in demand for housing. As described previously, the City is primarily built out and any housing constructed within the City limits would most likely be infill housing. Therefore, the Project could result in an increased imbalance in the jobs/housing ratio in the City.

A jobs-housing ratio is a numeric representation of the relationship between the total number of jobs and the total number of residential units in an area. This ratio indicates the ability of a region to provide both adequate employment and housing opportunities for its existing and projected population. A jobs housing ratio of 1.0 represents a balance of jobs and housing. An overall jobs-housing ratio of 1.0 to 1.5 is generally considered balanced (so that there is little in- or out-commuting). A balance of jobs and housing can benefit the regional environment by reducing commute times and distances between residential areas and employment centers. Longer commutes result in increased vehicle trip length, which creates environmental effects, such as those associated with transportation, air quality, and noise.

As discussed in the setting above, South San Francisco currently has a high jobs/housing ratio of 1.7; this means that South San Francisco is a job center that imports employees from surrounding communities, or alternatively, that exports housing.

Based on ABAG's projections, the future jobs/housing ratio in the City would increase to approximately 2.11 by 2020. These ratios suggest poor housing availability relative to the amount of

⁷³ ABAG, *Projections 2009*, August 2009. (Note that the anticipated Projections 2011 update was not published due to unknown implications of the recession on long-term projections.)

⁷⁴ U.S. Energy Information Administration, Special Topics 1995 Building Activities Other, Square feet per employee, 1995, available at: <u>http://www.eia.gov/emeu/consumptionbriefs/cbecs/pbawebsite/contents.htm</u>. Square feet per employees used in this assessment are 400 for office, 1,700 for warehouse, and 550 for research and development (other).

jobs projected, and a high level of in-commuting. Housing availability, already projected to be out of balance, would decrease with implementation of the Project. Assuming that one person per household would be employed by the Project, the Project would require 130 to 202 new units of housing, which may not all be provided for within South San Francisco city limits, taking into consideration other growth in the area. Consequently, the potential employment increase resulting from the Project would result in indirect growth that may not be accommodated by existing or proposed housing projections for the city. However, continued job growth in the city will promote a greater regional balance between jobs and housing. The city is a strategically located inner Bay Area community well served by all modes of transit—including air and rail, BART, and ferry service coming soon as well. Therefore, future employees commuting to jobs in the city would have varied means of reaching the Project.

Given the fact that the City does not have an adopted jobs/housing ratio goal, and overall the Project would promote a greater regional jobs balance, the impact of the Project on indirect population growth would be *less than significant* and no mitigation measures are required.

b) and c) Displace People and Housing

Significance Criteria: The Project would have a significant environmental impact if it would result in the displacement of substantial numbers of existing housing units or people living at the Project site.

There is currently no housing on the Project site. The Project would not displace any residents or housing units, and therefore, would have *no impact* on the displacement of housing or people.

	Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XIV.	PUBLIC SERVICES —				
	a) Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
	i) Fire protection?			\checkmark	
	ii) Police protection?			\checkmark	
	iii) Schools?			\checkmark	
	iv) Parks?			\checkmark	
	v) Other public facilities?				

SETTING

The proposed Project is within the jurisdiction of the City of South San Francisco and would be served by City of South San Francisco public services, including the following.

Police Protection Services

Police service within the Project area is provided by the South San Francisco Police Department (SSFPD). The South San Francisco Police Department's jurisdictional area includes the entire city. The Department currently has a total of 79 sworn officers and 35 civilian employees covering a city of approximately 60,000 residents with a daytime population around 100,000 people.⁷⁵ That's a ratio of approximately 1.3 sworn officers for every one thousand residents. The Department is generally able to respond to high priority calls within two to three minutes and average response times are five to seven minutes depending on the priority.

The South San Francisco General Plan establishes guiding policies 8.5-G1 to 8.5-G2 to provide police services that are responsive to citizen's needs to ensure a safe and secure environment for people and property in the community and to assist in crime prevention through physical planning and community design.

Fire Service

Fire protection and emergency services within the Project area is the responsibility of the South San Francisco Fire Department (SSFFD). The SSFFD has 85 members. Minimum on-duty staffing is 20 persons. There are currently five fire stations located throughout South San Francisco. In addition to the paramedics, the rest of the fire personnel are certified Emergency Medical Technicians (EMT). The SSFFD also has Advanced Life Support (ALS) engines that arrive on scene with a paramedic aboard.

⁷⁵ City of South San Francisco website, <u>http://www.ci.ssf.ca.us/index.aspx?NID=285</u>.

Station #62 is the closest station to the Project site, approximately 1,000 feet to the south at 249 Harbor Way. 76

School Services

The South San Francisco Unified School District provides schooling to South San Francisco's children in ten Elementary Schools (grades K-5), three Middle Schools (grades 6-8) and three High Schools (grades 9-12) as well as an adult education program.

a) Public Services

Significance Criteria: The Project would have a significant environmental impact if it were to result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection, police protection, schools, parks and recreational facilities, or other government facilities.

i) Fire Protection

South San Francisco Fire Department Station #62 is the closest station to the Project site, less than one half mile away at 249 Harbor Way, and would provide all first response services to the Project. Implementation of the proposed Project would increase development within the Project site, which would translate to an increase in workers on the site of 130 to 202, as discussed in more detail under Population, above. Compared to a daytime population of 100,000, this would represent an increase of less than 1% in the City's daytime population (0.1% to 0.2%). This negligible increase in daytime population would not result in SSFPD's inability to maintain acceptable service ratios, response times, or other performance objectives. Current response times and service ratios are adequate and no new facilities that would result in potential significant impacts would be required. The Project site is not located in any of the city's fire hazard management unit areas. ⁷⁷ The Project's design would be required to comply with the City's Fire Code (Chapter 15.24 of the Municipal Code) and the City Fire Marshal's code requirements regarding on site access for emergency vehicles as is a standard condition for any project approval. Therefore, the Project would have a *less than significant* impact on the city's fire protection services.

ii) Police Protection

Implementation of the proposed Project would increase development within the Project site, which would translate to a net increase of 130 to 202 employees working on the site, as discussed in more detail under Population, above. Compared to a daytime population of 100,000, this would represent an increase of less than 1% in the City's daytime population (0.1% to 0.2%). This would constitute a negligible increase in the City's population, and would not result in SSFPD's inability to maintain acceptable service ratios, response times, or other performance objectives or meet the goals of the General Plan or the need to construct new facilities that would result in potential significant impacts would be required. Therefore, the impact would be *less than significant* and no mitigation measures are required.

iii) Schools

⁷⁶ City of South San Francisco website, http://www.ci.ssf.ca.us/index.aspx?NID=416.

⁷⁷ City of South San Francisco, City of South San Francisco General Plan, 1999, p.265

It is possible that some of the 130 to 202 employees of the Project site would relocate to the City, thereby generating a small student population increase in the South San Francisco Unified School District. However, because the Project would not involve construction of new residences, it is not expected that the school district would experience a significant growth in student population due to this Project. Therefore, the impact on the South San Francisco Unified School District would be *less than significant*.

iv) Parks

With an estimated increase in daytime population of less than 1% (as discussed more fully in the Population section, above), the proposed Project would not place a substantial demand on the City's public parks. Though some users of the Project site would use the City's parks, this use would be considered *less than significant*. See the following Recreation section for additional discussion.

v) Other Facilities

As with the public services listed above, while the Project could result in a marginal increase in use of other facilities in South San Francisco, but with a negligible increase in daytime population of 0.1% to 0.2 percent, the net effect is *less than significant*.
	Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XV.	RECREATION -				
	a) Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			V	
	b) Does the Project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?				V

SETTING

The City of South San Francisco Parks and Recreation Department manages parks and recreation centers within the city boundaries. According to the Parks, Recreation, and Open Space element of the South San Francisco General Plan, there is an estimated 320 acres of parks and open space in the city, including community parks, neighborhood parks, mini-parks, linear parks, open spaces and school lands.⁷⁸

IMPACTS

a) and b) Recreation

Significance Criteria: The Project would have a significant environmental impact if it were to result in an increase in the use of existing parks or recreational facilities such that substantial physical deterioration of these facilities could be anticipated, or if it were to include recreational facilities, the construction of which might have adverse physical effects on the environment.

The South San Francisco General Plan requires 0.5 acres of parks per 1,000 new employees in employment areas or payment of in-lieu fees. Using the estimate of 130 to 202 net new on-site employment discussed above, 0.06 to 0.1 acres of parks or appropriate in lieu fees would be required. The Project does not include on-site recreational opportunities so would pay appropriate in-lieu fees. While it is possible that some users of the Project site would make use of City recreational facilities, the increase in daytime population is negligible (0.1% to 0.2%) and this would represent a negligible increase in the use of parks and would not substantially deteriorate existing parks or recreational facilities or require the construction of new facilities. Therefore, the impact related to recreational facilities would be considered *less than significant*.

⁷⁸ City of South San Francisco, City of South San Francisco General Plan, 1999, p.265

	Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XVI.	TRANSPORTATION/TRAFFIC — Would the Project:				
	a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?				
	b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the count congestion management agency for designated roads or highways?		M		
	c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				
	d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				
	e) Result in inadequate emergency access?			\checkmark	
	f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?				

A Traffic Study was completed for this Project by Crane Transportation, Inc. in October 2011, included in full as Appendix B of this document. The following discussion and impact assessment is based on this Traffic Study.

SETTING

The 328 Roebling Road Project site is located north of East Grand Avenue, east of Roebling Road and west of the 249 East Grand Avenue project. The Project site is now served by one driveway connection to East Grand Avenue and three driveway connections to Roebling Road. Driveways are not all connected via internal parking aisles. There would be three entrances to the proposed Project site, two on Roebling Road and one on East Grand Avenue. The main entrance on Roebling Road is between Buildings A and B, and the other entrance on the street is east of Building A at the end of the cul-de-sac. The East Grand Avenue entrance can only be accessed via a right turn heading northward due to a median that prevents left turns into the site. A schematic presentation of existing intersection approach lanes and control at the intersections requested for analysis by the City are presented in detail in the Traffic Study (Appendix B, Figure 2).

Streets

East Grand Avenue is a major arterial street and a central access route serving the industrial/ office areas east of the U.S.101 freeway. It has six travel lanes in the vicinity of the freeway and narrows to four travel lanes east of the Forbes Boulevard / Harbor Way intersection. In the Project vicinity it has two travel lanes in each direction and left turn lanes provided on the eastbound approach to Roebling Road and on the westbound approach to Harbor Way. The median break at the Roebling Road intersection is long enough to allow eastbound left turn access into a small parking area on the Project site on the northeast corner of the East Grand Avenue / Roebling Road intersection. No on-street parking is allowed along either the north or south sides of East Grand Avenue. The posted speed limit is 35 miles per hour (mph) and "Keep Clear" messages have been painted in the westbound lanes at the Roebling Road intersection. A railroad track diagonally crosses the East Grand Avenue / Forbes Boulevard-Harbor Way intersection.

Roebling Road is a 40-foot-wide street extending about 600 feet north of East Grand Avenue before ending in a cul-de-sac. There is no posted speed limit or a painted centerline. Pavement condition is adequate. Curb, gutter and sidewalks line both sides of the street. On-street parking is allowed during all hours except 3:00 to 5:00 AM. Roebling Road is stop sign controlled on its approach to East Grand Avenue.

Volumes

Weekday AM and PM peak hour analysis was prepared for the following 10 intersections serving the Project site.

- 1. Airport Blvd. / Miller Avenue / U.S.101 SB Off-Ramp (Signal)
- 2. Airport Blvd. / Grand Avenue (Signal)
- 3. E. Grand Overcrossing / Dubuque Avenue (Signal)
- 4. E. Grand Avenue Overcrossing / E. Grand Avenue (Signal)
- 5. E. Grand Avenue / Gateway Blvd. (Signal)
- 6. E. Grand Avenue / Forbes Blvd. / Harbor Way (Signal)
- 7. E. Grand Avenue / Roebling Road (Roebling Road Stop Sign Controlled)
- 8. S. Airport Blvd. / U.S.101 NB Hook Ramps / Wondercolor Lane (Signal)
- 9. Gateway Blvd. / S. Airport Blvd. / Mitchell Avenue (Signal)
- 10. Airport Blvd. / San Mateo Avenue / Produce Avenue (Signal)

Counts at all locations except E. Grand Avenue / Roebling Road were conducted in March 2008 or June 2008 as part of the East of 101 Area traffic study or the Oyster Point Redevelopment EIR. In addition, counts were conducted by Crane Transportation Group in September 2011 at E. Grand Avenue / Roebling Road, the Project driveway along E. Grand Avenue, and all driveways and on-street parking locations along Roebling Road.

Currently, volumes on adjacent Roebling Road are light, as existing buildings along both sides of the street are either empty or at low usage levels. See the Traffic Study in Appendix B (Figures 3 and 4) for existing AM and PM peak hour volumes at the analysis intersections.

Existing Intersection Operating Conditions

The City of South San Francisco considers Level of Service D (LOS D) to be the poorest acceptable operation for signalized and all-way-stop intersections, with LOS E the poorest acceptable operation for unsignalized city street intersection turn movements.

All signalized intersections evaluated for this assessment are currently operating at good to acceptable (LOS D or better) Levels of Service during both the AM and PM peak traffic hours. At the unsignalized E. Grand Ave. / Roebling Road intersection, the stop sign controlled Roebling Road approach is operating at acceptable levels (LOS A during the AM and LOS B during the PM commute peak traffic hours). (Appendix B, Table 3)

Existing Queuing

The standard adopted by the City of South San Francisco and Caltrans is that the 95th percentile vehicle queue must be accommodated within available storage for each off-ramp and on the approaches to intersections adjacent to off-ramp intersections that accommodate a significant amount of off-ramp traffic. In addition, no off-ramp traffic is allowed to back up to the freeway mainline during the entire AM or PM peak traffic hour. The 95th percentile queue indicates that vehicle backups will only extend beyond this length five percent of the time during the analysis hour.

Only one intersection has 95th percentile queuing currently exceeding available storage: Airport Boulevard / Grand Ave. AM peak hour queues in the left turn lane or the southbound Airport Boulevard approach exceed available storage. (Appendix B, Table 5)

Ramp Operation at Diverge From Freeway Mainline

Caltrans uses an off-ramp volume of 1,500 vehicles per hour as the maximum acceptable limit that can be accommodated by a single lane off-ramp at its divergence from the freeway mainline. For on-ramp operation, capacity is dependent upon the free flow speed of on-ramp traffic. For single lane diamond on-ramps with higher speeds, capacity has been set at 2,200 vehicles per hour, while for single lane button hook or curving on-ramps, capacity has been set at 2,000 vehicles per hour.

All U.S.101 freeway on-ramps serving South San Francisco and the East of 101 Area analyzed in this study are operating acceptably and have volumes well below capacity during the AM and PM peak hours. (Appendix B, Table 7)

All U.S.101 freeway off-ramps serving South San Francisco and the East of 101 Area analyzed in this study are operating acceptably and have volumes below 1,500 vehicles per hour during the AM and PM peak traffic hours, with the exception of the northbound off-ramp to East Grand Avenue/Executive Drive during the AM peak hour (with a volume of 1,618 vehicles per hour). (Appendix B, Table 6)

Freeway Operation

U.S.101 existing traffic conditions have been evaluated for the weekday AM and PM peak hours.

U.S. 101 is part of the San Mateo County Congestion Management Program (CMP). The LOS standards established for roads and intersections in the San Mateo County CMP street network vary based on geographic differences. For roadway segments and intersections near the county boarder, the LOS standard was set as LOS E in order to be consistent with the recommendations in the neighboring counties. If the existing Level of Service in 1990/91 was F, the standard was set to LOS F. If the

existing or future LOS was or will be E, the standard was set to E. For the remaining roadways and intersections, the standard was set to be one letter designation worse than the projected LOS in the year 2000.

Existing Levels of Service have been evaluated on four freeway segments in South San Francisco (northbound and southbound U.S.101 north of the Oyster Point interchange and northbound and southbound U.S.101 north of the I-380 interchange). Results were based upon analysis of year 2009 volumes. Currently, all U.S.101 freeway segments are operating at an acceptable LOS D or better during the weekday AM and PM peak hours. Conditions are generally poorer along U.S.101 to the north of Oyster Point Boulevard. (Appendix B, Tables 8 and 9)

Transit & Shuttle Service

Transit service in South San Francisco includes local bus service, shuttle service, regional rail service (BART and Caltrain) and a ferry terminal scheduled to open at Oyster Point in the spring of 2012.

There are no local bus lines in the East of 101 Area. Van shuttles are provided between the South San Francisco Caltrain station and employment centers east of U.S.101 during commute hours. Separate shuttles provide service to/from the Colma BART station. Shuttle stops are provided at two locations along East Grand Avenue and at one location along Harbor Way. The shuttles are free to riders. (Appendix B, Figure 5 and Tables 10 and 11)

Pedestrian and Bicycle Facilities

Sidewalks are in place along the north and south sides of East Grand Avenue and along both sides of Roebling Road in the Project vicinity. However, there are no Class II or Class III bicycle lane designations along East Grand Avenue or Roebling Road adjacent to the Project site, although there are numerous bicycle facilities available in the study area. Bike lanes are provided along East Grand Avenue east of Littlefield Avenue, Sister Cities Boulevard, Allerton Avenue, Oyster Point Boulevard (east of Gateway Avenue), Gull Road, and Gateway Boulevard (south of East Grand Avenue). Bike routes are designated on South Airport Boulevard and on East Grand Avenue between Executive Drive and the East Grand Overcrossing. Bike paths are available along Executive Drive and along the shoreline. Future bike lanes are planned along Gateway Boulevard, East Grand Avenue, and Forbes Boulevard (east of Allerton Avenue). Future bike routes are planned along Forbes Boulevard (west of Allerton Avenue), while a future bike path is planned along the Caltrain right-of-way. The proposed future bike lanes, routes, and paths are designated in the General Plan Transportation Element.

Project Trip Generation

The proposed Project would result in net increase of 16 inbound trips and a net reduction of 4 outbound trips during the AM peak hour, and a net increase of 8 inbound and 39 outbound trips during the PM peak hour. (Appendix B, Table 20)

IMPACTS

<u>a) Conflict with Applicable Measures of Effectiveness for the Performance of the Circulation</u> <u>System</u>

Significance Criteria: The Project would have a significant environmental impact if it were to cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system. See the Setting section above for specific standards.

Project-Specific

Traffic Impacts were analyzed against existing conditions to determine Project-specific impacts.

The addition of Project traffic would not degrade acceptable existing AM or PM peak hour intersection level of service to unacceptable levels at any analyzed location. This would be a *less-than-significant* impact. (Appendix B, Table 3)

The addition of Project traffic would not increase existing volumes at the E. Grand Avenue / Roebling Road intersection to meet peak hour signal warrant #3 criteria levels. This would be a *less-than-significant* impact. (Appendix B, Table 4)

The addition of Project traffic would not increase existing AM or PM peak hour off-ramp volumes above acceptable diverge capacity levels at any analyzed location. At the one analyzed off-ramp where existing AM peak hour volumes already exceed capacity limits (U.S.101 Northbound Off-Ramp to E. Grand Avenue / Executive Drive), Project traffic would increase existing AM peak hour off-ramp volumes by less than 1.0 percent (by only 0.6 percent – an increase from 1,618 up to 1,628 vehicle per hour). This would be a *less-than-significant* impact. (Appendix B, Table 6)

The addition of Project traffic would not increase existing AM or PM peak hour on-ramp volumes above acceptable capacity levels at any analyzed location. This would be a *less-than-significant* impact. (Appendix B, Table 7)

The addition of Project traffic would not degrade acceptable existing AM or PM peak hour U.S.101 mainline operation in South San Francisco to unacceptable levels. This would be a *less-than-significant* impact. (Appendix B, Table 9)

The addition of Project traffic would not degrade acceptable existing AM or PM peak hour vehicle queuing at any signalized intersection from acceptable to unacceptable lengths. However, Project traffic would significantly degrade operation at one signalized location with existing unacceptable existing queuing and at an unsignalized intersection, as detailed in the impact statements below.

Impact Traf-1: 95th Percentile Vehicle Queuing, Airport Blvd. Addition of Project traffic would significantly increase volumes for the left turn on the southbound approach to Grand Avenue, which already exceeds available queuing capacity. This is a potentially significant impact.

The Project would increase existing volumes for the Airport Boulevard left turn on the southbound approach to Grand Avenue by 4.2 percent during the AM peak hour in a turn lane where existing traffic 95th percentile queuing is already exceeding available storage between the Grand Avenue and Miller Avenue / U.S.101 Southbound Off-Ramp intersections.

Mitigation Measure

Traf-1:Airport Boulevard / Grand Avenue Signal Timing. Adjust signal timing to the
approval of the South San Francisco Public Works Department in order to reduce
Base Case + Project 95th percentile vehicle queuing for the left turn movement on
the southbound Airport Boulevard approach to Grand Avenue to a shorter distance
than Base Case queuing for this movement.

With implementation of Mitigation Measure Traf-1, the resultant AM Peak Hour operation for the southbound 95th percentile left turn lane queue would be reduced to 327 feet, which is within the existing queue capacity of 332 feet. (Appendix B, Figure 24) The impact would be reduced to *less-than-significant*.

Impact Traf-2: 95th Percentile Vehicle Queuing, E. Grand Avenue. The addition of Project traffic would degrade existing acceptable queuing in the left turn lane on the approach to the unsignalized Roebling Road intersection to an unacceptable storage demand.

The addition of Project traffic would increase the storage demand from 55 up to 100 feet during the AM peak hour in the 75-foot-long left turn lane on the eastbound E. Grand Avenue approach to the unsignalized Roebling Road intersection.

Mitigation Measure

Traf-2:

E. Grand Avenue / Roebling Road Turn Lane Extension. The following improvement is not included in the East of 101 Transportation Improvement Program and will not be funded via the Project's traffic impact fee contribution for this program. The Project proponent will be responsible for implementation of the following improvement:

Extend the left turn lane on the eastbound E. Grand Avenue approach to Roebling Road from 75 feet up to at least 125 feet (as determined by the City Engineer).

This improvement will require elimination of the short left turn lane on the westbound E. Grand Avenue approach to the driveway serving the western 250 E. Grand Avenue parking lot. Based upon counts conducted several years ago at this driveway by Crane Transportation Group, there are very few drivers making this westbound left turn. Also, drivers currently accessing this driveway have easy alternate routes to access this parking lot.

With implementation of Mitigation Measure Traf-2, the projected storage demand of 100 feet will be accommodated in the proposed 125-foot turn lane. The impact related to queuing at the East Grand Avenue and Roebling Road intersection would be reduced to a *less-than-significant* level.

Cumulative

Traffic impacts were also analyzed under future cumulative conditions, specifically for the years 2015 and 2035.

The addition of Project traffic would not degrade acceptable existing AM or PM peak hour intersection levels at any analyzed location under the cumulative 2015 and 2035 scenarios, nor would Project traffic increase volumes by more than 2 percent at locations with unacceptable Base Case operation. This would be a *less-than-significant* impact. (Appendix B, Tables 13 and 17)

The addition of Project traffic would not increase existing AM or PM peak hour off-ramp or on-ramp volumes above acceptable diverge capacity levels at any analyzed location under the cumulative 2015 and 2035 scenarios. This would be a *less-than-significant* impact. (Appendix B, Tables 6 and 7)

The addition of Project traffic would not degrade acceptable existing AM or PM peak hour U.S.101 mainline operation in South San Francisco to unacceptable levels or contribute significantly to existing segments experiencing unacceptable operation. This would be a *less-than-significant* impact. (Appendix B, Tables 15 and 19)

With implementation of Mitigation Measures Traf-1 and Traf-2, above, the addition of Project traffic would not degrade acceptable existing AM or PM peak hour vehicle queuing from acceptable to unacceptable lengths at any study location or contribute significantly to existing unacceptable queuing. The Airport Boulevard / Grand Avenue AM Peak Hour southbound 95th percentile left turn lane queue would be 376 feet under the 2015 cumulative scenario and 381 feet under the 2035 cumulative scenario, which are less than the Base Case queues of 390 and 398 feet respectively. The E. Grand Avenue / Roebling Road AM Peak Hour eastbound 95th percentile left turn lane queue would be up to 125 feet under the 2015 and 2035 cumulative scenarios, which is within the planned capacity of 125 feet. This would be a *less-than-significant* cumulative impact. (Appendix B, Tables 14, 18 and 24 and Figures 25 and 26)

Impact Traf-3: East Grand Avenue / Roebling Road Signal Warrant. This unsignalized intersection would receive a significant signal warrant impact due to the addition of Project traffic to cumulative PM peak hour volumes. This would be a *significant* impact.

Year 2015 Base Case PM peak hour volumes would be increased above peak hour signal warrant criteria levels due to the addition of Project traffic. (Appendix B, Table 4)

Mitigation Measure

- Traf-3:E. Grand Avenue / Roebling Road Signalization. The following improvements
are not currently included as part of the East of 101 Transportation Improvement
Program and will not be funded via the Project's traffic impact fee contribution to
this program. The Project proponent will be responsible for implementation of the
following improvement or fair-share reimbursement (as determined by the City
Engineer) if implemented by another party prior to initiation of construction for
this Project:
 - a) Signalize the intersection and coordinate operation with the signal at East Grand Avenue / Forbes Boulevard / Harbor Way.
 - b) Lengthen the single left turn lane on the westbound E. Grand Avenue approach to the Forbes/Harbor intersection to at least 225 feet (as determined by the City Engineer). Prohibit left turns to/from all driveways along E. Grand Avenue between these two locations.

Mitigation Measure Traf-2, the E. Grand Avenue / Roebling Road left turn lane extension, would also reduce this impact.

The nearby recently-approved 213 East Grand Avenue project would contribute to the impact at this intersection and require the same mitigation. Whichever project initiates construction first would be solely responsible for implementation of the improvements, and may be reimbursed on a fair-share basis (as determined by the City Engineer) by the other project if/when it proceeds.

With implementation of Mitigation Measures Traf-2 and Traf-3, the resultant 2015 Base Case + Project Signalized AM Peak Hour operation would be LOS B-11.5 seconds control delay and PM Peak Hour operation would be LOS B-11.9 seconds control delay. (Appendix B, Table 23 and Figure 25.) The resultant 2035 Base Case + Project Signalized AM Peak Hour operation would be LOS C-33.8 seconds control delay and PM Peak Hour: LOS A-8.8 seconds control delay. (Appendix B, Table 24 and Figure 26.) These levels are in compliance with City standards and the impact at this location would be reduced to a *less-than-significant* level.

b) Direct or Cumulative Increase in Traffic Which Causes a Congestion Management Agency Standard to be Exceeded

Significance Criteria: The Project would have a significant environmental impact if it were to result in a direct increase in traffic that would cause a Congestion Management Agency standard to be exceeded, or contribute substantially to a cumulative increase in traffic that would cause a Congestion Management Agency standard to be exceeded.

The San Mateo City/County Association of Governments (C/CAG) Agency Guidelines for the implementation of the 2003 Draft Congestion Management Program ("C/CAG Guidelines") specifies that local jurisdictions must ensure that the developer and/or tenants will mitigate all new peak hour trips (including the first 100 trips) projected to be generated by the development. The Project would generate less than 100 net new trips during the AM and PM peak hours. This is a *less than significant* impact. (Appendix B, Table 20)

c) Alter Air Traffic Patterns

Significance Criteria: The Project would have a significant effect if it were to result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

The Project would not alter any air traffic patterns that are already in place and therefore would have *no impact* on local air traffic patterns.

d) Hazards Due to Design Features or Incompatible Uses

Significance Criteria: The Project would have a significant effect if it were to increase traffic hazards due to its design or the introduction of incompatible traffic.

The Project's driveway connection to East Grand Avenue would be located about 200 feet east of the Forbes Boulevard / Roebling Road intersection. Sight lines at the Project's only driveway connection along East Grand Avenue, where right turns only would be allowed, would be at least 800 feet to the east (to see westbound traffic). Minimum stopping sight distance for a vehicle speed of 40 miles per hour (five miles greater than the posted speed limit) would be 305 feet. Therefore, sight lines are acceptable at this location.

Roebling Road is straight and level along its 600-foot length adjacent to the Project. Project driveways would be located along the east side of the street about 300 feet and 600 feet from East Grand Avenue. Speeds along Roebling Road are now 25 miles per hour or less and would be expected to remain at this level with the Project. Minimum stopping sight distance for a vehicle speed of 25 miles per hour would be 155 feet. Therefore, sight lines are acceptable at these driveways.

Each Project driveway along Roebling Road would be channelized at least 20 feet internal to the site, with the East Grand Avenue driveway being channelized at least 35 feet internal to the parking lot. In addition, all surface parking aisles are shown to be 25 feet or greater in width as are all parking garage aisles, which meets City code criteria and good traffic engineering practice. Additionally, internal walkways are shown on the site plan connecting all buildings and connecting the buildings to the sidewalks along Roebling Road and East Grand Avenue. The internal circulation plan would not create a safety hazard.

While the Project would increase the intensity of use at the site and on surrounding roadways, the Project has been designed with acceptable sight lines and internal circulation. The impact related to hazards due to design features or incompatible uses would be *less than significant*.

There is an at grade railroad crossings near the Project site running diagonally across the East Grand Avenue / Forbes Boulevard / Harbor Way intersection. No gates or lights are provided at the East Grand Avenue / Forbes Boulevard / Harbor Way intersection crossing.

Impact Traf-4:Grade Crossing Approaches Missing Signing and Pavement Striping. The
State Public Utilities Commission (September 26, 2006 letter to City of South San
Francisco) has noted in a recent inspection that the East Grand Avenue / Forbes
Boulevard / Harbor Way intersection grade crossing is not up to minimum
standards on one or more approaches for required advanced warning signing and
pavement striping (i.e. R15-1 and W-10-1 signs as well as RxR pavement striping).
This results in an existing safety concern that would be aggravated by the addition
of Project traffic. This would be a significant impact.

Mitigation Measure

Traf-4:Impacts to Grade Crossing Approach Signing & Pavement Striping. The
Project shall provide a fair share contribution towards all needed signs and
pavement markings on the approaches to the East Grand Avenue / Forbes
Boulevard / Harbor Way intersection "at grade railroad crossing" to meet
minimum State Public Utilities Commission requirements as detailed in the 2003
Manual of Uniform Traffic Control Services by the Federal Highway Commission.

With implementation of safety features identified in Mitigation Measure Traf-4, the impact related to an existing rail-crossing safety concern would be reduced to a *less-than-significant* level.

e) Emergency Access

Significance Criteria: The Project would have a significant effect if it were to have inadequate emergency access.

The proposed Project is designed in a manner that allows free and clear circulation for emergency vehicles that would respond to an emergency on site. Driveway connections would be provided to both Roebling Road and to East Grand Avenue and would connect internal to the site. Parking aisles would be in close proximity to each building. The Project would have adequate emergency access and therefore would have a *less than significant* impact on emergency access.

f) Alternative Transportation

Significance Criteria: The Project would have a significant effect if it were to conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

In 2001, The City Council adopted the TDM Ordinance. The ordinance requires a schedule of alternative mode use requirements based on floor-area ratio (FAR) for various land uses according to their General Plan designations. The Project would have a FAR of 0.8, and based on its General Plan land use designation, would have to provide an alternative mode shift of 30 percent.⁷⁹ The Project will be developing a TDM plan to meet City of South San Francisco mode shift criteria.

The Project would have a *less than significant* impact on adopted policies, plans or programs supporting alternative transportation.

<u>Parking</u>

Significance Criteria: Parking is no longer analyzed as a direct impact on the environment under CEQA. This is included as an informational item.

Parking conditions are not static, as parking supply and demand varies from day to day, from day to night, and from month to month. Hence, the availability of parking spaces (or lack thereof) is not a permanent physical condition, but changes over time as people change their modes and patterns of travel.

Parking deficits are considered to be social effects, rather than impacts on the physical environment as defined by CEQA. Under CEQA, a project's social impacts need not be treated as significant impacts on the environment. Environmental documents should, however, address the secondary physical impacts that could be triggered by a social impact (CEQA Guidelines § 15131(a)). The social inconvenience of parking deficits, such as having to hunt for scarce parking spaces, is not an environmental impact, but there may be secondary physical environmental impacts, such as increased traffic congestion at intersections, air quality impacts, safety impacts, or noise impacts caused by congestion. However, the absence of a ready supply of parking spaces, combined with available alternatives to auto travel (e.g., transit service, taxis, bicycles or travel by foot) and a relatively dense pattern of urban development, may induce drivers to seek and find alternative parking facilities, shift to other modes of travel, or change their overall travel habits.

The potential secondary effects of drivers searching for parking is typically offset by a reduction in vehicle trips due to others who are aware of constrained parking conditions in a given area. Hence, any secondary environmental impacts which may result from a shortfall in parking for the proposed Project would be minor, and the traffic assignments used in the transportation analysis, as well as in the associated air quality, noise and pedestrian safety analyses, reasonably addresses potential secondary effects.

In summary, changes in parking conditions are considered to be social impacts rather than impacts on the physical environment. A discussion of parking is presented below for informational purposes only.

⁷⁹ South San Francisco Municipal Code, Table 20.102.030-D.

The Project proposes parking at a ratio of 2.7 spaces per 1,000 square feet between the at-grade and subterranean parking lots, for a total of 288 parking spaces. Based upon City code criteria, 302 parking spaces would be required although a reduction from this standard may be granted via approval of a Use Permit if supported by a parking demand analysis acceptable to the City Engineer. Implementation of a TDM program, as proposed with the Project, supports reduced parking as an effective tool to reduce trip reduction efforts.

The following General Plan policies also specifically support a commitment to reduced parking requirements:

4.3-I-11 Establish parking standards to support trip reduction goals by:

• Allowing parking reduction for projects that have agreed to implement trip reduction methods, such as paid parking.

4.3-I-12 Amend the Zoning Ordinance to reduce minimum parking requirements for projects proximate to transit stations and for projects implementing a TDM program.

	Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XVII.	UTILITIES AND SERVICE SYSTEMS — Would the Project:				
	a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				\square
	b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			V	
	c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				
	d) Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?				
	e) Result in a determination by the wastewater treatment provider, which 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?				
	f) Be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?				
	g) Comply with federal, state, and local statutes and regulations related to solid waste?				

SETTING

Wastewater

The existing wastewater system serving the Project site and surrounding community is operated and maintained by the City of South San Francisco Public Works Department. All wastewater produced within the City of South San Francisco is treated at the City's Water Quality Control Plan (WQCP), which is located at the end of Belle Air Road, near the edge of the San Francisco Bay. The WQCP is jointly owned by the Cities of South San Francisco and San Bruno, and it treats all wastewater generated within the two cities. The WQCP also has contracts to treat a portion of the wastewater produced by the Cities of Colma and Daly City.⁸⁰

The most recent WQCP upgrade project was completed in 2005. The project included improvements to accommodate peak wet weather flows and an effluent pump station. The WQCP currently has an average dry weather flow capacity of 13 million gallons per day (MGD) and a wet weather flow capacity of 62 MGD. The City is implementing a new capital improvement plan (CIP) to increase wet

⁸⁰ City of South San Francisco, prepared by Lamphier-Gregory, 249 East Grand Ave EIR, 2005

weather flow capacity, add reliability improvements, and add green energy facilities. The CIP will be implemented in several phases over the next 10 years.⁸¹

Water

The water system in the East of Highway 101 area is owned and operated by the California Water Service Company (CWSC). CWSC's supply source consists of eight groundwater wells and surface water wholesaled by the San Francisco Public Utilities Commission (SFPUC). CWSC is a member of the Bay Area Water Supply and Conservation Agency (BAWSCA). CWSC serves three districts on the San Francisco Peninsula: Bear Gulch, Mid Peninsula, and South San Francisco.⁸²

The South San Francisco District water supply is a combination of purchased water obtained from the SFPUC, groundwater produced from CWSC owned wells, and SB7 conservation generated supply savings. Based on historical data, future demand projections, contracted treated water deliveries from SFPUC under normal hydrologic conditions and the mandated SB7 conservation savings are expected to generate a surplus SFPUC supply during the period 2015 to 2030 of between 2.0 and 3.84 MGD.⁸³

Water lines in the East of 101 Area would generally be adequate to serve new development allowed under the East of 101 Area Plan.⁸⁴ The water distribution system in the area was designed and constructed to meet industrial water demands. It consists of a network of 12-inch lines in relatively good condition, adequate to serve the 2,500 gallons per minute fire flow requirement and use demands for the land uses planned for the area.

Stormwater

The existing drainage system in the East of 101 Area is generally designed and constructed for industrial development, which has a high ratio of impervious surfaces. Thus, any redevelopment of existing development will generally maintain or decrease the amount of impervious surfaces and therefore not increase runoff.

Solid Waste

Solid waste is collected from South San Francisco homes and businesses and then processed at the South San Francisco Scavenger Company's materials recovery facility and transfer station. Materials that cannot be recycled or composted are transferred to the Ox Mountain Sanitary Landfill, near Half Moon Bay. Browning-Ferris Industries, owner of the landfill, has a permit for forward expansion of the Corinda Los Trancos Canyon at Ox Mountain. When the permit expires, either Corinda Los Trancos will be expanded further or Apanolio Canyon will be opened for fill. In 2005, the City landfilled approximately 85,091 tons. The landfill has a permitted maximum disposal of 3,598 tons per day. As of 2000 (the most recent quantification available), the landfill has exceeded its originally permitted

⁸¹ City of South San Francisco, prepared by Lamphier-Gregory, Oyster Point Specific Plan and Phase I Project Draft EIR, January 2011 (including Appendix G: *Oyster Point Business Park and Marina Redevelopment Master Plan Utilities Study*, prepared by Carollo Engineers).

⁸² City of South San Francisco, prepared by Lamphier-Gregory, *Oyster Point Specific Plan and Phase I Project Draft EIR*, January 2011 (and *Water Supply Assessment* included as Appendix F).

⁸³ City of South San Francisco, prepared by Lamphier-Gregory, *Oyster Point Specific Plan and Phase I Project Draft EIR*, January 2011 (and *Water Supply Assessment* included as Appendix F).

⁸⁴ City of South San Francisco, prepared by Brady and Associates, *East of 101 Area Plan*, 1994, p. 98.

capacity of 37.9 million cubic yards by approximately 6.7 million cubic yards (17.8 percent). The operators are permitted until 2018 to expand the Ox Mountain landfill capacity and they continue to accept waste as the landfill gradually settles and new space becomes available. The closure date is planned for 2018.⁸⁵

After collection, waste is brought to the Scavenger Company's Blue Line Transfer, Inc. facility, a public disposal and recycling center located at 500 East Jamie Court. The Blue Line Transfer facility is permitted to receive a daily maximum of 2,400 tons per day of wastes and recyclable materials⁸⁶, but receives an average of approximately 800 tons per day⁸⁷. This facility gives the Company increased capability to recover valuable materials from wastes, reducing the amount of waste being sent to the landfill. South San Francisco recycles both household and industrial solid waste and sewage sludge and has an estimated diversion rate of 40%.⁸⁸

IMPACTS

a) Regional Wastewater Treatment Standards

Significance Criteria: The Project would have a significant environmental impact if it were to exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.

The San Francisco-San Bruno WQCP operates under an NPDES permit issued by the State of California. One of the requirements of the permit is that the WQCP implement a Pretreatment Program to regulate the collection of toxic and hazardous wastes in municipal sewers. Under the Pretreatment Program, dischargers of industrial wastewater are required to abide by specific wastewater discharge limits and prohibitions. Industrial dischargers are also required to submit self-monitoring reports on the total volume and pollutant concentrations of their wastewater, and to allow for inspections by the City of South San Francisco.

The Project will be required to comply with all applicable regulations and would not cause an exceedance of wastewater treatment requirements so would have *no impact* related to an exceedance of wastewater treatment requirements of the Regional Water Quality Control Board.

b) Water and Wastewater Treatment Facilities

Significance Criteria: The Project would have a significant environmental impact if it were to require or result in the construction of new water or wastewater treatment facilities or in the expansion of existing facilities, the construction of which could cause significant environmental effects.

⁸⁵ California Integrated Waste Management Board, Active Landfills Profile for Ox Mountain Sanitary Landfill (41-AA-0002), website: http://www.ciwmb.ca.gov/Profiles/Facility/Landfill/LFProfile1.asp?COID=7&FACID=41-AA-0002, accessed December 17, 2010.

⁸⁶ San Mateo County, Countywide Integrated Waste Management Plan, Multi-Jurisdiction Non-Disposal Facility Element, draft June 2010 amendment.

⁸⁷ City of South San Francisco, prepared by Christopher A. Joseph & Associates, Gateway Business Park Master Plan Draft Environmental Impact Report, October 2009, page IV.N-8

⁸⁸ San Mateo County, Countywide Integrated Waste Management Plan, Multi-Jurisdiction Non-Disposal Facility Element, draft June 2010 amendment

The City of South San Francisco estimates its water and wastewater capacity needs based on the projected General Plan buildout of all land uses. The Project is consistent with the General Plan buildout scenarios, and therefore has been included in the City's water and wastewater growth projections.

The 1999 General Plan EIR indicated that major water delivery, and major wastewater treatment facilities were adequate, or would be improved, in order to meet project water and wastewater demand growth. These projections have been subsequently updated in the 2007 East of 101 Sewer System Master Plan Update.⁸⁹ The City of South San Francisco has initiated a sewer improvement program/capital improvement plan, whereby individual projects would pay a pro rata, fair share sewer improvement fee to cover the costs of any necessary sewer improvements.

The Project must, and would, pay this pro rata fee to help construct any local sewer improvements necessitated by cumulative growth in the area, including the Project. With mandated payment of fee, the impact of the Project on increased water and wastewater facilities would be *less than significant*.

c) Storm Water Drainage Facilities

Significance Criteria: The Project would have a significant environmental impact if it were to require or result in the construction of new storm water drainage facilities or in the expansion of existing facilities, the construction of which could cause significant environmental effects.

Periodic flooding occurs in South San Francisco, but is confined to certain areas along Colma Creek. Colma Creek handles much of the urban runoff generated in the city; since South San Francisco is highly urbanized, runoff levels are high and there is increased potential for flood conditions during periods of heavy rainfall. While the Project site is not located in the vicinity of the creek and would not be susceptible to flooding during a 100-year storm (see the Hydrology and Water Quality checklist section of this document for more information), site runoff may be within the Colma Creek watershed. (See the Hydrology section for additional detail.)

The proposed Project would result in a reduction in impervious surface area of 16%. The Colma Creek Flood Control District requires that drainage calculations, including outflow locations, be submitted to the District for approval. Per the Districts requirements, future discharge rates to District facilities may not exceed pre-project conditions. Therefore, the Project would result in no net increase in storm water runoff and would have *no impact* with regards to increased storm water runoff and the building or expansion of new storm water drainage facilities.

d) Water Supply

Significance Criteria: The Project would have a significant environmental impact if it were to require additional water supply beyond that available from existing entitlements and resources.

As discussed in the setting section in more detail, surplus SFPUC supply is anticipated through 2030 of between 2.0 and 3.84 MGD. ⁹⁰ The projected increase in demand for the Project would be a small

⁸⁹ City of South San Francisco, prepared by Carollo Engineers, Addendum to the City of South San Francisco East of Highway 101 Sewer Master Plan, May 2007

⁹⁰ City of South San Francisco, prepared by Lamphier-Gregory, *Oyster Point Specific Plan and Phase I Project Draft EIR*, January 2011 (and *Water Supply Assessment* included as Appendix F).

fraction of that surplus. Therefore, the proposed Project would lead to an increase in demand for potable water, but would utilize existing water entitlements and resources, having a *less than significant* impact on other water resources.

e) Wastewater Treatment Facility Capacity

Significance Criteria: The Project would have a significant environmental impact if it were to result in a determination by the wastewater treatment provider which may serve the Project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments.

The proposed Project would contribute both domestic sewage and industrial wastewater to the City of South San Francisco's municipal sewer system. As discussed in more detail in the setting section, above, the South San Francisco-San Bruno Water Quality Control Plan (WQCP) has recently been upgraded and currently has capacity to provide secondary treatment for 13 MGD in dry weather and 60 MGD in wet weather. The WQCP facilities plan is being updated to evaluate the existing and future treatment capacity needs. The Draft Facilities Plan estimates average flow projections through the year 2040 to reach 10.3 mgd, which is lower than the existing average dry weather plant capacity of 13 mgd. The increase of flow is within the projected flows for the East of 101 Area.⁹¹ The Project would contribute a small fraction of those increased flows, anticipated to be within existing capacity. The Project would place a *less than significant* demand on the area's wastewater treatment provider and would not prevent it from fulfilling its existing commitments.

f) and g) Solid Waste

Significance Criteria: The Project would have a significant environmental impact if it were to be served by a landfill with inadequate permitted capacity to accommodate the Project's solid waste disposal needs, or if it were to fail to fully comply with federal, state and local statutes and regulations related to solid waste.

As discussed in the setting section of this chapter, the Scavenger Company is contracted by the City of South San Francisco as the sole hauler of solid waste and operator of recycling services for the City. The Scavenger Company transports all solid waste from the Project area to the Blue Line Transfer facility. The Blue Line Transfer facility has a permitted capacity of 2,400 tons per day. Once the useable materials have been separated at the Blue Line Transfer facility, the remaining trash is then transported to the Ox Mountain Sanitary Landfill. The landfill has a permitted maximum disposal of 3,598 tons per day.

The Project would increase solid waste generation by a fraction of a percent of the permitted maximum amount accepted daily at the Blue Line Transfer facility and Ox Mountain Sanitary Landfill. The remaining capacity of the Blue Line Transfer facility would be able to accommodate the additional solid waste. While the Ox Mountain landfill is currently in excess of its originally permitted capacity, they are permitted until 2018 to expand the Ox Mountain landfill and continue to accept waste as the landfill gradually settles and new space becomes available. As discussed previously, the operators would either further expand Corinda Los Trancos or open Apanolio Canyon for fill to ensure adequate available capacity after 2018. Thus, the increase in solid waste generated under the proposed Project would be sufficiently served by the Blue Line Transfer facility and the Ox Mountain Landfill.

⁹¹ City of South San Francisco, prepared by Carollo Engineers, San Bruno-South San Francisco WQCP DRAFT Facilities Plan, April 2010.

Solid waste disposal and recycling in the City of South San Francisco is regulated by the City's Municipal Code, particularly Chapters 8.16 and 8.28. As neither of these chapters establishes quantitative disposal or recycling rates, the Project site would not be subject to diversion requirements. However, under the Municipal Code, the Project would be required to have its solid waste, including construction and demolition debris, and recyclable materials collected by the Scavenger Company. Additional health and sanitation requirements set forth in the Municipal Code would be met by the Scavenger Company.

Construction and operation of the proposed Project would be expected to be in full compliance with all federal, state and local statutes and regulations. The Project would be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs, and would not require or result in construction of landfill facilities or expansion of existing facilities nor would it impede the ability of the City to meet the applicable federal, state and local statutes and regulations related to solid waste. The Project would have a *less than significant* impact in relation to solid waste.

	Environmental Factors and Focused Questions for Determination of Environmental Impact	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XVIII.	MANDATORY FINDINGS OF SIGNIFICANCE –				
	a) Does the Project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		Ø		
	b) Does the Project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a Project are considerable when viewed in connection with the effects of past Projects, the effects of other current Projects, and the effects of probable future Projects.)				
	c) Does the Project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?		V		

a) Quality of the Environment

Project implementation could lead to development that adversely affects the environment in terms of impacts to various CEQA issue topics, as discussed in this IS/MND. However, impacts of the Project are considered to be *less than significant with mitigation*. Implementation of the Project would not degrade the quality and extent of the environment provided all policies, rules, and regulations of all relevant governing bodies are adhered to, and the mitigation measures contained within this document are implemented.

b) Cumulative Impacts

In accordance with CEQA Guidelines Section 15183, the environmental analysis in this IS/MND was conducted to determine if there were any project-specific effects that are peculiar to the Project or its site. No project-specific significant effects peculiar to the Project or its site were identified that could not be mitigated to a less than significant level.

The traffic study for this Project also includes analysis of a future cumulative scenario, with cumulative impacts identified and mitigated below significance levels. This is discussed in more detail in that section.

For Air Quality and Greenhouse Gas Emissions analysis, the BAAQMD CEQA Guidelines state that in developing thresholds of significance, BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. Therefore, given that the Project would not

exceed any BAAQMD CEQA Guidelines threshold of significance, the Project would not have a cumulatively considerable impact on the topics of Air Quality and Greenhouse Gas Emissions.

While the East of 101 Area is substantially built-out, redevelopment of sites with higher-intensity uses occurs throughout the area, as it is on this site, and would be considered the cumulative context. Through conformity with applicable regulations and design-level plans, all other potentially significant Project-specific impacts would be reduced below significance levels, which include those related to nesting birds, seismic ground shaking and other geological hazards, erosion and pollutant runoff, hazardous materials, water quality, drainage, and noise. With the onsite reduction of these impacts, the Project's contribution to cumulative increases in these areas would not be considered cumulatively considerable.

Cumulative impacts of the Project are considered to be less than significant with mitigation.

c) Adverse Effects on Human Beings

While human beings could be affected by a variety of impacts described above, the Project would not have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly. Noise, hazardous materials, air quality, and traffic impacts on adjacent land uses are *less than significant with mitigation*. The Project would not expose people to new hazards. There would be no other adverse effects on human beings.

APPENDIX A

AIR QUALITY AND GREENHOUSE GAS MODELING

Summary Results

Project Name:	Roebling	
Project and Baseline Years:	2013	2011
	Unmitigated Project-	Mitigated Project-
	Baseline CO2e (metric	Baseline CO2e
Results	tons/year)	(metric tons/year)
Transportation:	498.26	498.26
Area Source:	(0.24)	(0.24)
Electricity:	228.90	228.90
Natural Gas:	104.42	104.42
Water & Wastewater:	10.86	10.86
Solid Waste:	561.17	193.73
Agriculture:	0.00	0.00
Off-Road Equipment:	0.00	0.00
Refrigerants:	0.00	0.00
Sequestration:	N/A	0.00
Purchase of Offsets:	N/A	0.00
Total:	1,403.37	1,035.94

Baseline is currently: **ON**

Baseline Project Name: Roebling Baseline

Detailed Results

Unmitigated	CO2 (metric tpy)	CH4 (metric tpy)	N2O (metric tpy)	CO2e (metric tpy)	% of Total
Transportation*:				1,013.17	44.33%
Area Source:	0.23	0.00	0.00	0.23	0.01%
Electricity:	392.11	0.00	0.00	392.74	17.18%
Natural Gas:	130.15	0.01	0.00	130.48	5.71%
Water & Wastewater:	14.14	0.00	0.00	14.16	0.62%
Solid Waste:	5.37	34.74	N/A	734.86	32.15%
Agriculture:	0.00	0.00	0.00	0.00	0.00%
Off-Road Equipment:	0.00	0.00	0.00	0.00	0.00%
Refrigerants:	N/A	N/A	N/A	0.00	0.00%
Sequestration:	N/A	N/A	N/A	N/A	N/A
Purchase of Offsets:	N/A	N/A	N/A	N/A	N/A
Total:				2,285.64	100.00%

* Several adjustments were made to transportation emissions after they have been imported from URBEMIS.

After importing from URBEMIS, CO2 emissions are converted to metric tons and then adjusted to account for the "Pavley"

regulation. Then, CO2 is converted to CO2e by multiplying by 100/95 to account for the contribution of other GHGs (CH4, N2O, and HFCs

[from leaking air conditioners]). Finally, CO2e is adjusted to account for th low carbon fuels rule.

Mitigated **	CO2 (metric tpy)	CH4 (metric tpy)	N2O (metric tpy)	CO2e (metric tpy)	% of Total
Transportation*:				1,013.17	52.82%
Area Source:	0.23	0.00	0.00	0.23	0.01%
Electricity:	392.11	0.00	0.00	392.74	20.47%
Natural Gas:	130.15	0.01	0.00	130.48	6.80%
Water & Wastewater:	14.14	0.00	0.00	14.16	0.74%
Solid Waste:	2.68	17.37	N/A	367.43	19.15%
Agriculture:	0.00	0.00	0.00	0.00	0.00%
Off-Road Equipment:	0.00	0.00	0.00	0.00	0.00%
Refrigerants:	N/A	N/A	N/A	0.00	0.00%
Sequestration:	N/A	N/A	N/A	0.00	0.00%
Purchase of Offsets:	N/A	N/A	N/A	0.00	0.00%
Total:				1,918.21	100.00%

** The only migitation added into the BGM model was solid waste reduction of 50%. See URBEMIS results for changes to that model.

Baseline	CO2 (metric tpy)	CH4 (metric tpy)	N2O (metric tpy)	CO2e (metric tpy)	% of Total
Transportation*:				514.91	58.36%
Area Source:	0.46	0.00	0.00	0.46	0.05%
Electricity:	163.58	0.00	0.00	163.84	18.57%
Natural Gas:	25.99	0.00	0.00	26.06	2.95%
Water & Wastewater:	3.30	0.00	0.00	3.31	0.37%
Solid Waste:	1.27	8.21	N/A	173.70	19.69%
Agriculture:	0.00	0.00	0.00	0.00	0.00%
Off-Road Equipment:	0.00	0.00	0.00	0.00	0.00%
Refrigerants:	N/A	N/A	N/A	0.00	0.00%
Sequestration:	N/A	N/A	N/A	N/A	N/A
Purchase of Offsets:	N/A	N/A	N/A	N/A	N/A
Total:				882.28	100.00%

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Users\bruce\AppData\Roaming\Urbemis\Version9a\Projects\Roebling2011.urb924

Project Name: Roebling

Project Location: San Mateo County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	PM2.5	<u>CO2</u>
TOTALS (tons/year, unmitigated)	0.13	0.13	0.25	0.00	0.00	0.00	154.34
OPERATIONAL (VEHICLE) EMISSION ESTIMATES							
	ROG	NOx	<u>CO</u>	<u>SO2</u>	PM10	PM2.5	<u>CO2</u>
TOTALS (tons/year, unmitigated)	0.79	0.93	9.59	0.01	2.11	0.40	1,117.52
SUM OF AREA SOURCE AND OPERATIONAL EMISSION	ESTIMATES						
	ROG	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	0.92	1.06	9.84	0.01	2.11	0.40	1,271.86

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	PM10	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.01	0.13	0.11	0.00	0.00	0.00	154.09
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscape	0.01	0.00	0.14	0.00	0.00	0.00	0.25
Consumer Products	0.00						
Architectural Coatings	0.11						
TOTALS (tons/year, unmitigated)	0.13	0.13	0.25	0.00	0.00	0.00	154.34

Area Source Changes to Defaults

perational Unmitigated Detail Report:						
PERATIONAL EMISSION ESTIMATES A	nnual Tons Per Year,	Unmitigated				
Source	ROG	NOX	со	SO2	PM10	PM25
fice park	0.79	0.93	9.59	0.01	2.11	0.40
)TALS (tons/year, unmitigated)	0.79	0.93	9.59	0.01	2.11	0.40

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2013 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

		Summary of Land U	ses			
Land Use Type	Acre	age Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Office park		7.62	1000 sq ft	105.54	804.21	6,740.93
					804.21	6,740.93
		Vehicle Fleet	Mix			
Vehicle Type	P	ercent Type	Non-Cataly	rst	Catalyst	Diesel
Light Auto		56.0	0	.4	99.4	0.2
Light Truck < 3750 lbs		11.8	0	.8	97.5	1.7
Light Truck 3751-5750 lbs		20.2	0	.0	100.0	0.0
Med Truck 5751-8500 lbs		6.3	0	.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs		0.7	0	.0	71.4	28.6
Lite-Heavy Truck 10,001-14,000 lbs		0.6	0	.0	66.7	33.3
Med-Heavy Truck 14,001-33,000 lbs		0.9	0	.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs		0.1	0	.0	0.0	100.0
Other Bus		0.1	0	.0	0.0	100.0
Urban Bus		0.1	0	.0	0.0	100.0
Motorcycle		2.8	53	.6	46.4	0.0
School Bus		0.0	0	.0	0.0	0.0
Motor Home		0.4	0	.0	100.0	0.0
		Travel Conditi	ions			
	I	Residential			Commercial	
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer

	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

Office park

48.0 24.0 28.0

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Users\bruce\AppData\Roaming\Urbemis\Version9a\Projects\Roebling2011.urb924

Project Name: Roebling

Project Location: San Mateo County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	PM2.5	<u>CO2</u>			
TOTALS (lbs/day, unmitigated)	0.79	0.72	2.14	0.00	0.01	0.01	847.13			
OPERATIONAL (VEHICLE) EMISSION ESTIMATES										
	ROG	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	PM2.5	<u>CO2</u>			
TOTALS (lbs/day, unmitigated)	4.32	4.34	51.98	0.06	11.54	2.17	6,425.76			
SUM OF AREA SOURCE AND OPERATIONAL EMISSION I	ESTIMATES									
	ROG	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	PM2.5	<u>CO2</u>			
TOTALS (lbs/day, unmitigated)	5.11	5.06	54.12	0.06	11.55	2.18	7,272.89			

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	PM2.5	<u>CO2</u>
Natural Gas	0.05	0.70	0.59	0.00	0.00	0.00	844.32
Hearth - No Summer Emissions							
Landscape	0.12	0.02	1.55	0.00	0.01	0.01	2.81
Consumer Products	0.00						
Architectural Coatings	0.62						
TOTALS (lbs/day, unmitigated)	0.79	0.72	2.14	0.00	0.01	0.01	847.13

Area Source Changes to Defaults

Operational Unmitigated Detail Report:							
OPERATIONAL EMISSION ESTIMATES	Summer Pounds Per D	ay, Unmitigated					
Source	ROG	NOX	СО	SO2	PM10	PM25	CO2
Office park	4.32	4.34	51.98	0.06	11.54	2.17	6,425.76
TOTALS (lbs/day, unmitigated)	4.32	4.34	51.98	0.06	11.54	2.17	6.425.76

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2013 Temperature (F): 85 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

		Summary of Land	d Uses								
Land Use Type	Acı	eage Trip Ra	te Unit Type	No. Units	Total Trips	Total VMT					
Office park		7.6	62 1000 sq ft	105.54	804.21	6,740.93					
					804.21	6,740.93					
	Vehicle Fleet Mix										
Vehicle Type		Percent Type	Non-Catalyst		Catalyst	Diesel					
Light Auto		56.0	0.4		99.4	0.2					
Light Truck < 3750 lbs		11.8	0.8		97.5	1.7					
Light Truck 3751-5750 lbs		20.2	0.0		100.0	0.0					
Med Truck 5751-8500 lbs		6.3	0.0		100.0	0.0					
Lite-Heavy Truck 8501-10,000 lbs		0.7	0.0		71.4	28.6					
Lite-Heavy Truck 10,001-14,000 lbs		0.6	0.0		66.7	33.3					
Med-Heavy Truck 14,001-33,000 lbs		0.9	0.0		22.2	77.8					
Heavy-Heavy Truck 33,001-60,000 lbs		0.1	0.0		0.0	100.0					
Other Bus		0.1	0.0		0.0	100.0					
Urban Bus		0.1	0.0		0.0	100.0					
Motorcycle		2.8	53.6		46.4	0.0					
School Bus		0.0	0.0		0.0	0.0					
Motor Home		0.4	0.0		100.0	0.0					
		Travel Con	nditions								
		Residential			Commercial						
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer					
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4					

Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

Office park	48.0	24.0	28.0

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Users\bruce\AppData\Roaming\Urbemis\Version9a\Projects\Roebling2011Baseline.urb924

Project Name: Roebling Baseline

Project Location: San Mateo County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

	501	EMISSION	ESTIMATES
AREA	300	EIVIISSIUIN	ESTIMATES

	ROG	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	PM2.5	<u>CO2</u>			
TOTALS (tons/year, unmitigated)	0.11	0.16	0.41	0.00	0.00	0.00	188.16			
OPERATIONAL (VEHICLE) EMISSION ESTIMATES										
	ROG	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	PM2.5	<u>CO2</u>			
TOTALS (tons/year, unmitigated)	0.49	0.55	5.55	0.00	1.04	0.19	547.02			
SUM OF AREA SOURCE AND OPERATIONAL EMISSION E	STIMATES									
	ROG	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	PM2.5	<u>CO2</u>			
TOTALS (tons/year, unmitigated)	0.60	0.71	5.96	0.00	1.04	0.19	735.18			

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	PM2.5	<u>CO2</u>
Natural Gas	0.01	0.16	0.13	0.00	0.00	0.00	187.65
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscape	0.02	0.00	0.28	0.00	0.00	0.00	0.51
Consumer Products	0.00						
Architectural Coatings	0.08						
TOTALS (tons/year, unmitigated)	0.11	0.16	0.41	0.00	0.00	0.00	188.16

Area Source Changes to Defaults

tional Unmitigated Detail Report:						
		In mitia at a d				
ERATIONAL EMISSION ESTIMATES	Annual Tons Per Year, u	Jnmilgaled				
<u>Source</u>	ROG	NOX	со	SO2	SO2 PM10	SO2 PM10 PM25
eneral office building	0.09	0.11	1.17	0.00	0.00 0.22	0.00 0.22 0.04
······						
Narehouse	0.40	0.44	4.38	0.00	0.00 0.82	0.00 0.82 0.15
TOTALS (tons/year, unmitigated)	0.49	0.55	5.55	0.00	0.00 1.04	0.00 1.04 0.19

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2011 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

	Sum	mary of Land Us	es			
Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
General office building		11.01	1000 sq ft	7.72	85.00	688.69
Warehouse		4.96	1000 sq ft	71.79	356.08	2,632.49
					441.08	3,321.18
		Vehicle Fleet M	ix			
Vehicle Type	Percent	t Туре	Non-Cataly	yst	Catalyst	Diesel
Light Auto		56.0	C).7	99.1	0.2
Light Truck < 3750 lbs		11.8	1	1.7	95.8	2.5
Light Truck 3751-5750 lbs		20.2	C).5	99.5	0.0
Med Truck 5751-8500 lbs		6.3	C).0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs		0.7	C).0	71.4	28.6
Lite-Heavy Truck 10,001-14,000 lbs		0.6	C).0	66.7	33.3
Med-Heavy Truck 14,001-33,000 lbs		0.9	C).0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs		0.1	C).0	0.0	100.0
Other Bus		0.1	C).0	0.0	100.0
Urban Bus		0.1	C).0	0.0	100.0
Motorcycle		2.8	64	4.3	35.7	0.0
School Bus		0.0	C).0	0.0	0.0
Motor Home		0.4	C	0.0	100.0	0.0

Travel Conditions

	Residential				Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer	
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4	
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6	
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0	
% of Trips - Residential	32.9	18.0	49.1				

% of Trips - Commercial (by land use)			
General office building	35.0	17.5	47.5
Warehouse	2.0	1.0	97.0

APPENDIX **B**

TRAFFIC STUDY

I. INTRODUCTION

This report details the circulation impacts resulting from development of the 105,536-squarefoot research and development project at 328 Roebling Road in the City of South San Francisco. Existing, year 2015 and 2035 conditions have been evaluated at 10 intersections along East Grand Avenue and at the nearby U.S.101 interchanges serving the project that would be most affected by project traffic. Evaluation has also been conducted of operation along the U.S.101 freeway. Project off-site impacts to intersection level of service, signalization needs and vehicle queuing as well as impacts to U.S.101 freeway mainline operation have been determined, as have impacts due to project access, internal vehicular circulation and pedestrian circulation. Measures have then been recommended to mitigate all significant impacts. Where appropriate, excerpts and findings from the following EIRs or traffic studies have been included in this chapter: Oyster Point Redevelopment EIR (by Lamphier-Gregory and Crane Transportation Group, 2011) and the Revised Draft Report of the Traffic Study for the East of 101 Area by TJKM Transportation Consultants, January 28, 2011.

II. SETTING

A. ROADWAYS

The 328 Roebling Road Project site is located north of East Grand Avenue, east of Roebling Road and west of the 249 East Grand Avenue project, (see **Figure 1**). The project site is now served by one driveway connection to East Grand Avenue and three driveway connections to Roebling Road. Driveways are not all connected via internal parking aisles. However, the proposed project will have all driveways connecting internal to the site. A schematic presentation of existing intersection approach lanes and control at the intersections requested for analysis by the City are presented in **Figure 2**.

Streets

East Grand Avenue is a major arterial street and a central access route serving the industrial/ office areas east of the U.S.101 freeway. It has six travel lanes in the vicinity of the freeway and narrows to four travel lanes east of the Forbes Boulevard / Harbor Way intersection. In the Project vicinity it has two travel lanes in each direction and left turn lanes provided on the eastbound approach to Roebling Road and on the westbound approach to Harbor Way. The median break at the Roebling Road intersection is long enough to allow eastbound left turn access into a small parking area on the project site on the northeast corner of the East Grand Avenue / Roebling Road intersection. No on-street parking is allowed along either the north or south sides of East Grand Avenue. The posted speed limit is 35 miles per hour (mph) and "Keep Clear" messages have been painted in the westbound lanes at the Roebling Road intersection. A railroad track diagonally crosses the East Grand Avenue / Forbes Boulevard-Harbor Way intersection.

Roebling Road is a 40-foot-wide street extending about 600 feet north of East Grand Avenue before ending in a cul-de-sac. There is no posted speed limit nor a painted centerline. Pavement condition is adequate. Curb, gutter and sidewalks line both sides of the street. Onstreet parking is allowed during all hours except 3:00 to 5:00 AM. Roebling Road is stop sign controlled on its approach to East Grand Avenue.

<u>Volumes</u>

Weekday AM and PM peak hour analysis was requested by City staff at the following 10 intersections serving the Project site.

- 1. Airport Blvd. / Miller Avenue / U.S.101 SB Off-Ramp (Signal)
- 2. Airport Blvd. / Grand Avenue (Signal)
- 3. E. Grand Overcrossing / Dubuque Avenue (Signal)
- 4. E. Grand Avenue Overcrossing / E. Grand Avenue (Signal)
- 5. E. Grand Avenue / Gateway Blvd. (Signal)
- 6. E. Grand Avenue / Forbes Blvd. / Harbor Way (Signal)
- 7. E. Grand Avenue / Roebling Road (Roebling Road Stop Sign Controlled)
- 8. S. Airport Blvd. / U.S.101 NB Hook Ramps / Wondercolor Lane (Signal)
- 9. Gateway Blvd. / S. Airport Blvd. / Mitchell Avenue (Signal)
- 10. Airport Blvd. / San Mateo Avenue / Produce Avenue (Signal)

Counts at all locations except E. Grand Avenue / Roebling Road were conducted in March 2008 or June 2008 as part of the East of 101 area traffic study or the Oyster Point Redevelopment EIR. In addition, counts were conducted by Crane Transportation Group in September 2011 at the following locations.

- E. Grand Avenue / Roebling Road
- All driveways and on-street parking locations along Roebling Road
- The project driveway along E. Grand Avenue

Figures 3 and **4** present existing AM and PM peak hour volumes at the analysis intersections. Currently, volumes on Roebling Road are light, as existing buildings along both sides of the street are either empty or at low usage levels.

B. INTERSECTION OPERATION

Analysis Methodology

Signalized Intersections. Intersections, rather than roadway segments between intersections, are almost always the capacity controlling locations for any circulation system. Signalized

intersection operation is graded based upon two different scales. The first scale employs a grading system called Level of Service (LOS) which ranges from Level A, indicating uncongested flow and minimum delay to drivers, down to Level F, indicating significant congestion and delay on most or all intersection approaches. The Level of Service scale is also associated with a control delay tabulation (year 2000 Transportation Research Board [TRB] Highway Capacity Manual [HCM] operations method) at each intersection. The control delay designation allows a more detailed examination of the impacts of a particular project. Greater detail regarding the LOS/control delay relationship is provided in **Table 1**.

Level of Service	Description	Average Control Delay (Seconds Per Vehicle)
А	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	≤ 10.0
В	Operations with low delay occurring with good progression and/or short cycle lengths.	10.1 to 20.0
С	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.1 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, and/or high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.1 to 80.0
F	Operation with delays unacceptable to most drivers occurring due to oversaturation, poor progression, or very long cycle lengths.	> 80.0
Source: 2000 H	lighway Capacity Manual (Transportation Research Board).	

Table 1 – Signalized Intersection LOS Criteria

Unsignalized Intersections. Unsignalized intersection operation is also typically graded using the Level of Service A through F scale. LOS ratings for all-way stop intersections are determined using a methodology outlined in the year 2000 TRB Highway Capacity Manual. Under this methodology, all-way stop intersections receive one LOS designation reflecting operation of the entire intersection. Average control delay values are also calculated. Intersections with side streets only stop sign controlled (two-way stop control) are also evaluated using the LOS and average control delay scales using a methodology outlined in the year 2000 TRB Highway Capacity Manual. However, unlike signalized or all-way stop analysis where the LOS and control delay designations only pertain to the entire intersection, in side street stop sign control analysis LOS and delay designations are computed for only the stop sign controlled approaches or individual turn and through movements. **Table 2** provides greater detail about unsignalized analysis methodologies.

Level of Service	Description	Average Control Delay (Seconds Per Vehicle)	
А	Little or no delays	≤ 10.0	
В	Short traffic delays	10.1 to 15.0	
С	Average traffic delays	15.1 to 25.0	
D	Long traffic delays	25.1 to 35.0	
Е	Very long traffic delays	35.1 to 50.0	
F	Extreme traffic delays with intersection capacity exceeded (for an all-way stop), or with approach/turn movement capacity exceeded (for a side street stop controlled intersection)	> 50.0	
Source: 2000 Highway Capacity Manual (Transportation Research Board).			

Table 2 – Unsignalized Intersection LOS Criteria

Analysis Software

All existing and future operating conditions have been evaluated using the Synchro software program.

Standards

The City of South San Francisco considers Level of Service D (LOS D) to be the poorest acceptable operation for signalized and all-way-stop intersections, with LOS E the poorest acceptable operation for unsignalized city street intersection turn movements.

Existing Intersection Operating Conditions

Table 3 shows that all signalized intersections evaluated for this study are currently operating at good to acceptable (LOS D or better) Levels of Service during both the AM and PM peak traffic hours. At the unsignalized E. Grand Ave. / Roebling Road intersection, the stop sign controlled Roebling Road approach is operating at acceptable levels (LOS A during the AM and LOS B during the PM commute peak traffic hours).

Table 3 – Intersection Level of Service –	Existing &	Existing + 1	Project AM &	z PM Peak
Hour				

	AM Peak Hour		PM Peak Hour	
Intersection	Existing	Existing + Project	Existing	Existing + Project
Airport Blvd./Miller/U.S.101 SB Off-Ramp (Signal)	C-28.5 ⁽¹⁾	C-28.5	B-17.5 ⁽¹⁾	B-17.6
Airport Blvd./Grand Ave. (Signal)	D-40.2 ⁽¹⁾	D-40.8	C-31.7 ⁽¹⁾	C-31.7
E. Grand Overcrossing/Dubuque Ave. (Signal)	A-6.4 ⁽¹⁾	A-6.5	A-3.4 ⁽¹⁾	A-3.4
E. Grand Ave. Overcrossing/E. Grand Ave. (Signal)	B-18.5 ⁽¹⁾	B-18.5	B-13.5 ⁽¹⁾	B-13.5
E. Grand Ave./Gateway Blvd. (Signal)	C-24.9 ⁽¹⁾	C-24.9	C-22.4 ⁽¹⁾	C-22.4
E. Grand Ave./Forbes Blvd./Harbor Way. (Signal)	B-18.2 ⁽¹⁾	B-18.2	C-33.9 ⁽¹⁾	D-35.6
E.Grand Ave./Roebling Rd.	A-9.2 ⁽²⁾	A-9.6	B-10.5 ⁽²⁾	B-10.4
(Roebling Rd. Stop Sign Controlled)				
S. Airport Blvd./U.S.101 NB Hook Ramps/ Wondercolor (Signal)	C-31.2 ⁽¹⁾	C-31.4	C-27.1 ⁽¹⁾	C-27.1
Gateway Blvd./S. Airport Blvd./Mitchell Ave. (Signal)	C-34.3 ⁽¹⁾	C-34.3	D-44.8 ⁽¹⁾	D-45.5
Airport Blvd./San Mateo Ave./Produce Ave. (Signal)	D-36.8 ⁽¹⁾	D-36.8	C-33.8 ⁽¹⁾	C-33.8

⁽¹⁾ Signalized level of service—vehicle control delay in seconds.

⁽²⁾ Unsignalized level of service – vehicle control delay in seconds/Roebling Rd. southbound stop sign controlled approach to E. Grand Ave.

Year 2000 Highway Capacity Manual Analysis Methodology

Source: Crane Transportation Group

C. INTERSECTION SIGNALIZATION REQUIREMENTS

Traffic signals are used to provide an orderly flow of traffic through an intersection. Many times they are needed to offer side street traffic an opportunity to access a major road where high volumes and/or high vehicle speeds block crossing or turn movements. They do not, however, increase the capacity of an intersection (i.e., increase the overall intersection's ability to accommodate additional vehicles) and, in fact, often slightly reduce the number of total vehicles that can pass through an intersection in a given period of time. Signals can also cause an increase in traffic accidents if installed at inappropriate locations.

There are 9 possible tests for determining whether a traffic signal should be considered for installation. These tests, called "warrants", consider criteria such as actual traffic volume, pedestrian volume, presence of school children, and accident history. The intersection volume data together with the available collision histories were compared to warrants contained in the Manual on Uniform Traffic Control Devices (MUTCD), Federal Highway Administration, 2009, and the Manual on Unified Traffic Control Devices Federal Highway Administration, 2003 California Supplement, which has been adopted by the State of California as a replacement for Caltrans Traffic Manual. Section 4C of the MUTCD provides guidelines, or warrants, which may indicate need for a traffic signal at an unsignalized intersection. As indicated in the MUTCD, satisfaction of one or more warrants does not necessarily require immediate installation of a traffic signal. It is merely an indication that the local jurisdiction should begin monitoring conditions at that location and that a signal may ultimately be required.

Warrant 3, the peak hour volume warrant, is often used as an initial check of signalization needs since peak hour volume data is typically available and this warrant is usually the first one to be met. Warrant 3 is based on a curve and takes only the hour with the highest volume of the day into account. Please see the Appendix for the warrant chart. To meet this warrant, a minimum of 100 vehicles per hour must approach the intersection on one of the side streets. It should also be noted that Warrant 3 has a second set of criteria based upon a combination of vehicle delay and volumes. This is typically referred to as the peak hour delay warrant.

Existing Signalization Needs

Currently, the East Grand Avenue / Roebling Road intersection has AM and PM peak hour volumes well below signal warrant criteria levels (see **Table 4**).
Table 4: Intersection Signalization Requirements – Do Volumes Meet Peak Hour

 Volume Signal Warrant #3 Criteria Levels?

	EXIS	TING	2015 F	UTURE	2035 FUTURE		
LOCATION	W/O PROJECT	+ PROJECT	W/O PROJECT	+ PROJECT	W/O PROJECT	+ PROJECT	
E. Grand Ave./	No	No	No	No	No	No	
Roebling Rd.							

AM PEAK HOUR

PM PEAK HOUR

	EXIS	TING	2015 F	UTURE	2035 FUTURE		
LOCATION	W/O PROJECT	+ PROJECT	W/O PROJECT	+ PROJECT	W/O PROJECT	+ PROJECT	
E. Grand Ave./	No	No	No	Yes	No	Yes	
Roebling Rd.							

Compiled by: Crane Transportation Group

D. VEHICLE QUEUING

Analysis Methodology

The Synchro software program has determined existing, year 2015 and year 2035 projections of 95th percentile vehicle queuing on the critical approaches to the E. Grand Avenue intersections with Roebling Road and Forbes Boulevard / Harbor Way. The Synchro software program has also determined projections of vehicle queuing on the critical approaches to two signalized off-ramp intersections and on the approaches to adjacent intersections that need to accommodate flow from the off-ramp intersections:

- U.S.101 Southbound Off-Ramp / Airport Boulevard / Miller Avenue intersection & the adjacent Airport Boulevard / Grand Avenue intersection
- U.S.101 Northbound Off-Ramp / South Airport Boulevard / Wondercolor Lane intersection

In addition, off-ramp queuing was evaluated on the U.S.101 Northbound Off-Ramp connection to East Grand Avenue / Executive Drive. While this off-ramp is not controlled on

its approach to this first intersection, East Grand Avenue is signal controlled at its next major intersection to the east (at Grand Avenue Overcrossing). Queuing results for this signalized location were evaluated to see if any queuing extended back to the off-ramp. Projections are provided for each off-ramp as well as for turn lanes and other surface street approaches that have nearby adjacent intersections.

Queuing Standards

The standard adopted by the City of South San Francisco and Caltrans is that the 95th percentile vehicle queue must be accommodated within available storage for each off-ramp and on the approaches to intersections adjacent to off-ramp intersections that accommodate a significant amount of off-ramp traffic. In addition, no off-ramp traffic is allowed to back up to the freeway mainline during the entire AM or PM peak traffic hour. The 95th percentile queue indicates that vehicle backups will only extend beyond this length five percent of the time during the analysis hour. Queuing analysis is presented in this study for existing, year 2015 and year 2035 Base Case and Base Case + Project conditions. Off-ramp queuing has been evaluated using both the Synchro software output, which details queuing for one of the signal cycles during the peak traffic hour, as well as using the SIM traffic feature of the Synchro program, which evaluates off-ramp operation and backups during the entire peak traffic hour.

EXISTING QUEUING

As shown in **Table 5**, only one intersection has 95th percentile queuing currently exceeding available storage: Airport Boulevard / Grand Ave: AM peak hour queues in the left turn lane or the southbound Airport Boulevard approach exceed available storage.

OFF-RAMP OPERATION AT DIVERGE FROM FREEWAY MAINLINE

Analysis Methodology & Standards

Caltrans uses an off-ramp volume of 1,500 vehicles per hour as the maximum acceptable limit that can be accommodated by a single lane off-ramp at its divergence from the freeway mainline.

Existing Off-Ramp Diverge Operations

Table 6 shows that currently all U.S.101 freeway off-ramps serving South San Francisco and the East of 101 area analyzed in this study are operating acceptably and have volumes below 1,500 vehicles per hour during the AM and PM peak traffic hours, with the exception of the northbound off-ramp to East Grand Avenue/Executive Drive during the AM peak hour (with a volume of 1,618 vehicles per hour).

Table 5: 95th Percentile Queues* - ExistingIntersections at or Near U.S.101 Interchanges Potentially Impacted by theProject with Signal Timing for Optimized Level of Service

	64	AM I	Peak Hour	PM Peak Hour							
Intersection	Storage Distance*	Existing	Existing + Project		Existing + Project						
Airport Blvd./Miller Ave./U.S.101 SB Off											
SB Off Left/Through	750	206	211	217	217						
Airport Blvd./Grand Ave.											
SB Left Turn	300	332	346	160	163						
SB Through	300	219	224	154	154						
SB Right Turn	300	31	31	59	59						
E. Grand Ave./Grand Ave. Overcro	ossing										
NB E. Grand Right Turn Lane	800	441	475	52	52						
NB E. Grand Left Turn Lane	800	115	116	243	243						
S. Airport Blvd./U.S.101 NB On and Off/Wondercolor Lane											
NB Off Left/Through/Right	825	315	318	164	164						
Bolded results = significant project impact. The proposed project would not result in significant impacts to vehicle queuing for any other approach lane or lanes experiencing unacceptable Base Case 95^{th} percentile queuing as project traffic											

contributions would be less than 1 percent of the total.

* Storage and queues—in feet per lane.

Synchro software used for all analysis.

Source: Crane Transportation Group

AM Peak Hour										
				Year	2015	Yea	r 2035			
U.S.101 Off-Ramp	Capacity* (Veh/H.)	Existing	Existing + Project	Base Case	Base Case + Project	Base Case	Base Case + Project			
SB Off-Ramp to Airport Blvd./ Miller Ave.	1500	531	544	767	780	998	1009			
NB Off-Ramp to E. Grand Ave./ Executive Drive	1500**	1618	1628	1745	1755	2164	2173			
NB Off-Ramp to S. Airport Blvd./ Wondercolor Lane	1500**	1195	1200	1762	1767	2146	2150			
		PM	Peak Hour							
SB Off-Ramp to Airport Blvd./ Miller Ave.	1500	532	535	634	637	743	745			
NB Off-Ramp to E. Grand Ave./ Executive Drive	1500**	536	540	533	537	659	662			
NB Off-Ramp to S. Airport Blvd./ Wondercolor Lane	1500**	559	559	767	767	802	802			

Table 6 – Off-Ramp Capacity & Volumes at Diverge From Freeway MainlineExisting, Year 2015 & Year 2035

* Caltrans desired volume limit that can be accommodated by a single off-ramp lane connection to the freeway mainline.

** Programmed provision of second off-ramp lane connection to the freeway mainline will increase capacity to 2,300 vehicles per hour.

Bolded results = significant impacts

Compiled by: Crane Transportation Group

ON-RAMP OPERATION

Analysis Methodology & Standards

On-ramp operation has been evaluated using planning level methodology contained in the *Year 2000 Highway Capacity Manual* (page 25-4/Exhibit 25-3). Capacity is dependent upon the free flow speed of on-ramp traffic. For single lane diamond on-ramps with higher speeds, capacity has been set at 2,200 vehicles per hour, while for single lane button hook or curving on-ramps, capacity has been set at 2,000 vehicles per hour.

Existing On-Ramp Operations

Table 7 shows that currently, all U.S.101 freeway on-ramps serving South San Francisco and the East of 101 area analyzed in this study are operating acceptably and have volumes well below capacity during the AM and PM peak hours.

FREEWAY OPERATION

Analysis Methodology

U.S.101 freeway segments have been evaluated based on the Year 2000 Highway Capacity Manual as specified by Caltrans and the San Mateo County Congestion Management Program (CMP). U.S.101 existing traffic conditions have been evaluated for the weekday AM and PM peak hours. Existing traffic volumes used for the analysis were derived from year 2009 U.S.101 mainline counts from Caltrans as provided by TJKM Associates as part of their work for the updating of the City's East of 101 Traffic Modeling. Freeway mainline analysis was performed using the HCS software based upon the HCM methodology for freeway mainlines.

San Mateo CMP Standards for Regional Roads and Local Streets

The LOS standards established for roads and intersections in the San Mateo County CMP street network vary based on geographic differences. For roadway segments and intersections near the county boarder, the LOS standard was set as LOS E in order to be consistent with the recommendations in the neighboring counties. If the existing Level of Service in 1990/91 was F, the standard was set to LOS F. If the existing or future LOS was or will be E, the standard was set to E. For the remaining roadways and intersections, the standard was set to be one letter designation worse than the projected LOS in the year 2000.

AM Peak Hour											
		Volumes									
				Year	· 2015	Year 2035					
U.S.101 On-Ramp	Capacity* (Veh/Hr)	Existing	Existing + Project	Base Case	Base Case + Project	Base Case	Base Case + Project				
SB On-Ramp from Produce Ave.	3300**	1026	1024	1103	1101	1295	1293				
NB On-Ramp from Grand Ave.	2000	650	649	752	751	845	843				
NB On-Ramp from S. Airport Blvd./Wondercolor Lane	2000	269	269	334	334	388	388				
		PM I	Peak Hour								
SB On-Ramp from Produce Ave.	3300**	1834	1850	2188	2204	3088	3102				
NB On-Ramp from Grand Ave.	2000	842	856	1269	1283	1201	1212				
NB On-Ramp from S. Airport Blvd./Wondercolor Lane	2000	476	476	608	608	897	897				

Table 7 – On-Ramp Capacity & Volumes Existing, Year 2015 & Year 2035

* Planning level capacity: Year 2000 Highway Capacity Manual, TRB Report 209.

** Produce Avenue on-ramp has two travel lanes. One on-ramp lane merges to the freeway mainline, while the other on-ramp continues as an auxiliary lane to the I-380 off-ramp.

Bolded results = significant impacts

Compiled by: Crane Transportation Group

If a proposed land use change would either cause a deficiency (to operate below the standard LOS) on a CMP-designated roadway system facility, or would significantly affect (by using LOS F in the 1991 CMP baseline LOS, mitigation measures are to be developed so that LOS standards are maintained on the CMP-designated roadway system. If mitigation measures are not feasible (due to financial, environmental or other factors), a Deficiency Plan must be prepared for the deficient facility. The Deficiency Plan must indicate the land use and infrastructure action items to be implemented by the local agency to eliminate the deficient conditions.

A Deficiency Plan may not be required if the deficiency would not occur if traffic originating outside the County were excluded from the determination of conformance.

Existing Freeway Operation

Existing Levels of Service have been evaluated on four freeway segments in South San Francisco (northbound and southbound U.S.101 north of the Oyster Point interchange and northbound and southbound U.S.101 north of the I-380 interchange). Results were based upon analysis of year 2009 volumes. **Table 8** shows a summary of existing U.S. 101 freeway operation and **Table 9** shows details of the existing freeway Level of Service results. Currently, all U.S.101 freeway segments are operating at an acceptable LOS D or better during the weekday AM and PM peak hours. Conditions are generally poorer along U.S.101 to the north of Oyster Point Boulevard.

AM Peak Hour	
Southbound	LOS D North of the Oyster Point interchange southbound off-ramps
	LOS B South of the Produce Avenue on-ramp (just north of I-380)
Northbound	LOS C South of the S. Airport Blvd. off-ramp (just north of I-380)
	LOS D North of the Oyster Point interchange & northbound off-ramp to Bayshore Blvd.
PM Peak Hour	
Southbound	LOS C North of the Oyster Point interchange southbound off-ramps
	LOS C South of the Produce Avenue on-ramp (just north of I-380)
Northbound	LOS C South of the S. Airport Blvd. off-ramp (just north of I-380)
	LOS D North of the Oyster Point interchange & northbound off-ramp to Bayshore Blvd.
• LOS – Level of	f Service
Source: Crane Tra	nsportation Group

Table 8: Summary Of Existing U.S.101 Freeway Operation

		AM I	Peak Hour									
		Existing		Ex	isting + Proj	ject						
Segment	Vol	LOS	Density	Vol	LOS	Density						
North of Oyster Point Boulevard												
Northbound	7452	D	30.1	7451	D	30.1						
Southbound	6774	D	26.3	6787	D	26.4						
North of I-380												
Northbound	9713	С	24.9	9728	С	24.9						
Southbound	6421	В	16.1	6419	В	16.1						
PM Peak Hour												
North of Oyster Point B	Boulevard											
Northbound	7530	D	30.5	7544	D	30.6						
Southbound	6314	С	24.1	6317	C	24.2						
North of I-380												
Northbound	7605	C	19.1	7609	C	19.1						
Southbound	8377	С	21.1	8393	С	21.2						
The proposed project we	ould not resul	t in significar	nt impacts to a	ny freeway seg	ment.							
LOS = Level of Service												
Density is shown in pass	senger cars pe	er lane per m	ile.									
Year 2000 Highway Cap	pacity Manual	l Analysis Me	ethodology									
Source: Crane Transpor	Source: Crane Transportation Group											

Table 9: Existing U.S.101 Freeway Operation – AM & PM Peak Hours

E. TRANSIT & SHUTTLE SERVICE

Transit service in the study area includes local bus service, shuttle service and regional rail service. **Figure 5** shows bus/shuttle service east of the U.S.101 freeway in the project vicinity, while **Table 10** lists the type and frequency of transit service provided to South San Francisco area and **Table 11** lists the Alliance Shuttle Service shuttles and schedule.

		Freque	ency	
Services	Route	AM/PM Peak Hour	Midday	Area Served
	Airport/Linden Daly City and Colma BART Stations (130)	20/20	30	Airport Blvd./Linden Ave
	South SF BART Station (132)	30/30	50	Airport Blvd./Linden Ave
Com Trong	Airport/Linden Serramonte (133)	30/30	60	Airport Blvd./Linden Ave
Sam Trans	Palo Alto Daly City (390)	30/30	30	South SF BART Bay 3
	Redwood City Colma BART Station (391)	15/30(a)	15(a)	El Camino Real/South SF BART Station
	San Mateo SF (292)	15/15(a)	30	Airport Blvd./Baden Ave.
Caltrain	Gilroy SF	30/30	60	South SF Caltrain Station
	Pittsburg-Daly City	15/15	15	Daly City BART Station
DADT	Fremont-Daly City	15/15	15	Daly City BART Station
DAKI	Richmond-Daly City	15/15	—	Daly City BART Station
	Dublin-Millbrae	15/15	15	South SF BART Station
Caltrain	Gateway Area	15/15	—	1000 Gateway, Genentech Bldgs B9, B5
Shuttle to SSF	Oyster Point Area	30/30(a)	—	Gull/Oyster Point and 384 Oyster Point
Station	Sierra Point Area	30/30(a)	_	5000 Shoreline Court
	Utah Grand Area	30/30(a)	_	Cabot/Allerton
DADT	Sierra Point Area	35/35		5000 Shoreline Court
BART Shuttle to	Genentech	15/15	—	Genentech Bldgs B5, B54
Shuttle to SSF Station	Oyster Point Area	23/23(a)	_	Gull/Oyster Point and 384 Oyster Point
Sauton	Utah-Grand Area	23/23(a)	—	Cabot/Allerton

Source: Metropolitan Transportation Commission (511.org), Peninsula Traffic Congestion Relief Alliance (commute.org), Caltrain 2009. Frequency of transit service is presented in minutes.

SF = *San Francisco*

(*a*) = average frequency period.

Shuttle	Station Served	Schedule	Area Served		
Orator Point	BART	eight AM & nine PM trips	Oyster Point Blvd., Gull Dr., Eccles Ave., Forbes		
Oyster I ont	Caltrain	seven AM & seven PM trips	Blvd., Veterans Blvd.		
Utah Crand	BART	nine AM & nine PM trips	E. Grand Ave., Utah Ave., Harbor Way,		
Utan-Grand	Caltrain	seven AM & seven PM trips	Littlefield Ave.		
Gateway	Millbrae BART	ten AM & twelve PM trips	Gateway Blvd., BART		
	Caltrain	six AM & five PM trips	Gateway Blvd., Genentech Office		
Ciarra Dairat	BART	four AM & four PM trips	Ciama Daint Chanalina		
Sierra Point	Caltrain	Four AM & four PM trips	Sierra Foliti, Shoreillie		

 Table 11 Caltrain/BART Shuttle Service

Source: Peninsula Traffic Congestion Relief Alliance (Commute.org), Caltrain 2009. Both shuttles alternate between 15- and 30-minute headways during both peak hours.

Bus Service

The San Mateo County Transit District (SamTrans) provides bus service to South San Francisco. However, currently there is no SamTrans service east of the U.S.101 freeway. Bus service running just west of the freeway is as follows.

Route 34: Tanforan Shopping Center–Geneva operates along Bayshore Boulevard and Airport Boulevard between Brisbane and the San Bruno BART station in the study area. This route operates during midday only on weekdays with headways of about two hours.

Route 130: Daly City/Colma BART–South San Francisco operates along Linden Avenue and Grand Avenue in the study area. It connects central South San Francisco with the Colma BART station and Daly City. It operates with 20-minute peak period headways and 30- to 60-minute non-peak headways on weekdays, 30-minute headways on Saturdays and 60-minute headways on Sundays.

Route 132: Airport/Linden-Arroyo/El Camino operates along Hillside Avenue and Grand Avenue connecting to the South San Francisco BART station. It operates on 30-minute peak period headways and 60-minute non-peak headways on weekdays and 60-minute headways on Saturdays.

Route 292: San Francisco–SF Airport–Hillsdale Shopping Center operates along Airport Boulevard. It operates with 20- to 30-minute peak headways and 25- to 60-minute non-peak headways on weekdays and 30- to 60- minute headways on Saturdays and Sundays.

<u>Caltrain</u>

Caltrain provides train service between Gilroy, San Jose and San Francisco. There is a station located on the corner of Dubuque Avenue and Grand Avenue Overcrossing in South San Francisco. Trains operate every 15 to 20 minutes during commute periods and hourly during midday.

Caltrain/BART Shuttles

Van shuttles are provided between the South San Francisco Caltrain station and employment centers east of U.S.101 during commute hours. Separate shuttles provide service to/from the Colma BART station. Shuttle stops are provided at two locations along East Grand Avenue and at one location along Harbor Way.

The Gateway Area/Genentech Shuttle (BART and Caltrain) provides service on Gateway Boulevard, Oyster Point Boulevard, Forbes Boulevard, Grandview Drive and East Grand Avenue. There are 15 morning trips and 15 afternoon trips on the BART shuttle, and six morning trips and five afternoon trips on the Caltrain shuttle.

The Utah-Grand Shuttle (BART and Caltrain) serves over 20 employers in the Utah/Grand/Littlefield area. It provides service on Harbor Way, East Grand Avenue, Cabot Court, Grandview Avenue, Littlefield Avenue, Haskin Way and Utah Avenue. There are nine trips in the morning and nine trips in the afternoon on the BART shuttle, with nine morning and eight afternoon trips on the Caltrain shuttle.

All shuttle service is fixed-route, fixed-schedule and is provided on weekdays during the commute periods. The shuttles are free to riders. The operating costs are borne by the Joint Powers Board (JPB), SamTrans, the Bay Area Air Quality Management District, and the City/County Association of Governments (75 percent) and sponsoring employers (25 percent).

F. PEDESTRIAN AND BICYCLE FACILITIES

Sidewalks are in place along the north and south sides of East Grand Avenue and along both sides of Roebling Road in the Project vicinity. However, there are no Class II or Class III bicycle lane designations along East Grand Avenue or Roebling Road adjacent to the Project site, although there are numerous bicycle facilities available in the study area. Bike lanes are provided along East Grand Avenue east of Littlefield Avenue, Sister Cities Boulevard, Allerton Avenue, Oyster Point Boulevard (east of Gateway Avenue), Gull Road, and Gateway Boulevard (south of East Grand Avenue between Executive Drive and the East Grand Overcrossing. Bike paths are available along Executive Drive and along the shoreline. Future bike lanes are planned along Gateway Boulevard, East Grand Avenue, and Forbes Boulevard (east of Allerton Avenue). Future bike routes are planned along Forbes Boulevard (west of

Allerton Avenue), while a future bike path is planned along the Caltrain right-of-way. The proposed future bike lanes, routes, and paths are designated in the General Plan Transportation Element.

CITY OF SOUTH SAN FRANCISCO TRANSPORTATION DEMAND MANAGEMENT PROGRAM

The City of South San Francisco requires that all nonresidential development expected to generate 100 or more average daily trips, based on the Institute of Traffic Engineers (ITE) trip generation rates or a project seeking a floor area ratio (FAR) bonus implement Transportation Demand Management (TDM) measures to reduce vehicle traffic (Chapter 20.120 Transportation Demand Management). The purposes of the TDM ordinance are as follows:

- Implement a program designed to reduce the amount of traffic generated by new nonresidential development, and the expansion of existing nonresidential development pursuant to the City's police power and necessary in order to protect the public health, safety and welfare.
- Ensure that expected increases in traffic resulting from growth in employment opportunities in the City of South San Francisco will be adequately mitigated.
- Reduce drive-alone commute trips during peak traffic periods by using a combination of services, incentives, and facilities.
- Promote the more efficient utilization of existing transportation facilities and ensure that new developments are designed in ways to maximize the potential for alternative transportation usage.
- Establish minimum TDM requirements for all new nonresidential development.
- Allow reduced parking requirements for projects implementing the requirements of this chapter.
- Establish an ongoing monitoring and enforcement program to ensure that the measures are implemented.

The analysis prepared for the General Plan Amendment includes the assumption that a moderate TDM program will reduce peak hour traffic generation by an additional 9.5 percent compared to existing traffic generation rates, while an intensive TDM program will reduce peak hour traffic generation by an additional 20 to 25 percent. The objective of TDM programs is to reduce vehicle trips at commercial/residential developments by incorporating project components such as encouraging increased transit use, carpooling, and providing facilities for bicyclists and pedestrians.

South San Francisco has a "menu" of potential TDM programs, each with a specific number of points that relate to the program's effectiveness. Examples of TDM programs include bicycle racks and lockers, free carpool parking, shuttle services, and on-site amenities.

FUTURE BASE CASE (WITHOUT PROJECT) CONDITIONS

The traffic impacts have been evaluated in relation to both year 2015 and year 2035 Base Case conditions. Year 2015 reflects a horizon year that the project should be completed, while year 2035 reflects the most distant horizon year currently utilized by the City Public Works Department and Caltrans for analysis purposes and the assumed build out of the East of 101 area. This section details the process to determine Base Case traffic (without Project) operation for year 2015 and 2035 conditions.

Year 2015 Base Case Development

The year 2015 Base Case conditions include traffic generated by existing, approved and proposed development in the study area, as well as traffic generated by projects that are under construction. The development list was provided by City Planning staff. Projects and their associated trip generation are provided in **Table 12** and have been utilized by TJKM Associates to develop local area intersection and freeway volumes for use in the City's updated East of 101 Transportation Capital Improvement Program study. Year 2015 peak hour Base Case (without project) conditions were developed by adding traffic expected to be generated by all the approved and proposed developments in the greater East of 101 Area to the existing traffic network. Year 2015 projections include traffic from several recently approved background projects such as Gateway Business Park, Oyster Point Redevelopment Phase 1, 213 E. Grand, 494 Forbes, Lowe's, Home Depot, Terrabay, the ferry terminal that is currently under construction and the Genentech Corporate Facilities Master Plan. Year 2015 Base Case (without project) AM and PM peak hour intersection volumes are presented in **Figures 6** and **7**.

Table 12 – Existing, Approved & Planned Development Trip Generation by 2015 Developments East of the U.S.101 Freeway or Just West of the U.S.101 Freeway Contributing Significant Traffic to U.S.101 Interchanges in South San Francisco

LANE USE		SIZE/	DA	AILY		AN	I PEAK H	OUR			PN	I PEAK I	HOUR	
(ITE CODE)		UNIT	Rate	Total	Trip Rate	In/Out %	In	Out	Total	Trip Rate	In/Out %	In	Out	Total
Genentech ⁽¹⁾ (20% TDM Redu	ection)						1988	318	2306			271	1613	1884
	Hotel	350 Rooms	8.17	2860	0.56	61:39	120	76	196	0.59	53:47	109	97	206
Genentech Triangle	R&D ⁽²⁾	372,000 sf			0.51	83:17	158	32	190	0.39	16:84	23	122	145
	Office ⁽²⁾	248,000 sf			0.82	87:13	178	26	204	0.63	17:83	26	129	155
Oyster Point Redevelopment Phase 1							369*	48*	417*			55*	343*	398*
	R&D ⁽³⁾	680,499 sf	3.62	2464	0.57	83:17	322	66	388	0.47	15:85	48	272	320
Oyster Point Non- Redevelopment Area	Ferry Terminal ⁽⁴⁾ (010)	1 Berth		814			138	26	164			54	101	155
	Marina (420)	716 Berths	2.96	2119	0.08	33:67	19	38	57	0.19	60:40	82	54	136
Commercial ⁽³⁾ (82	20)	364,502 sf	43.19	15,741	0.91	61:39	202	129	331	4.15	49:51	741	772	1513
Home Center ⁽³⁾ (8	62)	290,794 sf	23.29	6774	1.26	57:43	209	158	367	2.37	48:52	331	358	689
Hotel (310)		3385 Rooms	8.17	27,655	0.56	61:39	1156	739	1895	0.59	53:47	1058	939	1997
R&D ⁽³⁾ (760) (20% TDM Redu	ction)	7,782,598 sf	3.62	28,174	0.57	83:17	3682	754	4436	0.47	15:85	549	3109	3658
Office ⁽³⁾ (710) (20% TDM Redu	ction)	360,000 sf	7.10	2554	1.05	88:12	333	45	378	1.00	17:83	61	300	361
Manufacturing (1 (15% TDM Redu	40) action)	7,955,717 sf	3.25	25,856	0.62	78:22	3848	1085	4933	0.62	36:64	1776	3157	4933
Total Trips							12,722	3540	16,262			5184	11,366	16,550

* Oyster Point Specific Plan and Phase 1 Project Draft EIR ⁽¹⁾ Trips based on existing land use as published in the Genentech EIR (with 20% TDM applied instead of 7.5% TDM used in the EIR). ⁽²⁾ Rates based on Genentech EIR (with 20% TDM applied instead of 7.5% TDM used in the EIR).

⁽³⁾ Rates developed from ITE equations.

⁽⁴⁾ Trips based on SF Bay Area Water Transit Authority (WTA) ridership forecast.

Trip rate source: Institute of Transportation Engineers (ITE) Trip Generation (8th Edition)

Compiled by: TJKM Associates

YEAR 2015 BASE CASE OPERATING CONDITIONS

Roadway Improvements Planned by 2015

The City's East of 101 capital improvement program funds certain roadway and intersection improvements in the City's East of 101 area through the collection of lawfully adopted impact fees. In accordance with the Mitigation Fee Act, impact fees are imposed on and collected from development projects in the East of 101 area, held in a separate account, and used to fund improvements benefiting the area and the projects from which the fees were collected. Like other developments in the East of 101 area, the 328 Roebling Road project will pay a proportionate share towards these improvements. The City is in the process of updating their capital improvement program list for the East of 101 area; a new list is expected to be available in late 2011. Based on currently available funding, projected growth rates, and the pending update, the City of South San Francisco Public Works division expects that the following intersection improvements will be funded and constructed by 2015. Accordingly, the improvements have been factored into the year 2015 Base Case traffic modeling conducted by TJKM Associates for the 2011 Updated East of 101 Capital Improvement Program.

• S. Airport Boulevard / U.S.101 Northbound Hook Ramps / Wondercolor Lane

• Add a second northbound off-ramp right turn lane.

• Dubuque Avenue / U.S.101 Northbound Off-Ramp-Southbound On-Ramp

- Eliminate the exclusive left turn lane on the southbound Dubuque approach.
- Restripe the Northbound Off-Ramp approach to provide 2 exclusive left turn lanes and a combined through / right turn lane.
- Oyster Point Boulevard / Veterans Boulevard
 - Add a second lane to the northbound (private driveway) approach. Stripe as one left turn lane and a combined through / right turn lane.

Oyster Point Boulevard / Sister Cities Boulevard / Airport Boulevard

- Add an exclusive right turn lane on the southbound Airport Boulevard approach and restripe the existing combined through / right turn lane as an exclusive through lane.
- Oyster Point Boulevard / Dubuque Avenue / U.S.101 Northbound On-Ramp
 - Widen the northbound Dubuque Avenue approach and provide 2 exclusive left turn lanes, 1 through lane and 2 exclusive right turn lanes. Also, provide a second

exclusive right turn lane on the westbound Oyster Point Boulevard approach (extending partway to Gateway Boulevard).

• E. Grand Avenue / Grand Avenue Overcrossing

• Provide a second right turn lane on the northbound E. Grand Avenue approach.

• E. Grand / US 101

Widen existing NB off ramp to add an additional lane.

Figure 8 provides a schematic presentation of year 2015 intersection approach lanes and control.

Intersection Level of Service

All intersections with year 2015 Base Case volumes would be operating at acceptable Levels of Service with the following exceptions (see **Table 13**).

AM Peak Hour

- E. Grand Avenue / Gateway Boulevard (Signal) LOS E
- Airport Boulevard / Grand Avenue (Signal) LOS E

PM Peak Hour

- E. Grand Avenue / Forbes Blvd. / Harbor Way (Signal) LOS E
- Gateway Blvd. / S. Airport Blvd. / Mitchell Avenue (Signal) LOS E

Intersection Signalization Needs

The following unsignalized intersection would <u>not</u> have year 2015 Base Case volumes meeting or exceeding peak hour signal warrant #3 volume criteria levels (see **Table 4**).

• E. Grand Avenue / Roebling Road

	AM Peak	Hour	PM Peak Hour		
Intersection	Base Case	Base Case + Project	Base Case	Base Case + Project	
Airport Blvd./Miller/U.S.101 SB Off- Ramp (Signal)	C-27.8 ⁽¹⁾	C-27.8	B-19.1 ⁽¹⁾	B-19.1	
Airport Blvd./Grand Ave. (Signal)	E-59.0 ⁽¹⁾	E-59.9	D-44.2 ⁽¹⁾	D-44.2	
E. Grand Overcrossing/Dubuque Ave. (Signal)	A-8.6 ⁽¹⁾	A-8.6	B-10.7 ⁽¹⁾	B-10.7	
E. Grand Ave. Overcrossing/E. Grand Ave. (Signal)	B-20.0 ⁽¹⁾	B-20.0	B-14.0 ⁽¹⁾	B-14.0	
E. Grand Ave./Gateway Blvd. (Signal)	E-61.5 ⁽¹⁾	E-63.0	D-37.2 ⁽¹⁾	D-37.2	
E. Grand Ave./Forbes Blvd./Harbor Way. (Signal)	C-32.6 ⁽¹⁾	D-35.5	E-60.8 ⁽¹⁾	E-64.7	
E.Grand Ave./Roebling Rd.	A-9.6 ⁽²⁾	A-9.7	B-10.9 ⁽²⁾	B-11.1	
(Roebling Rd. Stop Sign Controlled))					
S. Airport Blvd./U.S.101 NB Hook Ramps/ Wondercolor (Signal)	D-35.1 ⁽¹⁾	D-35.1	C-34.5 ⁽¹⁾	C-34.5	
Gateway Blvd./S. Airport Blvd./Mitchell Ave. (Signal)	C-30.2 ⁽¹⁾	C-30.3	E-65.7 ⁽¹⁾	E-68.5	
Airport Blvd./San Mateo Ave./Produce Ave. (Signal)	C-30.7 ⁽¹⁾	C-30.7	D-43.3 ⁽¹⁾	D-43.3	

Table 13: Intersection Level of Service – Year 2015 – AM & PM Peak Hours

Bold results = significant impacts. Base Case + Project. Base Case + Project LOS E or F results not bolded would not be significant since project traffic would not increase Base Case volumes by 2% or more.

⁽¹⁾ Signalized level of service – vehicle control delay in seconds.

⁽²⁾ Unsignalized level of service – vehicle control delay in seconds. Roebling Road stop sign controlled approach.

Year 2000 Highway Capacity Manual Analysis Methodology

Source: Crane Transportation Group

Vehicle Queuing

The following off-ramps and/or approaches to adjacent intersections would have 95th percentile year 2015 Base Case queuing exceeding available storage as determined using the Synchro software program (see **Table 14**).

AM Peak Hour

• Airport Boulevard / Grand Avenue

The Airport Boulevard southbound approach left turn and through movements would have 95th percentile queue demands greater than available storage.

The following left turn would have a 95th percentile year 2015 Base Case queuing exceeding the available 75-foot storage as determined using unsignalized intersection turn lane queuing analysis methodology contained in the Institute of Transportation Engineers (ITE) Journal.¹

• E. Grand Avenue / Roebling Road (Eastbound Left Turn at unsignalized intersection)

AM Peak Hour: 100-foot queue² PM Peak Hour: 75-foot queue²

¹ Estimation of Maximum Queue Lengths at Unsignalized Intersections by John T. Gard, ITE Journal, November 2001.

² Rounded upwards to nearest 25-foot increment.

Table 14: 95th Percentile Queues* - Year 2015Intersections at or Near U.S.101 Interchanges Potentially Impacted by theProject with Signal Timing for Optimized Level of Service

		Year 2015								
Intersection	Storage	AM	Peak Hour	PM Peak Hour						
	Distance*	Base Case	Base Case + Project	Base Case	Base Case + Project					
Airport Blvd./Miller Ave./U.S.101 SB Off										
SB Off Left/Through	750	305	309	225	227					
Airport Blvd./Grand Ave.										
SB Left Turn	300	390	397	223	230					
SB Through	300	328	335	202	203					
SB Right Turn	300	31	32	50	51					
E. Grand Ave./Grand Ave. Overcro	ossing									
NB E. Grand Right Turn Lane	800	268	272	37	37					
NB E. Grand Left Turn Lane	800	148	148	301	301					
S. Airport Blvd./U.S.101 NB On ar	nd Off/Wonderco	lor Lane								
NB Off Left/Through/Right	825	448	448	219	219					
Bolded results = significant project impact. The proposed project would not result in significant impacts to vehicle queuing for any other approach lane or lanes experiencing unacceptable Base Case 95 th percentile queuing as project traffic contributions would be less than 1 percent of the total. * Storage and queues—in feet per lane. Storage acference and for all encloses										

Source: Crane Transportation Group

Off-Ramp Operation at Diverge from Freeway Mainline

No off-ramps would have year 2015 Base Case volumes exceeding 1,500 vehicles/hour on a one-lane off-ramp connection to the freeway mainline or 2,200 to 2,300 vehicles/hour on a two-lane off-ramp connection to the freeway mainline (see **Table 6**). Both the northbound U.S.101 off-ramps to S. Airport Blvd. / Wondercolor Lane and to E. Grand Avenue / Executive Drive would require planned widening to two lanes in order to accommodate projected volumes.

• U.S.101 Northbound Off-Ramp to E. Grand Avenue / Executive Drive Intersection

AM Peak Hour: 1,745 vehicles per hour using off-ramp (being widened by 2015 to 2 lanes – 2,300 VPH capacity).

• U.S.101 Northbound Off-Ramp to So. Airport Blvd. / Wondercolor Lane

AM Peak Hour: 1,762 vehicles per hour using off-ramp (being widened by 2015 to 2 lanes -2,300 VPH capacity).

On-Ramp Operation

No on-ramps would have year 2015 Base Case volumes exceeding ramp capacities (see **Table 7**).

U.S.101 Freeway Mainline Level of Service

No mainline freeway segments would be operating at an unacceptable Level of Service with year 2015 Base Case volumes (see **Table 15**).

		AMI	Peak Hour				
		Base Case		Base Case + Project			
Segment	nent Vol		LOS Density		LOS	Density	
North of Oyster Point	nt Boulevard						
Northbound	8114	D	34.1	8115	D	34.1	
Southbound	7363	D	29.1	7376	D	29.2	
North of I-380							
Northbound	11364	D	30.4	11379	D	30.4	
Southbound	6714	В	16.7	6716	В	16.7	
		PM I	Peak Hour				
North of Oyster Poin	nt Boulevard						
Northbound	8191	D	34.7	8205	D	34.8	
Southbound	6802	D	26.1	6805	D	26.1	
North of I-380							
Northbound	8354	C	20.8	8358	С	20.8	
Southbound	9648	С	24.4	9664	С	24.4	
The proposed project LOS = Level of Serve Density is shown in p Year 2000 Highway	t would not result ice passenger cars pe Capacity Manual	t in significat er lane per m Analysis Mo	nt impacts to ar ile. ethodology	ny freeway seg	ment.		

Table 15: Year 2015 U.S.101 Freeway Operation – AM & PM Peak Hours

Source: Crane Transportation Group

YEAR 2035 BASE CASE OPERATING CONDITIONS

The year 2035 Base Case conditions include traffic generated by all development detailed in the 2015 analysis, the last half of the Genentech master plan, the last part of the Oyster Point Redevelopment area, the remaining half of the Gateway Master Plan as well as other increases in manufacturing, commercial, office and R&D uses. The daily and peak hour trip generation potential of all developments expected in the East of 101 area by 2035 is presented in **Table 16**. In addition to these specific developments, traffic on Airport Boulevard to/from Brisbane to the north as well as on Sister Cities Boulevard and other surface streets to the west of the U.S. 101 freeway were projected to grow from 2016 to 2035 at rates projected in the C/CAG regional model (after allowance for traffic to/from new development east of the 101 freeway).

Year 2035 intersection AM and PM peak hour as well as U.S.101 freeway segment traffic volumes were developed by TJKM Associates for the City's Update of the East of 101 Capital Improvements Program. Year 2035 Base Case (without project) AM and PM peak hour intersection volumes are presented in **Figures 9** and **10**.

Roadway Improvements Planned by 2035

At City Public Works Department direction, all roadway improvements currently listed in the City's July 2007 Traffic Impact Fee Study Update for the East of 101 Area were assumed to be built and in operation for year 2035 Base Case and Base Case + Project evaluation. **Figure 11** provides a schematic presentation of year 2035 intersection approach lanes and control.

Table 16 – Existing, Approved & Planned Development Trip Generation by 2035 Developments East of the U.S.101 Freeway or Just West of the U.S.101 Freeway Contributing Significant Traffic to U.S.101 Interchanges in South San Francisco

LANE USE		SIZE/	DA	AILY		AN	A PEAK H	OUR			PN	A PEAK I	HOUR	
(ITE CODE)		UNIT	Rate	Total	Trip Rate	In/Out %	In	Out	Total	Trip Rate	In/Out %	In	Out	Total
Genentech ⁽¹⁾ (20% TDM Redu	uction)						3015	427	3442			453	2513	2966
	Hotel	350 Rooms	8.17	2860	0.56	61:39	120	76	196	0.59	53:47	109	97	206
Genentech Triangle	R&D ⁽²⁾	372,000 sf			0.48	83:17	148	30	178	0.37	16:84	21	115	136
	Office ⁽²⁾	248,000 sf			0.77	87:13	167	24	191	0.58	17:83	24	121	145
Oyster Point Redevelopment	R&D / Office						1158*	244*	1402*			426*	1195*	1621*
	R&D ⁽³⁾	680,499 sf	3.28	2464	0.52	83:17	232	66	388	0.42	15:85	48	272	320
Oyster Point Non- Redevelopment	Ferry Terminal ⁽⁴⁾ (010)	1 Berth		814			138	26	164			54	101	155
Aica	Marina (420)	716 Berths	2.96	2119	0.08	33:67	19	38	57	0.19	60:40	82	54	136
Commercial ⁽³⁾ (82	20)	693,302 sf	34.14	23,671	0.69	61:39	291	186	477	3.33	49:51	1130	1176	2306
Home Center ⁽³⁾ (8	62)	290,794 sf	23.29	6774	1.26	57:43	209	158	367	2.37	48:52	331	358	689
Hotel (310)		3385 Rooms	8.17	27,655	0.56	61:39	1156	739	1895	0.59	53:47	1058	939	1997
R&D ⁽³⁾ (760) (20% TDM Redu	uction)	8,597,426 sf	3.28	28,200	0.52	83:17	3711	760	4471	0.42	15:85	542	3069	3611
Office ⁽³⁾ (710) (20% TDM Redu	uction)	1,230,570 sf	4.94	6079	0.76	88:12	825	112	937	0.87	17:83	181	886	1067
Manufacturing (1 (15% TDM Redu	40) action)	11,227,507 sf	3.25	36,490	0.62	78:22	5430	1531	6961	0.62	36:64	2506	4455	6961
Total Trips							16,710	4417	21,127			6965	15,351	22,316

* Oyster Point Specific Plan and Phase 1 Project Draft EIR

⁽¹⁾ Trips based on existing land use as published in the Genentech EIR (with 20% TDM applied instead of 7.5% TDM used in the EIR).

⁽²⁾ Rates based on Genentech EIR (with 20% TDM applied instead of 7.5% TDM used in the EIR).

⁽³⁾ Rates developed from ITE equations.

⁽⁴⁾ Trips based on SF Bay Area Water Transit Authority (WTA) ridership forecast.

Trip rate source: Institute of Transportation Engineers (ITE) Trip Generation (8th Edition)

Compiled by: TJKM Associates

Intersection Level of Service

All intersections with year 2035 Base Case volumes would be operating at acceptable levels of service with the following exceptions (see **Table 17**).

AM Peak Hour

- Airport Blvd. / Grand Avenue (Signal) LOS F
- S. Airport Boulevard / U.S.101 Northbound Hook Ramps / Wondercolor Lane (Signal) LOS E
- E. Grand Avenue / Gateway Boulevard (Signal) LOS F

PM Peak Hour

- Airport Boulevard / Grand Avenue (Signal) LOS E
- E. Grand Avenue / Forbes Blvd. / Harbor Way (Signal) LOS F
- Airport Blvd. / San Mateo Avenue / Produce Avenue (Signal) LOS E

Intersection Signalization Needs

The following unsignalized intersection would <u>not</u> have year 2015 Base Case volumes meeting or exceeding peak hour signal warrant #3 volume criteria levels (see **Table 4**).

• E. Grand Avenue / Roebling Road

Vehicle Queuing

The following off-ramps and/or approaches to adjacent intersections would have 95th percentile year 2035 Base Case queuing exceeding available storage as determined using the Synchro software program (see **Table 18**).

• Airport Boulevard / Grand Avenue

AM Peak Hour: The Airport Boulevard southbound approach left turn movement would have a 95th percentile queue demand greater than available storage.

	AM Pe	ak Hour	PM Pea	ak Hour
Intersection	Base Case	Base Case + Project	Base Case	Base Case + Project
Airport Blvd./Miller/U.S.101 SB Off- Ramp (Signal)	C-27.1 ⁽¹⁾	C-27.1	C-21.1 ⁽¹⁾	C-21.1
Airport Blvd./Grand Ave. (Signal)	F-82.5 ⁽¹⁾	F-83.4	E-62.9 ⁽¹⁾	E-63.4
E. Grand Overcrossing/Dubuque Ave. (Signal)	A-8.3 ⁽¹⁾	A-8.2	B-11.1 ⁽¹⁾	B-11.1
E. Grand Ave. Overcrossing/E. Grand Ave. (Signal)	C-21.2 ⁽¹⁾	C-21.1	B-15.3 ⁽¹⁾	B-15.3
E. Grand Ave./Gateway Blvd. (Signal)	F-133 ⁽¹⁾	F-135	D-54.9 ⁽¹⁾	E-55.4
E. Grand Ave./Forbes Blvd./Harbor Way. (Signal)	D-48.0 ⁽¹⁾	D-50.7	F-91.1 ⁽¹⁾	F-93.0
E.Grand Ave./Roebling Rd.	A-9.9 ⁽²⁾	B-10.3	D-29.0 ⁽²⁾	D-34.1
(Roebling Rd. Stop Sign Controlled)				
S. Airport Blvd./U.S.101 NB Hook Ramps/ Wondercolor (Signal)	E-62.0 ⁽¹⁾	E-62.2	D-48.8 ⁽¹⁾	D-48.9
Gateway Blvd./S. Airport Blvd./Mitchell Ave. (Signal)	B-19.5 ⁽¹⁾	B-19.5	D-35.0 ⁽¹⁾	D-35.0
Airport Blvd./San Mateo Ave./Produce Ave. (Signal)	C-33.5 ⁽¹⁾	C-33.5	E-63.2 ⁽¹⁾	F-64.3

Table 17: Intersection Level of Service – Year 2035 – AM & PM Peak Hours

Bold results = significant project impacts. Base Case + Project. Base Case + Project LOS E or F results not bolded would not be significant since project traffic would not increase Base Case volumes by 2% or more.

⁽¹⁾ Signalized level of service – vehicle control delay in seconds.

⁽²⁾ Unsignalized level of service – vehicle control delay in seconds. Roebling Road stop sign controlled approach.

Year 2000 Highway Capacity Manual Analysis Methodology

Source: Crane Transportation Group

Table 18: 95th Percentile Vehicle Queues – Year 2035Intersections at or Near U.S.101 Interchanges Potentially Impacted by theProject with Signal Timing for Optimized Level of Service

		Year 2035								
	Storage	AM	Peak Hour	PM Peak Hour						
Intersection	Distance*	Base Case	Base Case + Project	Base Case	Base Case + Project					
Airport Blvd./Miller Ave./U.S.101 SB Off										
SB Left/Through	750	268	272	295	295					
Airport Blvd./Grand Ave.	Airport Blvd./Grand Ave.									
SB Left Turn	300	389	396	155	158					
SB Through or SB Through/Right	300	242	242	194	194					
E. Grand Ave./Grand Ave. Overcrossin	g									
NB E. Grand Right Turn Lane	800	350	356	43	43					
NB E. Grand Left Turn Lane	800	156	156	303	303					
S. Airport Blvd./U.S.101 NB On and Oj	ff/Wondercolor L	ane								
EB Left Turn	825	809	813	319	319					
Bolded results = significant project impact. The proposed project would not result in significant impacts to vehicle queuing for any other approach lane or lanes experiencing unacceptable Base Case 95 th percentile queuing as project traffic contributions would be less than 1 percent of the total.										

* Storage and queues—in feet per lane.

Synchro software used for all analysis unless noted.

Source: Crane Transportation Group

The following off-ramps would have year 2035 Base Case queuing extending back to the U.S.101 mainline one or more times during the peak traffic hours as determined using the SIM traffic software program (unless noted).

• U.S.101 Northbound Off-Ramp to E. Grand Avenue / Executive Drive

AM Peak Hour: Backups to mainline.

• U.S.101 Northbound Off-Ramp to S. Airport Boulevard / Wondercolor Lane

AM Peak Hour: Backups to mainline.

• U.S.101 Southbound Off-Ramp to Airport Boulevard / Miller Avenue

AM Peak Hour: Backups to mainline.

The following left turn would have a 95th percentile year 2035 Base Case queuing exceeding the available 75-foot storage as determined using unsignalized intersection turn lane queuing analysis methodology contained in the Institute of Transportation Engineers (ITE) Journal.³

• E. Grand Avenue / Roebling Road (Eastbound Left Turn at unsignalized intersection)

AM Peak Hour: 100-foot queue⁴ PM Peak Hour: 75-foot queue⁴

Off-Ramp Operation at Diverge from Freeway Mainline

No off-ramps would have year 2035 Base Case volumes exceeding 1,500 vehicles/hour on a one-lane off-ramp connection to the freeway mainline or 2,200 to 2,300 vehicles/hour on a two-lane off-ramp connection to the freeway mainline (see **Table 6**).

On-Ramp Operation

No on-ramps would have year 2035 Base Case volumes exceeding ramp capacities (see **Table 7**).

U.S.101 Freeway Mainline Level of Service

The following mainline freeway segment with year 2035 Base Case volumes would be operating at unacceptable Levels of Service (see **Table 19**).

• U.S.101 Southbound (North of the Oyster Point On-Ramp)

AM Peak Hour: LOS F operation.

• U.S.101 Northbound (North of the Oyster Point On-Ramp)

AM Peak Hour: LOS F operation.

³ Estimation of Maximum Queue Lengths at Unsignalized Intersections by John T. Gard, ITE Journal, November 2001.

⁴ Rounded upwards to nearest 25-foot increment.

AM Peak Hour										
	Base Case			Base Case + Project						
Segment	Vol	LOS	Density	Vol LOS		Density				
North of Oyster Point Boulevard										
Northbound	9450	F*	na	9448	F*	na				
Southbound	10035	F*	na	10046	F*	na				
North of I-380										
Northbound	13595	Е	41.2	13608	Е	41.3				
Southbound	8624	С	21.1	8622	С	21.1				
		PI	M Peak Hour							
North of Oyster	Point Bouleva	rd								
Northbound	8901	Е	39.5	8912	Е	39.6				
Southbound	7925	D	31.6	7927	D	31.6				
North of I-380										
Northbound	8764	С	21.4	8767	С	21.4				
Southbound	11891	D	31.6	11905	D	31.7				

Table 19: Year 2035 U.S.101 Freeway Operation – AM & PM Peak Hours

Bold = significant project impact. The proposed project would result in a significant impact to one freeway segment experiencing Base Case LOS F operation as project volume increases would be greater than 1 percent.

* unacceptable freeway segment operating conditions.

LOS = Level of Service

Density is shown in passenger cars per lane per mile.

Year 2000 Highway Capacity Manual Analysis Methodology

Source: Crane Transportation Group

III. IMPACT ANALYSIS

A. SIGNIFICANCE CRITERIA

Standards of Significance have been measured based on CEQA, City of South San Francisco and C/CAG Guideline thresholds. Therefore, project impacts would be significant if they result in any of the following conditions:

- K. The project would exceed 100 net new peak hour trips on the local roadway system (C/CAG criteria only).
- L. Signalized intersection operation and all-way-stop operation would change from Level of Service (LOS) A, B, C or D to LOS E or F and total volumes passing through the intersection would be increased by at least two percent.
- M. Uncontrolled turn movements or stop sign controlled approaches at side street stop sign controlled intersections would change from LOS A, B, C, D or E to LOS F and total volumes passing through the intersection would be increased by at least two percent. Side street criteria are applicable only for stop sign controlled approaches with more than 25 trips during any peak traffic hour.
- N. The proposed project would increase total volumes passing through an intersection by two percent or more with signalized or all-way stop operation already at a Base Case LOS E or F, or when the intersection is side street stop sign controlled and the stop sign controlled Base Case operation is at LOS F (and there are more than 25 vehicles on the stop sign controlled approach).
- O. Project traffic would increase Base Case volumes at an unsignalized intersection to meet peak hour volume signal warrant criteria levels, or to meet pedestrian/school crossing signal warrant criteria levels.
- P. The proposed project would increase traffic entering an unsignalized intersection by two percent or more with Base Case traffic levels already exceeding peak hour volume signal warrant criteria levels.
- Q. Project traffic would increase acceptable Base Case 95th percentile vehicle queuing on a freeway off-ramp and/or also on the approaches to adjacent intersections leading away from off-ramp intersections to unacceptable levels (as determined by the Synchro software program), or if Base Case 95th percentile queuing on the freeway off-ramps or on the approaches to adjacent intersections leading away from off-ramp intersections is already projected at unacceptable lengths, the project would increase queuing volumes by one percent or more.

- R. Project traffic results in queues exceeding off-ramp storage capacity based upon SIM traffic software evaluation. If base case traffic already exceeds the storage capacity of the off-ramp, then a one-percent addition in traffic due to the project is considered a significant impact.
- S. Project traffic would degrade operation of the U.S. 101 freeway or freeway ramps from LOS E to LOS F with at least a one percent increase in volume, or would increase volumes by more than one percent on a freeway segment or a freeway ramp with Base Case LOS F operation.
- T. If on-site circulation would be confusing to drivers and result in excessive traffic flow through various parts of the project site.
- U. Project development or project traffic would produce a detrimental impact to local transit or shuttle service.
- V. If, in the opinion of the registered traffic engineer conducting the EIR analysis, a significant traffic, pedestrian or bicycle safety concern would be created or worsened.

B. PROJECT TRIP GENERATION

Table 20 shows that by 2015 a total of 105,536 square feet of research and development uses would be likely to generate 50 inbound and 11 outbound trips during the AM peak hour, with 8 inbound and 42 outbound trips during the PM peak hour. This assumes a 20 percent reduction in peak hour trips due to a moderate TDM program and R&D uses. By 2035, a more intense TDM program would be expected to reduce peak hour trip generation by 25 percent and result in 45 inbound and 10 outbound trips during the AM peak hour, with 7 inbound and 38 outbound trips during the PM peak hour.

As shown in **Table 21**, after allowance for traffic associated with existing uses on the project site that will be removed by 2015, the proposed project would result in 16 inbound and a reduction of 4 outbound net new trips on the local circulation system during the AM peak hour, with 8 inbound and 39 outbound net new trips on the local circulation system during the PM peak hour. By 2035, net new trip generation due to the project would be 31 inbound and a reduction of 5 outbound trips during the AM peak hour, with 7 inbound and 35 outbound trips during the PM peak hour.

Table 20: 328 Roebling Road Trip Generation 100% R&D, ITE/TJKM Trip Rates with TDM Adjustments

		AM PEAK HOUR TRIPS				PM PEAK HOUR TRIPS			
	SIZE	INBOUND OUTBOU		OUND	INBOUND		OUTBOUND		
USE	(SQ.FT.)	RATE	VOL	RATE	VOL	RATE	VOL	RATE	VOL
R&D (20% TDM Red)	105,536	.47	50	.10	11	.07	8	.40	42
		61					5	50	

YEAR 2015

YEAR 2035

		AN	AM PEAK HOUR TRIPS				PM PEAK HOUR TRIPS			
	SIZE	INBOUND OUTBOUND		INBOUND		OUTBOUND				
USE	(SQ.FT.)	RATE	VOL	RATE	VOL	RATE	VOL	RATE	VOL	
R&D (25% TDM Red)	105,536	.43	45	.09	10	.06	7	.36	38	
		55					Z	15		

Source: Crane Transportation Group

Table 21: 328 Roebling Road Net New Trip Generation After Removal of Existing Site Activity Trips

	AM PEAK HOUR TRIPS		PM PEAK HOUR TRIPS		
	IN	OUT	IN	OUT	
Proposed Project Trip Generation – 100% R&D	50	11	8	42	
Existing Site Use Trip Generation	(-14)	(-15)	0	(-3)	
(To be Eliminated)					
Net New Trip Generation from Project Site	36	(-4)	8	39	

2015

2035

	AM PEAK HO	UR TRIPS	PM PEAK HOUR TRIPS		
	IN	OUT	IN	OUT	
Proposed Project Trip Generation – 100% R&D	45	10	7	38	
Existing Site Use Trip Generation	(-14)	(-15)	0	(-3)	
(To be Eliminated)					
Net New Trip Generation from Project Site	31	(-5)	7	35	

Source: Crane Transportation Group

C. PROJECT TRIP DISTRIBUTION

Project traffic was distributed to the regional roadway network based upon East of 101 development traffic patterns contained in the April 2001 Draft SEIR for the South San Francisco General Plan Amendment and Transportation Demand Ordinance, the 2008 Genentech Corporate Facilities Master EIR and recent traffic modeling for the East of 101 Traffic Modeling update traffic study (see **Table 22**). Existing or year 2015 AM and PM peak hour project traffic is shown distributed to the local roadway network in **Figures 12** and **13**, with **Figures 14** and **15** presenting resultant AM and PM peak hour Existing + Project volumes, and **Figures 16** and **17** presenting year 2015 AM and PM peak hour Base Case + Project volumes at major intersections. **Figure 18** presents year 2015 AM and PM peak hour volumes at project driveways. Year 2035 AM and PM peak hour Project traffic is shown distributed to the local roadway network at major intersections. **Figures 19** and **20**, with **Figures 21** and **22** presenting resultant year 2035 AM and PM peak hour Project volumes at major intersections. **Figures 19** and **20**, with **Figures 21** and **22** presenting resultant year 2035 AM and PM peak hour Project volumes at major intersections. **Figures 19** and **20**, with **Figures 21** and **22** presenting resultant year 2035 AM and PM peak hour volumes at major intersections. **Figure 19** and **20**, with **Figures 21** and **22** presenting resultant year 2035 AM and PM peak hour volumes at major intersections. **Figure 23** presents year 2035 AM and PM peak hour volumes at Project volumes at Project volumes at major intersections.

	Year	2015	Year 2035		
	AM Peak PM Peak		AM Peak	PM Peak	
Direction	Hour	Hour	Hour	Hour	
U.S.101 North/San Francisco / Brisbane	37	35	34	32	
U.S.101 South ⁽¹⁾	48	48	48	48	
South San Francisco (central area)	6	6	6	6	
Daly City/Colma via Sister Cities Blvd.	6	6	6	6	
Local East of U.S.101	3	5	6	8	
TOTAL	100%	100%	100%	100%	

Table 22: Project Traffic Distribution

⁽¹⁾ Also includes use of S. Airport Blvd. to/from I-380 interchange.

Sources: City of South San Francisco, Draft Supplemental Environmental Impact Report, South San Francisco General Plan Amendment and Transportation Demand Management Ordinance, April 2001 and TJKM Traffic Modeling for 2010 East of 101 Capital Improvement Program Fee Update Traffic Study.

D. ON-SITE CIRCULATION AND ACCESS

Project Access

The Project would be accessed via one driveway connection to East Grand Avenue and two driveway connections to Roebling Road. AM and PM peak hour turn movement projections are presented in **Figures 18** and **23** for 2015 and 2035 traffic volumes, respectively. The proposed driveway along East Grand Avenue would allow westbound right in/right out movements only. All driveways along Roebling Road would allow all in and outbound movements, but due to the cul-de-sac would just experience right turn inbound and left turn outbound movements.

Impact 1:Site lines at East Grand Avenue Driveway. The Project's driveway
connection to East Grand Avenue would be located about 200 feet east of
the Forbes Boulevard / Roebling Road intersection. Sight lines at the
Project's only driveway connection along East Grand Avenue, where
right turns only would be allowed, would be at least 800 feet to the east (to
see westbound traffic). Minimum stopping sight distance for a vehicle
speed of 40 miles per hour (five miles greater than the posted speed limit)
would be 305 feet. Therefore, sight lines are acceptable at this location.

This would be a *less-than-significant* impact.

Mitigation Measure 1:

No mitigation required.

Impact 2: Sight Lines at Roebling Road Driveways. Roebling Road is straight and level along its 600-foot length adjacent to the Project. Project driveways would be located along the east side of the street about 300 feet and 600 feet from East Grand Avenue. Speeds along Roebling Road are now 25 miles per hour or less and would be expected to remain at this level with the Project. Minimum stopping sight distance for a vehicle speed of 25 miles per hour would be 155 feet. Therefore, sight lines are acceptable at these driveways.

This would be a *less-than-significant* impact.

Mitigation Measure 2:

No mitigation required.

Internal Circulation

Impact 3: Internal Vehicular Circulation. The internal circulation plan as shown on the 7/27/07 site plan by DES Architects / Engineers appears acceptable. Each Project driveway along Roebling Road would be channelized at least 20 feet internal to the site, with the East Grand Avenue driveway being channelized at least 35 feet internal to the parking lot. In addition, all surface parking aisles are shown to be 25 feet or greater in width as are all parking garage aisles, which meets City code criteria and good traffic engineering practice.

This would be a *less-than-significant* impact.

Mitigation Measure 3:

No mitigation required.

Impact 4:Internal Pedestrian Circulation. Internal walkways are shown on the site
plan connecting all buildings and connecting the buildings to the
sidewalks along Roebling Road and East Grand Avenue.

This would be a *less-than significant* impact.

Mitigation Measure 4:

No mitigation required.

E. RAIL SAFETY

There is an at grade railroad crossings near the Project site running diagonally across the East Grand Avenue / Forbes Boulevard / Harbor Way intersection. No gates or lights are provided at the East Grand Avenue / Forbes Boulevard / Harbor Way intersection crossing.

Impact 5:Grade Crossing Approaches Missing Signing and Pavement Striping.
The State Public Utilities Commission (September 26, 2006 letter to City
of South San Francisco) has noted in a recent inspection that the East
Grand Avenue / Forbes Boulevard / Harbor Way intersection grade
crossing is not up to minimum standards on one or more approaches for
required advanced warning signing and pavement striping (i.e. R15-1 and
W-10-1 signs as well as RxR pavement striping). This results in an
existing safety concern that would be aggravated by the addition of Project
traffic.

This would be a *significant* impact.

Mitigation Measure 5:

Impacts to Grade Crossing Approach Signing & Pavement Striping. The Project shall provide a fair share contribution towards all needed signs and pavement markings on the approaches to the East Grand Avenue / Forbes Boulevard / Harbor Way intersection "at grade railroad crossing" to meet minimum State Public Utilities Commission requirements as detailed in the 2003 Manual of Uniform Traffic Control Services by the Federal Highway Commission.

Impact reduced to a *less-than-significant* level.

F. EXISTING + PROJECT IMPACTS

Impact 6: Existing + Project Intersection Level of Service (see Table 3)

The addition of project traffic would not degrade acceptable existing AM or PM peak hour intersection level of service to unacceptable levels at any analyzed location.

This would be a *less-than-significant* impact.

Mitigation Measure 6:

No mitigation required.

Impact 7:Existing + Project Intersection Signalization Needs (see Table 4)

The addition of project traffic would <u>not</u> increase existing volumes at the E. Grand Avenue / Roebling Road intersection to meet peak hour signal warrant #3 criteria levels.

This would be a *less-than-significant* impact.

Mitigation Measure 7:

No mitigation required.

Impact 8:Existing + Project 95th Percentile Vehicle Queuing (see Table 5)

The addition of project traffic would not degrade acceptable existing AM or PM peak hour vehicle queuing at any signalized intersection to unacceptable lengths. However, project traffic would significantly degrade operation at one signalized location with unacceptable existing queuing.

95th Percentile Vehicle Queuing. Airport Blvd. left turn on the southbound approach to Grand Avenue

AM Peak Hour: The project would increase existing volumes by 4.2 percent in a turn lane where existing traffic 95th percentile queuing is already exceeding available storage between the Grand Avenue and Miller Avenue / U.S.101 Southbound Off-Ramp intersections.

The addition of project traffic would degrade existing acceptable queuing in the left turn lane on the approach to the one unsignalized intersection evaluated in this study to an unacceptable storage demand.

95th Percentile Vehicle Queuing. E. Grand Avenue left turn on the eastbound approach to Roebling Road

AM Peak Hour: The addition of project traffic would increase the storage demand from 55 up to 100 feet in the 75-foot-long left turn lane on the eastbound E. Grand Avenue approach to the unsignalized Roebling Road intersection.

This would be a *significant* impact.

Mitigation Measure 8:

Airport Boulevard / Grand Avenue (see Figure 24).

• Adjust signal timing.

Resultant AM Peak Hour Operation: Southbound 95th percentile left turn lane queue reduced to 327 feet, which is less than the existing queue of 332 feet.

E. Grand Avenue / Roebling Road (see Figure 24).

- Extend the left turn lane on the eastbound E. Grand Avenue approach to Roebling Road from 75 feet up to at least 125 feet. This will require elimination of the short left turn lane on the westbound E. Grand Avenue approach to the driveway serving the western 250 E. Grand Avenue parking lot. Based upon counts conducted several years ago at this driveway by Crane Transportation Group, there are very few drivers making this westbound left turn. Also, they have easy alternate routes to access this parking lot.
- This improvement is not included in the East of 101 Transportation Improvement Program and will not be funded via the Project's traffic impact fee contribution for this program.

Impact reduced to a *less-than-significant* level.

Impact 9:Existing + Project U.S.101 Off-Ramp Operation (see Table 6)

The addition of project traffic would not increase existing AM or PM peak hour off-ramp volumes above acceptable diverge capacity levels at any analyzed location. At the one analyzed off-ramp where existing AM peak hour volumes already exceed capacity limits (U.S.101 Northbound Off-Ramp to E. Grand Avenue / Executive Drive), project traffic would
increase existing AM peak hour off-ramp volumes by less than 1.0 percent (by only 0.6 percent – an increase from 1,618 up to 1,628 vehicle per hour).

This would be a *less-than-significant* impact.

Mitigation Measure 9:

No mitigation required.

Impact 10: Existing + Project U.S.101 On-Ramp Operation (see Table 7)

The addition of project traffic would not increase existing AM or PM peak hour on-ramp volumes above acceptable capacity levels at any analyzed location.

This would be a *less-than-significant* impact.

Mitigation Measure 10:

No mitigation required.

Impact 11: Existing + Project U.S.101 Freeway Mainline Operation (see Table 9)

The addition of project traffic would not degrade acceptable existing AM or PM peak hour U.S.101 mainline operation in South San Francisco to unacceptable levels.

This would be a *less-than-significant* impact.

Mitigation Measure 11:

No mitigation required.

G. YEAR 2015 BASE CASE + PROJECT IMPACTS

Impact 12:2015 Intersection Level of Service (see Table 13)

The addition of project traffic would not degrade acceptable existing AM or PM peak hour intersection levels at any analyzed location. Also, project traffic would not increase volumes by more than 2 percent at locations with unacceptable Base Case operation.

This would be a *less-than-significant* impact.

Mitigation Measure 12:

No mitigation required.

Impact 13: 2015 Intersection Signalization Needs (see Table 4)

The analysis concluded that the **East Grand Avenue / Roebling Road** unsignalized intersection would receive a significant signal warrant impact due to the addition of Project traffic to year 2015 Base Case PM peak hour volumes. Volumes would be increased above peak hour signal warrant criteria levels due to the addition of project traffic.

This would be a *significant* impact.

Mitigation Measure 13:

E. Grand Avenue / Roebling Road. (see **Table 23** and **Figure 25**) The following improvements would mitigate the project-specific impacts. These improvements are not currently included as part of the East of 101 Transportation Improvement Program and will not be funded via the Project's traffic impact fee contribution to this program.

- 1. Provide a fair share contribution towards signalizing the intersection and coordinating operation with the signal at East Grand Avenue / Forbes Boulevard / Harbor Way.
- Lengthen the left turn lane on the eastbound East Grand Avenue intersection approach from 75 feet up to about 125 feet. In conjunction with this measure, lengthen the single left turn lane on the westbound E. Grand Avenue approach to the Forbes/Harbor intersection to at least 225 feet. Prohibit left turns to/from all driveways along E. Grand Avenue between these two locations.

Resultant 2015 Base Case + Project Signalized Operation:

AM Peak Hour: LOS B-11.5 seconds control delay

PM Peak Hour: LOS B-11.9 seconds control delay

These improvements are not currently included as part of the East of 101 Transportation Improvement Program and will not be funded via the Project's traffic impact fee contribution to this program.

Table 23: 2015 Base Case + Project Mitigated Level of Service

INTERSECTION	AM PEAK HOUR	PM PEAK HOUR
E. Grand Ave. / Roebling Rd.	B-11.5 ⁽¹⁾ *	B-11.9 ⁽¹⁾ *

* Signalize intersection and lengthen eastbound E. Grand left turn lane to at least 125 feet.

⁽¹⁾ Signalized level of service – seconds control delay.

Year 2000 Highway Capacity Manual Analysis Methodology

Source: Crane Transportation Group

The nearby recently-approved 213 East Grand Avenue project would contribute to the impact at this intersection and require the same mitigation. Whichever project initiates construction first would be solely responsible for implementation of the improvements, and may be reimbursed on a fair-share basis (as determined by the City Engineer) by the other project if/when it proceeds.

Mitigation Measure 13 would reduce the impact at this location to a *less-than-significant* level through implementation of physical improvements that will improve the functioning of the intersection in compliance with City standards.

Impact 14:2015 95th Percentile Vehicle Queuing (see Table 14)

The addition of project traffic would not degrade acceptable existing AM or PM peak hour vehicle queuing at signalized intersections to unacceptable lengths. However, project traffic would significantly degrade operation at one signalized location with unacceptable existing queuing.

95th Percentile Vehicle Queuing. Airport Blvd. left turn on southbound approach to Grand Avenue

AM Peak Hour: The project would increase 2015 Base Case volumes by 3.0 percent in a turn lane where existing traffic 95th percentile queuing would already be exceeding available storage between the Grand Avenue and Miller Avenue / U.S.101 Southbound Off-Ramp signalized intersections.

The addition of project traffic would increase the already unacceptable 2015 Base Case queuing demand in the left turn lane on the approach to the one unsignalized intersection evaluated in this study.

95th Percentile Vehicle Queuing. E. Grand Avenue left turn on the eastbound approach to Roebling Road

AM Peak Hour: The Project would increase volumes by 23 percent in the left turn lane on the E. Grand Avenue approach to the unsignalized Roebling Road at a location with unacceptable Base Case 95th percentile queuing. The left turn lane queue at an unsignalized intersection would be extended from about 100 up to 125 feet in a location with only 75 feet of storage.

This would be a *significant* impact.

Mitigation Measure 14:

Airport Boulevard / Grand Avenue (see Figure 25).

• Adjust signal timing.

Resultant AM Peak Hour Operation: Southbound 95th percentile left turn lane queue reduced to 376 feet, which is less than the 2015 Base Case queue of 390 feet.

Impact reduced to a *less-than-significant* level.

E. Grand Avenue / Roebling Road (see Figure 25).

• Extend the left turn lane on the eastbound E. Grand Avenue approach to Roebling Road from 75 feet up to at least 125 feet. This will require elimination of the short left turn lane on the westbound E. Grand Avenue approach to the driveway serving a 250 E. Grand Avenue parking lot. Based upon counts conducted several years ago at this driveway by Crane Transportation Group, there are very few drivers making this westbound left turn. Also, they have easy alternate routes to access this parking lot.

This improvement is not included in the East of 101 Transportation Improvement Program and will not be funded via the Project's traffic impact fee contribution to this program. This measure may also be constructed in conjunction with Mitigation Measure 13, signalizing the intersection. The nearby recently-approved 213 East Grand Avenue project would contribute to the impact at this intersection and require the same mitigation. Whichever project initiates construction first would be solely responsible for implementation of the improvements, and may be reimbursed on a fair-share basis (as determined by the City Engineer) by the other project if/when it proceeds.

Mitigation Measure 14 would reduce the impact at this location to a *less-than-significant* level through implementation of physical improvements that will improve the functioning of the intersection in compliance with City standards.

Impact 15: 2015 U.S.101 Off-Ramp Operation (see Table 6)

The addition of project traffic would not increase existing AM or PM peak hour off-ramp volumes above acceptable diverge capacity levels at any analyzed location.

This would be a *less-than-significant* impact.

Mitigation Measure 15:

No mitigation required.

Impact 16:2015 U.S.101 On-Ramp Operation (see Table 7)

The addition of project traffic would not increase existing AM or PM peak hour on-ramp volumes above acceptable capacity levels at any analyzed location.

This would be a *less-than-significant* impact.

Mitigation Measure 16:

No mitigation required.

Impact 17:2015 U.S.101 Freeway Mainline Operation (see Table 15)

The addition of project traffic would not degrade acceptable existing AM or PM peak hour U.S.101 mainline operation in South San Francisco to unacceptable levels.

This would be a *less-than-significant* impact.

Mitigation Measure 17:

No mitigation required.

H. YEAR 2035 BASE CASE + PROJECT IMPACTS

Impact 18:2035 Intersection Level of Service (see Table 17)

The addition of project traffic would not degrade acceptable existing AM or PM peak hour intersection level of service to unacceptable levels at any analyzed location. Also, project traffic would not increase volumes by more than 2 percent at locations with unacceptable Base Case operation.

This would be a *less-than-significant* impact.

Mitigation Measure 18:

No mitigation required.

Impact 19:2035 Intersection Signalization Needs.

The analysis concluded that the **East Grand Avenue / Roebling Road** unsignalized intersection would receive a significant signal warrant impact due to the addition of Project traffic to year 2035 Base Case PM peak hour volumes. Volumes would be increased to borderline signal warrant criteria levels.

This would be a *significant* impact.

Mitigation Measure 19:

E. Grand Avenue / Roebling Road. (see **Table 24** and **Figure 26**) The following improvements would mitigate the project-specific impacts. These improvements are not currently included as part of the East of 101 Transportation Improvement Program and will not be funded via the Project's traffic impact fee contribution to this program.

- 1. Signalize the intersection and coordinate operation with the signal at East Grand Avenue / Forbes Boulevard / Harbor Way.
- Lengthen the left turn lane on the eastbound East Grand Avenue intersection approach from 75 feet up to at least 125 feet. In conjunction with this measure, lengthen the dual left turn lanes on the westbound E. Grand Avenue approach to the Forbes/Harbor intersection to at least 275 feet. Prohibit left turns to/from all driveways along E. Grand Avenue between these two intersections.

Table 24: 2035 Base Case + Project Mitigated Level of Service

INTERSECTION	AM PEAK HOUR	PM PEAK HOUR
E. Grand Ave. / Roebling Rd.	C-33.8 ⁽¹⁾ *	A-8.8 ⁽¹⁾ *

* Signalize intersection and lengthen eastbound E. Grand left turn lane to at least 125 feet.

⁽¹⁾ Signalized level of service – seconds control delay.

Year 2000 Highway Capacity Manual Analysis Methodology

Source: Crane Transportation Group

Resultant Base Case + Project Signalized Operation:

AM Peak Hour: LOS C-33.8 seconds control delay

PM Peak Hour: LOS A-8.8 seconds control delay

The improvements at the E. Grand / Roebling Road intersection are not currently included as part of the East of 101 Transportation Improvement Program and will not be funded via the Project's traffic impact fee contribution to this program.

The recently-approved 213 East Grand Avenue project proposal would contribute to the impact at this intersection and require the same mitigation. Whichever project initiates construction first would be solely responsible for implementation of the improvements, and may be reimbursed on a fair-share basis (as determined by the City Engineer) by the other project if/when it proceeds.

Mitigation Measure 19 would reduce the impact at this location to a *less-than-significant* level through implementation of physical improvements that will improve the functioning of the intersection in compliance with City standards.

Impact 20:2035 95th Percentile Vehicle Queuing (see Table 18)

The addition of project traffic would not degrade acceptable existing AM or PM peak hour vehicle queuing at signalized intersections to unacceptable lengths. However, project traffic would significantly degrade operation at one signalized location with unacceptable existing queuing.

95th Percentile Vehicle Queuing. Airport Blvd. left turn on southbound approach to Grand Avenue

AM Peak Hour: The project would increase 2035 Base Case volumes by 1.6 percent in a turn lane where existing traffic 95th percentile queuing would already be exceeding available storage between the Grand Avenue and Miller Avenue / U.S.101 Southbound Off-Ramp signalized intersections.

The addition of project traffic would increase the already unacceptable 2035 Base Case queuing demand in the left turn lane on the approach to the one unsignalized intersection evaluated in this study.

95th Percentile Vehicle Queuing. E. Grand Avenue left turn on the eastbound approach to Roebling Road

AM Peak Hour: The Project would increase volumes by 22 percent in the left turn lane on the E. Grand Avenue approach to the unsignalized Roebling Road at a location with unacceptable Base Case 95th percentile queuing. The left turn lane queue at an unsignalized intersection would be extended from about 100 up to 125 feet in a location with only 75 feet of storage.

This would be a *significant* impact.

Mitigation Measure 20:

Airport Boulevard / Grand Avenue (see Figure 26)

• Adjust signal timing.

Resultant AM Peak Hour Operation: Southbound 95th percentile left turn lane queue reduced to 381 feet, which is less than the 2035 Base Case queue of 398 feet.

Impact reduced to a *less-than-significant* level.

E. Grand Avenue / Roebling Road (see Figure 26)

• Extend the left turn lane on the eastbound E. Grand Avenue approach to Roebling Road from 75 feet up to at least 125 feet. This will require elimination of the short left turn lane on the westbound E. Grand Avenue approach to the driveway serving a 250 E. Grand Avenue parking lot. Based upon counts conducted several years ago at this driveway by Crane Transportation Group, there are very few drivers

making this westbound left turn. Also, they have easy alternate routes to access this parking lot.

• This improvement is not included in the East of 101 Transportation Improvement Program and will not be funded via the Project's traffic impact fee contribution to this program. This measure may also be constructed in conjunction with Mitigation Measure 19, signalizing the intersection.

The nearby recently-approved 213 East Grand Avenue project would contribute to the impact at this intersection and require the same mitigation. Whichever project initiates construction first would be solely responsible for implementation of the improvements, and may be reimbursed on a fair-share basis (as determined by the City Engineer) by the other project if/when it proceeds.

Mitigation Measure 20 would reduce the impact at this location to a *less-than-significant* level through implementation of physical improvements that will improve the functioning of the intersection in compliance with City standards.

Impact 21: 2035 U.S.101 Off-Ramp Operation (see Table 6)

The addition of project traffic would not increase existing AM or PM peak hour off-ramp volumes above acceptable diverge capacity levels at any analyzed location.

This would be a *less-than-significant* impact.

Mitigation Measure 21:

No mitigation required.

Impact 22: 2035 U.S.101 On-Ramp Operation (see Table 7)

The addition of project traffic would not increase existing AM or PM peak hour on-ramp volumes above acceptable capacity levels at any analyzed location.

This would be a *less-than-significant* impact.

Mitigation Measure 22:

No mitigation required.

Impact 23:2035 U.S.101 Freeway Mainline Operation (see Table 19)

The addition of project traffic would not degrade acceptable existing AM or PM peak hour U.S.101 mainline operation in South San Francisco to unacceptable levels. In addition, the project would only increase volumes by 0.1 percent on the two freeway segments (north of the Oyster Point interchange) experiencing unacceptable Base Case AM peak hour operation.

This would be a *less-than-significant* impact.

Mitigation Measure 23:

No mitigation required.

I. CONGESTION MANAGEMENT AGENCY GUIDELINES

Impact 24: Project Trip Generation Exceeds 100 Trips During Peak Hours. The Project would generate less than 100 net new trips during the AM and PM peak hours in both 2015 and 2035 (in 2015 32 net new two-way (inbound + outbound) trips during the AM peak hour, with 47 net new two-way trips during the PM peak hour; in 2035 26 net new two-way (inbound + outbound) trips during the AM peak hour and 42 net new two-way trips during the PM peak hour (see **Table 21**). The San Mateo City/County Association of Governments (C/CAG) Agency Guidelines for the implementation of the 2003 Draft Congestion Management Program ("C/CAG Guidelines") specifies that local jurisdictions must ensure that the developer and/or tenants will mitigate all new peak hour trips (including the first 100 trips) projected to be generated by the development.

This would be a *less-than-significant* impact.

Mitigation Measure 24:

No mitigation measure required.

































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