

# SAN BRUNO RECREATION AND AQUATIC CENTER PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT



City of San Bruno  
Community and Economic Development Department  
567 El Camino Real  
San Bruno, California 94066

January 2020

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## **NOTICE OF AVAILABILITY**

**Draft Environmental Impact Report for the  
San Bruno Recreation and Aquatic Center Project  
(SCH # 2019080096)  
City of San Bruno**

**Date** January 27, 2020  
**To** Agencies, Organizations, and Interested Parties  
**Subject** Notice of Availability of a Draft Environmental Impact Report

**NOTICE IS HEREBY GIVEN** that the City of San Bruno (City), as the lead agency under the California Environmental Quality Act (CEQA), has prepared a Draft Environmental Impact Report (EIR) for the proposed San Bruno Recreation and Aquatic Center Project (proposed project).

In accordance with Section 15087 of the CEQA Guidelines, the City has prepared this Notice of Availability (NOA) to invite agencies, organizations, and interested parties to provide comments on the Draft EIR.

**Public Review Period:** Monday, January 27, 2020 – Wednesday, March 11, 2020

**Submittal of Comments:** Comments must be received by **5:00 p.m. on March 11, 2020**. Please indicate a contact person for your agency or organization.

Written comments on the Draft EIR may be sent via U.S. mail and addressed to:

Darcy Smith, Community and Economic Development Director  
City of San Bruno Community Development Department  
Attn: Darcy Smith  
567 El Camino Real, San Bruno, CA 94066.  
Comments may also be sent via email to: [dsmith@sanbruno.ca.gov](mailto:dsmith@sanbruno.ca.gov)

**Agencies:** The City requests your agency's views of the analysis within the Draft EIR regarding information relevant to your agency's statutory responsibilities in connection with the proposed project, Section 15086 of the CEQA Guidelines. Your agency may need to use the EIR prepared by the City when considering any permits or other approvals that your agency must issue for the proposed project.

**Project Location:** The approximately 5.6-acre project site is generally situated in the western and northern portion of the existing San Bruno City Park in the City of San Bruno (City), San Mateo County. The approximately 29.09-acre park (Assessor's Parcel Number [APN] 020-320-030) is located at 251 City Park Way and is bound by Crystal Springs Road to the north, residential uses and Cypress Avenue to the east, residential, public, and institutional uses to the south, and the San Bruno Senior Center and Junipero Serra Park to the west. The site itself is currently developed with the existing San Bruno Veterans Memorial Recreation Center (Veterans Memorial building), San Bruno Park Pool, Rotary Pavilion, and portions of the channelized El Zanjon Creek with five existing crossings.

**Project Description:** The proposed project would include the following components: 1) demolition of the existing Veterans Memorial recreation building and pool; 2) construction of a new San Bruno Recreation and Aquatics Center (SBRAC); 3) the reconfiguration of adjacent existing parking areas and roadways within the park; and 4) the relocation of the existing channelized creek within a portion of the park.

The new SBRAC would be constructed in generally the same location as the existing Veterans Memorial recreation building; however, it would have a larger footprint. The SBRAC would be two stories in height and approximately 47,000 square feet in size. The first floor of the new SBRAC would include space for a community lounge, lobby, gymnasium, an indoor pool, three classrooms, City staff offices, a Police substation, lockers, and storage and service areas. The second floor would include space for a community hall, group exercise room, walking track, fitness/cardio/weights and conference room. Similar to the existing building, the proposed building would be designed to operate as an emergency resource center and would either include a permanent generator or space for a portable emergency generator. An outdoor pool would be constructed in a later phase of the project. An outdoor plaza would also be located along City Park Way. The existing parking lot adjacent to the existing Veterans Memorial recreation building would be reconfigured by separating the parking from City Park Way, creating a designated parking lot and separate park drive. A portion of the channelized creek running through the park would be relocated in order to accommodate the parking lot reconfiguration.

**Significant Environmental Effects:** The proposed project would result in potentially significant impacts related to: Biological Resources; Cultural Resources; Transportation; Air Quality; Noise; Geology and Soils; Hazards and Hazardous Materials; and Hydrology and Water Quality. All impacts, with the exception of Cultural Resources, would be reduced to less-than-significant levels through implementation of identified mitigation measures. A significant unavoidable impact related to the demolition of the existing Veterans Memorial building, which is considered to be a historic resource, is identified in the Draft EIR.

**Hazardous Materials and Hazardous Waste Sites:** The project site is not located on any list of hazardous materials waste sites compiled pursuant to Section 65962.5 of the Government Code.

**Document Availability:** This Draft EIR, all documents incorporated by reference, and additional information regarding the proposed project can be accessed at the following website:  
[https://www.sanbruno.ca.gov/gov/city\\_departments/commdev/planning\\_division/development\\_activity/san\\_bruno\\_recreation\\_and\\_aquatic\\_center.htm](https://www.sanbruno.ca.gov/gov/city_departments/commdev/planning_division/development_activity/san_bruno_recreation_and_aquatic_center.htm)

The proposed project's environmental file is also available for public review at the following locations during regular business hours:

City of San Bruno Community Development Department  
567 El Camino Real, San Bruno, CA 94066  
Monday through Friday: 8:00 a.m. to 5:00 p.m.

City of San Bruno Public Library  
701 Angus Ave W, San Bruno, CA 94066  
Monday through Thursday: 10:00 a.m. to 8:00 p.m.  
Friday: 10:00 a.m. to 6:00 p.m.  
Saturday: 10:00 a.m. to 5:00 p.m.

If you require additional information, please contact Darcy Smith, Community and Economic Development Director, at (650) 616-7039 or by email at [dsmith@sanbruno.ca.gov](mailto:dsmith@sanbruno.ca.gov).

Darcy Smith  
Darcy Smith  
Community and Economic Development Director

January, 23, 2020  
Date

**SAN BRUNO RECREATION AND  
AQUATIC CENTER PROJECT  
DRAFT ENVIRONMENTAL IMPACT REPORT**

Prepared by:

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Project No. GRP1803

**LSA**

January 2020

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- C: CREEK ASSESSMENT
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## LIST OF ABBREVIATIONS AND ACRONYMS

°C	Celsius
°F	Fahrenheit
ABAG	Association of Bay Area Governments
ACMs	asbestos-containing materials
AIA	American Institute of Architects
AIAs	Airport Influence Areas
ALUC	Airport Land Use Committee
ALUCP	Airport Land Use Compatibility Plan
AP Act	Alquist-Priolo Earthquake Fault Zoning Act
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
bgs	below ground surface
BMPs	Best Management Practices
C/CAG	City/County Association of Governments
CA MUTCD	California Manual of Uniform Traffic Control Devices
CAAQS	California Ambient Air Quality Standards
CAG	County Association of Governments
CAL Fire	California Department of Forestry and Fire Protection
Cal/OSHA	California Occupational Safety and Health Administration
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
Caltrans	California Department of Transportation

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CARB	California Air Resources Board
CARE	Community Air Risk Evaluation
CBC	California Building Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CGS	California Geological Survey
City	City of San Bruno
CMA	Congestion Management Agency
CMP	Congestion Management Program
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
Corps	U.S. Army Corps of Engineers
CPTs	cone penetrometer tests
CRHR	California Register of Historical Resources
CTC	California Transportation Commission
CTR	California Toxics Rule
dB	decibel

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dba	A-weighted decibels
DDT	dichlorodiphenyltrichloroethane
DOT	U.S. Department of Transportation
DTSC	Department of Toxic Substance Control
DWR	California Department of Water Resources
EIR	Environmental Impact Report
EOP	Emergency Operations Plan
EPA	Environmental Protection Agency
ESA	Federal Endangered Species Act
ESCP	Erosion and Sediment Control Plan
ESLs	Environmental Screening Levels
FAA	Federal Aviation Administration
FCAA	Federal Clean Air Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIP	Federal Implementation Plan
FIRM	Flood Insurance Rate Map
FTA	Federal Transit Administration
GHG	greenhouse gas
GSAs	groundwater sustainability agencies
GWMP	Groundwater Management Plan
HABS	Historic American Building Survey
HAER	Historic American Engineering Record
HALS	Historic American Landscapes Survey

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HBMS	Hazardous Building Materials Survey
HCM	Highway Capacity Manual
HMBPs	Hazardous Materials Business Plans
HRA	Health Risk Assessment
HRE	Historical Resource Evaluation
HVAC	heating, ventilation, and air conditioning
I-280	Interstate 280
I-380	Interstate 380
ITE	Institute of Transportation Engineers
LBP	lead-based paints
LCP	lead-containing paint
Ldn	Day-night equivalent noise level
Leq	continuous sound level
LID	low impact development
Lmax	maximum noise level
LTS	less-than-significant impact
MEI	maximally exposed individual
MLD	Most Likely Descendent
MPO	Metropolitan Planning Organization
MRP	Municipal Regional Permit
MS4	Municipal Separate Storm Sewer System
MTC	Metropolitan Transportation Commission
MUTCD	Manual on Uniform Traffic Control Devices
MW	moment magnitude

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NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NEHRP	National Earthquake Hazards Reduction Program
NFIP	National Flood Insurance Program
NO2	nitrogen dioxide
NOI	Notice of Intent
NOP	Notice of Preparation
NOx	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NWIC	Northwest Information Center
O3	ozone
OSHA	Occupational Health and Safety Administration
pavilion	Rotary Pavilion
Pb	lead
PCBs	polychlorinated biphenyls
PG&E	Pacific Gas and Electric
PM	afternoon peak hour (related to traffic)
PM10	respirable particulate matter
PM2.5	fine particulate matter
pool	San Bruno Park Pool
POTWs	publicly owned treatment works
PPV	peak particle velocity
project	San Bruno Recreation and Aquatic Center Project

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RCRA	Resource Conservation and Recovery Act of 1976
Regional Water Board	San Francisco Bay Regional Water Quality Control Board
rms	root mean square
ROG	reactive organic gases
RTP	Regional Transportation Plan
S	significant impact
SamTrans	San Mateo County Transit District
SBCC	San Bruno Community Center
SBCF	San Bruno Community Foundation
SBRAC	San Bruno Recreation and Aquatic Center (proposed project)
SDSs	Safety Data Sheets
SFO	San Francisco International Airport
SGMA	Sustainable Groundwater Management Act
SHMA	Seismic Hazards Mapping Act
SIP	State Implementation Plan
SMCEHS	San Mateo County Environmental Health Services
SMCWPPP	San Mateo County Water Pollution Prevention Program
SO <sub>2</sub>	sulfur dioxide
Sox	sulfur oxides
SR-82	State Route 82
SR-35	State Route 35
SRA	State responsibility areas
SU	significant and unavoidable impact
SWPPP	Stormwater Pollution Prevention Plan

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SWRCB	State Water Resources Board
TACs	toxic air contaminants
TDM	Transportation Demand Management
TIA	Transportation Impact Analysis
TMDL	Total Maximum Daily Load
TPZ	tree protection zone
UCMP	University of California Museum of Paleontology
US 101	U.S. Route 101
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	underground storage tanks
Veterans Memorial building	San Bruno Veteran Memorial Recreation Center
VMT	vehicle miles traveled
WDRs	Waste Discharge Requirements
WHO	World Health Organization
WOB	West-of-Bayshore
WTP	water treatment plant
ZORI	Zones of Required Investigation

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## 1.0 INTRODUCTION

### 1.1 PURPOSE OF THIS EIR

In compliance with the California Environmental Quality Act (CEQA), this Environmental Impact Report (EIR) describes the potential environmental impact of the proposed San Bruno Recreation and Aquatic Center Project (proposed project). The purpose of this EIR is to inform San Bruno decision-makers, responsible agencies, and the general public of the proposed project and the potential environmental impacts of project approval and implementation. This EIR also examines alternatives to the proposed project and recommends mitigation measures to reduce or avoid potentially significant physical impacts.

The City of San Bruno (City) is the CEQA Lead Agency for environmental review. This EIR will be used by the Planning Commission, responsible agencies, and the public in their review of the proposed project and associated approvals, described below and in more detail in Chapter 3.0, Project Description.

### 1.2 PROPOSED PROJECT

The approximately 5.6-acre project site is generally situated in the western and northern portion of the San Bruno City Park in the City of San Bruno, San Mateo County. The approximately 29.09-acre park is located at 251 City Park Way and is bound by Crystal Springs Road to the north, residential uses and Cypress Avenue to the east, residential, public, and institutional uses to the south, and the San Bruno Senior Center and Junipero Serra County Park to the west. The project site itself includes the existing San Bruno Veteran Memorial Recreation Center (Veterans Memorial building) and immediate surroundings, the San Bruno Park Pool (pool), existing roadways and parking areas directly in front of and adjacent to the building, the existing Rotary Pavilion area, and a segment of the channelized El Zanjon creek.

In 2013, consistent with the terms of a settlement agreement between the City and the Pacific Gas & Electric Company (PG&E) in the amount of \$70 million, the City established the independent not-for-profit San Bruno Community Foundation (SBCF) to manage the restitution settlement funds and to oversee use of the funds. Following completion of a broad-based Community Listening Campaign, SBCF identified its intent that \$50 million of the restitution settlement funds would be dedicated for design and construction of one or more community facilities. In February 2017, replacement of the existing Recreation Center and Aquatic Center within San Bruno City Park was identified as one of the community's highest priorities.

The proposed project would include the following components: 1) demolition of the existing Veterans Memorial building and pool; 2) construction of a new 47,000-square-foot San Bruno Recreation and Aquatic Center (SBRAC), future construction of an outdoor pool, and installation of associated water, sewer, and stormwater infrastructure; 3) the reconfiguration of adjacent existing parking areas and roadways within the park; and 4) the relocation of the existing channelized creek within a portion of the park. An existing memorial recognition sculpture and pavilion would also be

removed and relocated. The new SBRAC would include the following uses/programming: indoor and outdoor pools, a gymnasium, community hall, classrooms, fitness/cardio/weights, group exercise room, conference room, lobby/lounge, elevated walking track, City staff offices, and Police substation. The facility would also be used as a temporary emergency resource center, similar to existing conditions. The outdoor pool is proposed to be constructed as part of a later phase of the project.

### 1.3 EIR SCOPE

The City circulated a Notice of Preparation (NOP) for the proposed project on August 5, 2019, to help identify the types of impacts that could result from the proposed project, as well as potential areas of controversy. The NOP was mailed to public agencies, organizations, and individuals who requested to be notified of the potential impacts of the project. Comments on the NOP were received by the City and considered during preparation of the EIR. Copies of the NOP and the comment letters are included in Appendix A.

The following environmental topics are addressed in Chapter 4.0 of this EIR:

1. Biological Resources
2. Cultural Resources
3. Transportation
4. Air Quality
5. Noise
6. Geology and Soils
7. Hazards and Hazardous Materials
8. Hydrology and Water Quality

It has been determined that the following potential effects of the proposed project would be less than significant or have no impact, and therefore these topics are not studied in detail in the Draft EIR: aesthetics; agricultural and forestry resources; energy; greenhouse gas emissions; land use and planning; mineral resources; recreation; population and housing; public services; tribal cultural resources; utilities and service systems; and wildfire. Each of these topic areas is addressed in the Initial Study provided in Appendix B and summarized in Chapter 6.0, CEQA-Required Assessment Conclusions, of this EIR.

## 1.4 REPORT ORGANIZATION

This EIR is organized into the following chapters:

- **Chapter 1.0 – Introduction:** Discusses the overall EIR purpose, provides a summary of the proposed project, describes the EIR scope, and summarizes the organization of the EIR.
- **Chapter 2.0 – Summary:** Provides a summary of the impacts that would result from implementation of the proposed project, describes mitigation measures recommended to reduce or avoid significant impacts, and describes the alternatives to the proposed project.
- **Chapter 3.0 – Project Description:** Provides a description of the project site, the project objectives, the proposed project, and uses of this EIR.
- **Chapter 4.0 – Setting, Impacts, and Mitigation Measures:** Describes the following for each environmental technical topic: existing conditions (setting), potential environmental impacts and their level of significance, and mitigation measures recommended to reduce or avoid identified impacts. Potential adverse impacts are identified by levels of significance, as follows: less-than-significant impact (LTS), significant impact (S), and significant and unavoidable impact (SU). The significance of each impact is categorized before and after implementation of any recommended mitigation measures(s). Cumulative impacts are also addressed.
- **Chapter 5.0 – Alternatives:** Provides an evaluation of three alternatives to the proposed project, including the CEQA-required No Project alternative.
- **Chapter 6.0 – Other CEQA Considerations:** Provides an analysis of effects found not to be significant, growth-inducing impacts, unavoidable significant environmental impacts, and significant irreversible changes.
- **Chapter 7.0 – Report Preparation:** Identifies preparers of the EIR, references used, and the persons and agencies contacted.

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## 2.0 SUMMARY

This chapter provides an overview of the proposed project and the findings outlined in this EIR, including a discussion of alternatives and cumulative project impacts.

### 2.1 PROJECT UNDER REVIEW

This EIR has been prepared to evaluate the environmental consequences of approval and implementation (i.e., construction and operation) of the proposed San Bruno Recreation and Aquatic Center Project (project). The approximately 5.6-acre project site is located at 251 City Park Way in the City of San Bruno, San Mateo County. The project site is located within the approximately 29.09-acre San Bruno City Park, which is bound by Crystal Springs Road to the north, residential uses and Cypress Avenue to the east, residential, public and institutional uses to the south, and the San Bruno Senior Center and Junipero Serra County Park to the west.

The proposed project would include the following components: 1) demolition of the existing Veterans Memorial building and pool; 2) construction of a new 47,000-square-foot San Bruno Recreation and Aquatic Center (SBRAC), future construction of an outdoor pool, and installation of associated water, sewer, and stormwater infrastructure; 3) the reconfiguration of adjacent existing parking areas and roadways within the park; and 4) the relocation of an existing channelized creek (El Zanjon Creek) within a portion of the park.

The new SBRAC would be constructed in generally the same location as the existing Veterans Memorial building; however, it would have a larger footprint. The SBRAC would be two stories in height and approximately 47,000 square feet in size. The first floor of the new SBRAC would include space for a community lounge, lobby, gymnasium, an indoor pool, three classrooms, City staff offices, a Police substation, lockers, and storage and service areas. The second floor would include space for a community hall, group exercise room, walking track, fitness/cardio/weights and conference room. The proposed building would be designed to operate as an emergency resource center and would either include a permanent generator or space for a portable emergency generator. An outdoor pool would be constructed in a later phase of the project. An outdoor plaza would also be located along City Park Way.

The new SBRAC would allow the City to provide approximately 109 hours of weekly recreational programming, 95 hours of weekly programming within the indoor pool facility, and 95 hours of weekly programming within the outdoor pool facility (seasonally).

The existing 73-space parking lot adjacent to the existing Veterans Memorial building would be reconfigured by separating the parking from City Park Way, thus creating a designated parking lot with 71 spaces (for a loss of 2 spaces) and separate park drive.

This reconfiguration would also include the relocation of the channelized creek, as it currently runs through the parking area and adjacent to City Park Way. Relocation would begin just north of the existing pedestrian bridge located directly adjacent to the existing Veterans Memorial building, and would generally be shifted south until it reaches the intersection of City Park Way and Crystal

Springs Road. Currently, the reconfigured creek is planned to be channelized, similar to existing conditions.

## 2.2 POTENTIAL AREAS OF CONTROVERSY

One comment letter regarding the Notice of Preparation (NOP) was received from the Native American Heritage Commission. The concerns expressed in this letter are addressed in Section 3.18, Tribal Cultural Resources of the Initial Study included in Appendix B. The NOP and comment letter are included in Appendix A. No other known areas of controversy have been identified.

## 2.3 SUMMARY OF IMPACTS AND MITIGATION MEASURES

This summary provides an overview of the analysis contained in the Initial Study (included in Appendix B) and Chapter 4.0, Setting, Impacts, and Mitigation Measures of this EIR.

### 2.3.1 Findings of the Initial Study

The Initial Study for the proposed project is included in Appendix B to this EIR. The Initial Study identified either no impact or less than significant impacts related to the following environmental issues:

- Aesthetics
- Agriculture and Forestry Resources
- Energy
- Greenhouse Gas Emissions
- Land Use and Planning
- Mineral Resources
- Population and Housing
- Public Services
- Recreation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire

For a complete description of potential impacts identified in the Initial Study, please refer to the specific discussion in the Initial Study, included as Appendix B to this EIR. Chapter 6.0, Other CEQA Consideration, also includes a summary of the findings for each topic not discussed in the EIR.

The Initial Study identified potential impacts requiring more detailed evaluation related to the following environmental issues, which are further evaluated in Chapter 4.0 of this EIR:

- Biological Resources
- Cultural Resources
- Transportation
- Air Quality
- Noise
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality

### 2.3.2 Significant Impacts

Under CEQA, a significant impact on the environment is defined as "...a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance." Impacts in the following areas would be significant without the implementation of mitigation measures, but would be reduced to a less-than-significant level if the mitigation measures recommended in this report are implemented:

- Biological Resources
- Cultural Resources (archaeological resources and human remains)
- Transportation
- Air Quality
- Noise
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality

### 2.3.3 Significant and Unavoidable Impacts

Development of the proposed project would result in demolition of the existing Veterans Memorial building, which would result in a substantial adverse change on a historical resource, as defined in CEQA Guidelines Section 15064.5. Mitigation Measures CUL-1a, CUL-1b, and CUL-1c would minimize this significant impact; however, the impact would remain significant and unavoidable even after mitigations are implemented as there are no established measures that could adequately replace the loss of a historic building.

### 2.3.4 Cumulative Impacts

CEQA defines cumulative impacts as "two or more individual effects which, when considered together, are considerable, or which can compound or increase other environmental impacts." Section 15130 of the CEQA Guidelines requires that an EIR evaluate potential environmental impacts that are individually limited, but cumulatively significant. These impacts can result from the proposed project when combined with other past, present, or reasonably foreseeable future projects. The cumulative impacts analysis in this Draft EIR is based on information provided by the City on currently planned, approved, or proposed projects primarily located within approximately 1 mile of the project site, unless otherwise noted in the cumulative discussion for each of the topical sections. Refer to Chapter 4.0 for additional discussion.

As discussed in Chapter 4.0 of this EIR, impacts of the proposed project would be individually limited and would not result in cumulatively considerable impacts.

### 2.3.5 Alternatives to the Project

In accordance with CEQA and the CEQA Guidelines (Section 15126.6), an EIR must describe a reasonable range of alternatives to the project, or to the location of the project, that could attain most of the project's basic objectives, while avoiding or substantially lessening any of the significantly adverse environmental effects of the project. The range of alternatives required in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. CEQA states that an EIR should not consider alternatives "whose effect cannot be ascertained and whose implementation is remote and speculative."

The three alternatives to the proposed project that are discussed and analyzed in Chapter 5.0 of this EIR are:

- The **No Project alternative**, which assumes the project site would not be subject to redevelopment, and would generally remain in its existing condition. Existing programming and use of the Veterans Memorial building and pool would not change. Existing roadways and parking areas within City Park would remain and no tree removal would occur. The existing channelized creek would remain in its current condition and alignment.
- The **Existing Creek Alignment alternative**, which assumes that the existing Veterans Memorial Building and pool facility would be demolished and that a new recreation center would be constructed, similar in size to the proposed project. However, the existing alignment of City Park Way and El Zanjon Creek would be maintained. The parking lot adjacent to the existing building would be demolished to accommodate the proposed SBRAC, and the existing angled parking along City Park Way would be retained to provide approximately 46 parking spaces. The parking provided by the project would be reduced by approximately 25 spaces to accommodate the existing alignment of City Park Way and El Zanjon Creek.
- The **Existing Building Reuse alternative**, which assumes that the existing building would be reused with interior improvements and an exterior addition. The existing second-floor gymnasium and the first-floor space underneath it would be retained and repurposed, for reuse of a total of approximately 19,000 square feet of existing space. The remaining portions of the existing building that surround the gymnasium would be demolished and replaced with new construction that would wrap three sides of the existing gymnasium, a total of approximately 30,000 square feet. Spaces in the addition would include program rooms, staff spaces, locker rooms, and a new indoor pool. Similar to the proposed project, this alternative would include the demolition of the existing outside pool facility, realignment of City Park Way and El Zanjon Creek, and the reconfigured parking layout. A new outdoor pool would also be constructed, similar to the proposed project.

Each alternative is compared to the proposed project and discussed in terms of its various mitigating or adverse effects on the environment. Analysis of the alternatives focuses on those topics for which

significant adverse impacts would result from the proposed project. The Existing Creek Alignment alternative is considered to be the environmentally superior alternative.

## 2.4 SUMMARY TABLE

Information in Table 2.A, Summary of Impacts and Mitigation Measures, has been organized to correspond with environmental issues discussed in Chapter 4.0. The table is arranged in four columns: 1) impacts; 2) level of significance without mitigation; 3) mitigation measures; and 4) level of significance with mitigation. Levels of significance are categorized as follows:

SU	Significant and Unavoidable
S	Significant
LTS	Less Than Significant

For a complete description of potential impacts and recommended mitigation measures, please refer to the specific topical discussions in Chapter 4.0.

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**Table 2.A: Summary of Impacts and Mitigation Measures**

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
<b>4.1 BIOLOGICAL RESOURCES</b>			
<p><b>BIO-1:</b> Construction activities could result in direct impacts to California red-legged frog (a California Species of Special Concern) and San Francisco garter snake (a California endangered species).</p>	S	<p><b>BIO-1a:</b> For all ground disturbing activities involving vegetation removal, a qualified biologist familiar with California red-legged frog and San Francisco garter snake shall conduct a preconstruction survey of the work area for these species within 24 hours prior to any vegetation removal or ground-disturbing activities. If any California red-legged frogs or San Francisco garter snakes are found in the work area, construction activities shall not commence until a qualified biologist has verified that the species have left the work area. Both the CDFW and USFWS shall be notified within 24 hours. Relocation shall only be conducted with CDFW and USFWS authorization, and by permitted biologists. Construction activities may not resume until approved by CDFW and USFWS.</p> <p><b>BIO-1b:</b> A worker-training program and construction monitoring shall be performed by a qualified biologist during the initial ground-disturbing activities at the project site. The qualified biologist shall: 1) be familiar with both California red-legged frog and San Francisco garter snake; 2) advise the construction crew that these species could be present on the site and vicinity and discuss their status and the procedure to follow if an individual of either species is suspected to be present (i.e. that all work shall stop immediately in the vicinity of the individual until the species is accurately identified by the qualified biologist); and 3) monitor construction activity to assist the contractor in avoiding impacts to individuals of these species. If an individual of either species is discovered during initial ground-disturbing activity, all work shall stop and the USFWS and CDFW shall be contacted within 24 hours for guidance on how to proceed.</p>	LTS

**Table 2.A: Summary of Impacts and Mitigation Measures**

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
<p><b>BIO-2:</b> Construction of the project could result in direct impacts to Townsend big-eared bat, a California Species of Special Concern.</p>	<p>S</p>	<p><b>BIO-2a:</b> Within 24 hours prior to demolition of structures (including buildings and culverts), and removal of trees, a qualified biologist shall conduct a preconstruction survey of the work area for Townsend big-eared bats. If any Townsend big-eared bats or signs thereof are found in the work area, construction activities shall not commence until a qualified biologist has verified that the animals have left the work area. The CDFW shall be notified within 24 hours and construction activities shall not be resume until approved by CDFW. Relocation shall only be conducted with CDFW authorization, and by permitted biologists.</p> <p><b>BIO-2b:</b> All trees shall be removed in a two-step process. On the first day the branches and trunk shall be cut down. The branches and trunk sections shall be left onsite, undisturbed, until the next day (the second day) when the branches can be chipped and hauled away. This two-step process would allow bats roosting in the trees to escape before chipping of the wood.</p>	<p>LTS</p>
<p><b>BIO-3:</b> The proposed project would realign a segment of El Zanjon Creek, resulting in temporary impacts to regulated waters and the riparian habitat of the creek channel.</p>	<p>S</p>	<p><b>BIO-3a:</b> The City shall apply for a Streambed Alteration Agreement from the CDFW. All measures required by the CDFW as stated in the Streambed Alteration Agreement shall be followed. At a minimum, the following measures shall be implemented:</p> <ul style="list-style-type: none"> <li>• Construction fencing shall be placed around the segments of the creek channel and surrounding trees to be retained as part of the project so that grading and other construction activities do not inadvertently affect these areas.</li> <li>• Work within the stream/riparian corridor shall be confined to the period of June 15 to October 15 to minimize the likelihood for presence of surface flows in the channel. Revegetation may occur at any time. The period for completing work within the creek channel shall be restricted to periods of no stream flow and dry weather.</li> <li>• The City shall enhance or create riparian habitat at a minimum replacement/enhancement-to-loss ratio of 1:1 (i.e., 1 tree replanted per tree removed from the creek corridor). Trees shall be planted along the existing and reconfigured channel. Tree planting shall occur in the fall following the end of construction activities to take advantage of fall and winter rains in establishing the plantings. To ensure a successful</li> </ul>	<p>LTS</p>

**Table 2.A: Summary of Impacts and Mitigation Measures**

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
<i>BIO-3 cont.</i>		<p>revegetation effort, all plants shall be monitored and maintained for 5 years. All planting shall have a minimum of 80 percent survival at the end of 5 years. If this goal is not achieved, the City shall be responsible for replacement planting, additional watering, weeding, invasive exotic eradication, or any other remedial measures, to achieve the performance criteria. Details of the riparian replacement/ enhancement plan and success criteria shall be stipulated in a Mitigation and Monitoring Plan, to be prepared by the City's landscape architect, in consultation with a qualified biologist. This Plan shall be submitted to CDFW as part of the Streambed Alteration Agreement. An annual report documenting compliance with this measure shall be submitted to the CDFW and to the Community Development Department project file.</p> <p><b>BIO-3b:</b> The City shall secure the appropriate permits from and as required by the Corps (Section 404) and Regional Water Quality Control Board (Section 401 Water Quality Certification) and implement all terms of the permits including monitoring and reporting requirements and mitigation requirements. Mitigation for impacts to jurisdictional areas shall be provided at a minimum 1:1 basis (impacted : mitigated).</p> <p><b>BIO-3c:</b> The City shall implement the following water quality protection measures as best management practices during project construction to protect aquatic life in and the water quality of the El Zanjon Creek channel:</p> <ul style="list-style-type: none"> <li>• Materials used for work in and below top-of-bank of the current and the proposed new creek channel shall be non-toxic to aquatic life. Any concrete used in the relocated channel shall be allowed to cure sufficiently (typically 30 to 60 days unless an approved sealant is used) prior to contact with surface waters from the creek to avoid leaching of lime into receiving waters.</li> <li>• All equipment refueling and maintenance shall occur outside the creek channel, and appropriate measures shall be implemented to prevent the discharge of fuels or other contaminants into the stream in the event of spills.</li> <li>• An Erosion and Sediment Control Plan (ESCP) shall be developed, and standard erosion and water quality Best Management Practices (BMPs) shall be implemented.</li> </ul>	

**Table 2.A: Summary of Impacts and Mitigation Measures**

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
<i>BIO-3 cont.</i>		<ul style="list-style-type: none"> <li>• After realignment work is complete, a final clean-up of the work sites shall include removal of all temporary silt fencing, flagging, sandbags, and other refuse generated by the proposed work.</li> <li>• Details of the planting plan and success criteria shall be stipulated in a Mitigation and Monitoring Plan (refer to Mitigation Measure BIO-3a).</li> </ul>	
<p><b>BIO-4:</b> Construction of the proposed project could result in impacts to nesting native birds protected under the federal Migratory Bird Treaty Act and California Fish and Game Code.</p>	S	<p><b>BIO-4:</b> To the extent feasible, initial grading and vegetation removal activities shall occur during the non-nesting season (September 1 to January 31). For any construction activities conducted during the nesting season, a qualified biologist (i.e., experienced in searching for passerine nests) shall conduct a preconstruction nest survey of all trees or other suitable nesting habitat in and within 250 feet of the limits of construction activities. The survey shall be conducted no more than seven days prior to the start of work. If the survey indicates the presence of nesting birds, the biologist shall determine an appropriately sized buffer around the nest in which no work shall occur until the young have successfully fledged. The size of the nest buffer shall be determined by the biologist and shall be based on the nesting species and its sensitivity to disturbance. In general, buffer sizes of up to 250 feet for raptors and 50 feet for other birds should suffice to prevent substantial disturbance to nesting birds, but these buffers may be increased or decreased, as appropriate, depending on the bird species and the level of disturbance anticipated near the nest.</p>	LTS

**Table 2.A: Summary of Impacts and Mitigation Measures**

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
<b>4.2 CULTURAL RESOURCES</b>			
<p><b>CUL-1:</b> Demolition of the Veterans Memorial building would have a substantial adverse change on a historical resource, as defined in CEQA Guidelines Section 15064.5.</p>	S	<p><b>CUL-1a:</b> The City shall retain a historian or architectural historian meeting the Secretary of the Interior’s Qualifications Standards to prepare a historical context report of the Veterans Memorial building. The report shall be done to Level II or higher standards for the National Park Service’s Historic American Building Survey (HABS) documentation and shall generally follow the Outline Format as presented in the HABS History Guidelines issued by the National Park Service. The report shall provide a detailed description of the building and its historical significance within the contexts of the Living Memorial Movement, International/Modern architecture, and local architect William Henry Rowe. Photographs and scaled architectural drawings of the building shall accompany the report (as specified in Mitigation Measures CUL-1b and CUL-1c). The report and associated documentation shall be offered to the appropriate historical archives, including, but not limited to, the San Mateo County History Museum. Based on the curation requirements of the receiving institution, either archival hard copies and/or electronic copies of the report and associated documentation shall be offered to the Northwest Information Center at Sonoma State University, the San Mateo County Historical Association, and the San Bruno Public Library History Collection. The City shall be responsible for ensuring the report, photo-documentation (CUL-1b), and scaled architectural drawings (CUL-1c) are available to the public via the internet for a minimum of 5 years.</p> <p><b>CUL-1b:</b> The City shall retain a professional photographer to complete photo-documentation of the Veterans Memorial building prior to project construction to provide additional descriptive data and a permanent visual record of the resource. The photographer must be familiar with large format architectural photography and have prior demonstrable experience photographing historic buildings and structures. The photo-documentation shall be done according to the National Park Service’s Historic American Building Survey/Historic American Engineering Record/Historic American Landscapes Survey (HABS/HAER/HALS) Photography Guidelines. Photograph views for the data set shall include contextual views; views of each side of the building; interior views, including any original interior features, where possible; oblique views of the building; and detail views of character-defining features identified in the Historical Resource Evaluation report prepared for the proposed project.</p>	SU

**Table 2.A: Summary of Impacts and Mitigation Measures**

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
<i>CUL-1 cont.</i>		<b>CUL-1c:</b> Existing, scaled historic drawings of the Veterans Memorial building, if available, shall be reproduced and included with the report (Mitigation Measure CUL-1a). In the absence of adequate archival drawings, an architect, meeting the Secretary of the Interior’s Professional Qualification Standards for Historic Architecture, shall produce full-size measured drawings of the building’s plan and significant exterior elevations.	
<b>CUL-2:</b> Project ground disturbance has the potential to unearth significant Native American archaeological deposits or resources, resulting in a potential substantial adverse change on a historical resource, as defined in CEQA Guidelines Section 15064.5.	S	<p><b>CUL-2a:</b> Prior to project ground disturbance, a qualified archaeologist shall conduct a training session at the project site with construction personnel responsible for overseeing or conducting soil-disturbing activities. The training session shall describe the types of archaeological materials and/or features that could be encountered, the potential for human remains, and the appropriate actions to be taken upon such a discovery. The on-site training shall include photographs and/or physical examples of artifacts that may be encountered during ground disturbance.</p> <p>The City shall be responsible for funding this training and ensuring that all appropriate construction personnel have received this training prior to commencement of project excavation.</p> <p><b>CUL-2b:</b> Should an archaeological deposit be encountered during project subsurface construction activities when an archaeologist is not on site, all ground-disturbing activities within 25 feet shall be halted and a qualified archaeologist meeting the Secretary of the Interior’s Professional Qualifications Standards for Archeology contacted to assess the situation, determine if the deposit qualifies as a historical resource, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. If the deposit is found to be significant (i.e., eligible for listing in the California Register of Historical Resources), the City shall be responsible for funding and implementing appropriate mitigation measures. Mitigation measures may include recordation of the archaeological deposit, data recovery and analysis, and public outreach regarding the scientific and cultural importance of the discovery. Upon completion of the selected mitigations, a report documenting methods and findings shall be prepared, and the final report shall be submitted to the Northwest Information Center at Sonoma State University. Significant archaeological materials shall be submitted to an appropriate curation facility and used for public interpretive displays, as appropriate and in coordination</p>	LTS

**Table 2.A: Summary of Impacts and Mitigation Measures**

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
<i>CUL-2 cont.</i>		<p>with a local Native American tribal representative.</p> <p>The City shall inform its contractor(s) of the sensitivity of the project area for archaeological deposits and shall verify that the following directive has been included in the appropriate contract documents: <i>“The subsurface of the construction site may be sensitive for Native American archaeological deposits. If archaeological deposits are encountered during project subsurface construction, all ground-disturbing activities within 25 feet shall be redirected and a qualified archaeologist contacted to assess the situation, and make recommendations for the treatment of the discovery. Project personnel shall not collect or move any archaeological materials. Archaeological deposits can include shellfish remains; bones; flakes of, and tools made from, obsidian, chert, and basalt; and mortars and pestles. Contractor acknowledges and understands that excavation or removal of archaeological material is prohibited by law and constitutes a misdemeanor under California Public Resources Code, Section 5097.5.”</i></p>	
<b>4.3 TRANSPORTATION AND CIRCULATION</b>			
<p><b>TRA-1:</b> The proposed project would add more than 10 trips to the critical movement of the all-way stop-controlled intersection of Crystal Springs Road and Oak Avenue/City Park Way during the peak hour and meets the peak hour traffic signal warrant for this intersection during Existing Plus Project and Cumulative Plus Project conditions.</p>	S	<p><b>TRA-1:</b> The San Bruno Walk ‘n Bike Plan recommends a mini-roundabout at the Crystal Springs Road and Oak Avenue/City Park Way intersection to simplify the intersection control and calm traffic. However, the plan also noted that this improvement should be further studied to determine the feasibility of a mini-roundabout at this location given the relatively large number of school children and activity. Therefore, to reduce the level of service impact at this intersection, either a mini-roundabout (if determined to be feasible) or traffic signal shall be installed at the Crystal Springs Road and City Park Way intersection.</p>	LTS
<p><b>TRA-2:</b> The proposed project could conflict with the goals and policies related to pedestrian circulation of the San Bruno General Plan and San Bruno Walk ‘n Bike Plan.</p>	S	<p><b>TRA-2:</b> Prior to the issuance of a certificate of occupancy, wayfinding signage shall be installed directing pedestrians to the existing path that runs through City Park to the San Bruno Senior Center to prevent unsafe crossings of Crystal Springs Road.</p>	LTS

**Table 2.A: Summary of Impacts and Mitigation Measures**

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
<b>4.4 AIR QUALITY</b>			
<p><b>AIR-1:</b> Construction of the proposed project would generate air pollutant emissions that could violate air quality standards</p>	S	<p><b>AIR-1:</b> In order to meet the BAAQMD fugitive dust threshold, the following BAAQMD Basic Construction Mitigation Measures shall be implemented: All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.</p> <ul style="list-style-type: none"> <li>• All haul trucks transporting soil, sand, or other loose material off-site shall be covered.</li> <li>• Use Best Management Practices to prevent tracking of materials onto roadway.</li> <li>• All visible mud or dirt tracked-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.</li> <li>• All vehicle speeds on unpaved roads shall be limited to 15 mph.</li> <li>• All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible.</li> <li>• Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.</li> <li>• 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.</li> <li>• 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.</li> <li>• A publicly-visible sign shall be posted with the telephone number and person to contact at the City of San Bruno regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD phone number shall also be visible to ensure compliance with applicable regulations.</li> </ul>	LTS

**Table 2.A: Summary of Impacts and Mitigation Measures**

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
<p><b>AIR-2:</b> Construction of the proposed project would expose surrounding sensitive receptors to toxic air contaminants.</p>	S	<p><b>AIR-2:</b> During construction of the proposed project, the project contractor shall ensure all off-road diesel-powered construction equipment of 50 horsepower or more used for the project construction at a minimum meets the California Air Resources Board (CARB) Tier 2 with level 3 diesel particulate filters emissions standards or equivalent.</p>	LTS
<p><b>4.5 NOISE</b></p>			
<p><b>NOI-1:</b> The proposed project would locate recreational land uses in an area that is considered a conditionally acceptable noise environment based on the City's Noise and Land Use Compatibility Guidelines for similar land uses.</p>	S	<p><b>NOI-1:</b> In order to reduce interior noise impacts in compliance with City noise standards, the building design shall incorporate mechanical ventilation, such as air conditioning, to allow windows and doors to remain closed for prolonged periods of time.</p> <p>Implementation of Mitigation Measure NOI-1 would ensure that interior noise levels would be reduced to 45 dBA or less and would be acceptable under the City's land use compatibility standards. Therefore, this impact would be less than significant.</p>	LTS
<p><b>NOI-2:</b> Noise from construction activities at the project site would result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.</p>	S	<p><b>NOI-2:</b> The project contractor shall implement the following best management practice measures during construction of the project:</p> <ul style="list-style-type: none"> <li>• Equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers' standards.</li> <li>• Place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the active project site.</li> <li>• Locate equipment staging in areas that would create the greatest possible distance between construction-related noise sources and noise-sensitive receptors nearest the active project site during all project construction.</li> <li>• Install temporary noise barriers around stationary noise sources (such as compressors) and locate stationary noise sources as far from adjacent or nearby sensitive receptors as possible.</li> <li>• Prohibit extended idling time of internal combustion engines.</li> <li>• All noise producing construction activities shall be limited to between the hours of 7:00 a.m. and 5:00 p.m. unless permitted by the City of San Bruno.</li> <li>• Designate a "disturbance coordinator" at the City of San Bruno who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaint (e.g., starting too early, bad muffler) and would determine and implement reasonable measures warranted to correct the problem.</li> </ul>	LTS

**Table 2.A: Summary of Impacts and Mitigation Measures**

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
<b>4.6 GEOLOGY AND SOILS</b>			
<p><b>GEO-1:</b> The proposed project could expose occupants to seismic hazards related to liquefaction.</p>	S	<p><b>GEO-1:</b> Prior to the issuance of any site-specific grading or building permits, the City’s Building Division shall confirm that: 1) additional borings/cone penetrometer tests have been performed across the footprint of the proposed building after the demolition of the existing structures to refine foundation/ground improvement recommendations and depth to groundwater; 2) a design-level geotechnical report has been prepared which includes evaluations of the potential for: lateral spreading, including at the landscaped slope on the northeast side of the proposed building and earthen creek embankments along the relocated creek alignment, slope instability from removal of an existing retaining wall and excavation into/at the toe of the hillside, and expansive soils at the project site; 3) the design-level geotechnical report includes design-level recommendations for grading activities, removal of the existing retaining wall, hillside excavation, engineered fill, foundation and ground improvement designs, retaining wall designs, and measures to address expansive soils, if present; and 4) project plans have incorporated geotechnical recommendations and the project’s geotechnical engineer has reviewed and approved project plans. Prior to the issuance of building occupancy permits, the City’s Building Division shall ensure that implementation of all the geotechnical recommendations including design criteria, specifications, and construction observations/inspection/testing has been performed and documented in a construction completion report prepared by the project’s geotechnical engineer.</p>	LTS
<p><b>GEO-2:</b> Construction of the proposed project could directly or indirectly destroy a previously unknown paleontological resource or a unique geologic feature.</p>	S	<p><b>GEO-2:</b> If paleontological resources are encountered during site preparation or grading activities, all work within 25 feet of the discovery shall be redirected until a qualified paleontologist has assessed the discoveries and made recommendations. Paleontological resources include fossil plants and animals, and evidence of past life such as trace fossils and tracks.</p> <p>If the paleontological resources are found to be significant, adverse effects to such resources shall be avoided by project activities to the extent feasible. If project activities cannot avoid the resources, the adverse effects shall be mitigated in accordance with CEQA Guidelines Section 15126.4(b)(3). Mitigation may include data recovery and analysis, preparation of a final</p>	LTS

**Table 2.A: Summary of Impacts and Mitigation Measures**

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
<i>GEO-2 cont.</i>		report, and the formal transmission or delivery of any fossil material recovered to a paleontological repository, such as the University of California Museum of Paleontology (UCMP). Upon completion of project activities, the final report shall document methods and findings of the mitigation and be submitted to the City's Community and Economic Development Department for the project file and a suitable paleontological repository.	
<b>4.7 HAZARDS AND HAZARDOUS MATERIALS</b>			
<b>HAZ-1:</b> Demolition of the existing buildings on the project site could result in the release of PCBs into the environment.	S	<b>HAZ-1:</b> Prior to the issuance of any demolition permits for existing structures on the project site, a comprehensive Hazardous Building Materials Survey (HBMS) for the project site shall be prepared and signed by a qualified environmental professional, documenting the presence or lack thereof of asbestos-containing materials, lead containing paint, lead based paint, PCBs containing equipment and materials, and any other hazardous building materials. The HBMS and abatement specifications shall be submitted to and approved by the City prior to the start of abatement activities. The HBMS shall include abatement specifications for the stabilization and/or removal of the identified hazardous building materials in accordance with all applicable laws and regulations. The demolition contractor(s) shall implement the abatement specifications and submit to the City evidence of completion of abatement activities prior to demolition of the existing structures.	LTS
<b>HAZ-2:</b> Construction and operation of the proposed project could temporarily and permanently increase fire risks.	S	<b>HAZ-2a:</b> Construction contractors shall ensure spark arrestors are fitted on all construction vehicles and equipment to minimize the potential for accidental ignition of construction materials and vegetation and shall store flammable/combustible materials away from vegetated areas and structures.	LTS

**Table 2.A: Summary of Impacts and Mitigation Measures**

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
<i>HAZ-2 cont.</i>		<p><b>HAZ-2b:</b> The City shall develop a Vegetation Management and Fire Prevention Plan and shall implement the approved Plan during construction and operation of the proposed project. The Vegetation Management and Fire Prevention Plan shall include, at a minimum, the following measures:</p> <ul style="list-style-type: none"> <li>• Use of spark arrestors on all vehicles and equipment used for landscape and vegetation management;</li> <li>• Schedule for removal of vegetation overhanging roof areas;</li> <li>• Schedule for removal of leaves and needles from roofs; Planting and placement of fire-resistant plants near the structure and phasing out flammable vegetation;</li> <li>• Schedule for trimming back vegetation around windows;</li> <li>• Pruning the lower branches of tall trees</li> <li>• Clearing out ground-level brush and debris; and,</li> <li>• Storing combustible materials away from vegetated areas.</li> </ul>	
<b>4.8 HYDROLOGY AND WATER QUALITY</b>			
<p><b>HYD-1:</b> The proposed project would alter the drainage pattern of the site in a manner which could impede or redirect flood flows.</p>	S	<p><b>HYD-1:</b> Prior to issuance of grading or building permits, a detailed hydraulic evaluation shall be performed by a qualified professional engineer and submitted to the City’s Building Division for review and approval. The detailed hydraulic evaluation shall include analysis of post-project potential flooding conditions (including 25-year, 50-year, and 100-year storm events) and shall be performed using hydraulic modeling (i.e., HEC-RAS or similar program). The detailed hydraulic evaluation shall demonstrate that the proposed project, when combined with all other existing and anticipated development, would not contribute to increased flooding or impede or redirect flood flows such that it would increase the extent or depth of flooding on or off the project site. If hydraulic evaluation indicates that the project could increase flooding risks or that the proposed structure could be exposed to flooding inundation, the project plans shall be modified (e.g., changing the location and/or design of improvements, increasing on-site stormwater detention/retention, increasing impervious area) and/or improvement of existing off-site stormwater drainage systems shall be incorporated into the project such that subsequent hydraulic modeling demonstrates that the proposed project, when combined with all other existing and anticipated development, would not impede or redirect flood flows, contribute to increased flooding risks, or expose the proposed pool and/or structure to flooding inundation.</p>	LTS

**Table 2.A: Summary of Impacts and Mitigation Measures**

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
<p><b>HYD-2:</b> During a construction-period flooding event at the project site, pollutants could be released into surface waters.</p>	<p>S</p>	<p><b>HYD-2:</b> When working within areas of potential storm flooding inundation at the northeast portion of the project site (defined as Zone D on the Federal Emergency Management Agency [FEMA] Flood Insurance Rate Map (FIRM) Panel No. 06081C0131F, dated April 5, 2019 and shown on Figure 4.8-1 of the EIR) and any other areas of potential storm inundation identified by the hydraulic evaluation required by Mitigation Measure HYD-1, the construction contractor(s) shall closely monitor weather forecasts and shall ensure that construction materials and equipment are temporarily moved out of areas of potential flooding inundation prior to the start of the storm event. The improvements anticipated to be located within areas of potential storm flooding inundation include the proposed parking lot and relocation of El Zanjon Creek.</p>	<p>LTS</p>

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## 3.0 PROJECT DESCRIPTION

This chapter describes the proposed San Bruno Recreation and Aquatic Center Project (project) that is proposed by the City of San Bruno and that is the subject of this Environmental Impact Report (EIR). A description of the project's location, context, and objectives is followed by details of the project itself and a summary of required approvals and entitlements.

### 3.1 PROJECT SITE

The following section describes the geographic context of the project site and provides a brief overview of existing land uses within and in the vicinity of the site. The existing regulatory context is also described.

#### 3.1.1 Project Location

The approximately 5.6-acre project site is generally situated in the western and northern portion of the San Bruno City Park in the City of San Bruno (City), San Mateo County. The approximately 29.09-acre park (Assessor's Parcel Number [APN] 020-320-030) is located at 251 City Park Way and is bound by Crystal Springs Road to the north, residential uses and Cypress Avenue to the east, residential, public, and institutional uses to the south, and the San Bruno Senior Center and Junipero Serra County Park to the west. The project's location and regional vicinity is shown in Figure 3-1, and an aerial of the project site and surrounding land uses are shown in Figure 3-2.

#### 3.1.2 Existing Conditions

The existing San Bruno City Park includes the San Bruno Veterans Memorial Recreation Center (Veterans Memorial building), the San Bruno Park Pool (pool), three baseball fields, tennis courts, multiple picnic areas and playgrounds, and three parking areas. The park is bisected by City Park Way, which connects Crystal Springs Road, north of the site, to De Soto Way, south of the site.

A channelized creek (El Zanjón Creek) runs through the park, traversing the southern border until it reaches City Park Way, at which point it follows City Park Way to the northern park boundary, where it enters an underground culvert. There are five existing crossings of the creek, including four pedestrian crossings, and the City Park Way automobile crossing. The park generally slopes from north to south from the highest point along Crystal Springs Road to the location of the Veterans Memorial building, at which point it generally levels out, aside from minor undulations near the baseball field in the southern portion of the park.

The project site itself is depicted in Figure 3-3 and existing site photos are shown in Figures 3-4 and 3-5. The site includes the existing Veterans Memorial building (Photos 1 and 2) and immediate surroundings, the pool (Photo 3), existing roadways and parking areas directly in front of and adjacent to the building, the existing Rotary Pavilion (pavilion) area, and portions of the channelized creek (Photo 4). The Veterans Memorial building was constructed in 1955, is approximately 30,700 square feet in size and includes one gymnasium, two meeting rooms, a kitchen, restrooms, an exercise room, and four rooms for class, programs, and special events. There are approximately 198 total trees within the limits of the project site.

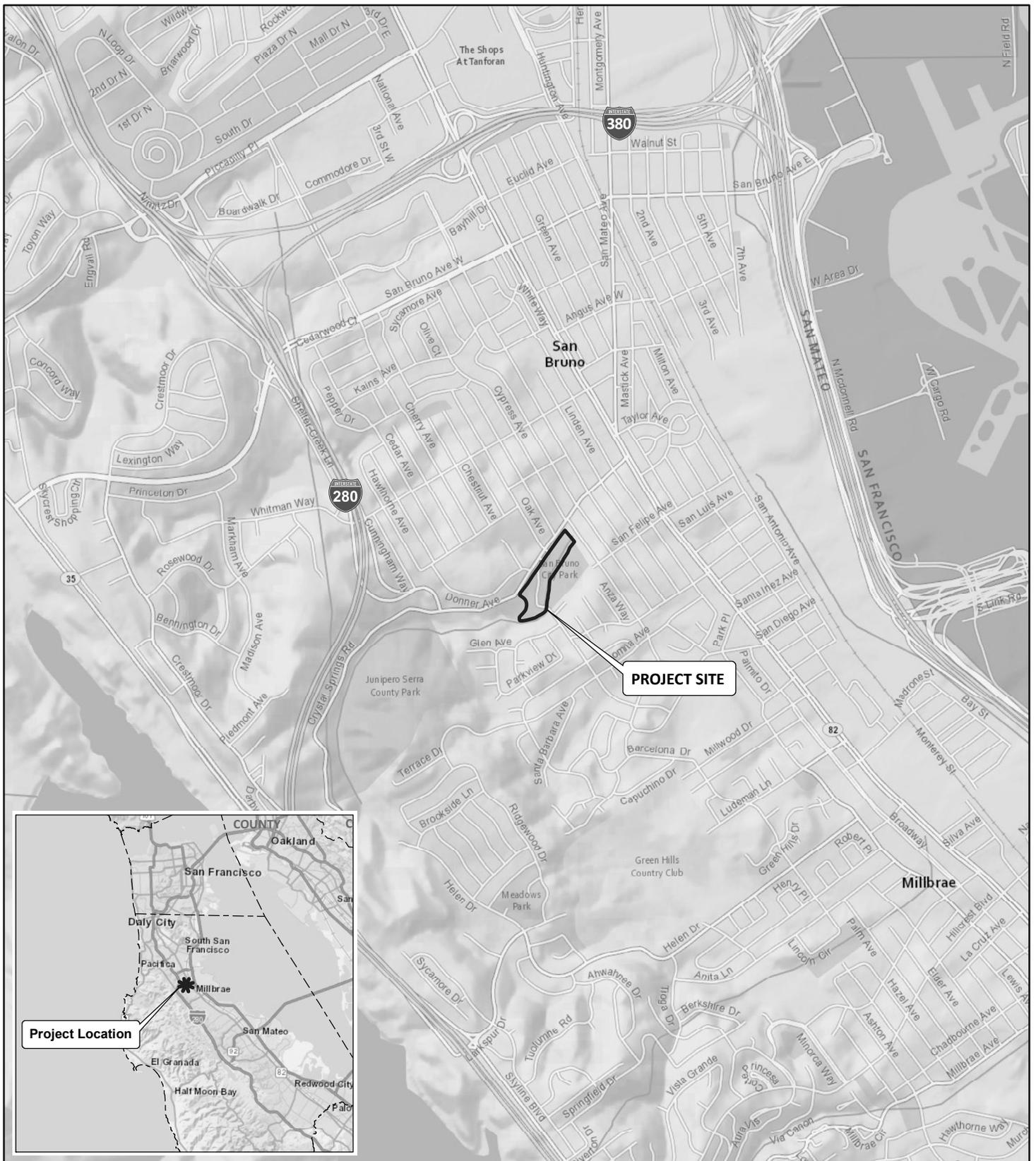


FIGURE 3-1

LSA

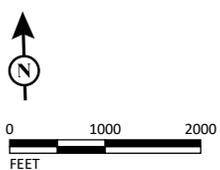
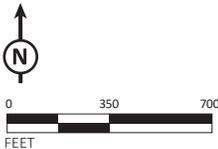




FIGURE 3-2

LSA



 Project Site

*San Bruno Recreation and Aquatic Center Project EIR*  
 Aerial Photograph of the Project Site and Surrounding Land Uses



FIGURE 3-3

LSA

NOT TO SCALE

San Bruno Recreation and Aquatic Center Project EIR  
Existing Site Conditions

SOURCE: GROUP 4, 2019.

P:\GRP1803 San Bruno Rec Center\PRODUCTS\Graphics\EIR\Figures\Figure 3-3.ai (10/15/19)



Photo 1: Existing Veterans Memorial Building



Photo 2: Existing Veterans Memorial Building and Adjacent Parking Lot

LSA

FIGURE 3-4

San Bruno Recreation and Aquatic Center Project EIR  
Existing Site Photos



Photo 3: Existing Pool Facility



Photo 4: Existing El Zanjon Creek

**LSA**

FIGURE 3-5

*San Bruno Recreation and Aquatic Center Project EIR*  
Existing Site Photos

The Veterans Memorial building provides space for a total of 70 community center programs and is open from 8:00 a.m. to 9:00 p.m. Monday through Thursday; 8:00 a.m. to 5:00 p.m. on Fridays; and 9:00 a.m. to 1:00 p.m. on Saturdays. The building is closed on Sundays. It is estimated that between 100 and 500 daily visitors utilize the building and there are 5 full-time and over 90 part-time staff. The facility also operates as a temporary emergency resource center during emergency situations. The pool facility is open from 6:30 a.m. to 9:30 p.m. Monday through Friday and 6:30 a.m. to 6:30 p.m. on Saturdays and Sundays. The pool is open on a seasonal basis.

### 3.1.3 Parking, Circulation, and Access

A total of 204 parking spaces serve the existing park and associated facilities. A parking lot adjacent to the Veterans Memorial building and diagonal spaces along City Park Way provide a total of 73 parking spaces. The City-owned parking lot located just south of the existing pool provides a total of 69 spaces and serves both the pool and the adjacent church. The parking lot for the Tom Lara Field/corporation yard, which provides spaces for the baseball field in the northern portion of the park and access to the corporation yard, provides 33 parking spaces. A total of 11 spaces are included in the park picnic area. A total of 18 on-street parking spaces are located along Crystal Springs Road.

Automobile access to the project site is provided by City Park Way, which is accessible from Crystal Springs Road to the north and De Soto Way to the south. Regional access to the project site is provided by both Interstate 280 (I-280), located west of the project site, and El Camino Real, which is State Route 82 (SR 82), to the east. Both I-280 and SR 82 provide access to Crystal Springs Road.

### 3.1.4 Regulatory Setting

The park is designated as Parks/Open Space in the City of San Bruno General Plan<sup>1</sup> and is within the Open Space (O) zoning district on the City's Zoning Map.<sup>2</sup>

### 3.1.5 Surrounding Land Uses

As shown in Figure 3-2, a variety of land uses are located within the vicinity of the project site. Across Crystal Springs Road to the north, the project site is generally surrounded by single- and multi-family residential and institutional uses. To the east the project site is bounded by Cypress Avenue and San Felipe Avenue, across which is a mix of single- and multi-family residential uses and the El Crystal Elementary School. El Crystal Elementary School is currently closed but is proposed for re-use as a 312-student preschool and kindergarten private educational facility (the Stratford School). The San Francisco International Airport is located approximately 1 mile east of the project site. To the south the project site is bound by residential uses and institutional uses, as well as an access road. West of the project site is the San Bruno Senior Center and Junipero Serra County Park, which is owned and operated by San Mateo County.

<sup>1</sup> San Bruno, City of, 2009. *San Bruno General Plan*. March 24.

<sup>2</sup> San Bruno, City of, 2007. Zoning Map. August 2.

### 3.2 PROJECT BACKGROUND

In 2013, consistent with the terms of a settlement agreement between the City and the Pacific Gas & Electric Company (PG&E) in the amount of \$70 million, the City established the independent not-for-profit San Bruno Community Foundation (SBCF) to manage the restitution settlement funds and to oversee use of the funds.

In 2015, SBCF sponsored a broad-based Community Listening Campaign to identify the community's priorities for use of the restitution settlement funds. The Community Listening Campaign identified the community's highest priorities to be the replacement and/or addition of new community facilities to support delivery and expansion of community programs and services. The specific community facilities listed as priorities through the Listening Campaign were a new Library, Recreation Center and Swimming Pool to replace existing facilities, and a new Community Center to meet the community's need for meeting and community gathering/event space. Following completion of the Listening Campaign, SBCF identified its intent to dedicate \$50 million of the restitution settlement funds for the design and construction of one or more of these priority community facilities.

In 2016, recognizing that \$50 million would not be sufficient to construct all of the facilities the community had identified as priority needs, the City conducted a subsequent facilitated community discussion process to identify which among the four community facilities discussed should proceed to design and construction as the community's highest priority for use of the \$50 million allocated by SBCF. That process concluded in February 2017 with the San Bruno City Council's approval of the Community Facility Prioritization report which identified replacement of the Recreation Center and Aquatic Center as one of the community's highest priorities.

### 3.3 PROJECT OBJECTIVES

The City's objectives for the proposed project are to provide a new recreation center and aquatic facility that offers long-term benefits to the entire San Bruno community, including:

- Flexible, integrated, and attractive spaces that serve the community's current and future recreation, aquatics, and event-space needs;
- A place that promotes and advances San Bruno's community, social, and recreational programs;
- Vibrant indoor and outdoor community gathering spaces;
- Building design that reflects the natural beauty of San Bruno City Park and integrates the natural and built environment through indoor/outdoor transparency and strong connections to useable outdoor spaces;
- Maximized operational efficiencies;
- Intuitive systems and layout;
- Programming in a California Building Code-compliant building;
- An energy-efficient building, which maximizes sustainable design strategies within project constraints; and
- A highly valued community resource.

### 3.4 PROPOSED PROJECT

The proposed project would include the following components: 1) demolition of the existing Veterans Memorial building and pool; 2) construction of a new 47,000 square-foot San Bruno Recreation and Aquatic Center (SBRAC), future construction of an outdoor pool, and installation of associated water, sewer, and stormwater infrastructure; 3) the reconfiguration of adjacent existing parking areas and roadways within the park; and 4) the relocation of the existing channelized creek within a portion of the park. The overall conceptual site plan is depicted in Figure 3-6.

The new SBRAC would include the following uses/programming: an indoor pool, a gymnasium, community hall, classrooms, fitness/cardio/weights, group exercise room, conference room, lobby/lounge, elevated walking track, City staff offices, and Police substation. The new SBRAC would also function as a temporary emergency resource center and would operate similarly to the existing facility during emergency situations. The outdoor pool is proposed to be constructed as part of a later phase of the project.

#### 3.4.1 Recreation and Aquatic Center

The new SBRAC would be constructed in generally the same location as the existing Veterans Memorial building; however, it would have a larger footprint. The SBRAC would be two stories in height and approximately 47,000 square feet in size. The conceptual facility plan is shown in Figure 3-7. The first and second floor plans for the new facility are depicted in Figures 3-8 and 3-9, respectively. Conceptual building elevations are shown in Figure 3-10.

The first floor of the new SBRAC would include space for a community lounge, lobby, gymnasium, an indoor pool, three classrooms, City staff offices, lockers, and storage and service areas. The second floor would include space for a community hall, group exercise room, walking track, fitness/cardio/weights and conference room. The proposed building would be designed to operate as an emergency resource center and would either include a permanent generator or space for a portable emergency generator.

An outdoor pool would be constructed in a later phase of the project. An outdoor plaza would also be located along City Park Way.

In addition to the demolition of the existing Veterans Memorial building and pool, a memorial recognition sculpture that is currently located immediately adjacent to the Veterans Memorial building would be relocated. The location of the new memorial recognition sculpture is not yet known, but may be within the vicinity of the existing tennis courts. The pavilion that is currently located to the south of the Veterans Memorial building would be demolished as part of the proposed project and rebuilt in a new currently unknown location as a separate project led by the Rotary Club of San Bruno.

The new SBRAC would allow the City to provide approximately 109 hours of weekly recreational programming, 95 hours of weekly programming within the indoor pool facility, and 95 hours of weekly programming within the outdoor pool facility (seasonally).

### 3.4.2 Parking and Circulation Improvements

The existing 73-space parking lot adjacent to the existing Veterans Memorial building would be reconfigured by separating the parking from City Park Way, thus creating a designated parking lot with 71 spaces (for a loss of 2 spaces) and separate, realigned City Park Way. This reconfiguration would also include the relocation of the channelized creek, as it currently runs through this parking/road area, which is described below. Conceptual parking and roadway improvements are shown in Figure 3-11.

The Lara Field parking lot/corporation yard is also planned to be reconfigured and restriped to provide a total of 91 spaces, an increase of 60 parking spaces. The Lara Field parking lot reconfiguration is not included as a part of the proposed project and is undergoing a separate City approval and CEQA process.

### 3.4.3 Channelized Creek Relocation

As noted above and shown in Figure 3-11, a portion of the channelized creek running through the park would be relocated in order to accommodate the parking lot reconfiguration. Relocation would begin just north of the existing pedestrian bridge located directly adjacent to the existing Veterans Memorial building, and would generally be shifted south until it reaches the intersection of City Park Way and Crystal Springs Road. Currently, the reconfigured creek is planned to be channelized, similar to existing conditions. In addition to the reconfiguration of the creek, two new 6-foot-wide, 30-foot-long metal truss bridges with wood slat walking surfaces and railings would be installed at two points across the creek, connecting to a new 6-foot-wide concrete walkway on either side. The new bridges would provide access between the baseball fields and tennis courts to the east and the new SBRAC facility to the west.

### 3.4.4 Utilities and Infrastructure

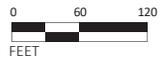
The new SBRAC facility would connect to existing utility infrastructure located within and in the immediate vicinity of the site. The proposed project includes the installation of a new 8-inch wastewater line that would connect to the existing 15-inch main line within City Park Way. The proposed project would also include the installation of new water lines connecting to the existing 10-inch water service line that currently serves the Veterans Memorial building.

The proposed storm drainage infrastructure would drain towards the concrete-lined drainage channel within the site in a new 8- to 12-inch storm drain. From there, stormwater would drain from the drainage channel to the east, discharging into an existing underground storm drain box culvert at the eastern edge of the project site. As shown in Figure 3-12, five stormwater treatment areas are proposed on the project site. One of the stormwater treatment areas would be located south of the proposed SBRAC building, one would be located east of the parking lot, and three would be located north of the realigned El Zanjón Creek. The stormwater treatment areas would be vegetated with a layer of bioretention soil and a layer of permeable rock. Overflow would be discharged from the stormwater treatment areas to the onsite storm drain system which would connect to outfalls in the realigned, concrete lined El Zanjón Creek channel.



FIGURE 3-6

LSA



-  Project Site Boundary
-  Phase 2

*San Bruno Recreation and Aquatic Center Project EIR  
Conceptual Site Plan*

SOURCES: GROUP 4; SWA, 2019.

P:\GRP1803 San Bruno Rec Center\PRODUCTS\EIR\Figures\Figure 3-6.ai (10/17/19)

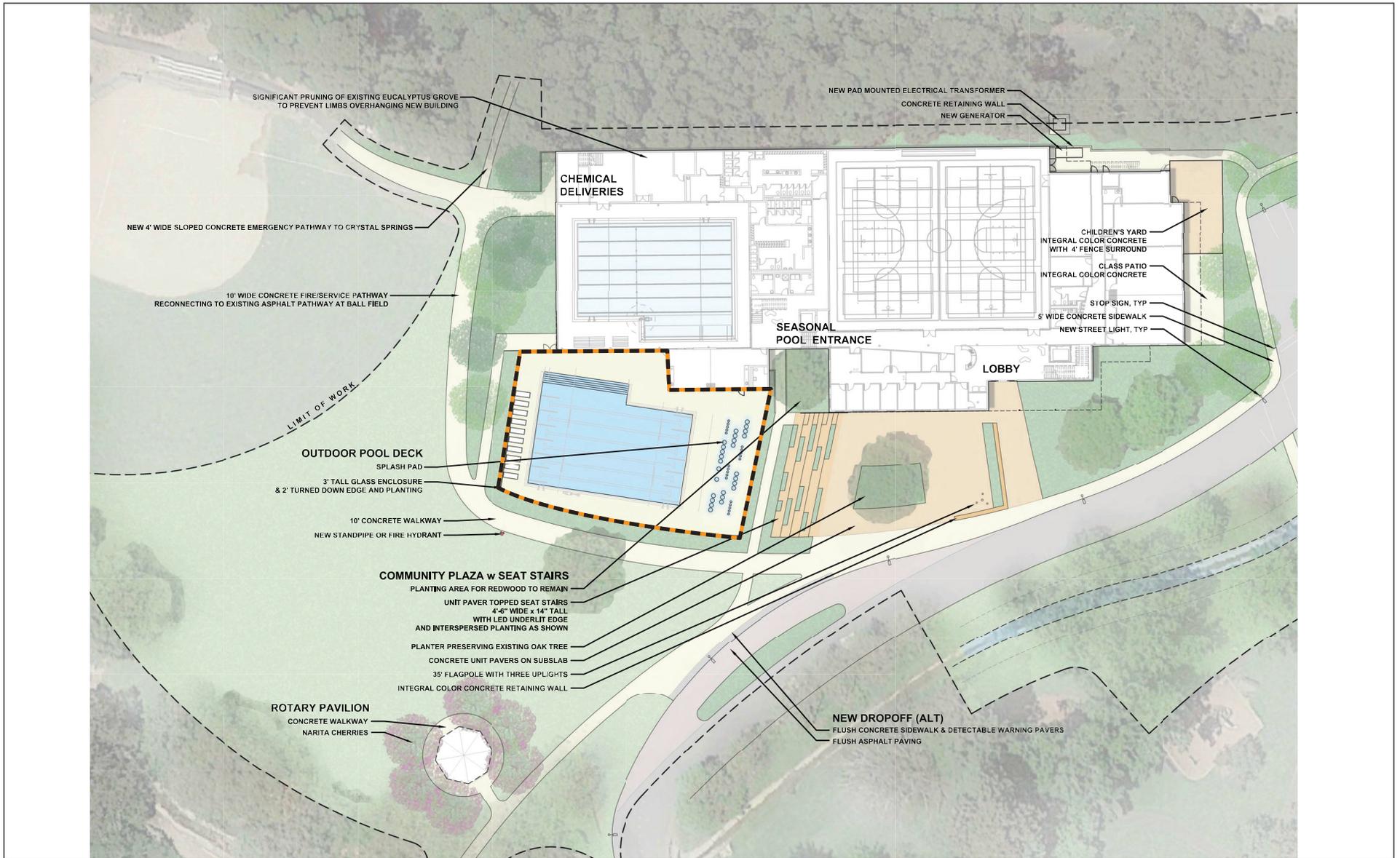
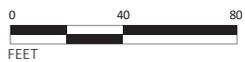
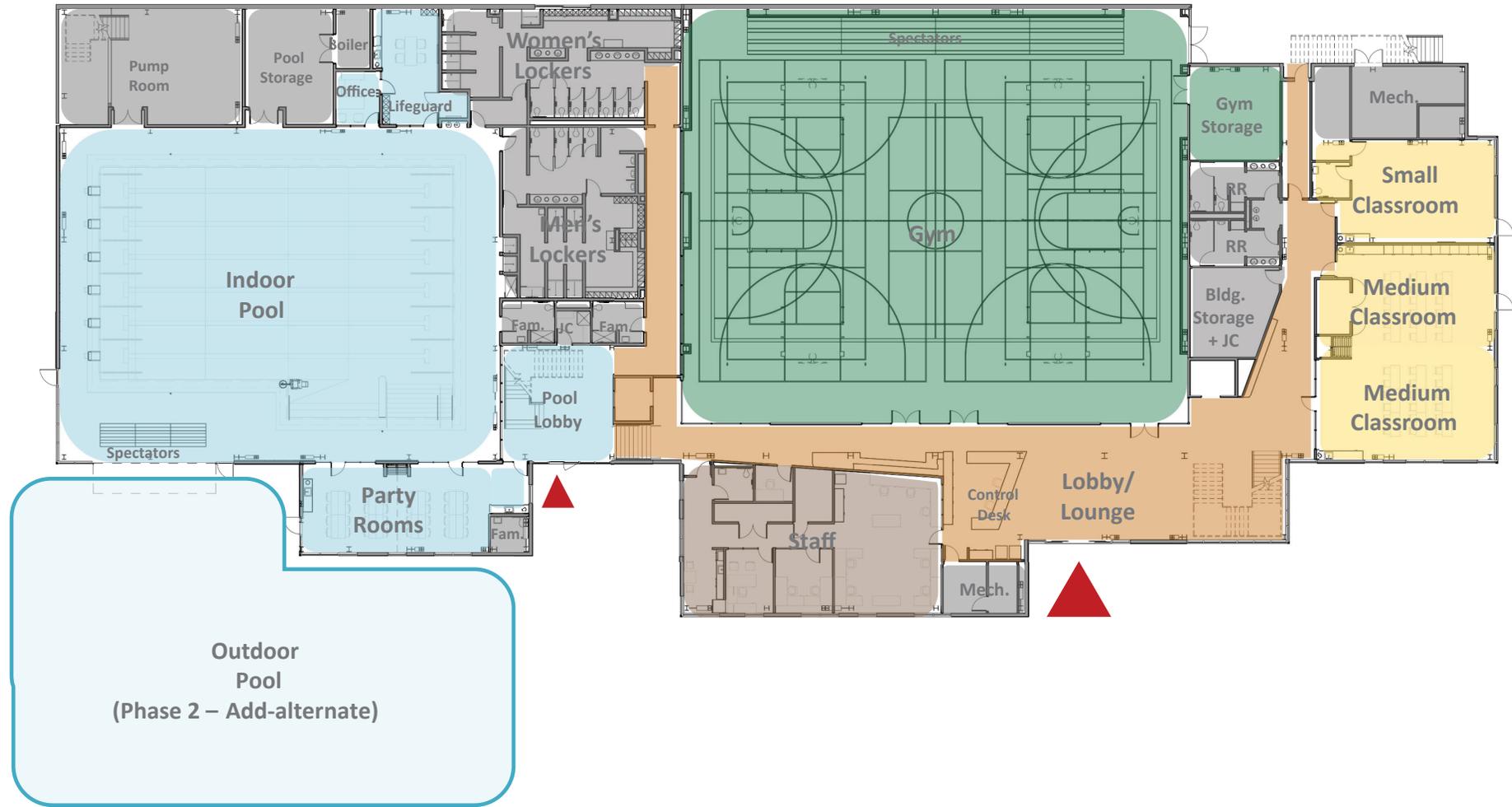


FIGURE 3-7

LSA



In progress



LSA

FIGURE 3-8

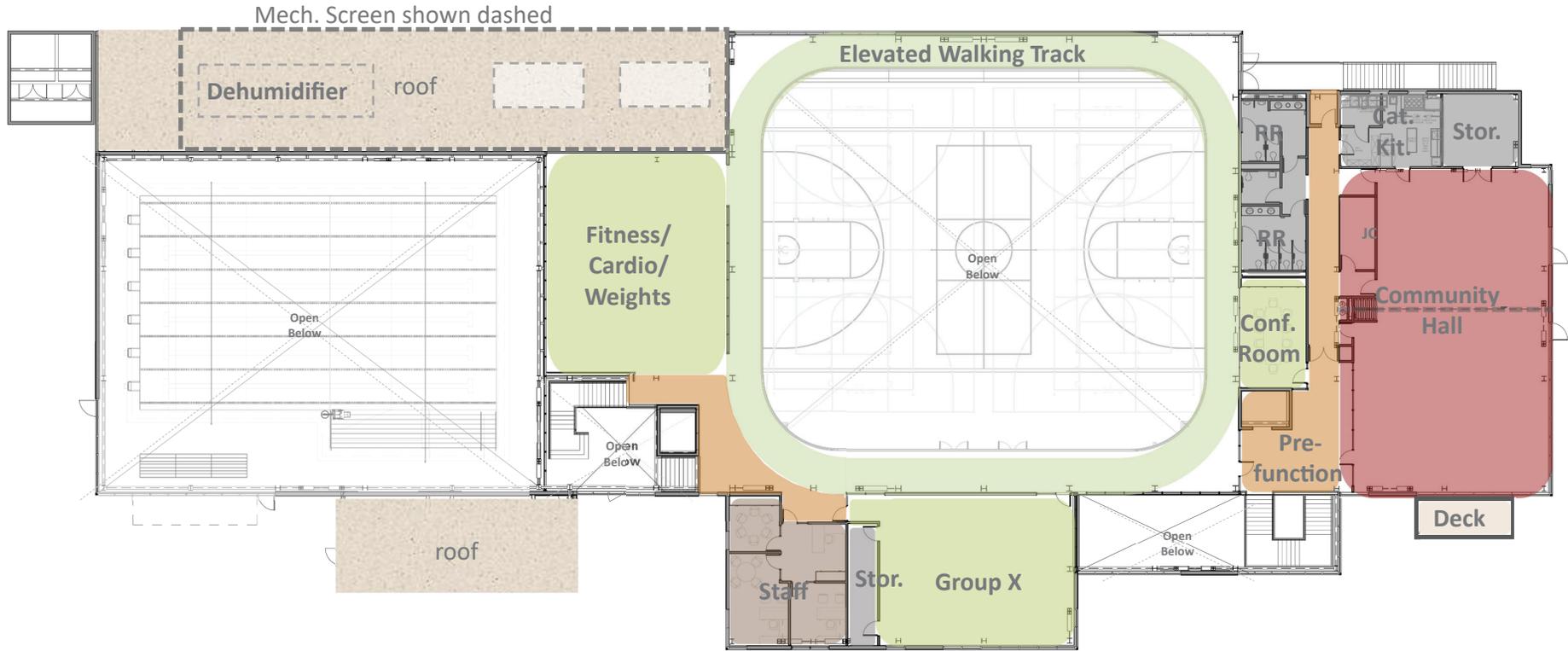
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San Bruno Recreation and Aquatic Center Project EIR  
Conceptual First Floor Plan

SOURCE: GROUP 4, 2019.

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# In progress



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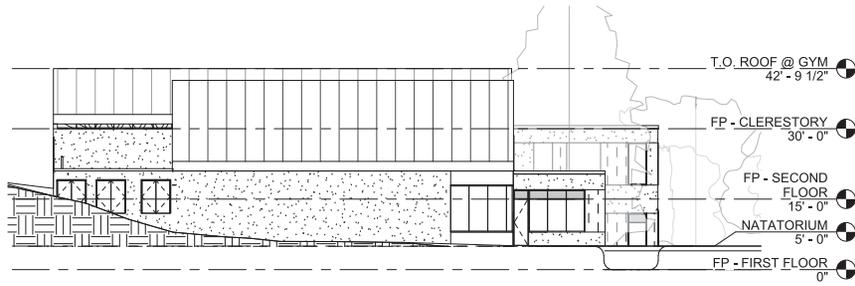
FIGURE 3-9

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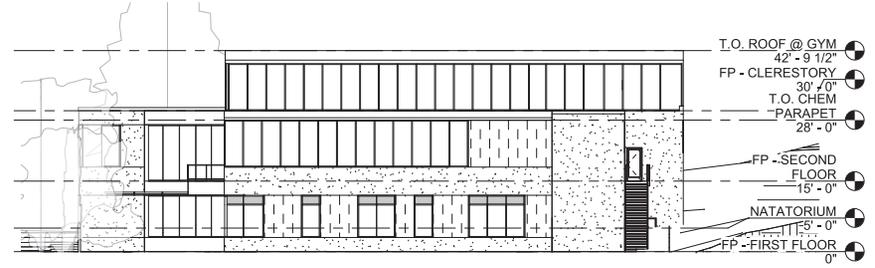
San Bruno Recreation and Aquatic Center Project EIR  
Conceptual Second Floor Plan

SOURCE: GROUP 4, 2019.

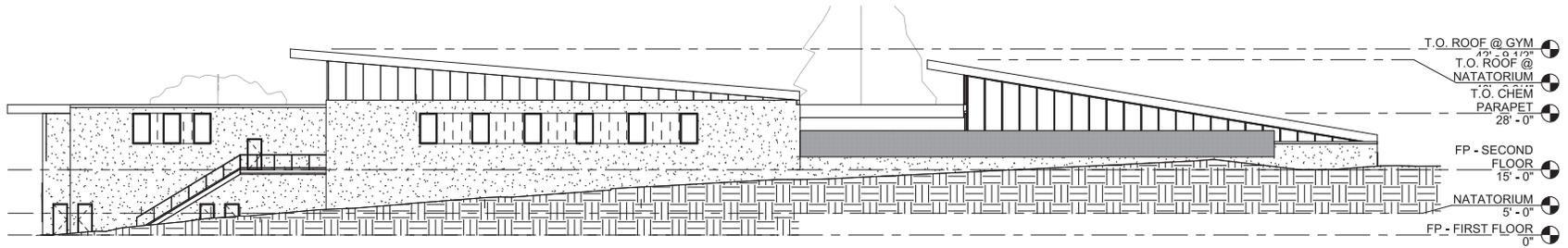
P:\GRP1803 San Bruno Rec Center\PRODUCTS\Graphics\EIR\Figures\Figure 3-9.ai (12/18/19)



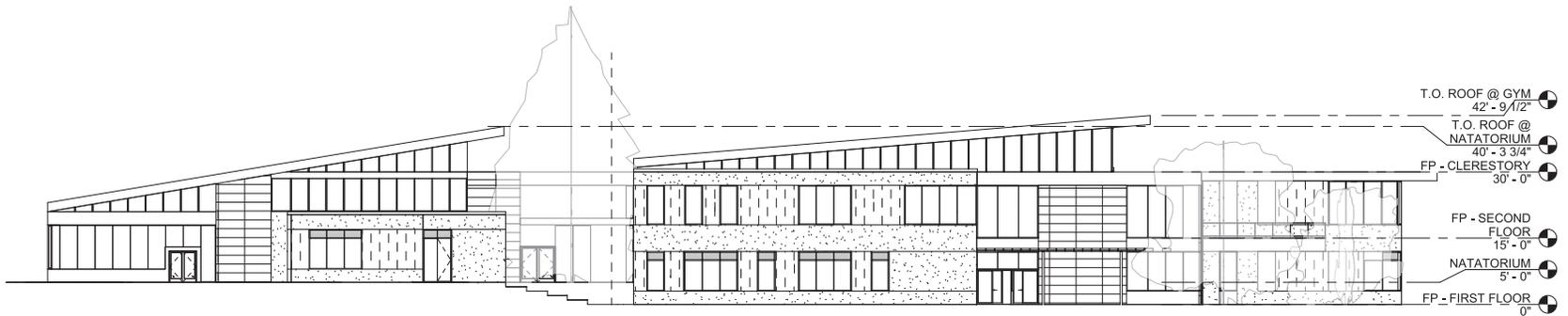
**SOUTH ELEVATION OVERALL**



**NORTH ELEVATION OVERALL**



**WEST ELEVATION OVERALL**



**EAST ELEVATION OVERALL**

**LSA**

**FIGURE 3-10**

NOT TO SCALE

*San Bruno Recreation and Aquatic Center Project EIR  
Conceptual Building Elevations*

SOURCES: GROUP 4; BRINKLEY, SARGENT, WIGINTON ARCHITECTS, 2019.

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FIGURE 3-11

LSA



SOURCES: GROUP 4; SWA, 2019.

P:\GRP1803 San Bruno Rec Center\PRODUCTS\Graphics\EIR\Figures\Figure 3-11.ai (12/30/19)

*San Bruno Recreation and Aquatic Center Project EIR*  
 Conceptual Parking, Roadway, and Creek Improvements

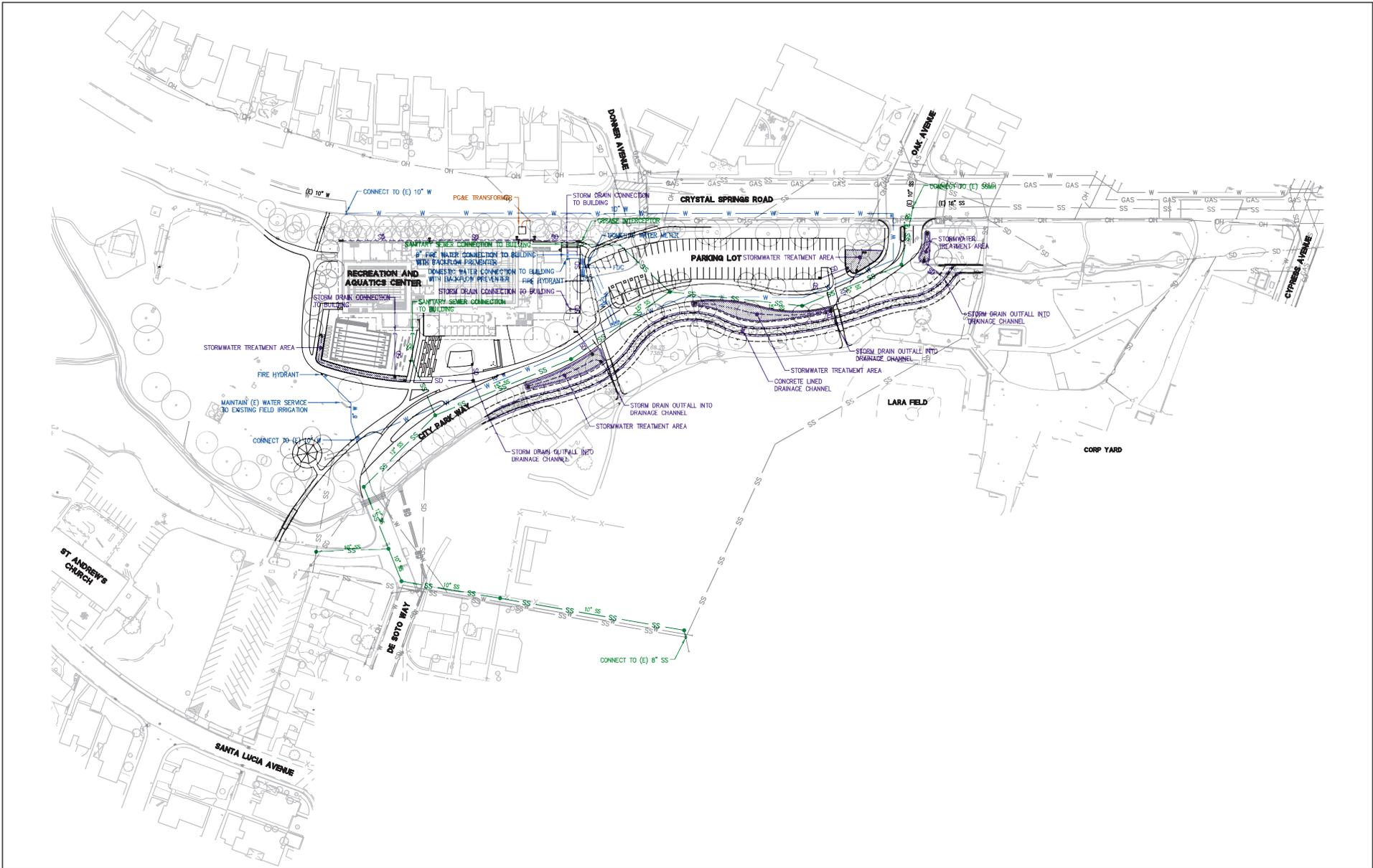
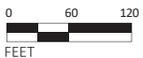


FIGURE 3-12

LSA



SOURCES: GROUP 4; BKF, AUGUST 2019.

P:\GRP1803 San Bruno Rec Center\PRODUCTS\Graphics\EIR\Figures\Figure 3-13.ai (12/18/19)

San Bruno Recreation and Aquatic Center Project EIR  
Proposed Utility Plan

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### 3.4.5 Demolition, Tree Removal and Construction

The preliminary demolition plan is shown in Figure 3-13. The existing Veterans Memorial building and pool would be demolished and the new SBRAC facility would be constructed generally in the same location. The proposed project would also include the removal of the existing retaining wall and excavation into/at the toe of the hillside west of the existing Veterans Memorial building to accommodate the foundation of the proposed SBRAC; the specific location and extent of work would be identified as part of the final design phase. Approximately 64 trees (including 52 protected heritage trees and 12 non-protected trees) are expected to be removed from the project site, and 52 trees would be replanted as a part of the proposed project.

Construction of the proposed project would occur over an approximately 20- to 24-month period and is anticipated to begin in the winter of 2021. Construction staging areas would be determined by the construction manager of the awarded construction firm and would be contained on the project site.

### 3.5 USES OF THIS EIR

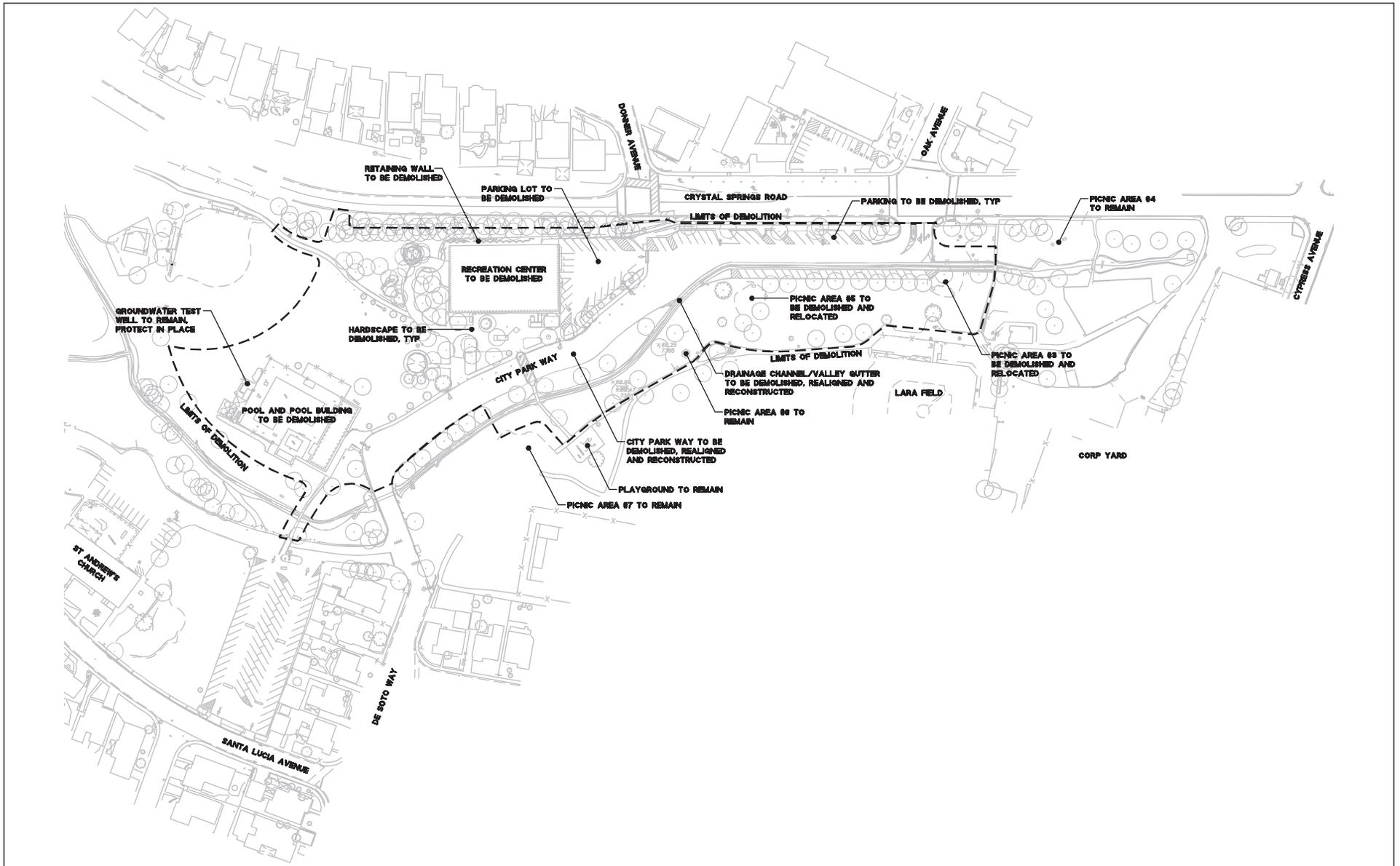
A number of permits and approvals would be required for the proposed project. It is anticipated that this EIR will provide environmental review for all discretionary approvals necessary for the proposed project as described within this chapter.

While the City is the Lead Agency for the project, other agencies also have discretionary approval/permit authority related to the project. A list of these agencies and potential permits and approvals that may be required is provided in Table 3.A.

**Table 3.A: Potential Permits and Approvals**

Lead Agency	Potential Permits/Approvals
City of San Bruno	<ul style="list-style-type: none"> <li>• Environmental Review (EIR Certification)</li> <li>• Conditional Use Permit</li> <li>• Architectural Review Permit</li> <li>• Provision of grading, demolition, construction, parking, traffic, erosion, and Storm Water Pollution Prevention Plan permits and approvals (ministerial)</li> <li>• Permits for water lines, water hookups, wastewater lines, wastewater hookups</li> <li>• Encroachment Permit</li> </ul>
<b>Other Agencies</b>	
California Department of Fish and Wildlife	<ul style="list-style-type: none"> <li>• Section 1602 Streambed Alteration Agreement</li> </ul>
Army Corps of Engineers	<ul style="list-style-type: none"> <li>• Section 404 Permit (if required)</li> </ul>
Bay Area Air Quality Management District (BAAQMD)	<ul style="list-style-type: none"> <li>• Demolition/Renovation Approval Letter for Asbestos</li> <li>• Emergency Generator Permit or Registration Certificate</li> </ul>
California Regional Water Quality Control Board	<ul style="list-style-type: none"> <li>• National Pollutant Discharge Elimination System (NPDES) permit for stormwater discharge</li> <li>• Section 401 Water Quality Certification</li> </ul>
City of South San Francisco	<ul style="list-style-type: none"> <li>• Discharge Permit (if required)</li> </ul>

Source: LSA Associates, Inc. (2019)



LSA

FIGURE 3-13

NOT TO SCALE 

*San Bruno Recreation and Aquatic Center Project EIR  
Demolition Plan*

SOURCES: GROUP 4; SWA, 2019.

P:\GRP1803 San Bruno Rec Center\PRODUCTS\Graphics\EIR\Figures\Figure 3-13.ai (12/30/19)

## 4.0 SETTING, IMPACTS, AND MITIGATION MEASURES

This chapter contains an analysis of each potentially significant environmental issue that has been identified for the proposed San Bruno Recreation and Aquatic Center Project (project). The following: 1) identifies how a determination of significance is made; 2) identifies the environmental issues addressed in this chapter; 3) describes the context for the evaluation of cumulative effects; 4) lists the format of the topical issue section; and 5) provides an evaluation of each potentially significant issue in Sections 4.1 through 4.8.

### DETERMINATION OF SIGNIFICANCE

Under CEQA, a significant effect is defined as a substantial, or potentially substantial, adverse change in the environment.<sup>1</sup> The CEQA Guidelines direct that this determination be based on scientific and factual data. Each impact evaluation in this chapter is prefaced by criteria of significance, which are the thresholds for determining whether an impact is significant. These criteria of significance are based on the CEQA Guidelines and applicable City policies. In determining whether a project's impacts are significant, an EIR ordinarily compares those impacts with existing environmental conditions which are referred to as the "baseline" for the impact analysis. This EIR compares the project impacts with environmental conditions in existence at the time this EIR was being prepared.

### ISSUES ADDRESSED IN THE DRAFT EIR

Sections 4.1 through 4.8 of this chapter describe the environmental setting of the project as evaluated in the EIR and the impacts that are expected to result from implementation of the proposed project. Mitigation measures are proposed to reduce potential impacts, where appropriate. The following environmental issues are addressed in this chapter:

1. Biological Resources
2. Cultural Resources
3. Transportation
4. Air Quality
5. Noise
6. Geology and Soils
7. Hazards and Hazardous Materials
8. Hydrology and Water Quality

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<sup>1</sup> *CEQA Guidelines*, 2019. Section 21068.

Preliminary analysis provided in the Initial Study (Appendix B) determined that development of the proposed project would not result in significant impacts to the following environmental topics: aesthetics; agriculture and forestry resources; energy; greenhouse gas emissions; land use and planning; mineral resources; recreation; population and housing; public services; tribal cultural resources; utilities and service systems; and wildfire. Consequently, these issues are not examined in this EIR (but are briefly discussed in Chapter 6.0, Other CEQA Considerations).

## CUMULATIVE ANALYSIS CONTEXT

CEQA defines cumulative as “two or more individual effects which, when considered together, are considerable, or which can compound to increase other environmental impacts.” Section 15130 of the CEQA Guidelines requires that an EIR evaluate potential environmental impacts when the project’s incremental effect is cumulatively considerable. “Cumulatively considerable” means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. These impacts can result from a combination of the proposed project together with other projects causing related impacts. The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonable foreseeable probable future projects.

The methodology used for assessing cumulative impacts typically varies depending on the specific topic being analyzed. CEQA requires that cumulative impacts be discussed using either a list of past, present, and probable future projects producing related or cumulative impacts, or a summary of projections contained in an adopted local, regional, or Statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. This EIR uses the list of past, present, and probable future projects approach, unless otherwise noted under each topical section. A list of developments was obtained from the City of San Bruno. Nearby projects within a 1-mile radius of the project site include the following:

- 406 San Mateo Avenue – a three-story mixed-use development of 83 apartment units and 7,000 square feet of retail space;
- 160 El Camino Real Hotel – a three-story hotel with 34 rooms;
- 271 El Camino Real – a three-story multi-family development with 24 units; and
- The Stratford School – a private school for pre-Kindergarten and Kindergarten students located at 201 Balboa Way.

CEQA also specifies that lead agencies should define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic area used. The cumulative geographic context for most project impacts generally extends for an approximately 1-mile radius around the site. However, the geographic scope for each topical area may be different depending upon the nature of the environmental impact being evaluated. For example, the geographic and temporal (time-related) parameters related to a cumulative analysis of air quality impacts are not necessarily the same as those for a cumulative analysis of noise impacts because the

geographic area that relates to air quality is much larger and regional in character than the geographic area that could be affected by potential noise impacts from a proposed project and other cumulative projects/growth. The cumulative noise impacts are more localized than air quality and transportation impacts, which are more regional in nature. Accordingly, the parameters of the respective cumulative analyses in this document are determined by the degree to which impacts from this project are likely to occur in combination with other development projects.

Refer to the appropriate discussion in each topical section for further discussion of the cumulative assumptions relevant to each topic.

## FORMAT OF ISSUE SECTIONS

Each environmental topical section is comprised of two primary parts: (1) Setting and (2) Impacts and Mitigation Measures. An overview of the general organization and the information provided in the two parts is provided below:

- *Setting.* The Setting section for the environmental topic generally provides a description of the applicable physical setting (e.g., existing land uses, existing traffic conditions) for the project site and its surroundings in San Bruno. The regulatory context is also described.
- *Impacts and Mitigation Measures.* The Impacts and Mitigation Measures section for the environmental topic presents a discussion of the impacts that could result from implementation of the proposed project. The section begins with the criteria of significance, which are the thresholds used to determine whether an impact is significant. The latter part of this section presents the impacts from the proposed project and mitigation measures, if required. Cumulative impacts are also addressed.

Impacts are numbered and shown in bold type, and the corresponding mitigation measures are numbered and indented. Impacts and mitigation measures are numbered consecutively and begin with an acronymic or abbreviated reference to the impact section (e.g., TRA). The following symbol is used for individual topics:

BIO	Biological Resources
CUL	Cultural Resources
TRA	Transportation
AIR	Air Quality
NOI	Noise
GEO	Geology and Soils
HAZ	Hazards and Hazardous Materials
HYD	Hydrology and Water Quality

Impacts are also categorized by type of impact, as follows: Less-Than-Significant (LTS), Significant (S), and Significant and Unavoidable (SU).

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## 4.1 BIOLOGICAL RESOURCES

This section describes the existing biological resources on and in the vicinity of the proposed project site, including potentially occurring special-status species and/or species of special concern and sensitive habitats, such as wetlands. Potential impacts to biological resources associated with implementation of the proposed project are described, and mitigation measures are identified, where required.

### 4.1.1 Setting

This subsection describes: 1) the methods used to establish the baseline conditions for biological resources in the project area; 2) the regulatory context related to biological resources; and 3) existing biological resources occurring within and in the vicinity of the project site.

#### 4.1.1.1 Methods

LSA assessed the biological baseline conditions on the project site by conducting both a desktop-level review of literature and databases, and general reconnaissance-level field review. LSA searched the *California Natural Diversity Database (CNDDDB)*<sup>1</sup> and California Native Plant Society (CNPS) *Inventory of Rare and Endangered Plants of California* for records of special-status wildlife and plant species and sensitive habitat occurrences within the vicinity of the project site. Database search results were supplemented with the in-house knowledge of LSA biologists about the occurrence of special-status species in San Mateo County. LSA also reviewed U.S. Geological Survey (USGS) topographic maps, the U.S. Fish and Wildlife Service (USFWS) Critical Habitat Portal, current Google Earth aerial images of the project site, and information provided in the San Bruno General Plan.<sup>2</sup> LSA biologists conducted reconnaissance-level surveys in spring 2019 during a creek assessment<sup>3</sup> and wetland delineation,<sup>4</sup> and a tree survey<sup>5</sup> to determine the potential presence of trees protected under the City's tree ordinance. A species inventory was not conducted during the field survey. The creek assessment, wetland delineation, and arborist report are included in Appendices C, D, and E, respectively of this EIR. The surveys were conducted on foot in order to provide visual coverage of the project site. Species observed during the survey were noted.

For the purpose of this analysis, special-status species are defined as follows:

- Species that are listed, formally proposed, or designated as candidates for listing as threatened or endangered under the federal Endangered Species Act (ESA);
- Species that are listed, or designated as candidates for listing, as rare, threatened, or endangered under the California Endangered Species Act (CESA);
- Plant species assigned to California Rare Plant Ranks 1A, 1B, and 2A and 2B;

<sup>1</sup> California Department of Fish and Wildlife, 2019.

<sup>2</sup> San Bruno, City of, 2009. *San Bruno General Plan*. March 24.

<sup>3</sup> LSA, 2019. *Creek Assessment for the San Bruno Recreation and Aquatic Center Project*. March 3.

<sup>4</sup> LSA, 2019. Request for Verification of Preliminary Clean Water Act Jurisdictional Delineation for the San Bruno Recreation Center Project, San Bruno, San Mateo County, California. July 1.

<sup>5</sup> LSA, 2020. *Arborist Report, San Bruno Recreation and Aquatic Center Project, San Mateo County, California*. January 22.

- Wildlife species designated as Species of Special Concern or Fully Protected by the California Department of Fish and Wildlife (CDFW);
- Species that meet the definition of rare, threatened, or endangered under Section 15380 of the CEQA guidelines; or
- Species considered a taxon of local concern by local agencies.

#### 4.1.1.2 Existing Conditions

The landscape setting within the project area consists of either hardscape or landscaping. Landscaping generally consists of lawn and landscape trees typical for public parks in this area (see Vegetation discussion, below). At the lower reach of the surveyed section, pavement connects City Park Way to a parking lot for the San Bruno City Park. At this location, vehicles access the parking spaces by driving through and across the armored El Zanjón Creek channel that runs along City Park Way. The creek is shallow in this location, which allows vehicular access to the parking lot. The creek conditions are discussed in detail in the Riverine section, below.

**Land Cover Types.** The land cover types of the project site consist of: hardscape (including roads, parking areas, paved paths, tennis courts, and other impervious surfaces), ornamental landscaping (i.e., turf and landscape trees typical of public parks in this area), and a segment of El Zanjón Creek. Within the project site, the creek has been previously extensively modified and is currently a concrete-lined channel, but is likely still considered jurisdictional as intermittent riverine habitat by State and federal regulatory agencies (see Regulatory Context below).

**Ornamental Landscaping.** The park has been developed and maintained for open space use, with ornamental landscaping of trees, shrubs, irrigated turf, and groundcover plantings. The turf/landscape areas within the project site are maintained, including regular mowing. At the time of the spring 2019 reconnaissance-level survey, the turf was mowed to approximately 3 inches. Turf plants observed included typical non-native landscape grasses<sup>6</sup> and ruderal forbs, including clover (*Trifolium* sp.), bristly ox-tongue (*Helminthotheca echioides*), broadleaf plantain (*Plantago major*), English ivy (*Hedera helix*), and common daisy (*Bellis perennis*).

The majority of the trees on the project site consist of eucalyptus (*Eucalyptus* sp.), especially bordering Crystal Springs Road, and London plane (*Platanus x acerifolia*). In addition, coast redwood (*Sequoia sempervirens*), Canary Island pine (*Pinus canariensis*), and Japanese zelkova (*Zelkova serrate*) are among the species on the project site. Trees lining the creek channel consist predominantly of typical landscape trees (both native and non-native), including, but not limited to, California sycamore (*Platanus racemosa*), eucalyptus, pine (*Pinus* sp.), coast redwood, coast live oak (*Quercus agrifolia*), birch (*Betula* sp.), and magnolia (*Magnolia* sp.). The trees within the project site and lining the creek are generally of mature heights of their respective species.

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<sup>6</sup> Due to the recent mowing, a reliable identification of the grass species of the managed turf was not feasible.

**Riparian.** The horticultural trees and shrubs growing along the El Zanjon Creek channel may be considered riparian habitat by the regulatory agencies where the canopies overlap the creek channel. However, no natural riparian vegetation is present within the project site due to the disturbed nature of the area and because the creek consists of a concrete-lined channel, rather than a natural bank/bed.<sup>7</sup>

**Riverine (intermittent).** El Zanjon Creek generally consists of an approximately 10-foot-wide channel formed by concave concrete panels or slabs. The height between the bottom of the concave concrete slabs and the top of the slabs is generally in the range of 1 to 2 feet (depending on the varying angles of the placement of the concrete slabs). This section of the creek appears to convey intermittent to ephemeral surface flows. These flows may predominantly originate in the watershed of the westerly slopes of Junipero Serra Park, but they may also include runoff from the watershed including easterly slopes of Interstate 280 at this location.

**Wildlife and Habitats.** Wildlife species that occur in developed and landscaped areas can use ornamental landscaping as foraging habitat and/or escape cover, and some are able to exploit building crevices, rooftops, and/or ledges on buildings for nesting and/or roosting. Common bird species likely to be found in the developed and landscaped areas include mourning dove (*Zenaidura macroura*), rock pigeon (*Columba livia*), American crow (*Corvus brachyrhynchos*), European starling (*Sturnus vulgaris*), house finch (*Haemorhous mexicanus*), and house sparrow (*Passer domesticus*). Mammal species expected to occur in developed and landscaped areas include Virginia opossum (*Didelphis virginiana*), fox squirrel (*Sciurus niger*), Botta's pocket gopher (*Thomomys bottae*), and house mouse (*Mus musculus*). Several amphibians and reptile species can occur in developed habitats if suitable cover is present, particularly in residential areas or parks rather than industrial or commercial areas including northwestern fence lizard (*Sceloporus occidentalis*), common garter snake (*Thamnophis* sp.), arboreal salamander (*Aneides lugubris*), and slender salamander (*Batrachoseps attenuatus*).

Nesting or other utilization of both native and non-native bird species, including migratory birds and birds of prey is more probable in the trees and shrubs on site and discussed below.

**Special-Status Plant Species.** Based on a literature and database review, as well as several reconnaissance-level surveys of the project site, LSA evaluated the potential presence and potential project-related impacts for special-status plant species known to occur (or have been known to historically occur) in the vicinity of the project site (Table 4.1.A).

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<sup>7</sup> Fremont cottonwood and white alder are the only native trees that are typically considered riparian plants.

**Table 4.1.A: Special-Status Plant Species Evaluated**

Species Name	Habitat	Federal Status	State Status	Rare Plant Rank	Potential to Occur
<i>Collinsia multicolor</i> San Francisco collinsia	Northern coastal scrub, closed-cone pine forest	None	None	1B.2	None. No suitable habitat present.
<i>Horkelia marinensis</i> Point Reyes horkelia	Coastal strand, coastal prairie, northern coastal scrub	None	None	1B.2	None. No suitable habitat present.
<i>Pentachaeta bellidiflora</i> White-rayed pentachaeta	Valley grassland	Endangered	Endangered	1B.1	None. No suitable habitat present.
<i>Triphysaria floribunda</i> San Francisco owl's-clover	Coastal prairie, valley grassland	None	None	1B.2	None. No suitable habitat present.

Source: LSA (2019)

The potential for these plant species to occur within the project site was assessed based on the habitats present within and adjacent to the project site, the proximity of known species occurrences, and knowledge of the species' range. None of the four plant species are likely to occur on the project site because all of the project site area consists of either hardscape, or regularly mowed and managed turf. Additionally, the extent of past disturbance, the site's use as a landscaped park, and the lack of suitable habitat in the vicinity of the site furthermore inhibits the persistence of any special-status plant species and none are expected to occur on the project site.

**Special-Status Wildlife Species.** Based on the database review (including CNDDDB and the San Bruno General Plan), information in background documents listed in the Methods section above, the reconnaissance surveys, and LSA's in-house knowledge of the surrounding areas, the potential presence of and potential impacts to the following special-status animal species were evaluated: California red-legged frog (*Rana draytonii*), San Francisco garter snake (*Thamnophis sirtalis tetrataenia*), and Townsend big-eared bat (*Corynorhinus townsendii*). A summary of the assessment is presented in Table 4.1.B.

Due to the developed conditions of the site, the potential for occurrence of special-status wildlife species is considered highly unlikely. As reported by the CNDDDB, known occurrences of both California red-legged frog and San Francisco garter snake are present to the east and west of the project site. Approximately 0.6 miles east of the project site, established populations of both species occurs on the West-of-Bayshore property (WOB; owned and managed for species recovery purposes by the San Francisco International Airport). Aboveground, dense residential and commercial development separates this breeding habitat at WOB from the project site. However, WOB is hydrologically connected to the project site because El Zanjon Creek drains via the underground stormwater system to a drainage crossing WOB, known as Cupid Row Canal. California red-legged frogs have been observed in Cupid Row Canal, but it is unlikely that either species would travel 0.6 miles underground through the stormwater system to reach the project site.<sup>8</sup>

<sup>8</sup> Frogs might be washed into or through a long culvert but usually would not traverse a culvert where the end is not visible.

**Table 4.1.B: Special-Status Wildlife Species Evaluated**

Species Name	Habitat	Federal Status	State Status	Potential to Occur
<i>Corynorhinus townsendii</i> Townsend big-eared bat	Prefers open surfaces of caves or cave-like structures, including buildings, bridges, and water diversion tunnels, rock crevices, and crevices in large hollow trees. Foraging associations include edge habitats along streams and areas adjacent to and within a variety of wooded habitats.	None	CSC	Unlikely. Species observed in 2011 at Harry Tracy Water Treatment Plant, approximately 0.7 miles from project site. No typical roosting habitat present.
<i>Rana draytonii</i> California red-legged frog	Inhabits ponds, streams, drainages, and associated uplands; requires areas of deep, still, or slow-moving water for breeding.	FT	CSC	Unlikely. No breeding habitat present. Only marginal dispersal habitat present.
<i>Thamnophis sirtalis tetrataenia</i> San Francisco garter snake	Densely vegetated ponds near open hillsides with rodent burrows, temporary ponds, and other seasonal freshwater bodies. Emergent and bankside vegetation such as cattails, bulrushes, and spike rushes are preferred and used for cover. The area between stream and pond habitats and grasslands or bank sides is used for basking, while nearby dense vegetation or water often provide escape cover.	FE	CE	Unlikely. No breeding habitat present on site. Only marginal dispersal habitat present.

Source: LSA (2019)

Status:

FE = federally endangered

FT = federally threatened

CE = California State endangered

CT = California State threatened

CSC = California Species of Special Concern

CFP = California Fully Protected Species

Approximately 1 mile to the west of the project site, both California red-legged frogs and San Francisco garter snakes have been documented from areas associated with the San Andreas Lake, including areas east of Skyline Boulevard. Although I-280 separates San Andreas Lake and the El Zanjon Creek watershed, open space areas (including Junipero Serra Park), the headwater areas and watershed of El Zanjon Creek and El Zanjon Creek itself may provide a potential dispersal corridor for this species onto the project site during the wet season. Specifically, the project site is within the documented wet-season dispersal distance for California red-legged frog.<sup>9</sup> With frog populations known within the vicinity of the site, it is possible that frogs may move through the project site.

Dispersal from the east or the west onto the project site would constitute a population sink for either species, given intense predator density and the absence of breeding habitat at the project site. However, the presence of a transient individual during the wet season cannot be ruled out.

<sup>9</sup> Fellers, G.M., and Kleeman P.M., 2007. California Red-legged Frog (*Rana draytonii*) Movement and Habitat Use: Implications for Conservation

Townsend big-eared bat was documented in 2011 at the Harry Tracy Water Treatment Plant, approximately 0.7 miles from the project site. No typical roosting habitat is present on the project site, and the high level of development and human disturbance makes it unlikely that this species is present on the project site. However, it cannot be ruled out that crevices, or other cave-like structures (such as box culverts or buildings), including crevices in trees, may be used by this species for night roosting.

#### 4.1.1.3 Regulatory Context

Biological resources on the site may fall under the jurisdiction and regulations of the agencies listed below.

**United States Fish and Wildlife Service.** The U.S. Fish and Wildlife Service (USFWS) has jurisdiction over federally listed threatened and endangered species under the federal ESA. The ESA protects listed species from harm or “take” which is broadly defined as to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct.” An activity can be defined as a “take” even if it is unintentional or accidental.

An endangered species is one which is in danger of becoming extinct throughout all or a significant portion of its range. A threatened species is one that is likely to become endangered within the foreseeable future. In addition to endangered and threatened species, which are legally protected under the federal ESA, the USFWS maintains a list of candidate species. Candidate species are specifically included on a list published in the federal register. Federal candidate species are not afforded legal protection under the federal ESA.

**U.S. Army Corps of Engineers.** Under Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers (Corps) is responsible for regulating the discharge of fill material into waters of the United States. Waters of the U.S. and their lateral limits are defined in 33 Code of Federal Regulations (CFR) Part 328.3 (a) and include streams that are tributary to navigable waters and their adjacent wetlands. Wetlands that are not adjacent to waters of the U.S. are termed “isolated wetlands” and may be subject to Corps jurisdiction.

In general, a Corps permit must be obtained before placing fill in wetlands or other waters of the U.S. The type of permit depends on the acreage involved and the purpose of the proposed fill. Nationwide Permits are available for projects that are anticipated to have minimal impacts on waters of the U.S. and wetlands and meet the general terms of the specific Nationwide Permit and the standard conditions for all Nationwide Permits. An Individual Permit is required for projects that result in more than a “minimal” impact on wetlands. The Corps would be required to consult with the USFWS under Section 7 of the Endangered Species Act if a project subject to Clean Water Act permitting will result in take of a federally listed species. The Corps must also consult with the Regional Water Quality Control Board (Regional Water Board) regarding potential impacts to water quality.

**Migratory Bird Treaty Act.** The federal Migratory Bird Treaty Act (16 U.S.C., Sec. 703, Supp. I, 1989) prohibits killing, possessing, or trading in migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs. Most native bird species on the project site are covered by this Act. The

California Fish and Game Code (Sections 3503 and 3505) prohibits the take, destruction, or possession of any bird, nest, or egg of any bird unless express authorization is obtained from CDFW.

**California Department of Fish and Wildlife.** The CDFW has jurisdiction over State-listed threatened, endangered, and rare (plant) species under the CESA. In addition, species proposed for listing under the CESA are also protected until a determination is made on the listing proposal. The State and federal lists are generally similar, although a few species present on one list may be absent from the other list. The State also maintains lists of special-status wildlife species identified as Species of Special Concern. These are species whose status is being monitored due to one or more threats. Species on these lists are not afforded legal protection. The CDFW also exerts jurisdiction over the bed and bank of watercourses according to the provisions of Sections 1601 to 1603 of the Fish and Game Code. The CDFW typically requires a Streambed Alteration Agreement for the fill or removal of material from any natural drainage. The jurisdiction of the CDFW under the Fish and Game Code extends to the top of bank of a stream.

**Regional Water Quality Control Board.** Pursuant to Section 401 of the Clean Water Act, projects that require a permit from the Corps under Section 404 must also obtain water quality certification from the Regional Water Board. This certification ensures that the project will uphold State water quality standards. The Regional Water Board requires mitigation for any loss of jurisdictional area.

**Porter-Cologne Water Quality Control Act.** This act authorizes the Regional Water Board to regulate the discharge of waste that could affect the quality of the State's waters. Projects that do not require a federal permit may still require review and approval by the Regional Water Board. The Regional Water Board focuses on ensuring that projects do not adversely affect the "beneficial uses" associated with waters of the State. In most cases, the Regional Water Board requires the integration of water quality control measures into projects that will require discharge into waters of the State. For most construction projects, the Regional Water Board requires the use of construction and post-construction best management practices.

**CEQA Guidelines Section 15380.** Although threatened and endangered species are protected by specific federal and State statutes, CEQA Guidelines Section 15380(b) provides that a species not listed on the federal or State list of endangered or threatened species may be considered rare or endangered if the species can be shown to meet certain, specified criteria. These criteria have been modeled after the definition in the federal ESA and the section of the California Fish and Game Code dealing with rare or endangered species. Section 15380 (b) was included in the Guidelines primarily to address situations in which a public agency is reviewing a project that may have a significant effect on a species that has not yet been listed by either the USFWS or CDFW. Thus, CEQA provides a lead agency with the ability to protect a species from a project's potential impacts until the respective government agencies have an opportunity to designate the species as protected, if warranted.

**California Native Plant Society.** The California Native Plant Society (CNPS) is a non-governmental nonprofit organization that publishes an online rare plant inventory. The online inventory provides a Rare Plant Rank for each species. Although the CNPS has no regulatory authority and does not issue permits, the plant species it deems rare must be addressed under CEQA, per the CEQA Guidelines section 15380.

**San Bruno Municipal Code.** Chapter 8.25 of the City’s Municipal Code addresses the protection of heritage trees. The City requires a tree removal permit for private development projects that would remove any heritage tree, which includes: 1) any native bay (*Umbellularia californica*), buckeye (*Aesculus* species), oak (*Quercus* species), redwood (*Sequoia sempervirens*), or pine (*Pinus radiata*) tree that has a diameter of 6 inches or more measured at 54 inches above natural grade; 2) any tree or stand of trees designated by resolution of the city council to be of special historical value or of significant community benefit; 3) a stand of trees, the nature of which makes each dependent on the others for survival; or 4) any tree with a trunk diameter of 10 inches or more, measured at 54 inches above natural grade. Chapter 8.24 addresses the protection of street trees and reforestation requirements applicable to project-related tree removal occurring within the street right-of-way. City-sponsored projects are not required to obtain a tree removal permit; however, the City endeavors to meet the specified replacement requirements, to the extent feasible.

**City of San Bruno General Plan.** The Environmental Resource and Conservation Element of the San Bruno General Plan includes policies encouraging the protection of biological resources. The primary biological resources policies applicable to the proposed project include the following:

- **Policy ERC-A:** Preserve open space essential for the conservation of San Bruno’s natural resources—including vegetation, wildlife, soils, water, and air.
- **Policy ERC-B:** Protect the natural environment, including wildlife, from destruction during new construction or redevelopment within San Bruno.
- **Policy ERC-C:** Recognize areas of overlapping jurisdiction with respect to open space and environmental resources, and coordinate the City’s actions with efforts of surrounding cities, agencies, and San Mateo County.
- **Policy ERC-1:** Preserve as open space those lands, which are identified, through environmental review, as sensitive habitat areas. Require setbacks to development as buffer areas, as appropriate.
- **Policy ERC-2:** Preserve as open space those portions of property, which have significant value to the public as scenic resources, aesthetic, or recreation purposes.
- **Policy ERC-3:** Protect natural vegetation in park, open space, and scenic areas as wildlife habitat, to prevent erosion, and to serve as noise and scenic buffers.
- **Policy ERC-5:** Preserve critical habitat areas and sensitive species within riparian corridors, hillsides, canyon areas, tree canopies, and wetlands that are within the City’s control (Figure 6-1). Protect declining or vulnerable habitat areas from disturbance during design and construction of new development.
- **Policy ERC-8:** If development occurs adjacent to a wetlands area, ensure that a qualified biologist has conducted a wetlands delineation in accordance with federal and State guidelines.

- **Policy ERC-9:** Preserve mature trees and vegetation, including wildflowers, within open canyon areas and along the city’s scenic roadways.
- **Policy ERC-10:** Require incorporation of native plants into landscape plans for new development as feasible—especially in areas adjacent to natural areas, such as canyons or scenic roadways (Figure 6-1). Require preservation of mature trees, as feasible, during design and construction.
- **Policy ERC-12:** Balance the need for fire safety and invasive plant species management with new considerations along the city’s scenic corridors. Encourage buildings to be located outside of the tree’s drip-line or 12 feet from the tree trunk, whichever is greater, and/or incorporating special techniques to minimize root damage, etc.
- **Policy ERC-13:** Through environmental review, assure that all projects affecting resources of regional concern (e.g., the San Francisco garter snake habitat, water and air quality, the San Francisco Fish and Game Reserve) satisfy regional, State and federal laws.
- **Policy ERC-14:** Preserve wetlands habitat and associated species in compliance with the federal “no net loss” policy using mitigation measures such as:
  - Avoidance of sensitive habitat areas;
  - Clustering of development away from wetlands;
  - Transfer of development rights for preservation of existing sensitive lands; and/or
  - Compensatory in-kind mitigation, such as restoration or creation.
- **Policy ERC-15:** Consult with the California Department of Fish and Wildlife to determine significant habitat areas. Identify priorities for acquisition or maintenance of open space areas based on biological or environmental concerns.
- **Policy ERC-16:** Conduct presence/absence biological surveys for sensitive plant and animal species in natural areas prior to any construction activities proposed adjacent to or within identified natural areas. If no special status species are detected during these surveys, then construction-related activities may proceed. If listed special status species are found with the construction zone, then avoid these species and their habitat or consult with U.S. Fish and Wildlife Service and/or California Department of Fish and Game.
- **Policy ERC-17:** If construction activities, including tree removal activities, are required adjacent to or within natural areas, then avoid activities during March through June unless a bird survey is conducted to determine that the tree is unused during the breeding season by avian species that are protected under California Fish and Game Codes 3503, 3503.5, and 3511.

#### 4.1.2 Impacts and Mitigation Measures

The following section provides a discussion of potential impacts to biological resources that could result from construction and operation of the proposed project. The section begins with the criteria of significance, which establish the thresholds used to determine whether an impact is significant. The remainder of this section presents the impacts associated with the proposed project and identifies mitigation measures, as appropriate.

#### 4.1.2.1 Criteria of Significance

Implementation of the proposed project would have a significant impact on the environment related to biological resources if it would:

- 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 CDFW or USFWS;
- 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 CDFW or USFWS;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means;
- Create substantial interference 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;
- Conflict with the provisions of an approved local, regional or State policy or ordinance protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

#### 4.1.2.2 Project Impacts

The following section discusses potential impacts to biological resources associated with implementation of the proposed project. Potential impacts are differentiated between temporary construction-related impacts and permanent operational impacts.

**Special-Status Species.** The following includes a discussion of potential construction-period impacts to special-status wildlife species, including California red-legged frog, San Francisco garter snake, and Townsend big-eared bat, which would be mitigated to a less-than-significant level with implementation of identified mitigation measures. No impacts to special-status wildlife species would occur with project operation, as the proposed project would not permanently disturb any sensitive habitats. No impacts to special-status plant species would occur, given that none are known to occur within or in the immediate vicinity of the project site.

**Impact BIO-1: Construction activities could result in direct impacts to California red-legged frog (a California Species of Special Concern) and San Francisco garter snake (a California endangered species). (S)**

No suitable breeding habitat, upland habitat, or known occurrences of California red-legged frog or San Francisco garter snake exist on the project site; therefore, the likelihood that the proposed project would adversely affect these species is very low. However, dispersal of individuals from the east or the west onto the project site during the wet season cannot be ruled out. If present, dispersing individuals of California red-legged frog and San Francisco garter snake could be directly

affected through grading or other ground and vegetation disturbance associated with project construction. Implementation of the following two-part mitigation measure would ensure that this impact would be reduced to a less-than-significant level.

**Mitigation Measure BIO-1a:** For all ground disturbing activities involving vegetation removal, a qualified biologist familiar with California red-legged frog and San Francisco garter snake shall conduct a preconstruction survey of the work area for these species within 24 hours prior to any vegetation removal or ground-disturbing activities. If any California red-legged frogs or San Francisco garter snakes are found in the work area, construction activities shall not commence until a qualified biologist has verified that the species have left the work area. Both the CDFW and USFWS shall be notified within 24 hours. Relocation shall only be conducted with CDFW and USFWS authorization, and by permitted biologists. Construction activities may not resume until approved by CDFW and USFWS.

**Mitigation Measure BIO-1b:** A worker-training program and construction monitoring shall be performed by a qualified biologist during the initial ground-disturbing activities at the project site. The qualified biologist shall: 1) be familiar with both California red-legged frog and San Francisco garter snake; 2) advise the construction crew that these species could be present on the site and vicinity and discuss their status and the procedure to follow if an individual of either species is suspected to be present (i.e. that all work shall stop immediately in the vicinity of the individual until the species is accurately identified by the qualified biologist); and 3) monitor construction activity to assist the contractor in avoiding impacts to individuals of these species. If an individual of either species is discovered during initial ground-disturbing activity, all work shall stop and the USFWS and CDFW shall be contacted within 24 hours for guidance on how to proceed. (LTS)

Implementation of Mitigation Measures BIO-1a and BIO-1b would ensure that potential construction-period impacts on California red-legged frogs and San Francisco garter snake are reduced to a less-than-significant level by ensuring that direct take of these special-status species is avoided, in accordance with CDFW and USFWS requirements.

**Impact BIO-2: Construction of the project could result in direct impacts to Townsend big-eared bat, a California Species of Special Concern. (S)**

No typical roosting habitat is present on the project site, and the high level of development and human disturbance makes it unlikely that this species uses the site frequently if at all. Cave-like structures (such as box culverts or buildings), and trees, could be used by this species for night roosting. Therefore, if present, Townsend big-eared bat could be directly affected through grading or other ground and vegetation disturbance associated with project construction.

**Mitigation Measure BIO-2a:** Within 24 hours prior to demolition of structures (including buildings and culverts), and removal of trees, a qualified biologist shall conduct a preconstruction survey of the work area for Townsend big-eared bats. If any Townsend big-eared bats or signs thereof are found in the work area, construction activities shall not commence until a qualified biologist has verified that the animals have left the work area. The CDFW shall be notified within 24 hours and construction activities shall not be resume until approved by CDFW. Relocation shall only be conducted with CDFW authorization, and by permitted biologists.

**Mitigation Measure BIO-2b:** All trees shall be removed in a two-step process. On the first day the branches and trunk shall be cut down. The branches and trunk sections shall be left onsite, undisturbed, until the next day (the second day) when the branches can be chipped and hauled away. This two-step process would allow bats roosting in the trees to escape before chipping of the wood. (LTS)

Implementation of Mitigation Measures BIO-2a and BIO-2b would ensure that potential construction-period impacts on Townsend big-eared bat are reduced to a less-than-significant level by ensuring that direct take of this species is avoided, in accordance with CDFW requirements.

**Wetlands and Riparian Habitat.** Approximately 450 linear feet of the El Zanjon Creek channel running through the park would be relocated to accommodate the proposed parking lot reconfiguration and provide a separation between the creek and vehicle parking stalls. Relocation would begin just north of the existing pedestrian bridge east of the existing Veterans Memorial building. The creek channel would generally be shifted south until it reaches the intersection of City Park Way and Crystal Springs Road. Currently, the reconfigured creek is planned to be channelized, similar to existing conditions. Relocation of the channel away from the existing roadway and parking stalls would reduce the potential for contaminants from vehicles to enter the channel and eliminate the existing safety risk to visitors parking in the channel during periods of heavy flows, improving water quality within the creek.

With the exception of one white alder and two cottonwood trees, no wetlands or native riparian habitat are present along the segment of El Zanjon Creek to be relocated. Placement of fill in the creek, modification of its bed or bank, or removal of creekside vegetation is subject to regulation by the CDFW, Regional Water Board, and Corps. The proposed project is designed to realign El Zanjon Creek with no net loss of channel area or function. Therefore, no permanent adverse effects on State or federally regulated wetlands are anticipated. However, an estimated 2,760 square feet (0.063 acre) of regulated waters would be temporarily disturbed as part of the channel realignment, and temporary construction activities could result in degradation of water quality and loss of habitat values of the creek channel. Because the creek channel is a regulated water body, temporary impacts would be potentially significant.

**Impact BIO-3: The proposed project would realign a segment of El Zanjon Creek, resulting in temporary impacts to regulated waters and the riparian habitat of the creek channel. (S)**

Realignment of El Zanjon Creek would require removal of four London plane trees that grow along the southern edge of the parking stalls near the vehicle entrance to the park at Crystal Springs Road (refer to Figure 4.1-1). A portion of the canopy of these trees extends over the concrete-lined swale-like portion of El Zanjon Creek through the parking stalls. The trees that form the riparian canopy may be considered riparian habitat by the CDFW and Regional Water Board. The proposed project includes extensive replacement tree plantings that would address loss of the existing trees along the current El Zanjon Creek alignment and the riparian habitat values they provide.

Implementation of the following mitigation measures would ensure that potential impacts to regulated waters and the associated loss of low-quality riparian habitat associated with the London plane trees to be removed would be reduced to a less-than-significant level.

**Mitigation Measure BIO-3a:** The City shall apply for a Streambed Alteration Agreement from the CDFW. All measures required by the CDFW as stated in the Streambed Alteration Agreement shall be followed. At a minimum, the following measures shall be implemented:

- Construction fencing shall be placed around the segments of the creek channel and surrounding trees to be retained as part of the project so that grading and other construction activities do not inadvertently affect these areas.
- Work within the stream/riparian corridor shall be confined to the period of June 15 to October 15 to minimize the likelihood for presence of surface flows in the channel. Revegetation may occur at any time. The period for completing work within the creek channel shall be restricted to periods of no stream flow and dry weather.

The City shall enhance or create riparian habitat at a minimum replacement/enhancement-to-loss ratio of 1:1 (i.e., 1 tree replanted per tree removed from the creek corridor). Trees shall be planted along the existing and reconfigured channel. Tree planting shall occur in the fall following the end of construction activities to take advantage of fall and winter rains in establishing the plantings. To ensure a successful revegetation effort, all plants shall be monitored and maintained for 5 years. All planting shall have a minimum of 80 percent survival at the end of 5 years. If this goal is not achieved, the City shall be responsible for replacement planting, additional watering, weeding, invasive exotic eradication, or any other remedial measures, to achieve the performance criteria. Details of the riparian replacement/ enhancement plan and success criteria

shall be stipulated in a Mitigation and Monitoring Plan, to be prepared by the City's landscape architect, in consultation with a qualified biologist. This Plan shall be submitted to CDFW as part of the Streambed Alteration Agreement. An annual report documenting compliance with this measure shall be submitted to the CDFW and to the Community Development Department project file.

**Mitigation Measures BIO-3b:** The City shall secure the appropriate permits from and as required by the Corps (Section 404) and Regional Water Quality Control Board (Section 401 Water Quality Certification) and implement all terms of the permits including monitoring and reporting requirements and mitigation requirements. Mitigation for impacts to jurisdictional areas shall be provided at a minimum 1:1 basis (impacted: mitigated).

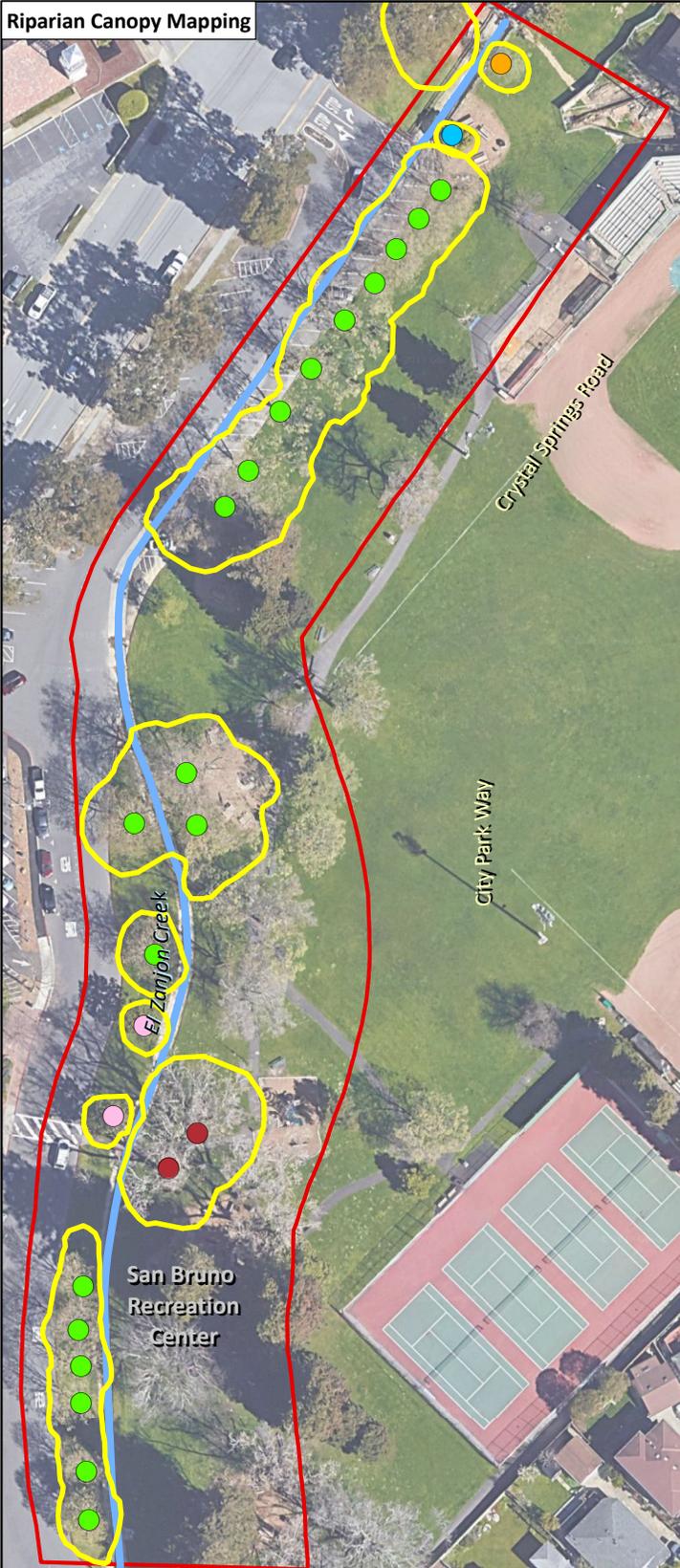
**Mitigation Measures BIO-3c:** The City shall implement the following water quality protection measures as best management practices during project construction to protect aquatic life in and the water quality of the El Zanjon Creek channel:

- Materials used for work in and below top-of-bank of the current and the proposed new creek channel shall be non-toxic to aquatic life. Any concrete used in the relocated channel shall be allowed to cure sufficiently (typically 30 to 60 days unless an approved sealant is used) prior to contact with surface waters from the creek to avoid leaching of lime into receiving waters.
- All equipment refueling and maintenance shall occur outside the creek channel, and appropriate measures shall be implemented to prevent the discharge of fuels or other contaminants into the stream in the event of spills.

An Erosion and Sediment Control Plan (ESCP) shall be developed, and standard erosion and water quality Best Management Practices (BMPs) shall be implemented. After realignment work is complete, a final clean-up of the work sites shall include removal of all temporary silt fencing, flagging, sandbags, and other refuse generated by the proposed work.

- Details of the planting plan and success criteria shall be stipulated in a Mitigation and Monitoring Plan (refer to Mitigation Measure BIO-3a). (LTS)

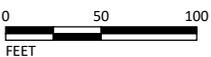
Riparian Canopy Mapping



Project Impacts to Riparian Canopy



LSA



SOURCE: Google Maps Sat (04/2019).

LEGEND

- Study Area
- Riparian Canopy
- ✕ Riparian Tree to be Removed
- Riparian Canopy Impacted by Tree Removal (0.164 acre)
- Camphor tree
- Fremont cottonwood
- London plane
- Southern magnolia
- White alder

FIGURE 4.1-1

San Bruno Recreation and Aquatic Center Project EIR  
Existing and Impacted Riparian Canopy

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Implementation of Mitigation Measures BIO-3a through BIO-3c would ensure that permanent impacts to El Zanjon Creek are avoided through replacement of the disturbed area at a minimum 1:1 ratio, in accordance with regulatory agency requirements and as proposed by the project design. Temporary impacts would also be reduced to a less-than-significant level through implementation of construction-period best management practices.

**Migratory Species and Nursery Sites.** Development of the proposed project would not create any significant new permanent barriers to terrestrial or aquatic wildlife movement. However, the proposed project would result in vegetation removal activities which could affect nesting birds protected under the federal Migratory Bird Treaty Act and California Fish and Game code, as discussed below. Implementation of Mitigation Measures BIO-1 through BIO-2b as previously discussed, would ensure that impacts to special-status wildlife species would be less than significant. In addition, implementation of Mitigation Measure BIO-4 would further ensure that impacts to common wildlife species that may be present on or move through the project site would be less than significant.

**Impact BIO-4: Construction of the proposed project could result in impacts to nesting native birds protected under the federal Migratory Bird Treaty Act and California Fish and Game Code. (S)**

Project construction would result in the removal of trees and other vegetation that could be used by nesting birds. If conducted during the nesting season (February 1 to August 31), project activities could directly impact nesting birds by removing trees (including dead trees) or shrubs that support active nests. Grading and site preparation activities could also destroy or disturb nests in shrubs or on bare ground (common bird species that nest on bare ground include California towhee, killdeer, and mourning dove). Construction-related disturbance (e.g., noise, vehicle traffic, personnel working adjacent to suitable nesting habitat) could also indirectly impact nesting birds by causing adults to abandon nests in nearby trees or other vegetation, resulting in nest failure and reduced reproductive potential. Implementation of the following mitigation measure would reduce potential impacts to nesting birds to a less-than-significant level.

**Mitigation Measure BIO-4:** To the extent feasible, initial grading and vegetation removal activities shall occur during the non-nesting season (September 1 to January 31). For any construction activities conducted during the nesting season, a qualified biologist (i.e., experienced in searching for passerine nests) shall conduct a preconstruction nest survey of all trees or other suitable nesting habitat in and within 250 feet of the limits of construction activities. The survey shall be conducted no more than seven days prior to the start of work. If the survey indicates the presence of nesting birds, the biologist shall determine an appropriately sized buffer around the nest in which no work shall occur until the young have successfully fledged. The size of the nest buffer shall be determined by the biologist and shall be based on the nesting species and its sensitivity to disturbance. In general, buffer sizes of up to 250 feet for raptors and 50 feet for other birds should suffice to prevent substantial disturbance to nesting birds, but these buffers may be increased or decreased, as appropriate,

depending on the bird species and the level of disturbance anticipated near the nest. (LTS)

Implementation of Mitigation Measure BIO-4 would ensure that potential impacts to migratory bird species would be avoided, by limiting grading and vegetation removal activities to periods when these species and their nests are not present within the work area. Therefore, this impact would be less than significant.

**Local Policy Conflicts.** The proposed project would remove approximately 64 trees from the project site to accommodate construction of the new SBRAC and associated parking improvements, roadway realignment, and creek realignment. Of the 64 trees proposed to be removed, 52 have been identified as heritage trees. As previously discussed, a tree removal permit is required for the removal of heritage trees and street trees for private development projects but is not required for City-sponsored projects.

Section 8.25.060 of the San Bruno Municipal Code states that the Director of Public Works or a designee may exempt any tree removal or pruning on City-owned open space or park parcels conforming to best management practices recommended by a certified arborist from the reforestation requirements. As the proposed project and associated tree removal is located on City-owned park parcels, it is exempt from tree removal permit and reforestation requirements and this impact would be less than significant.

In addition, the proposed project would retain 117 “heritage trees” within the survey area, including one tree that is proposed to be a centerpiece of the new building’s design. Tree #14, as identified in Figure 1 of the Arborist Report<sup>10</sup> is a specimen coast redwood tree that is in excellent health and has a good structure. In general, coast redwoods are tolerant to impacts such as root severance and have an extraordinary ability to compensate for disruptions to their root systems.<sup>11</sup> Although it is likely that Tree #14 would survive impacts related to construction, the tree should be continually monitored for health and stability by a professional arborist, as outlined below:

- *Tree Protection During Construction.* Trees to be retained should be enclosed in a tree protection zone (TPZ) to prevent direct damage to the trees and their growing environment during the construction process. A TPZ fence should be established around the trees at a distance no less than 5 feet outside the dripline. In no case should the TPZ fence be less than 10 feet from the trunk of the tree. The fencing should be installed before site preparation, construction activities, or tree trimming begins and should consist of blaze orange barrier fencing supported by metal “T-rail” fence posts.
- *Tree Maintenance Prior to and During Construction, Canopy.* It may be necessary to trim the canopy of a tree to reduce the hazard of accidental limb failure or to allow the movement of construction machinery. Although no specific branch or branches are recommended for removal, planned tree work should consider removing dead, crossed, and/or malformed limbs.

<sup>10</sup> LSA, 2020, op. cit.

<sup>11</sup> Stone, E. C., and R. B. Vasey 1962. Studies Related to the Physiology and Vigor of Old Growth Redwood: Root Regenerating Capacity of Mature Plants. Redwood Ecology Project. Annual Report. Wildland Research Center, University of California. California Department of Parks and Recreation.

All branches to be removed should be pruned back to an appropriately sized lateral or to the trunk by following proper pruning guidelines. It is recommended that a professional tree company with certified arborists be retained to do this work. If accidental damage of tree trunks and limbs should occur during construction, a professional arborist should be consulted to properly address these issues. Tree trimming should not be allowed to be performed by construction personnel.

- *Tree Maintenance Prior to and During Construction, Root Zones.* Tree roots often extend far beyond the canopy dripline. To reduce the root shock trees are likely to experience during construction, a watering schedule should be initiated a minimum of 30 days prior to the start of construction. During construction supplemental irrigation should be applied as needed based upon seasonal temperatures and soil moisture. An arborist should help determine the watering schedules.

If encroachment into the TPZ cannot be avoided, the design should consider special construction to allow the roots to breathe and obtain water. In situations where construction leads to excavation work within the dripline of trees, this work should be done with light equipment or by hand whenever possible to avoid tearing large diameter roots. All roots encountered during excavation should be cut with a sharp blade, taking care not to rip the roots. Excavation adjacent to any retained tree, particularly the redwood tree to be retained (Tree #14), should not be permitted where damage to the large structural or fibrous matting root system will result. Root removal that jeopardizes the structural integrity or the health of the tree should be avoided. The existing ground surface within the TPZ should not be cut, filled, compacted, or paved. Root collars should not be buried when exposed roots are backfilled with native soil to a natural grade. Any root pruning required for construction purposes should receive the prior approval of and be supervised by a certified arborist retained for the supervision of tree work on site.

Methods or treatments used to minimize damage to nearby roots may include root pruning prior to grading, use of retaining walls with discontinuous footings avoiding large structural roots, use of paving sections that require a minimum amount of excavation, and the use of air and water pervious pavement. If pervious pavement cannot be used, then a root aeration system should be considered. There are many different methods and designs for venting impervious pavement for root aeration, and a professional arborist can assist the City in finding the best solution.

- *Activities Prohibited Within Canopy Driplines.* Where feasible, heavy machinery should not be allowed to operate or park within the TPZ, nor should any excess soil, chemicals, debris, equipment, or other materials be dumped or stored within the TPZ or upslope of the protected trees. If it is necessary for heavy machinery to operate within the dripline of the preserved protected trees, then a layer of mulch or pea gravel at least 4 inches in depth should be placed on the ground beneath the dripline. A 3/4 inch sheet of plywood should be placed on top of the mulch. The plywood and mulch will reduce compaction of the soil within the dripline. Debris or materials shall not be placed within TPZs or against tree trunks.

Implementation of the above tree protection measures would ensure that heritage trees to be retained on site have the best possible chance of survival. These measures, or other similarly-

effective measures recommended by the City's arborist, should be incorporated into the construction contract documents.

**Conservation Plans.** The project site is not located within any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. Therefore, the proposed project would have no impact on consistency with such plans.

#### 4.1.2.3 Cumulative Impacts

For biological resources, the scope for assessing cumulative impacts encompasses other past, current, or probable future projects under review by the City. With implementation of Mitigation Measures BIO-1 through BIO-4, the proposed project would result in less than significant impacts to special-status plants and wildlife (including California red-legged frog, San Francisco garter snake, and Townsend big-eared bat), native bird species, riparian areas, and movement of common wildlife species. Recommended mitigation measures to reduce these impacts are standard measures recommended for similar development projects and comply with the requirements of State and local agencies. In addition, all of the potential impacts identified for the proposed project would be temporary and limited to the construction period. Habitats for special-status plants or wildlife species would not be adversely affected by the proposed project as the site is currently fully developed and is unsuitable for special-status species. The project, therefore, would not combine with the effects of other projects in the vicinity to contribute to a significant cumulative impact on these resources.

Development of the proposed project would result in an impact to 0.063 acres of federally protected waters. Given the small area impacted and its replacement onsite (Mitigation Measure BIO-3), the temporary impact to waters on the site would not be cumulatively considerable.

When future development proposals are considered by the City, these proposals would undergo environmental review pursuant to CEQA, and when necessary, mitigation measures would be adopted as appropriate. In most cases, this environmental review and compliance with project conditions of approval, relevant policies and mitigation measures, and the General Plan, and compliance with the requirements of the applicable regulatory agencies such as the USFWS, CDFW, Corps, Regional Water Board, etc., would ensure that significant impacts to biological resources would be avoided or otherwise mitigated to less-than-significant levels.

For these reasons, the proposed project would not result in or contribute to any significant cumulative impacts to biological resources and cumulative impacts to these resources would be less than significant.

## 4.2 CULTURAL RESOURCES

This section describes existing cultural resources conditions within the project site and vicinity, identifies potentially significant impacts to such resources that may result from development of the proposed project, and recommends mitigation measures to reduce the severity of potentially significant impacts. Cultural resources are sites, buildings, structures, objects, and districts that may have traditional or cultural value for their historical significance. Examples of cultural resources include precontact (Native American) and historic-period archaeological sites, and historic buildings and bridges of architectural significance. The California Environmental Quality Act (CEQA) requires that agencies considering projects that are subject to discretionary action shall consider the potential impacts on cultural resources that may occur from project implementation (see Section 15064.5 and Appendix G of the CEQA Guidelines).

Section 4.18 of the Initial Study included in Appendix B to this EIR addresses the topic of tribal cultural resources. As discussed in the Initial Study, impacts to these resources would not occur with development of the proposed project.

In addition to the references listed in this section, a Historical Resource Evaluation (HRE)<sup>1</sup> was prepared for the built environment resources located within the project site; the HRE was used in the analysis provided in this section and is included as Appendix F. Additionally, a peer review of the HRE was prepared.<sup>2</sup>

### 4.2.1 Setting

To characterize the setting for cultural resources at the project site the following tasks were completed: (1) records searches were conducted at the Northwest Information Center (NWIC) and local historical archives; (2) a field survey was completed to identify cultural resources; and (3) the Veterans Memorial building and San Bruno Park Pool (pool facility) were evaluated to determine their eligibility for listing in the California Register of Historical Resources (CRHR). The results of these tasks are summarized below. This section also includes an overview of the applicable regulatory context related to cultural resources.

#### 4.2.1.1 Records Searches

The results of the records searches at the NWIC and local historical archives are discussed below.

**Northwest Information Center.** The NWIC records search was conducted on January 4, 2019. The NWIC, an affiliate of the State of California Office of Historic Preservation, is the official State repository of cultural resources records and reports for San Mateo County. The NWIC database indicates that there are no recorded cultural resources at, nor are there previous studies of, the project site. There are three recorded precontact archaeological sites within a 0.25-mile radius of the project site. The archaeological sites were used for habitation, as indicated by shell midden, human remains, and groundstone tools.

<sup>1</sup> LSA, 2019. *Historical Resource Evaluation of the War Memorial Community Center and San Bruno Park pool facility, San Bruno, San Mateo County, California*. April 20.

<sup>2</sup> Page & Turnbull, 2019. *251 City Park Way, San Bruno – Historic Resource Evaluation Peer Review*. May 24.

**Local Historical Archives.** Materials on file at the Local History Collection of the San Bruno Public Library and San Mateo County History Museum were reviewed to obtain information on the historical context of the Veterans Memorial building and pool facility. Archival information reviewed included newspaper clippings and memoranda. A synthesis of the information obtained about the Veterans Memorial building and the pool facility is presented in the HRE included in Appendix F — and in the historical context provided below in Section 4.2.2.3.

#### 4.2.1.2 Field Survey

LSA's qualified architectural historian and qualified archaeologist conducted field reviews at the project site; the findings of the field surveys are discussed below.

**Historical Architectural Survey.** A qualified architectural historian conducted a field review of the Veterans Memorial building and the pool facility on March 19, 2019. The purpose of the review was to characterize the architectural styles of these facilities, identify their respective character-defining features, and assess the building's condition with respect to potential alterations not documented via official records.

The Veterans Memorial building embodies the distinctive characteristics of International/Modern architecture and is in good condition. The pool facility bathhouse is a modest example of International/Modern architecture and is in good condition. The CRHR eligibility of these two built-environment resources is discussed below in Section 4.2.1.5.

**Archaeological Survey.** A qualified archaeologist conducted a field survey of the project site on May 14, 2019. Asphalt, buildings, and landscaping obscure most of the native ground surface at the project site and overall visibility of the underlying soil was poor. The survey focused on areas where examination of native soil was possible, including at the bases of trees and patches of exposed ground within the turf and landscape ground cover; animal burrows; and along the northern boundary of the site adjacent to Crystal Springs Road. A hoe was used intermittently to expose soil where leaves and weeds obscured the ground surface, particularly along the northern boundary of the project site behind the Veterans Memorial building where eucalyptus leaf cover was dense. Exposed soil was inspected for precontact archaeological materials (e.g., stone tools, culturally flaked stone debris, and dietary remains), historic-period artifacts (e.g., metal, glass, ceramics), and soil discoloration that might indicate the presence of archaeological cultural resources.

No archeological cultural resources were identified within the project site. However, shell midden was seen near the proposed project site. Shell fragments of oyster, mussel, and charcoal were observed on the ground surface.<sup>3</sup>

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<sup>3</sup> The location of the archaeological deposit is not disclosed in this document to prevent unauthorized collection and disturbance of the resource. The legal authority to restrict cultural resources information is in California Government Code Section 6254.10 and 6254(r), and California Code of Regulations Section 15120(d).

#### 4.2.1.3 Historical Background

The historical context of the project area is discussed below.

**City of San Bruno.** Until the Gold Rush period, the land that would become the city of San Bruno was grazing land that was part of Rancho Buri Buri, which Mexican Governor José Castro granted to Jose Antonio Sánchez in 1835. After Sánchez' death in 1843, his heirs decided to forgo cattle ranching and sold the rancho off piecemeal to investors and land speculators. Lying between San Francisco and San José, development in the area was slow, confined along the El Camino Real. The arrival of the San Francisco and San José Railroad opened up the area to more uses, and a fledgling community grew around transportation services.

By 1890, three roadhouses, the 14-Mile House, San Bruno House, and Jenevein's Junction House were constructed along El Camino Real. Darius Ogden Mills, founder of the Bank of California, purchased thousands of acres of Rancho Buri Buri and operated a large estate and dairy farm. Other families also purchased Buri Buri lands, building homes and operating farms that supplied San Francisco with dairy products, meat, and horses. However, this settlement pattern was dispersed, and a nucleus of a city had yet to develop.

Of the thousands of San Franciscans who fled the city after the earthquake and fire, a small number moved onto the rural landscape and soon formed the core of what would become San Bruno, ushering in a period of sustained residential development. Development was slow in the decades following the disaster, but by 1914, a community of 1,400 residents elected to incorporate their community as a city, San Bruno.

The city of San Bruno remained relatively rural until the 1940s, when massive change arrived with the start of World War II. Two watershed events stand out. The first event was the use of the Tanforan Race Track as an assembly point for Japanese Americans for processing and transport to internment camps in the interior for the duration of the war. West of the racetrack, the Army built the Western Region Advance Personnel Depot, where thousands of military personnel passed through on their way to the Pacific front.

The second transformative event in San Bruno was the development of the former estate and farm of banker and philanthropist Darius Ogden Mills as housing for military support personnel and returning veterans. Named the Mills Park Addition, this development triggered a 20-year boom in residential growth in San Bruno. By 1965, San Bruno's population grew to over 35,000, a six-fold increase since 1940, and the city's size tripled from two to six-square miles.

**The Living Memorial Movement.** Before the end of World War I, a debate over the nature and purpose of memorializing the war began in the United States. One group promoted traditional means of memorializing what war represents, as well as its proper place in the public memory. The sensibilities of this group defined proper commemoration as involving funerary art, such as statues, obelisks, triumphal arches, and bronze plaques engraved with the names of war dead. Another group, however, rejected this tradition as nothing more than "dead monuments" that celebrated individual generals, nationalistic symbols, and important public figures rather than the everyday soldiers who fought and died. These opponents of the commemorative status quo argued that the

nature and practice of war had changed with the advent of modern weaponry such as poison gas, machine guns, and submarines, which inflicted mass casualties on an industrial scale. These technological advances quickly made 19th century Napoleonic-era tactics obsolete, leaving armies stalled in miles of trenches – further increasing sickness, injuries, and death. The degree to which war changed could no longer be meaningfully memorialized through appeals to the gallantry of battle.

By 1930, communities nationwide embraced the living memorial concept. During the Great Depression, investment in living memorials got a boost by New Deal era programs such as the Works Progress Administration, Civilian Conservation Corps, and others. During World War II, servicemen were polled on what kind of memorial they would like built for them, and a Service Men’s Weekly outreach found that 3,500 respondents stated “No more stone cannons. No more stone statues. No more granite pillars. And no more parks with flowers.” Instead, servicemen wanted “a community center, a real one [. . .] which will answer all the needs” of their hometowns.<sup>4</sup> Taking seriously this feedback from soon-returning veterans, many communities began organizing, making plans, and raising funds to build multi-use public spaces and facilities. To help communities make the most of their efforts, national organizations such as the National Recreation Association and the American Commission for Living War Memorials formed to provide guidance and assistance. As many Americans were still grappling with the lingering effects of the Great Depression and buying war bonds, raising money was the most challenging and time-consuming aspect of the effort, and the pace of fundraising dictated the pace of construction.

**San Bruno Community Center, Inc.** During the January 1945 meeting of the Progress Club of San Bruno, Mayor Edward McGuire broached the idea of building “a Living Memorial [. . .] to be erected at the entrance to the City Park.”<sup>5</sup> The idea of what form the living memorial would take ranged from a monument with names inscribed, to a building “to supply meeting places for youngsters as well as adults of the community.” The organization and funding of the project was not intended to be in the hands of a small group of people, but rather the vision was to make it “a community project and everyone in the community should participate.”<sup>6</sup> The San Bruno Community Center, Incorporated (SBCC), was formed to organize the effort and guide the project.

During a May 8, 1945 meeting, the SBCC engaged James Needles, a member of the State Advisory Committee on Living Memorials, to give a speech. In his speech, Needles argued that San Bruno’s living memorial would accomplish several pressing needs at once, including making youngsters more physically fit – so to make them better potential draftees; hosting organized recreation programs to instill a sense of fair play and determination to win; and preventing juvenile delinquency by giving young men and women something to do. Needles also noted that the State Commissions on Living Memorials induced over 50 communities (such as San José, Oakland, Turlock, Gustine, Vallejo, Petaluma, and Long Beach) to build living memorials such as swimming pools, stadiums, and community centers. The community center in San Bruno would be sited on “6 acres of land in the

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<sup>4</sup> Bevil, Alexander D., 2014. Lest We Forget: The San Diego Veterans War Memorial Building. *The Journal of San Diego History*. Vol. 60, No. 4, Fall 2014. Pgs. 293-312.

<sup>5</sup> San Bruno Community Center, Inc., 1945a. Meeting Minutes: Report on Public Meeting Held on May 8th, 1945. On file at San Bruno Public Library, San Bruno.

<sup>6</sup> Ibid.

City Park.” The building would be “a real building, a two-story building, and it is going to be wide enough and land enough to play basketball, to hold community dances, etc.” The City, for its part, would provide a swimming pool “adjacent to the building.”

The initial design of the building was prepared by Menlo Park resident Al Bilund. The SBCC decided early on to fund the project strictly through donations, as organization officials felt it unjust to tax returning veterans to help pay for the project.<sup>7</sup> The SBCC outlined five objectives for the memorial building, presented verbatim, as follows: (1) The memorial shall be a fitting memorial for the World War II dead; (2) it will provide an inspiration to youth; (3) it will be well built, easy to administer, and economical to maintain; (4) very careful thought shall be given to its future care and maintenance; and (5) it shall be centrally located in the community to serve the present as well as the future needs of the community.<sup>8</sup>

Fundraising began June 10, 1945. Over the next 10 years, the SBCC utilized many different means to raise funds, including direct donations, carnivals, enchilada dinners, private parties, dinner and bingo games, costume parties, kangaroo courts to raise money via mock fines, a “Community Center Fiesta,” and fashion shows.<sup>9</sup> According to a December 23, 1954, San Mateo Times article, the Community Center was built in two phases. The first phase began in 1945 but was halted and remained incomplete; it remained a “long, grey concrete structure which has been boarded up for nearly 10 years” and became “the butt of jokes.” By 1954, the San Bruno City Council retained architect William Henry Rowe to complete the building at a cost of \$150,000. The article noted that the “second story will be of wood, including the “inverted butterfly” roof and will house an all-purpose athletic court-auditorium.” The War Memorial Community Center formally opened on June 1, 1956, but was not fully completed and furnished until January 1958. The Community Center contained a basketball court, a senior center, a teen center, a ceramics room, recreation offices, a kitchen, weight room and sauna, storage areas, and a childcare center.

On June 3, 2006, the City of San Bruno celebrated the San Bruno Community Center’s 50-year anniversary. A bronze plaque, affixed on the building’s south façade near the main entrance, commemorated the building’s anniversary and rededicated it “In honor of the men and women who have served to secure and protect our freedom, the citizens of the City of San Bruno demonstrate their gratitude by renaming this facility in memory of all veterans past and present.”

#### 4.2.1.4 Regulatory Context

The following describes the State and local regulatory and policy requirements for cultural resources that are relevant to the proposed project.

**California Environmental Quality Act (CEQA).** CEQA applies to all discretionary projects undertaken or subject to approval by the state's public agencies (14 CCR Section 15002(i)). Under the provisions of CEQA, “A project with an effect that may cause a substantial adverse change in the significance of

<sup>7</sup> San Bruno Community Center, Inc., 1945b. Meeting Minutes: Report on Public Meeting Held on May 29th, 1945. On file at San Bruno Public Library, San Bruno.

<sup>8</sup> Ibid.

<sup>9</sup> San Bruno Community Center, Inc., n.d. San Bruno Community Center, Incorporated. Scrap Book, 1946-1951. On file at San Bruno Public Library, San Bruno.

a historical resource is a project that may have a significant effect on the environment” (14 CCR Section 15064.5(b)).

*CEQA Guidelines* Section 15064.5(a) defines a “historical resource” as a resource that meets one or more of the following criteria:

- Listed in, or eligible for listing in, the California Register of Historical Resources (as defined under California Public Resources Code [PRC], Section 5024.1; 14 CCR Section 4850, et seq.);
- Listed in a local register of historical resources (as defined at PRC Section 5020.1(k));
- Identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); or
- Determined to be a historical resource by a project's lead agency (14 CCR Section 15064.5(a)).

A historical resource consists of “Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California...Generally, a resource shall be considered by the lead agency to be ‘historically significant’ if the resource meets the criteria for listing in the California Register of Historical Resources” (14 CCR Section 15064.5(a)(3)).

If an impact on a historical or archaeological resource is significant, CEQA requires feasible measures to minimize the impact (14 CCR Section 15126.4 (a)(1)). Mitigation of significant impacts must lessen or eliminate the physical impact that the project would have on the resource. Generally, a project that follows the Secretary of the Interior’s *Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* shall be considered mitigated to a level of a less-than-significant impact on the historical resource (14 CCR Section 15064.5(b)(3)). As noted in Section 15126.4(b)(2) of the CEQA Guidelines “In some circumstances, documentation of a an historical resource, by way of historic narrative, photographs or architectural drawings, as mitigation for the effects of demolition of the resource will not mitigate the effects to a point where clearly no significant effect on the environment will occur.” Finally, CEQA requires that all feasible mitigation be undertaken even if the mitigation does not reduce impacts to less-than-significant levels (14 CCR Section 15126.4(a)(1)).

**California Register of Historical Resources (CRHR).** PRC Section 5024.1 established the CRHR. The requirements for listing in the CRHR, including the criterion for listing and having integrity, are similar to those of the National Register of Historic Places (NRHP). Generally, a resource is considered by the lead agency to be “historically significant” if the resource meets the criteria for listing in the CRHR (14 CCR Section 15064.5(a)(3)). For a cultural resource to qualify for listing in the CRHR, it must be significant under one or more of the following criteria:

**Criterion 1:** Associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage,

- Criterion 2:** Associated with the lives of persons important in our past,
- Criterion 3:** Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values, or
- Criterion 4:** Has yielded, or may be likely to yield, information important in prehistory or history.

In addition to being significant under one or more of these criteria, a resource must retain enough of its historic character and appearance to be recognizable as a historical resource and be able to convey the reasons for its significance (14 CCR Section 4852(c)). Generally, a cultural resource must be 50 years or older to be eligible for the CRHR (14 CCR Section 4852(d)(2)).

In addition to meeting one or more of the significance criteria, a cultural resource must retain its historical integrity to be considered eligible for listing in the CRHR. Historical integrity is defined as “the authenticity of a historical resource’s physical identity evidenced by the survival of characteristics that existed during the resource’s period of significance.”<sup>10</sup> The evaluation of integrity must be grounded in an understanding of a resource’s physical features and its environment, and how these relate to its significance. There are seven aspects of integrity to consider when evaluating a cultural resource—location, design, setting, materials, workmanship, feeling, and association—that are described as follows:<sup>11</sup>

- *Location* is the place where the historic property was constructed or the place where the historic event occurred. The actual location of a historic property, complemented by its setting, is particularly important in recapturing the sense of historic events and persons.
- *Design* is the combination of elements that create the form, plan, space, structure, and style of a property. Design includes such elements as organization of space, proportion, scale, technology, ornamentation, and materials.
- *Setting* is the physical environment of a historic property. Setting refers to the character of the place in which the property played its historical role. Physical features that constitute the setting of a historic property can be either natural or manmade, including topographic features, vegetation, paths or fences, or relationships between buildings and other features or open space.
- *Materials* are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.

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<sup>10</sup> California Office of Historic Preservation, n.d. California Office of Historic Preservation Technical Assistance Series #6. *California Register and National Register: A Comparison*. California Office of Historic Preservation. California Office of Historic Preservation, Sacramento.

<sup>11</sup> National Park Service, 1997. *National Register Bulletin: How to Apply the National Register Criteria for Evaluation*. U.S. Department of the Interior, Washington, D.C.

- *Workmanship* is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory. It is the evidence of the artisan's labor and skill in constructing or altering a building, structure, object, or site.
- *Feeling* is a property's expression of the aesthetic or historic sense of a particular period of time. It results from the presence of physical features that, taken together, convey the property's historic character.
- *Association* is the direct link between an important historic event or person and a historic property.

**California Public Resources Code Section 5097.98.** Section 5097.98 of the PRC states that the NAHC, upon notification of the discovery of Native American human remains pursuant to Health and Safety Code Section 7050.5 (discussed below), shall immediately notify those persons (i.e., the Most Likely Descendent or "MLD") it believes to be descended from the deceased. With permission of the landowner or a designated representative, the MLD may inspect the remains and any associated cultural materials and make recommendations for treatment or disposition of the remains and associated grave goods. The MLD shall provide recommendations or preferences for treatment of the remains and associated cultural materials within 48 hours of being granted access to the site.

**California Health and Safety Code 7050.5.** Section 7050.5 of the California Health and Safety Code states that, in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined whether or not the remains are subject to the coroner's authority. If the human remains are of Native American origin, the coroner must notify the NAHC within 24 hours of this identification. The NAHC will identify a Native American MLD to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.

**City of San Bruno General Plan.** The Environmental Resources and Conservation Element of the San Bruno General Plan includes several implementing policies for the enhancement and protection of cultural resources in the city. Relevant policies are listed below.

- **Policy ERC-35:** Develop criteria for designation of local historic or cultural resources. Designation may not be based solely on the age of a resource, but rather special qualities, detailing, people, or events associated with it. Resources may also include special signage and/or landmarks known to city residents.
- **Policy ERC-36:** Preserve historic structures and resources during reuse and intensification within the city's older neighborhoods.
- **Policy ERC-39:** Continue to protect archaeological sites and resources from damage. Require that areas found to contain significant indigenous artifacts be examined by a qualified archaeologist for recommendations concerning protection and preservation.

- **Policy ERC-41:** Educate citizens about San Bruno's past by creating a brochure describing the city's history and resources for distribution to community groups and public schools.
- **Policy ERC-44:** Rehabilitation, renovation, or reuse of historic resources will be implemented in coordination with the standards of the Secretary of the Interior and the Office of Historic Preservation.

#### 4.2.1.5 Project Site Historical Evaluations

The results of the historical resource evaluation of the Veterans Memorial building and the pool facility are summarized below according to the criteria for listing in the CRHR (criteria 1 through 4). Please note that the criteria for listing are described in Section 4.2.1.4.

**Veterans Memorial Building.** The Veterans Memorial building was constructed between 1946 and 1958. It is an approximately 15,000-square-foot two-story auditorium and sports recreation facility with a ground floor constructed of reinforced concrete and an upper floor of wood-frame construction. The building massing is composed of a rectangular base covered by a prominent barrel groin arch vault roof sheathed in an undetermined type of roofing. This center section is flanked on the east and west by shorter wings covered with extending flat roofs. Prominent vertical accent elements on the north and south façades are evenly placed to convey the impression of buttresses. The north- and south-facing façades each contain an imposing semi-circular, wood-framed, multi-sashed window that completely fills the second story barrel-shaped roof gable. Fenestration on the shorter east- and west-facing façades contains similar, albeit smaller wood-framed semi-circular windows set in barrel-shaped roof gable. Fenestration in the east-facing barrel-shaped gable appears painted over. The west-facing façade contains a smaller version of the semi-circular shaped window. The east and west-facing façades also contain two sets of three tall vertical windows flanking the central barrel roof. The main entrance comprises a pair of automatic double slider doors near the center of the east-facing façade.

**Criterion 1.** Is it associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage?

The Veterans Memorial building is associated with the Living Memorial Movement, a nationwide campaign with origins after World War I that changed how Americans memorialized military sacrifice in light of the industrial scale of war. Intended as active, multi-use public spaces, Living Memorials marked a significant change from the traditional modes of commemoration and marking events in public memory. The Veterans Memorial building was created, funded, and built when many others in California and nationwide were under construction. The Community Center is the culmination of a decade-long effort by San Bruno residents to raise funds for its construction without relying on conventional methods, such as taxes or bond financing. This method was adopted at the outset and based on a shared belief that returning veterans should not bear any of the burden of paying for a war memorial, via taxes or otherwise. Relying on direct contributions required much impassioned dedication by many volunteer groups. The Community Center is also associated with the larger pattern of institutional growth, public recreation, and community development of San Bruno in the mid-20th century. During the time

of the Community Center's construction, other important civic buildings in San Bruno, such as the City Hall, the Main Library, and the Central Fire Station, were built.

Since its dedication, the Community Center continues to serve the community as a venue for events, classes, meetings, civic events, and organized sports; it is also used by local organizations for meetings, fund raising, and social events. In 2006, the City of San Bruno celebrated the building's 50-year anniversary and reaffirmed the building's original purpose as a multi-use community facility dedicated to veterans. Nearly 65 years later, it continues to serve both veteran and non-veteran groups, and the general public. For these reasons, the Veterans Memorial building is significant under CRHR Criterion 1 due to its association with events that have made a significant contribution to the broad patterns of California's history.

**Criterion 2.** Is it associated with the lives of persons important in our past?

Background research did not identify an association with the Veterans Memorial building and any specific persons important in our past. Background research did not find an association with the life of an important local athlete, coach, or other historical figure directly associated with the building. For these reasons, the Community Center is not significant under CRHR Criterion 2.

**Criterion 3.** Does it embody the distinctive characteristics of a type, period, or method of construction, or represent the work of an important creative individual, or possess high artistic values?

The Veterans Memorial building possesses some of the general architectural characteristics of International/Modern, an architectural style well represented in the existing building stock of the city of San Bruno and San Mateo County, California, and nationwide. It is a building type inexpensive to build, and this property was designed to provide a functional multi-use building to contain many different uses. Designed by architect William Henry Rowe, the building's imposing barrel groin vaulted roof is its signature design feature. A review of other community centers in the Bay Area and California found the Veterans Memorial building's roof shape uncommon for community centers.

William Henry Rowe was a prolific architect known for his work designing institutional buildings in San Bruno. His skill as an architect and as an important creative individual are in the design of San Bruno's City Hall and Main Library. His work on those projects paved the way for the City to commission him to design the Community Center, which displayed the range of his skill in applying Modern design to create a multi-purpose space that adhered to the original vision of a two-story building with an upper floor gymnasium. Rowe's professional portfolio and contributions to the architectural community are well regarded by the architectural profession, having served as the American Institute of Architect's (AIA) Northern California Chapter Director, Chairman of AIA's Architectural Practice Commission, and General Chairman of the California Council of Architects. The Veterans Memorial building appears significant as an intact and distinctive example of World War II-era institutional International/Modern architecture in San Bruno, and as an example of how William Henry Rowe applied this style, an architect known for other civic institutional International/Modern designs in San Bruno and elsewhere. For these reasons, the Veterans Memorial building is significant under CRHR Criterion 3 as a distinctive

example of International/Modern architecture and due to its association with the work of an important creative individual.

**Criterion 4.** Has it yielded, or may it be likely to yield, information important to history?

This criterion is typically used to evaluate the potential for archaeological deposits to contain information important in understanding past lifeways. Its application to architecture is less common in eligibility assessments due to the prevalence of popular publications that thoroughly document the form, materials, and design of a building type. Information about the International/Modern architecture style and construction methods, as represented by the Veterans Memorial building, can be obtained from other widely available sources on this and other common architectural styles. The building is unlikely to yield information important to the history of San Bruno, San Mateo County, or California. For these reasons, the War Memorial Community Center is not significant under CRHR Criterion 4.

**Integrity.** As described in the HRE (Appendix F), the Veterans Memorial building retains sufficient integrity to convey its historical significance to qualify for listing in the CRHR.

**Pool Facility.** The pool facility was constructed in 1959, shortly after final construction of the Veterans Memorial building. It consists of two reinforced-concrete in-ground pools; a single story, 3,000-square-foot bath house of reinforced-concrete construction; and water filtration, chlorination, and heating equipment, surrounded by a chain link fence.

**Criterion 1.** Is it associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage?

Research indicates that the pool facility is associated with the larger pattern of institutional growth, public recreation, and community development of San Bruno in the mid-20th century. The pool facility is one of several institutional properties built in San Bruno during this period. Although built around the same time as the Veterans Memorial building, the San Bruno Park Pool is not associated with the Living Memorial movement. It was a separate recreational facility wholly funded by the City of San Bruno. No evidence was identified to elevate the building in associative stature. It does not possess specific, important associations within the historic context to distinguish it from other buildings with a similar construction history and use. For these reasons, the San Bruno Park Pool is not significant under CRHR Criterion 1.

**Criterion 2.** Is it associated with the lives of persons important in our past?

Background research did not identify an association with the pool facility and any persons important in our past, including an important local athlete or coach. For these reasons, the San Bruno Park Pool is not significant under CRHR Criterion 2.

**Criterion 3.** Does it embody the distinctive characteristics of a type, period, or method of construction, or represent the work of an important creative individual, or possess high artistic values?

The pool facility possesses some of the general architectural characteristics of International/Modern, an architectural style well represented in the existing building stock of the City of San Bruno and San Mateo County, California, and nationwide. It is a building type inexpensive to build and designed to provide a functional, multi-use building to contain many different uses.

Background research identified the original designer as San Francisco-based civil engineer August E. Waegemann. Waegemann was a prolific civil engineer who designed, or helped design, numerous buildings in San Francisco. He is credited with introducing the lift-slab building process in San Francisco. However, that process was not utilized to build the pool facility bathhouse.

A review of popular architectural guides of the Bay Area and a database of West Coast architect biographies did not indicate that the pool facility is notable for its architectural or design qualities or as an important example of Waegemann's work as an engineer. Background research and field survey indicates that the pool facility is not significant in the context of Modern/International architectural style. It is a relatively simple facility designed to meet a public need for a recreational swimming facility. It is not a rare example of this type of civic resource in the context of post-World War II institutional development in San Bruno, California, or the United States. For these reasons, the San Bruno Park Pool is not significant under CRHR Criterion 3.

**Criterion 4.** Has it yielded, or may it be likely to yield, information important to history?

Information about the pool facility—including its architectural style and methods of construction—is available through published and unpublished books, reports, and documents. Additional study of the pool facility would not yield new or important information to understanding its history. For these reasons, the pool facility is not significant under CRHR Criterion 4.

**Integrity.** Integrity is the ability of a property to convey its historical significance. As the pool facility does not appear to be eligible under the CRHR criteria for listing, a study of its integrity was not done.

#### 4.2.2 Impacts and Mitigation Measures

As described above, the presence of and potential for significant cultural resources was determined by assessing previously documented cultural resources through archival background research, a field survey, and an evaluation of cultural resources in the project site to determine their eligibility for listing in the CRHR. These findings were then compared to the *CEQA Guidelines'* cultural resource types identified below to determine if the project would have the potential to result in significant impacts to those types of cultural resources.

The following discussion describes the project's potential impacts on cultural resources, consisting of historical resources, archaeological resources, and human remains. The section begins with the criteria of significance, which establish the thresholds used to determine whether an impact is significant. The latter part of this section presents the impacts associated with the proposed project and identifies mitigation measures, as appropriate.

#### 4.2.2.1 Significance Criteria

The proposed project would have a significant impact on cultural resources if it would:

- Cause a substantial adverse change in the significance of a historical resource as defined in *CEQA Guidelines* Section 15064.5
- Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to *CEQA Guidelines* Section 15064.5, or
- Disturb any human remains, including those interred outside of formal cemeteries.

For the project to have "a substantial adverse change" on a historical resource, it would have to demolish, destroy, relocate, or alter the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired (*CEQA Guidelines* Section 15064.5(b)). Archaeological sites may qualify as historical resources under CEQA (*CEQA Guidelines* Section 15064.5(c)(1)).

Generally, for purposes of CEQA, the significance of a historical resource is materially impaired when a project demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the California Register or an officially recognized local register of historical resources, or its identification in a historical resources survey meeting the requirements of PRC Section 5024.1(g).

#### 4.2.2.2 Project Impacts

The following discussion describes the project's potential impacts to cultural resources according to the significance criteria described above.

**Historical Resources.** Impacts to historical resources could occur from project implementation. Note that under the CEQA Guidelines, "historical resources" can include both significant built-environment resources and archaeological deposits. Potential impacts to these two types of historical resources are described under Impact CUL-1 and Impact CUL-2.

#### **Impact CUL-1: Demolition of the Veterans Memorial building would have a substantial adverse change on a historical resource, as defined in CEQA Guidelines Section 15064.5. (S)**

Constructed between 1946 and 1958, the Veterans Memorial building was evaluated for its eligibility for listing in the CRHR (see Section 4.2.1.5 and Appendix F). The building is eligible for listing in the CRHR under Criteria 1 and 3. Under Criterion 1, the Veterans Memorial building is

associated with the Living Memorial Movement, a historical event that had a significant contribution on California's cultural heritage. The Living Memorial Movement was a nationwide campaign that developed after World War I that changed how Americans memorialized military sacrifice in light of the industrial scale of war. Under Criterion 3, the Veterans Memorial building is a distinctive example of International/Modern architecture, featuring an imposing barrel groin vaulted roof, which is a rare roof design for a Veterans Memorial facility. The Veterans Memorial building is also associated with the work of an important creative individual, William Henry Rowe, who designed other notable local buildings that include San Bruno City Hall, the Main Library, and Central Fire Station.

Due to its eligibility for listing in the CRHR, the Veterans Memorial building qualifies as a historical resource under CEQA (CEQA Guidelines Section 15064.5(a)(3)). Its demolition to allow for construction of the San Bruno Recreation and Aquatic Center would result in a substantial adverse change under CEQA. Mitigation Measures CUL-1a, CUL-1b, and CUL-1c would minimize this significant impact; however, the impact would remain significant and unavoidable even after mitigations are implemented.

**Mitigation Measure CUL-1a:** The City shall retain a historian or architectural historian meeting the Secretary of the Interior's Qualifications Standards to prepare a historical context report of the Veterans Memorial building. The report shall be done to Level II or higher standards for the National Park Service's Historic American Building Survey (HABS) documentation and shall generally follow the Outline Format as presented in the HABS History Guidelines issued by the National Park Service. The report shall provide a detailed description of the building and its historical significance within the contexts of the Living Memorial Movement, International/Modern architecture, and local architect William Henry Rowe. Photographs and scaled architectural drawings of the building shall accompany the report (as specified in Mitigation Measures CUL-1b and CUL-1c). The report and associated documentation shall be offered to the appropriate historical archives, including, but not limited to, the San Mateo County History Museum. Based on the curation requirements of the receiving institution, either archival hard copies and/or electronic copies of the report and associated documentation shall be offered to the Northwest Information Center at Sonoma State University, the San Mateo County Historical Association, and the San Bruno Public Library History Collection. The City shall be responsible for ensuring the report, photo-documentation (CUL-1b), and scaled architectural drawings (CUL-1c) are available to the public via the internet for a minimum of 5 years.

**Mitigation Measure CUL-1b:** The City shall retain a professional photographer to complete photo-documentation of the Veterans Memorial building prior to project construction to provide additional descriptive data and a permanent visual record of the resource. The photographer must be familiar with large format architectural photography and have prior demonstrable experience photographing historic buildings and structures. The photo-documentation shall be done according to the National Park Service's Historic American Building Survey/Historic American Engineering Record/Historic American Landscapes Survey (HABS/HAER/HALS) Photography Guidelines. Photograph views for the data set shall include contextual views; views of each side of the building; interior views, including any original interior features, where possible; oblique views of the building; and detail views of character-defining features identified in the Historical Resource Evaluation report prepared for the proposed project.

**Mitigation Measure CUL-1c:** Existing, scaled historic drawings of the Veterans Memorial building, if available, shall be reproduced and included with the report (Mitigation Measure CUL-1a). In the absence of adequate archival drawings, an architect, meeting the Secretary of the Interior's Professional Qualification Standards for Historic Architecture, shall produce full-size measured drawings of the building's plan and significant exterior elevations. (SU)

As previously discussed, demolition of the existing Veterans Memorial building to allow for construction of the San Bruno Recreation and Aquatic Center would result in a substantial adverse change under CEQA. Mitigation Measures CUL-1a, CUL-1b, and CUL-1c would minimize this significant impact; however, as noted in Section 15126.4(b)(2) of the CEQA Guidelines "In some circumstances, documentation of a an historical resource, by way of historic narrative, photographs or architectural drawings, as mitigation for the effects of demolition of the resource will not mitigate the effects to a point where clearly no significant effect on the environment will occur." Therefore, this impact would remain significant and unavoidable even after mitigations are implemented.

**Impact CUL-2: Project ground disturbance has the potential to unearth significant Native American archaeological deposits or resources, resulting in a potential substantial adverse change on a historical resource, as defined in CEQA Guidelines Section 15064.5. (S)**

No archaeological cultural resources were identified at the project site. However, shell midden with fragments of oyster, mussel, and charcoal was observed on the ground surface outside the proposed project site but near the area of proposed project construction. The physical extent of this newly identified archaeological deposit was not determined.

If significant archaeological deposits or resources were unearthed during project construction, a substantial adverse change in the significance of a historical resource could occur from its demolition, destruction, relocation, or alteration such that the significance of the resource would be materially impaired through loss of information important in understanding San Bruno's prehistory

(CEQA Guidelines Section 15064.5(b)(1)). When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource. Those archaeological sites that do not qualify as historical resources shall be assessed to determine if these qualify as “unique archaeological resources” (California PRC Section 21083.2). The project would have a potentially significant impact on archaeological historical resources and unique archaeological resources unless mitigation described under Mitigation Measures CUL-2a and CUL-2b are incorporated.

**Mitigation Measure CUL-2a:** Prior to project ground disturbance, a qualified archaeologist shall conduct a training session at the project site with construction personnel responsible for overseeing or conducting soil-disturbing activities. The training session shall describe the types of archaeological materials and/or features that could be encountered, the potential for human remains, and the appropriate actions to be taken upon such a discovery. The on-site training shall include photographs and/or physical examples of artifacts that may be encountered during ground disturbance.

The City shall be responsible for funding this training and ensuring that all appropriate construction personnel have received this training prior to commencement of project excavation.

**Mitigation Measure CUL-2b:** Should an archaeological deposit be encountered during project subsurface construction activities when an archaeologist is not on site, all ground-disturbing activities within 25 feet shall be halted and a qualified archaeologist meeting the Secretary of the Interior’s Professional Qualifications Standards for Archeology contacted to assess the situation, determine if the deposit qualifies as a historical resource, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. If the deposit is found to be significant (i.e., eligible for listing in the California Register of Historical Resources), the City shall be responsible for funding and implementing appropriate mitigation measures. Mitigation measures may include recordation of the archaeological deposit, data recovery and analysis, and public outreach regarding the scientific and cultural importance of the discovery. Upon completion of the selected mitigations, a report documenting methods and findings shall be prepared, and the final report shall be submitted to the Northwest Information Center at Sonoma State University. Significant archaeological materials shall be submitted to an appropriate curation facility and used for public interpretive displays, as appropriate and in coordination with a local Native American tribal representative.

The City shall inform its contractor(s) of the sensitivity of the project area for archaeological deposits and shall verify that the following directive has been included in the appropriate contract documents:

*“The subsurface of the construction site may be sensitive for Native American archaeological deposits. If archaeological deposits are encountered during project subsurface construction, all ground-disturbing activities within 25 feet shall be redirected and a qualified archaeologist contacted to assess the situation, and make recommendations for the treatment of the discovery. Project personnel shall not collect or move any archaeological materials. Archaeological deposits can include shellfish remains; bones; flakes of, and tools made from, obsidian, chert, and basalt; and mortars and pestles. Contractor acknowledges and understands that excavation or removal of archaeological material is prohibited by law and constitutes a misdemeanor under California Public Resources Code, Section 5097.5.” (LTS)*

The mitigation measures described under Mitigation Measures CUL-2a and CUL-2b would ensure that: (1) if archaeological cultural resources are identified during excavation, these would be evaluated, documented, and studied in accordance with standard archaeological practice, and (2) archaeological deposits and human remains would be treated in accordance with appropriate State codes and regulations. As such, implementation of these mitigation measures would reduce the project’s potential impacts to archaeological historical resources to a less-than-significant level.

**Human Remains.** There are no known human remains at the project site, although the potential to unearth such remains during construction cannot be ruled out. In the event that human remains are identified during project construction, these remains would be treated in accordance with Section 7050.5 of the California Health and Safety Code and Section 5097.98 of the Public Resources Code, as appropriate.

Section 7050.5 of the California Health and Safety Code states that, in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined whether or not the remains are subject to the coroner’s authority. If the human remains are of Native American origin, the coroner must notify the NAHC within 24 hours of this identification. The NAHC will identify a Native American Most Likely Descendent (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.

Section 5097.98 of the Public Resources Code states that the NAHC, upon notification of the discovery of Native American human remains pursuant to Health and Safety Code Section 7050.5, shall immediately notify those persons (i.e., the MLD) it believes to be descended from the deceased. With permission of the landowner or a designated representative, the MLD may inspect the remains and any associated cultural materials and make recommendations for treatment or disposition of the remains and associated grave goods. The MLD shall provide recommendations or preferences for treatment of the remains and associated cultural materials within 48 hours of being granted access to the site. With these regulations in place, no impact on human remains is anticipated, and no mitigation is necessary.

#### 4.2.2.3 Cumulative Impacts

For cultural resources, the scope for assessing cumulative impacts encompasses other past, current, or probable future projects under review by the City. The proposed project would have a significant effect on the environment if it would contribute to a significant cumulative impact on cultural resources.

Aside from the proposed project, there are no past, current, or reasonably foreseeable future projects under review by the City that may impact architectural historical resources. As such, the project is not anticipated to contribute to a cumulative impact on local architectural historical resources.

No recent past, current, or probable future projects under City review include recorded archaeological historical resources, archaeological resources, or human remains. However, similar to the proposed project, ground disturbance associated with these projects could result in potentially significant impacts on previously unidentified archaeological sites and associated human remains that may be unearthed. However, impacts on resources accidentally discovered during implementation of these projects would be mitigated to less-than-significant levels with appropriate mitigation measures adopted as conditions of approval. Collectively, recent past, approved, and probable future projects that may occur in the vicinity—including the proposed project—would not result in a cumulative increase in impacts on archaeological historical resources, archaeological resources, or human remains, as these resources would be avoided or otherwise removed, analyzed, and reported (i.e., by a qualified archaeologist).

When the City considers future development proposals, these proposals would undergo environmental review pursuant to CEQA and, when necessary, mitigation measures would be adopted as appropriate. In most cases, this environmental review and compliance with project conditions of approval and relevant policies of the General Plan would ensure that significant impacts on cultural resources would be avoided or otherwise mitigated to less-than-significant levels.

## 4.3 TRANSPORTATION AND CIRCULATION

This section summarizes the analysis and conclusions presented in the Transportation Impact Analysis (TIA) prepared for the proposed project.<sup>1</sup> The TIA is included as Appendix G of this EIR. The TIA describes existing and proposed future transportation conditions within the project site vicinity, identifies the potential direct/indirect and cumulative impacts of the project, and recommends mitigation measures for impacts identified as potentially significant. The scope and methodology, environmental and regulatory settings, significance criteria and project impact analyses are described in the following sections.

### 4.3.1 Analysis Scope and Methodology

The scope of the analysis presented in this chapter and all methodologies herein were reviewed and approved by City staff. The potential impacts of the proposed project were evaluated in accordance with the standards set forth by the City of San Bruno, the City/County Association of Governments (C/CAG) of San Mateo County, and the California Department of Transportation (Caltrans). The C/CAG administers the San Mateo County Congestion Management Program (CMP) and requires an analysis of Transportation Demand Management (TDM) strategies to reduce travel demand when 100 or more net peak hour trips result from a new project. Given that the project is estimated to generate fewer than 100 peak hour vehicle trips, an analysis in accordance with C/CAG's CMP guidelines is not required. The TIA includes an analysis of AM and PM peak hour traffic conditions for two signalized intersections and five unsignalized intersections in the vicinity of the project site. The study also includes an analysis of site access and on-site circulation, vehicle queuing within the project area, as well as potential impacts to transit, bicycle, and pedestrian facilities.

#### 4.3.1.1 Study Intersections

The study area for the transportation analysis was selected based on local traffic patterns, input from local authorities, and engineering judgement, to capture the transportation facilities where motorists are likely to experience impacts due to buildout of the proposed project. The seven study intersections selected for analysis are listed below and shown on Figure 4.3-1.

1. Cunningham Way & Crystal Springs Road
2. Donner Avenue & Crystal Springs Road (unsignalized)
3. Crystal Springs Road & Oak Avenue/City Park Way (unsignalized)
4. Cypress Avenue & Crystal Springs Road (unsignalized)
5. El Camino Real & Crystal Springs Road
6. De Soto Way & Santa Lucia Avenue (north - unsignalized)
7. De Soto Way & Santa Lucia Avenue (south - unsignalized)

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<sup>1</sup> Hexagon Transportation Consultants, 2020. *San Bruno Recreation and Aquatics Center Transportation Impact Analysis*. January 13.

#### 4.3.1.2 Data Collection

The data required for the analysis were obtained from recent traffic counts, the City of San Bruno, previous traffic studies, and field observations. The following data were collected from these sources:

- Existing traffic volumes;
- Existing lane configurations;
- Signal timing and phasing; and
- Approved project trips.

Traffic counts were conducted on January 23, 2019 when area schools were in session. Park usage is assumed to be higher in the spring and summer seasons. The counts were compared against the counts supplied by the City of San Bruno completed in March 2018. Although the counts showed similar volumes, the counts were increased by 5 percent as a conservative factor.

#### 4.3.1.3 Level of Service Standards and Analysis Methodologies

Traffic conditions at the study intersections were evaluated using level of service (LOS). LOS is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays. The analysis methods for signalized and unsignalized intersections are described below.

**Signalized Intersections.** There are two signalized study intersections in the vicinity of the project site. Level of service at signalized intersections was evaluated based on the 2010 Highway Capacity Manual (HCM) level of service methodology using Synchro software. This method evaluates signalized intersection operations on the basis of average control delay time for all vehicles at the intersection. The correlation between average control delay and level of service at signalized intersections is shown in Table 4.3.A.

**Table 4.3.A: Signalized Intersection Level of Service Definitions Based on Control Delay**

Level of Service	Description	Average Control Delay Per Vehicle (sec.)
A	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	Up to 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	10.1 to 20.0
C	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 combinations of unfavorable progression, long cycle lengths, or high 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	Operations with delays unacceptable to most drivers occurring due to oversaturation, poor progression, or very long cycle lengths.	Greater than 80.0

Source: *Highway Capacity Manual* (Transportation Research Board 2010).

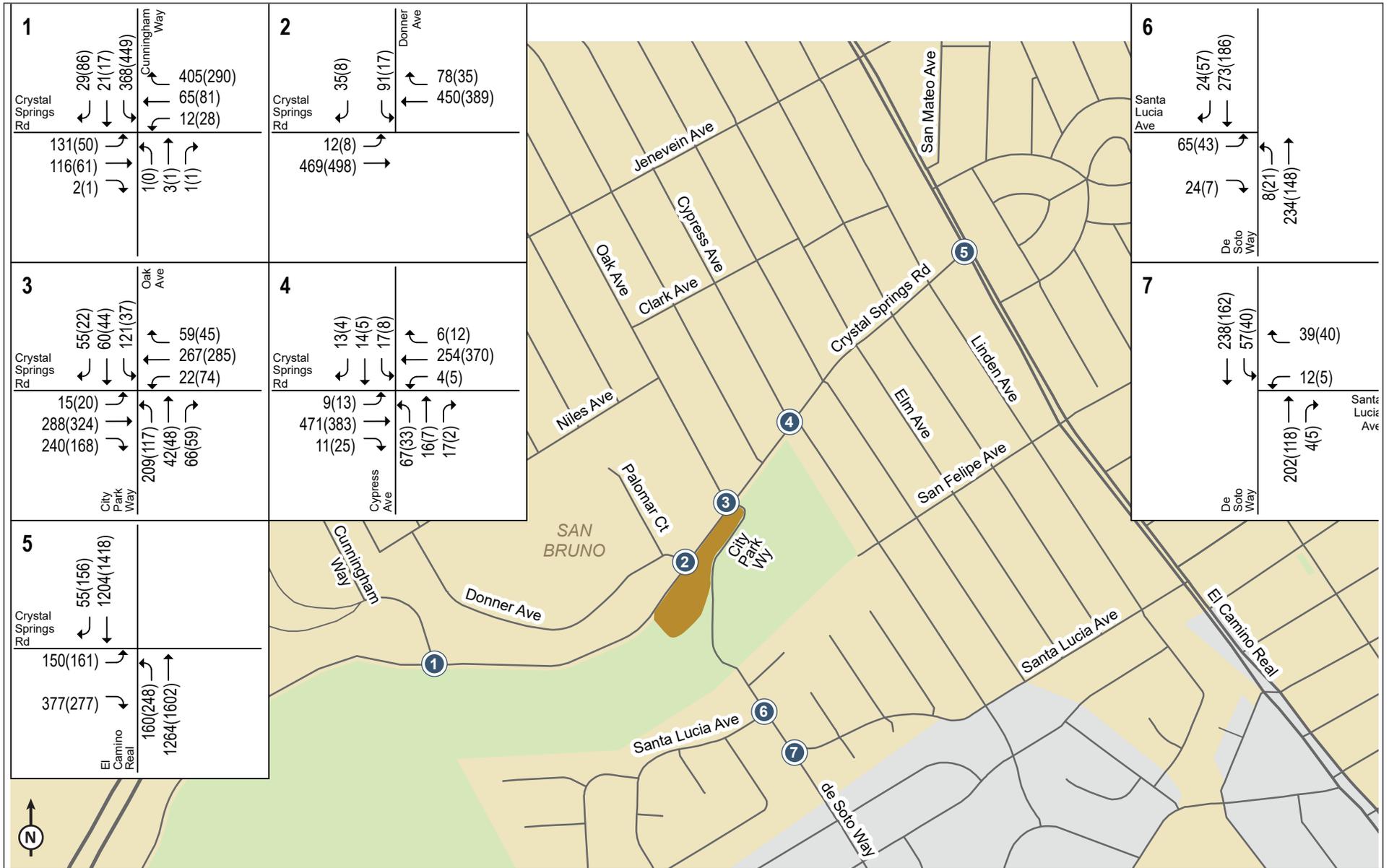


FIGURE 4.3-1



**LEGEND**

- = Site Location
- X = Study Intersection
- XX(XX) = AM(PM) Peak-Hour Traffic Volumes

*San Bruno Recreation and Aquatic Center Project EIR*  
Existing Traffic Volumes

SOURCE: HEXAGON, DECEMBER 4, 2019.

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**Unsignalized Intersections.** Level of service analysis at unsignalized intersections is generally used to determine the need for modification in the type of intersection control (i.e., all-way stop or signalization). As part of the evaluation, traffic volumes, delays and traffic signal warrants are evaluated to determine if the existing intersection control is appropriate.

There are five unsignalized study intersections in the vicinity of the project site. Level of service at unsignalized intersections was based on the 2010 HCM method using the Synchro software. This method is applicable for both two-way and all-way stop-controlled intersections. Synchro evaluates unsignalized intersections on the basis of average stopped delay for all-way stop controlled intersections, and the worst approach delay at the intersection for two-way stop-controlled intersections. The correlation between average control delay and LOS for unsignalized intersections is shown in Table 4.3.B.

**Table 4.3.B: Unsignalized Intersection Level of Service Definitions Based on Control Delay**

Level of Service	Description	Average Control Delay Per Vehicle (sec.)
A	Little or no traffic delay	10.0 or less
B	Short traffic delays	10.1 to 15.0
C	Average traffic delays	15.1 to 25.0
D	Long traffic delays	25.1 to 35.0
E	Very long traffic delays	35.1 to 50.0
F	Extreme traffic delays	Greater than 50.0

Source: *Highway Capacity Manual* (Transpiration Research Board 2010).

**Traffic Warrant Signal Analysis.** The level of service calculations at the unsignalized intersections are supplemented with an assessment of the need for installation of a traffic signal, known as a signal warrant analysis. The need for signalization of unsignalized intersections in an urban or suburban context is typically assessed based on the Peak Hour Volume Warrant (Warrant 3) described in the California Manual on Uniform Traffic Control Devices for Streets and Highways (CA MUTCD), Part 4, Highway Traffic Signals. This method makes no evaluation of intersection level of service, but simply provides an indication whether vehicular peak hour volumes are, or would be, sufficiently high to justify installation of a traffic signal.

The decision to install a traffic signal should not be based purely on the warrants alone. Instead, the decision should be considered when one or more of the warrants are met, which triggers further feasibility analysis. Engineering judgment should be exercised to determine how a traffic signal could affect collision rates and traffic conditions at the subject intersection, as well as at adjacent intersections. Other options besides a traffic signal should also be considered, such as all-way stop control, new or enhanced signage, or roadway geometry changes; these measures may be more appropriate than a new traffic signal.

**City of San Bruno Intersection Level of Service Standards.** The City of San Bruno General Plan specifies 29 intersections at which a level of service standard (LOS D) must be maintained during AM and PM peak periods. The relevant General Plan polices are listed below:

- **Policy T-B:** Maintain acceptable levels of service for vehicular movement along the City's street network. Acceptable level of service could vary based on characteristics of the area under consideration.
- **Policy T-6:** Maintain LOS standards for intersections for AM and PM peak periods as shown in [General Plan] Figure 4-2.

The City does not have a general LOS standard that applies to all intersections, and none of the study intersections are included in General Plan Figure 4-2. However, LOS significance criteria have been developed to ensure that study intersection LOS would remain consistent with General Plan Policy T-B with implementation of the proposed project.

**Caltrans Intersection Level of Service Standards.** The intersection of El Camino Real and Crystal Springs Road is within the jurisdiction of the California Department of Transportation (Caltrans). Therefore, that study intersection is subject to Caltrans' standards. According to Caltrans' Guide for the Preparation of Traffic Impact Studies, Caltrans seeks to maintain a target LOS at the transition between LOS C and LOS D on State highway facilities but acknowledges that this may not always be feasible. In instances where an existing State highway facility is operating worse than the appropriate target LOS, the existing measure of effectiveness (i.e., vehicle delay at intersections and v/c ratio at the ramps) should be maintained. Thus, LOS D is considered the appropriate target LOS for this State Route intersection.

#### 4.3.1.4 Analysis Scenarios

Traffic conditions at the study intersections were analyzed for both the weekday AM and PM peak hours of adjacent street traffic. <sup>2</sup>The AM peak hour typically occurs between 7:00 AM and 9:00 AM and the PM peak hour between 4:00 PM and 6:00 PM on a regular weekday. These are the peak commute hours during which most traffic congestion occurs on the roadways. Traffic conditions were evaluated for the following scenarios:

- **Existing Conditions.** Existing traffic volumes at the study intersections were obtained from traffic counts conducted on January 23, 2019.<sup>3</sup> Assuming that park usage would be higher in the spring and summer seasons, the counts were increased by 5 percent as a conservative factor. The study intersections were evaluated with a level of service analysis using Synchro software in accordance with the 2010 HCM methodology.

<sup>2</sup> Weekend volumes were much lower than during the weekdays. The peak volume on Saturday and Sunday was about 350 vehicles per hour compared to about 550 to 600 vehicle trips during peak hours on weekdays. Thus, weekday AM and PM peak hours represent the highest volumes and traffic conditions at the study intersections were not further evaluated during weekend conditions.

<sup>3</sup> Counts conducted by the City on March 27, 2018 for Crystal Springs Road showed similar numbers to the winter counts conducted for the TIA; therefore a 5 percent increase was identified to be conservative.

- **Cumulative Conditions.** Cumulative traffic volumes reflect traffic added by projected volumes from approved but not yet completed and/or occupied developments in the project area. The approved project trips and/or approved project information were obtained from the City of San Bruno. The approved project information is included in Appendix B of the TIA, which is included as Appendix G of this EIR.
- **Existing Plus Project Conditions.** Existing traffic volumes with the project were estimated by adding to existing traffic volumes the additional traffic generated by the project. Existing Plus Project Conditions were evaluated relative to existing conditions in order to determine the effects the project would have on the existing roadway network.
- **Cumulative Plus Project Conditions.** Cumulative traffic volumes with the project (hereafter called project traffic volumes) were estimated by adding to cumulative traffic volumes the additional traffic generated by the project. Cumulative Plus Project Conditions were evaluated relative to cumulative conditions in order to determine potential project impacts.

### 4.3.2 Setting

This chapter describes the existing conditions for transportation facilities in the vicinity of the site, including the roadway network, transit service, pedestrian and bicycle facilities.

#### 4.3.2.1 Existing Roadway Network

Regional access to the project site is provided via Interstate 280 (I-280). Local access to the site is provided via Crystal Springs Road and El Camino Real. These roadways are described below.

- **I-280** is a north/south freeway west of the project site that extends from San Francisco through San Mateo and Santa Clara Counties. In San Bruno, I-280 is eight lanes wide. Regional access to the project site is provided via an exit at Crystal Springs Road.
- **El Camino Real (SR 82)** is a six-lane north-south arterial with a raised center median within the project area. El Camino Real extends northward to San Francisco where it changes designation to Mission Street and San Jose Avenue, and southward through San Jose. El Camino Real provides access to the project via Crystal Springs Road.
- **Crystal Springs Road** is a two-lane east/west arterial street that extends east from El Camino Real to Cunningham Way. On-street parking is permitted along Crystal Springs Road. The project site is accessed by the intersection at Crystal Springs Road and City Park Way.
- **City Park Way** is a two lane north/south street from Portola Way to Crystal Springs Road. Parking lots are provided off City Park Way to access the current recreation center. The project site is directly accessed by City Park Way.

#### 4.3.2.2 Existing Pedestrian and Bicycle Facilities

Existing pedestrian and bicycle facilities within the project area are described below.

**Pedestrian Facilities.** Pedestrian facilities consist of sidewalks, crosswalks, and pedestrian signals at signalized intersections. In the vicinity of the project site, sidewalks exist along both sides of Crystal Springs Road east of Donner Avenue, De Soto Way, Cypress Avenue, Oak Avenue, and Donner Avenue, providing pedestrian access to and from the project site. Marked crosswalks with pedestrian signal heads and push buttons are provided on all approaches at the signalized intersection of El Camino Real and Crystal Springs Road. A marked crosswalk with pedestrian signal head and push buttons is provided on the east approach at the signalized intersection of Crystal Springs Road and Cunningham Way. At the unsignalized study intersections, marked crosswalks are provided along most stop-controlled approaches. Sidewalk connections are missing on City Park Way beginning just north of Portola Way. On the east side of the street, a sidewalk connection does not begin again until the City Park Way and Crystal Springs Road intersection. On the west side of the street, sidewalks are provided from the current swimming pool facility to the current staff parking lot. There is also a pedestrian path through the park from the San Bruno Senior Center to the existing recreation center. Although some sidewalk and crosswalk connections are missing, the overall network of sidewalks and crosswalks in the study area has adequate connectivity and provides pedestrians with safe routes from the surrounding neighborhoods to the recreation center.

**Bicycle Facilities.** In the vicinity of the project, there are no bike lanes provided on any of the streets. The nearest bike lanes are provided along Sneath Lane which runs east/west along the Golden Gate National Cemetery. Although the Class II bike lanes along Sneath Lane are the only bicycle lanes that currently exist in San Bruno, the City plans to improve the on-street bicycle network. In July of 2016, the City Council adopted the Walk 'n Bike Plan. This Plan outlines specific improvements to ensure that walking and biking are safe, comfortable, and convenient. The Plan also calls for many support programs and initiatives to encourage more walking and cycling throughout the city. Despite the lack of specific bicycle facilities, the streets near the recreation center generally are local residential streets that are conducive to bicycling due to low speeds and volume.

#### 4.3.2.3 Existing Transit Service

Existing transit service to the study area is provided by the San Mateo County Transit District (SamTrans), Bay Area Rapid Transit (BART), and Caltrain, as described below.

**Samtrans.** The study area is served directly by one local route and one express route, including Local Route 141 from Palmetto Avenue/Manor Drive to the SFO AirTrain Station, with 30 to 40 minute headways and Route ECR from the Daly City BART Station to Palo Alto Transit Center, with 10 to 15 minute headways. The nearest bus stops are located on Crystal Springs Road at the San Bruno Senior Center and the intersection of Crystal Springs Road and El Camino Real. Both locations are within walking distance of the project site.

**Caltrain.** The San Bruno Caltrain Station is located 1.6 miles northeast of the project site. The station can be accessed by SamTrans Bus routes 141 and ECR. Caltrain provides frequent passenger train service between San Jose and San Francisco seven days a week. During commute hours, Caltrain provides extended service to Morgan Hill and Gilroy. Trains that stop at the San Bruno Station operate at approximately 30-minute headways in both directions during the commute hours, with somewhat less frequent service midday. Service operates between about 5:40 a.m. and 11:45 p.m.

in the northbound direction and between 5:15 a.m. and 12:30 a.m. in the southbound direction. Bicycles are permitted on Caltrain. There are bicycle racks and bicycle lockers available at the San Bruno Station. The project site is within short distance of the Caltrain station.

**BART.** BART operates regional rail service in the Bay Area, connecting between San Francisco International Airport and Millbrae Intermodal Station to the south, San Francisco to the north, and cities in the East Bay. The nearest BART station is the San Bruno Station, located approximately 2 miles from the project on Huntington Avenue east of the El Camino Real and Sneath Lane intersection and just north of I-380. The BART station can be accessed by both SamTrans Local Route 141 and Route ECR. BART trains operate on 15-minute headways during peak hours and 20-minute headways during off-peak hours.

#### 4.3.2.4 Existing Intersection Lane Configurations and Traffic Volumes

The existing lane configurations at the study intersections were determined by observations in the field and are shown on Figure 4.3-1. Existing traffic volumes at the intersections were obtained from peak hour counts collected on January 23, 2019. Assuming that park usage would be higher in the spring and summer seasons, the counts were increased by 5 percent as a conservative factor. A tube count<sup>4</sup> was collected on City Park Way for one week beginning January 23, 2019. The existing peak-hour intersection volumes are shown on Figure 4.3-1.

The Crystal Springs Road and El Camino Real intersection has a driveway on the west side of the intersection. However, the eastbound approach lanes only have one right-turn lane and one left-turn lane. Eastbound vehicles do not have a lane that allows them to go straight into the driveway. The existing volume counts showed that one car during the PM peak hour went straight into the driveway from the eastbound approach. Because the lane configurations do not show a through lane, one through vehicle was added to the left turn lane for the purposes of the analysis. The PM peak hour also showed three vehicles coming out of the driveway. The driveway is not a part of the intersection as it is unsignalized; therefore, the vehicles were not included in the intersection analysis.

The tube count on City Park Way between Crystal Springs Road and Portola Way showed that, on average, the mid-week AM peak hour was from 7:00 to 8:00 a.m., and the mid-week PM peak hour was from 3:00 to 4:00 p.m. The AM peak hour correlates to the normal commute hour, but the PM peak hour corresponds with school traffic and not during the commute period. The mid-week average for the AM peak hour had 552 vehicles (276 vehicles northbound and 276 vehicles southbound). The PM peak hour had an average of 591 vehicles (287 vehicles northbound and 303 vehicles southbound). The highest PM peak commute hour was from 5:00 to 6:00 p.m. with a total average of 548 vehicles (255 vehicles northbound and 293 vehicles southbound).

Volumes on the weekend were much lower than during the weekdays. The peak volume on Saturday and Sunday was about 350 vehicles per hour compared to about 550 to 600 vehicles during peak hours on weekdays.

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<sup>4</sup> A tube count collects the number of vehicles that pass through a certain section of the street, in between intersections.

#### 4.3.2.5 Existing Intersection Levels of Service

As shown in Table 4.3.C, the results of the intersection level of service analysis show that all of the signalized and unsignalized study intersections currently operate at LOS D or better, except Crystal Springs Road and Oak Avenue/City Park Way intersection during the AM peak hour of traffic.

**Table 4.3.C: Existing Intersection Levels of Service**

Study Number	Intersection	Traffic Control	Peak Hour	Existing Conditions	
				Avg. Delay (sec.)	LOS
1	Cunningham Way & Crystal Springs Road	Signal	AM	26.2	C
			PM	27.7	C
2	Donner Avenue & Crystal Springs Road	AWSC <sup>1</sup>	AM	20.7	C
			PM	15.9	C
3	Crystal Springs Road & Oak Avenue/City Park Way	AWSC <sup>1</sup>	AM	<b>73.0</b>	<b>F</b>
			PM	31.50	D
4	Cypress Avenue & Crystal Springs Road	AWSC <sup>1</sup>	AM	15.0	B
			PM	13.1	B
5	El Camino Real & Crystal Springs Road	Signal	AM	21.9	C
			PM	21.5	C
6	De Soto Way & Santa Lucia Avenue (North)	AWSC <sup>1</sup>	AM	10.0	A
			PM	8.7	A
7	De Soto Way	TWSC <sup>2</sup>	AM	9.5	A
			PM	8.3	A

Source: *San Bruno Recreation and Aquatics Center Transportation Impact Analysis* (Hexagon Transportation Consultants January 2020).

<sup>1</sup> Average delay for an all-way stop controlled intersection is reported for the entire intersection.

<sup>2</sup> Average delay for the two-way stop controlled intersection is reported by the Synchro output delay and LOS

AWSC = All-Way Stop Control

TWSC = Two-Way Stop Control

**Bold** indicates a substandard level of service.

#### 4.3.2.6 Observed Traffic Conditions

Traffic conditions were observed in the field to identify existing operational deficiencies and to confirm the accuracy of calculated intersection levels of service. The purpose of this effort was: (1) to identify any existing traffic problems that may not be directly related to level of service, and (2) to identify any locations where the level of service analysis does not accurately reflect existing traffic conditions.

Overall, most study intersections operate adequately during both the AM and PM peak hours of traffic, and the level of service analysis appears to accurately reflect actual existing traffic conditions. However, field observations showed that some minor operational problems occur during the AM peak commute hours. These issues are described below.

**Crystal Springs Road and Oak Avenue/City Park Way.** This intersection experiences heavy traffic along Crystal Springs Road and City Park Way during the AM peak hour. Vehicle queues were long on the eastbound and northbound approaches, with the eastbound right turn movement occasionally extending to the Donner Avenue and Crystal Springs Road intersection. The movement was

separated from the through movement as most vehicles traveling eastbound often created two lanes. Vehicles traveling northbound on City Park Way often experienced a long queue that extended to the front of the current recreational center.

**Donner Avenue and Crystal Springs Road.** Field observations also showed that during the AM peak hour at the Donner Avenue and Crystal Springs Road intersection, the eastbound through queue often extended past 10 vehicles; however, due to the low traffic volume on the southbound left turn movement, vehicles were able to move through the intersection without a large amount of delay. Occasionally, the queue from the Crystal Springs Road and Oak Avenue/City Park Way intersection backed up into the Donner Avenue and Crystal Springs Road intersection.

**Cypress Avenue and Crystal Springs Road.** Eastbound traffic on Crystal Springs Road often experienced a queue of 10 or more vehicles. Due to the low volume of vehicles on Cypress Avenue, vehicles were able to clear the intersection quickly. Vehicles blocked the driveway to the Playground/Corporation Lot (Lot #2), but there were not many vehicles trying to access the lot during the AM peak hour.

#### 4.3.2.7 Cumulative Conditions

Cumulative conditions are defined as conditions within the next 3 to 5 years (a horizon year of 2021 to 2023) just prior to completion/occupation of the proposed development. Traffic volumes for cumulative conditions comprise existing traffic volumes plus traffic generated by cumulative projects in the vicinity of the site. It is assumed in this analysis that the transportation network under cumulative conditions would be the same as the existing transportation network because there are no planned and funded transportation improvements at the study intersections.

Cumulative traffic volumes for the study intersections were estimated by adding to existing traffic volumes the trips generated by nearby approved but not yet completed or occupied projects, projects under construction, and projects with a formal application submitted. A list of developments was obtained from the City of San Bruno. Nearby projects within a 1-mile radius of the project site that are expected to generate a measurable number of vehicle trips at one or more study intersections include the following:

- 406 San Mateo Avenue – a three-story mixed-use development of 83 apartment units and 7,000 square feet of retail space;
- 160 El Camino Real Hotel – a three-story hotel with 34 rooms;
- 271 El Camino Real – a three-story multi-family development with 24 units; and
- The Stratford School – a private school for pre-Kindergarten and Kindergarten students located at 201 Balboa Way.

Trip generation estimates for the approved projects were based on their respective traffic study, if available. The traffic study, done by Hexagon, was used for the 406 San Mateo Avenue project. The 160 El Camino Real Hotel project and the 271 El Camino Real residential development do not have

traffic studies; therefore, trips were estimated based off the ITE Trip Generation Manual, 10th Edition. A memorandum provided by Fehr & Peers, dated November 22, 2019, was used for trips estimated for The Stratford School. Refer to Appendix G for additional information. The estimated trips from the projects were distributed and assigned throughout the study area based on the trip distribution assumptions present in the traffic studies or based on knowledge of travel patterns in the study area. Figure 4.3-2 shows the cumulative traffic volumes.

The analysis results, as shown in Table 4.3.D, show that the signalized and unsignalized study intersections would operate at LOS D or better during both the AM and PM peak hours, except the Crystal Springs Road and Oak Avenue/City Park Way intersection, which would continue to operate at LOS F during the AM peak hour and would degrade to LOS E during the PM peak hour.

**Table 4.3.D: Cumulative Intersection Levels of Service**

Study Number	Intersection	Traffic Control	Peak Hour	Existing Conditions		Cumulative Conditions	
				Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS
1	Cunningham Way & Crystal Springs Road	Signal	AM	26.2	C	29.5	C
			PM	27.7	C	28.1	C
2	Donner Avenue & Crystal Springs Road	AWSC <sup>1</sup>	AM	20.7	C	20.8	C
			PM	15.9	C	17.0	C
3	Crystal Springs Road & Oak Avenue/City Park Way	AWSC <sup>1</sup>	AM	<b>73.0</b>	<b>F</b>	<b>73.5</b>	<b>F</b>
			PM	31.5	D	<b>36.9</b>	<b>E</b>
4	Cypress Avenue & Crystal Springs Road	AWSC <sup>1</sup>	AM	15.0	B	15.4	B
			PM	13.1	B	13.1	B
5	El Camino Real & Crystal Springs Road	Signal	AM	21.9	C	22.1	C
			PM	21.5	C	22.1	C
6	De Soto Way & Santa Lucia Avenue (North)	AWSC <sup>1</sup>	AM	10.0	A	10.0	A
			PM	8.7	A	8.9	A
7	De Soto Way & Santa Lucia Avenue (South)	TWSC <sup>2</sup>	AM	9.5	A	9.5	A
			PM	8.3	A	8.3	A

Source: *San Bruno Recreation and Aquatics Center Transportation Impact Analysis* (Hexagon Transportation Consultants January 2020).

<sup>1</sup> Average delay for an all-way stop controlled intersection is reported for the entire intersection.

<sup>2</sup> Average delay for the two-way stop controlled intersection is reported by the Synchro output delay and LOS

AWSC = All-Way Stop Control

TWSC = Two-Way Stop Control

**Bold** indicates a substandard level of service.

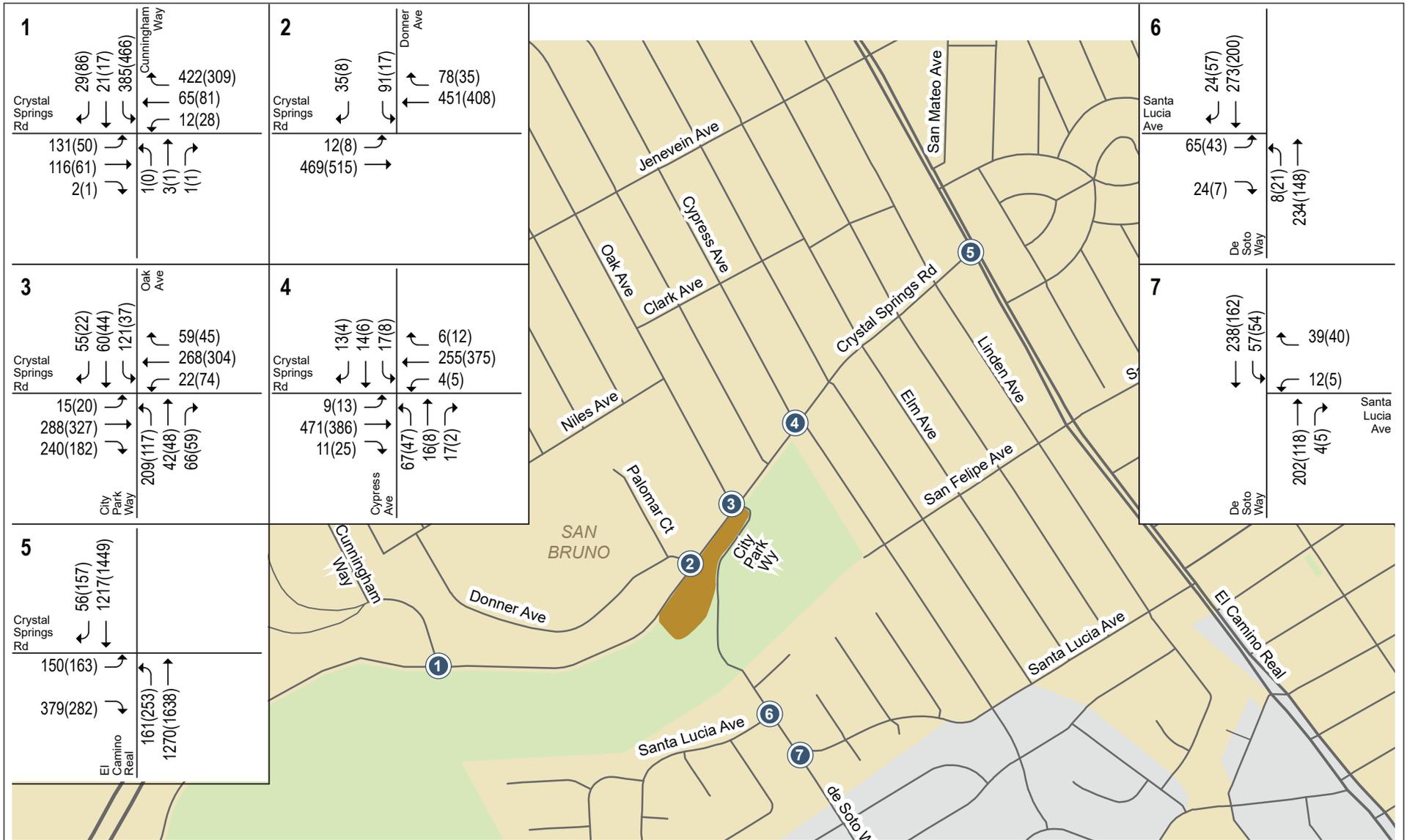


FIGURE 4.3-2

LSA



**LEGEND**

- = Site Location
- X = Study Intersection
- XX(XX) = AM(PM) Peak-Hour Traffic Volumes

San Bruno Recreation and Aquatic Center Project EIR  
Cumulative Traffic Volumes

SOURCE: HEXAGON, DECEMBER 4, 2019.

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### 4.3.3 Regulatory Setting

The existing regulatory setting as it relates to transportation and circulation within the vicinity of the project site is described below.

#### 4.3.3.1 Agencies with Jurisdiction over Transportation in San Bruno

The City of San Bruno has jurisdiction over all local City streets and City-operated traffic signals within the study area. Several regional agencies, including the City/County Association of Governments of San Mateo County (C/CAG), the Congestion Management Agency in San Mateo County, and the Metropolitan Transportation Commission (MTC), coordinate and establish funding priorities for intra-regional transportation improvement programs. Freeways serving San Bruno (I-280, I-380, and US 101), associated local freeway ramps, intersections that serve as freeway ramp terminals, and local surface highway segments are under the jurisdiction of the State of California Department of Transportation (Caltrans). Transit service providers such as Caltrain, SamTrans, and BART have jurisdiction over their respective services. These agencies, their responsibilities, and funding sources are more specifically described below.

**City of San Bruno.** The City of San Bruno is responsible for planning, constructing, and maintaining local public transportation facilities, including all City streets, City-operated traffic signals, sidewalks, and bicycle facilities. These local services are funded primarily by gas-tax revenue and developer fees.

**San Mateo City/County Association of Government (C/CAG).** C/CAG is the Congestion Management Agency (CMA) for San Mateo County authorized to set State and federal funding priorities for improvements affecting the San Mateo County Congestion Management Program (CMP) roadway system. C/CAG-designated CMP roadway system components in San Bruno include I-280, I-380, US 101, SR 82 (El Camino Real), and SR 35 (Skyline Boulevard). Designated CMP intersections within the vicinity of the project site include El Camino Real/Crystal Springs Road.

C/CAG has adopted guidelines to reduce the number of net new vehicle trips generated by new developments. These guidelines apply to all developments that generate 100 or more net new peak hour vehicular trips on the CMP network and are subject to CEQA review. The goal of the guidelines is that “the developer and/or tenants will reduce the demand for all new peak hour trips (including the first 100 trips) projected to be generated by the development.”

**Metropolitan Transportation Commission.** The regional transportation planning agency and Metropolitan Planning Organization (MPO) for the nine-county Bay Area is the Metropolitan Transportation Commission (MTC). MTC is the authorized clearinghouse for State and federal transportation improvement funds. Each county’s CMA, including C/CAG, forwards a capital improvement project list to MTC. MTC reviews the lists submitted by all nine Bay Area counties and submits a regional priority list to the California Transportation Commission (CTC) and/or the Federal Highway Administration (FHWA) for selection of projects to receive funding. Funded projects are then included in the Regional Transportation Plan (RTP) prepared by MTC.

**California Department of Transportation (Caltrans).** Caltrans has authority over the State highway system, including mainline facilities, interchanges, and arterial State routes. Caltrans approves the planning and design of improvements for all State-controlled facilities. Caltrans facilities in San Bruno include I-280, I-380, US 101 and their respective interchanges, SR 82 (El Camino Real), including the El Camino Real/Crystal Springs Road intersection, and SR 35 (Skyline Boulevard).

**SamTrans.** The San Mateo County Transit District (SamTrans) is the primary public transportation provider in San Mateo County. SamTrans manages local and regional bus service, paratransit services, and Caltrain commuter rail. There are over 50 routes in the county that can be categorized as community, express, BART connection, Caltrain connection, and BART and Caltrain connection routes.

**Caltrain.** Caltrain operates 50 miles of commuter rail between San Francisco and San Jose, and limited service trains to Morgan Hill and Gilroy during weekday commute periods. Caltrain is funded through the Peninsula Corridor Joint Powers Board and managed by SamTrans. On weekdays, Caltrain operates approximately 100 trains per day of local, limited stop, and Baby Bullet express service in both directions.

**BART.** Bay Area Rapid Transit (BART) operates 122 miles of commuter rail between the San Francisco Peninsula, Richmond, Antioch, Fremont, and Dublin. BART operates a total of 48 stations, including one within the City, throughout the Bay Area with approximately 723 trains.

#### 4.3.3.2 Plans and Policies

Planning and policy documents that apply to transportation and circulation within the vicinity of the site, and therefore would apply to development of the proposed project, are described below.

**San Bruno General Plan.** The San Bruno General Plan was adopted in March 2009 to guide future decision making in San Bruno. The Circulation Element of the General Plan was developed to guide decision making specific to transportation. One of the guiding policies of the Circulation Element is to:

- **Guiding Policy T-A:** Provide for efficient, safe, and pleasant movement for all transportation modes – vehicles, bicycles, transit, and pedestrians.
- **Guiding Policy T-B:** Maintain acceptable levels of service for vehicular movement along the city's street network. Acceptable level of service could vary based on characteristics of the area under consideration.
- **Implementing Policy T-6:** Maintain LOS standards for intersections for AM and PM peak periods as shown in Figure 4-2.

All projects should be evaluated to ensure they are consistent with the General Plan goals and policies related to transportation. At a minimum, transportation analysis should evaluate the project access points, connectivity to adjacent bicycle, pedestrian, transit and vehicle facilities.

**San Bruno Walk ‘n Bike Plan.** The San Bruno Walk ‘n Bike Plan was adopted in July 2016. The Walk ‘n Bike Plan outlines specific improvements to ensure that walking and biking are safe, comfortable, and convenient. The Walk ‘n Bike Plan also calls for many support programs and initiatives to encourage more walking and cycling throughout the city.

**C/CAG Guidelines.** C/CAG has adopted guidelines as a part of its CMP, which are intended to reduce the regional traffic impacts of substantive new developments. The guidelines apply to all projects in San Mateo County that will generate 100 or more net new peak hour trips on the CMP network and are subject to CEQA review. C/CAG calls for projects that meet the criteria to determine if a combination of acceptable measures is possible that has the capacity to “fully reduce,” through the use of a trip credit system, the demand for net new trips that the project is anticipated to generate on the CMP roadway network (including the first 100 trips). C/CAG has published a list of mitigation options in a memorandum that also outlines a process for obtaining C/CAG approval. The project is expected to generate fewer than 100 peak hour trips, and therefore does not need to obtain C/CAG approval.

#### 4.3.4 Impacts and Mitigation Measures

This section provides an assessment of the potential impacts related to transportation that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds for determining whether an impact is significant. The latter part of this section presents potential impacts associated with implementation of the proposed project and identifies mitigation measures, as appropriate.

##### 4.3.4.1 Significance Criteria

The criteria for evaluating the significance of a project’s environmental impacts are based on the CEQA Guidelines Appendix G and applicable standards recognized by San Bruno and C/CAG. For this analysis, transportation impacts are considered significant if the project would:

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

**Signalized Intersections.** Significance criteria are used to establish what constitutes an impact. In order to be consistent with General Plan Policy T-B, a significant impact on signalized intersection operations would occur if, for either peak hour:

1. The level of service at the intersection degrades from an acceptable level (LOS D or better) under existing conditions to an unacceptable level under existing plus project conditions; or

2. The level of service at the intersection is an unacceptable level (LOS E or F) under existing conditions, and the addition of project trips would cause the critical-movement delay at the intersection to increase by four or more seconds.

**Unsignalized Intersections.** In order to be consistent with the General Plan Policy T-B, an unsignalized intersection would have a significant impact if the following would occur:

1. The intersection or a stop-controlled approach degrades from an acceptable LOS D to an unacceptable LOS E or F or is already operating below LOS D; and
2. The project would add ten or more vehicle trips to the critical movement of the intersection or stop-controlled approach during the peak hour; and
3. The intersection meets the California Manual on Uniform Traffic Control Devices (MUTCD) peak hour volume traffic signal warrant after project completion.

#### 4.3.4.2 Project Trip Estimates

The magnitude of traffic produced by a new development and the locations where that traffic would appear are estimated using a three-step process: 1) trip generation, 2) trip distribution, and 3) trip assignment. In determining project trip generation, the magnitude of traffic traveling to and from the proposed SBRAC was estimated for the AM and PM peak hours. As part of the project trip distribution, the directions to and from which the project trips would travel were estimated. In the project trip assignment, the project trips were assigned to specific streets and intersections. These procedures are described below.

**Trip Generation.** Through empirical research, data have been collected that quantify the amount of traffic expected to be generated by many types of land uses. These trip generation rates can be used to estimate the future traffic increases that would result from a new development. The trip generation research is published in the Institute of Transportation Engineers (ITE) Trip Generation Manual.

Project trip generation was estimated by applying the appropriate trip generation rates obtained from the ITE Trip Generation Manual, 10th Edition. The average trip generation rates for a Recreational Community Center (Land Use 495) were applied to the project. According to the ITE Trip Generation Manual, a recreational community center is described as a stand-alone public facility that often includes classes and clubs, swimming pools, athletic courts, exercise equipment, locker rooms, and a restaurant or snack bar.

The proposed project would include redevelopment of the project site with the proposed 47,000-square-foot SBRAC, an increase of approximately 17,000 square feet compared to the existing Veterans Memorial Building. The trip generation is based on the added square footage of the proposed project. Based on the project description and ITE trip generation rates, the proposed new recreation center would generate a total of 490 new daily vehicle trips, with 30 new trips (20 inbound and 10 outbound) occurring during the AM peak hour and 39 new trips (18 inbound and 21 outbound) occurring during the PM peak hour, as shown in Table 4.3.E.

**Table 4.3.E: Project Trip Generation Estimates**

Land Use	Net Increase in Size	Daily		AM Peak Hour				PM Peak Hour			
		Rate	Trips	Rate	In	Out	Total	Rate	In	Out	Total
<b>Proposed Uses</b>											
Community Center <sup>1</sup>	17 ksf	28.82	490	1.76	20	10	30	2.31	18	21	39

Source: *San Bruno Recreation and Aquatics Center Transportation Impact Analysis* (Hexagon Transportation Consultants, January 2020).

<sup>1</sup> Recreational Community Center (Land Use 495) average rates published in ITE's Trip Generation Manual, 10th Edition, 2017.

Ksf = 1,000 square feet

**Trip Distribution and Assignment.** The trip distribution pattern for the project was developed based on existing travel patterns on the surrounding roadway system and the locations of complementary land uses. The peak hour vehicle trips generated by the project were assigned to the roadway network in accordance with the trip distribution pattern. Figure 4.3-3 shows the trip distribution pattern for the proposed recreation center.

#### 4.3.4.3 Project Impacts

This section includes an analysis of the proposed project's impacts on the existing transportation and circulation system. CEQA Guidelines Appendix G, the San Bruno General Plan, C/CAG Guidelines, and San Bruno City staff were consulted to determine the criteria for which project-level impacts should be evaluated against as part of this analysis.

**Conflict with Program, Plan, Ordinance, or Policy Addressing the Circulation System.** This section evaluates the transportation-related impacts of the proposed project under Existing Plus Project and Cumulative Plus Project conditions, presenting estimated vehicle trip generation associated with development of the proposed project, and the distribution of those vehicle trips on the study area's roadway network. The impacts of the increased traffic at intersections in the context of applicable significance criteria are then described. The impact related to transit, bicycle, and pedestrian facilities is then discussed.

**Existing Plus Project Conditions.** Project trips, as represented in the above project trip assignment, were added to the existing traffic volumes to obtain Existing Plus Project traffic volumes. The Existing Plus Project traffic volumes are shown on Figure 4.3-4.

The results of the level of service analysis under Existing Plus Project conditions are summarized in Table 4.3.F. The results of the analysis show that all study intersections would continue to operate at LOS D or better during both the AM and PM peak hours, except the Crystal Springs Road and Oak Avenue/City Park Way intersection, which would continue to operate at LOS F during the AM peak hour.

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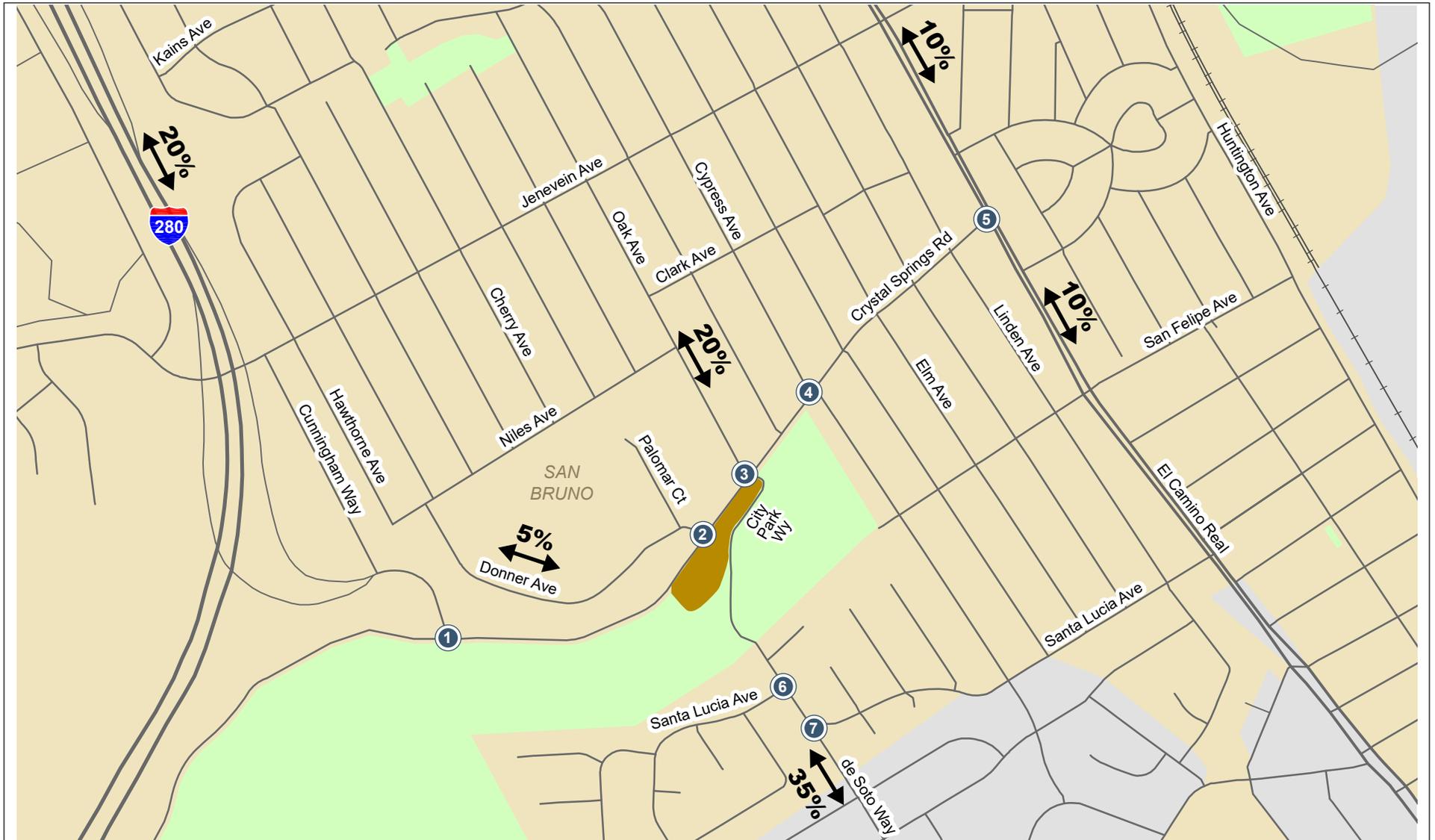


FIGURE 4.3-3

LSA

**LEGEND**

- = Site Location
- X = Study Intersection



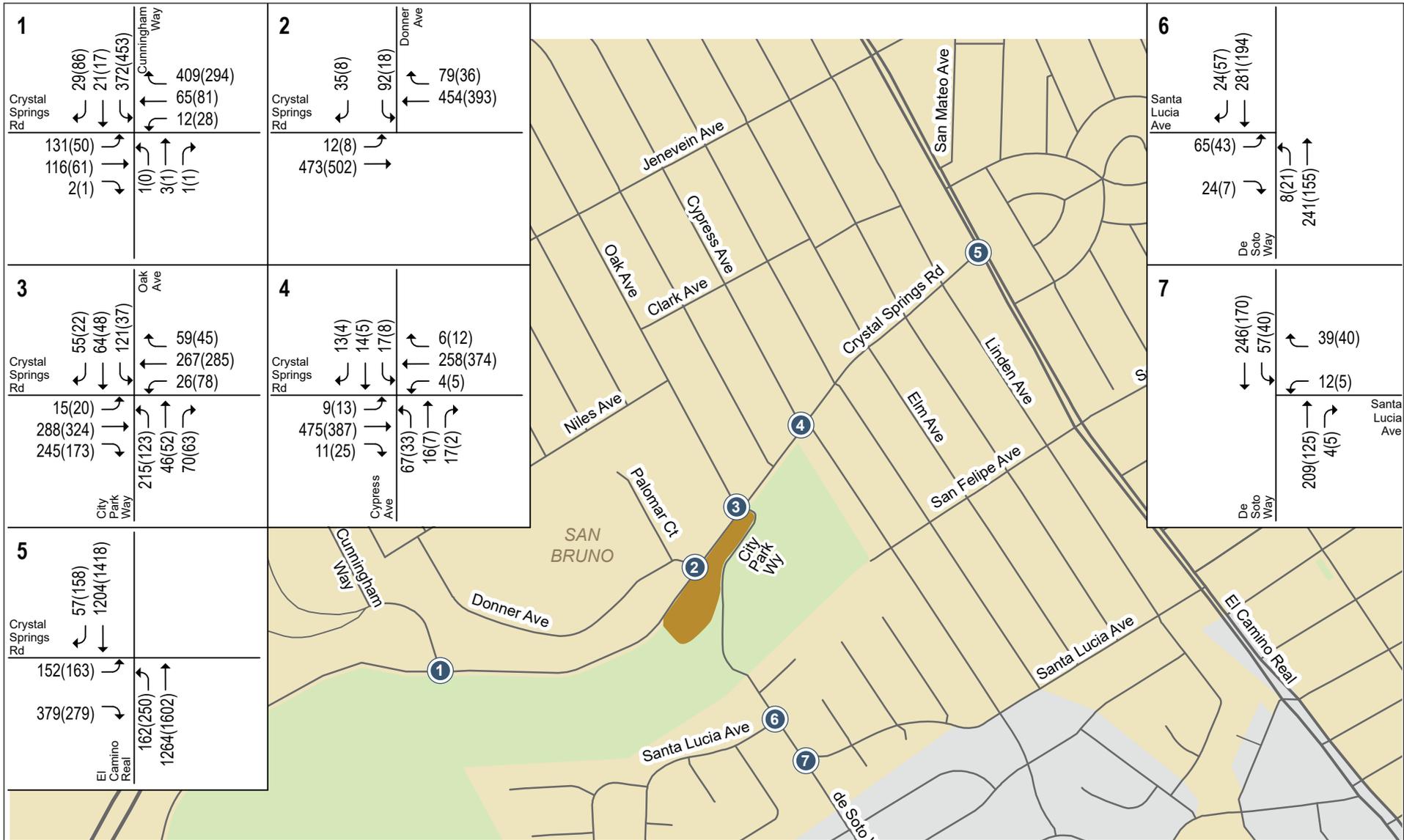


FIGURE 4.3-4

LSA



**LEGEND**

- = Site Location
- X = Study Intersection
- XX(XX) = AM(PM) Peak-Hour Traffic Volumes

San Bruno Recreation and Aquatic Center Project EIR  
Existing Plus Project Traffic Volumes

SOURCE: HEXAGON, DECEMBER 4, 2019.

P:\GRP1803 San Bruno Rec Center\PRODUCTS\Graphics\EIR\Figures\Figure 4.3-4.ai (12/17/19)

**Table 4.3.F: Existing Plus Project Intersection Levels of Service**

Study Number	Intersection	Traffic Control	Peak Hour	Existing Conditions			
				No Project		Plus Project	
				Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS
1	Cunningham Way & Crystal Springs Road	Signal	AM	26.2	C	26.8	C
			PM	27.7	C	27.0	C
2	Donner Avenue & Crystal Springs Road	AWSC <sup>1</sup>	AM	20.7	C	21.3	C
			PM	15.9	C	16.2	C
3	Crystal Springs Road & Oak Avenue/City Park Way	AWSC <sup>1</sup>	AM	<b>73.0</b>	<b>F</b>	<b>79.8</b>	<b>F</b>
			PM	31.5	D	34.9	D
4	Cypress Avenue & Crystal Springs Road	AWSC <sup>1</sup>	AM	15.0	B	15.2	C
			PM	13.1	B	13.2	B
5	El Camino Real & Crystal Springs Road	Signal	AM	21.9	C	22.6	C
			PM	21.5	C	21.6	C
6	De Soto Way & Santa Lucia Avenue (North)	AWSC <sup>1</sup>	AM	10.0	A	10.1	A
			PM	8.7	A	8.8	A
7	De Soto Way & Santa Lucia Avenue (South)	TWSC <sup>2</sup>	AM	9.5	A	9.6	A
			PM	8.3	A	8.4	A

Source: *San Bruno Recreation and Aquatics Center Transportation Impact Analysis* (Hexagon Transportation Consultants January 2020).

<sup>1</sup> Average delay for an all-way stop controlled intersection is reported for the entire intersection.

<sup>2</sup> Average delay for the two-way stop controlled intersection is reported by the Synchro output delay and LOS

AWSC = All-Way Stop Control

TWSC = Two-Way Stop Control

**Bold** indicates a substandard level of service.

**Impact TRA-1: The proposed project would add more than 10 trips to the critical movement of the all-way stop-controlled intersection of Crystal Springs Road and Oak Avenue/City Park Way during the peak hour and meets the peak hour traffic signal warrant for this intersection during Existing Plus Project and Cumulative Plus Project conditions. (S)**

In conjunction with the level of service analysis, a signal warrant analysis was performed to determine if the unsignalized intersection of Crystal Springs Road and Oak Avenue/City Park Way would warrant a traffic signal. The study intersection was analyzed on the basis of one-hour traffic volumes and was checked against the One-Hour signal warrant described in Section 4C.01 of the California Manual of Uniform Traffic Control Devices (CA MUTCD). As identified in the signal warrant analysis documented in Appendix G of this EIR, the AM and PM peak-hour intersection volumes warrant signalization under Existing Plus Project Cumulative Plus Project conditions. Because the project would add more than 10 trips to critical movement of the all-way stop-controlled intersection of Crystal Springs Road and Oak Avenue/City Park Way during the peak hour, and the intersection would warrant a traffic signal or other traffic calming measure, the project would create a significant impact at the study intersection. To reduce this impact to a less than significant level, the following mitigation measure shall be implemented:

**Mitigation Measure TRA-1:** The San Bruno Walk 'n Bike Plan recommends a mini-roundabout at the Crystal Springs Road and Oak Avenue/City Park Way intersection to simplify the intersection control and calm traffic. However, the plan also noted that this improvement should be further studied to determine the feasibility of a mini-roundabout at this location given the relatively large number of school children and activity. Therefore, to reduce the level of service impact at this intersection, either a mini-roundabout (if determined to be feasible) or traffic signal shall be installed at the Crystal Springs Road and City Park Way intersection. (LTS)

Implementation of Mitigation Measure TRA-1 would improve operations during Existing Plus Project conditions at the study intersection to an acceptable LOS B, with average delays of approximately 12.5 seconds during the AM peak hour and 10.6 seconds during the PM peak hour with a roundabout and 14.8 seconds during the AM peak hour and 12.4 seconds during the PM peak hour with installation of a signal. Therefore, with implementation of Mitigation Measure TRA-1, this impact would be less than significant.

**Cumulative Plus Project Conditions.** Project trips were added to cumulative traffic volumes to obtain Cumulative Plus Project traffic volumes. The Cumulative Plus Project traffic volumes at the study intersections are shown on Figure 4.3-5.

The results of the intersection level of service cumulative analysis show that all study intersections would continue to operate at LOS D or better during both the AM and PM peak hours of traffic, except the Crystal Springs Road and Oak Avenue/City Park Way intersection, which would continue to operate at LOS F during the AM peak hour and degrade from LOS D to LOS E during the PM peak hour, as shown on Table 4.3.G. The peak hour signal warrant would also be met. Implementation of Mitigation Measure TRA-1, identified above, would improve operations during Cumulative Plus Project conditions at the study intersection to an acceptable LOS B, with average delays of approximately 12.5 seconds during the AM peak hour and 11.0 seconds during the PM peak hour with a roundabout and 14.8 seconds during the AM peak hour and 12.1 seconds during the PM peak hour with installation of a signal. Therefore, with implementation of Mitigation Measure TRA-1, this impact would be less than significant.

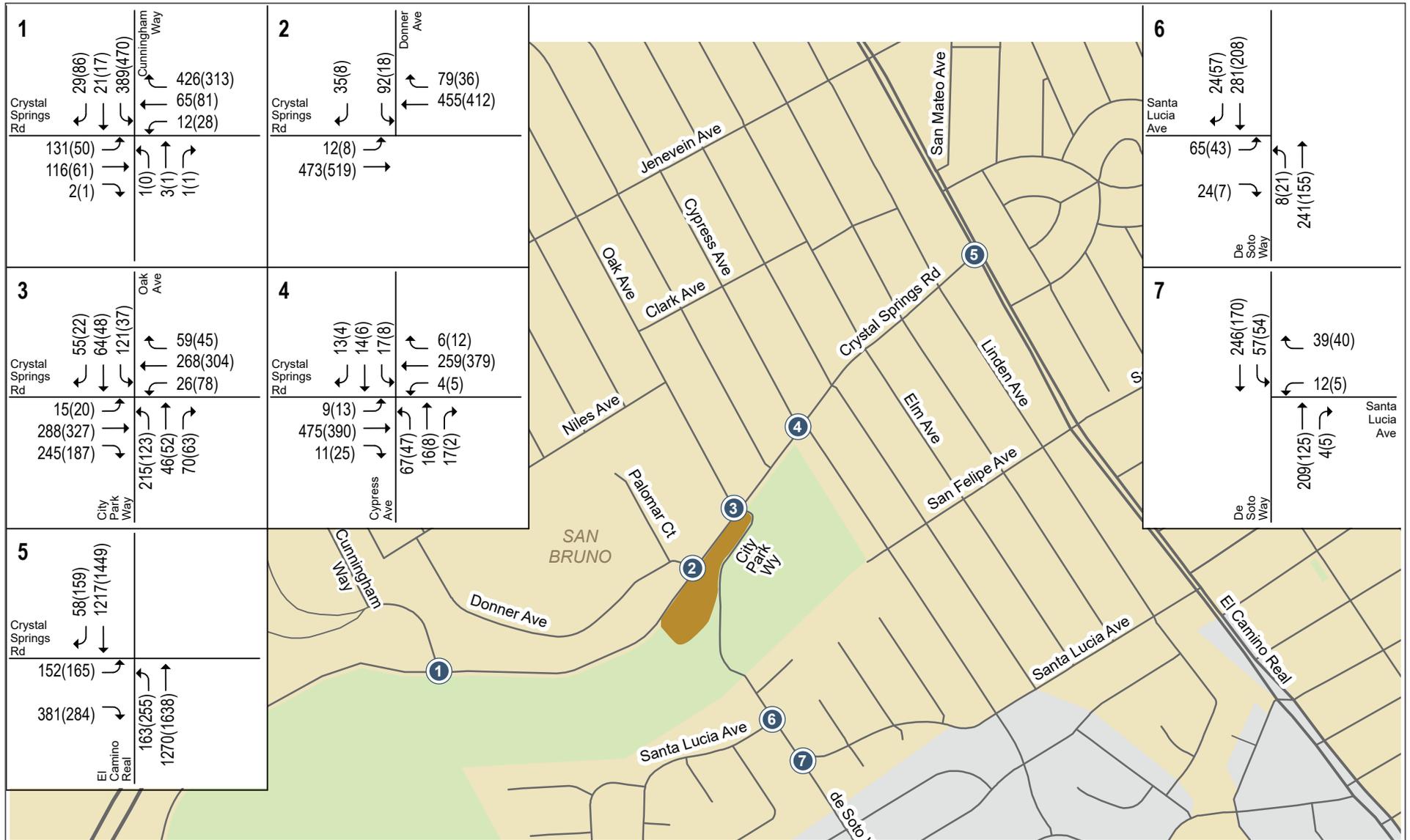


FIGURE 4.3-5

LSA



**LEGEND**

= Site Location

= Study Intersection

XX(XX) = AM(PM) Peak-Hour Traffic Volumes

San Bruno Recreation and Aquatic Center Project EIR  
Cumulative Plus Project Traffic Volumes

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**Table 4.3.G: Cumulative Plus Project Intersection Levels of Service**

Study Number	Intersection	Traffic Control	Peak Hour	Cumulative Conditions			
				No Project		Plus Project	
				Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS
1	Cunningham Way & Crystal Springs Road	Signal	AM	29.5	C	30.5	C
			PM	28.1	C	28.3	C
2	Donner Avenue & Crystal Springs Road	AWSC <sup>1</sup>	AM	20.8	C	21.3	C
			PM	17.0	C	17.4	C
3	Crystal Springs Road & Oak Avenue/City Park Way	AWSC <sup>1</sup>	AM	<b>73.4</b>	<b>F</b>	<b>80.0</b>	<b>F</b>
			PM	36.9	D	<b>43.8</b>	<b>E</b>
4	Cypress Avenue & Crystal Springs Road	AWSC <sup>1</sup>	AM	15.4	B	15.2	C
			PM	13.4	B	13.6	B
5	El Camino Real & Crystal Springs Road	Signal	AM	22.1	C	22.7	C
			PM	22.1	C	22.3	C
6	De Soto Way & Santa Lucia Avenue (North)	AWSC <sup>1</sup>	AM	10.0	A	10.1	A
			PM	8.9	A	8.9	A
7	De Soto Way & Santa Lucia Avenue (South)	TWSC <sup>2</sup>	AM	9.5	A	9.6	A
			PM	8.3	A	8.4	A

Source: *San Bruno Recreation and Aquatics Center Transportation Impact Analysis* (Hexagon Transportation Consultants January 2020).

<sup>1</sup> Average delay for an all-way stop controlled intersection is reported for the entire intersection.

<sup>2</sup> Average delay for the two-way stop controlled intersection is reported by the Synchro output delay and LOS

AWSC = All-Way Stop Control

TWSC = Two-Way Stop Control

**Bold** indicates a substandard level of service.

***Pedestrian, Bicycle and Transit Analysis.*** All new development projects in San Bruno should enhance opportunities for all modes of transportation, consistent with the goals of the City’s General Plan and the Walk ‘n Bike Plan. It is the goal of the General Plan and the Walk ‘n Bike Plan that all development projects accommodate and encourage the use of non-automobile transportation modes within the area. The Walk ‘n Bike Plan establishes strategies to foster more multi-modal opportunities, promote active living, and connect to the other modes of transportation within the network. In order to further the goals of the City, pedestrian and bicycle facilities should be encouraged with new development projects.

Pedestrian Facilities. Pedestrian facilities in the study area consist of sidewalks, crosswalks, and pedestrian signals at signalized intersections. The project plans show sidewalks surrounding the border of the recreation center, as well as connecting to the parking lots. The project would also construct one publicly accessible pedestrian plaza at the recreation center’s entrance along City Park Way. The project should assess the following concerns from the Walk ‘n Bike Plan:

- Wider sidewalk paths
- Better maintenance of the paths within the park.

The City's Walk 'n Bike Plan outlines the following potential pedestrian improvement strategies, although none are planned or funded projects:

- *Intersection of Crystal Springs Road and El Camino Real:* Install corner bulb-outs to shorten pedestrian crossing distance and reduce corner curb radii, remove turn pockets where capacity is not needed, narrow travel lanes to provide a pedestrian refuge, and provide supplemental signal faces and signal push buttons or other detectors, as needed.
- *Intersection of Crystal Springs Road and Oak Avenue:* Construct a mini-roundabout to simplify the intersection control and calm traffic. The improvement should be studied to determine the feasibility of a mini-roundabout at this location given the relatively large number of school children and activity.
- *Crystal Springs Road from Donner Avenue to Cunningham Way:* Construct a minimum six-foot sidewalk, curb and gutter. Some locations might require retaining walls.

**Impact TRA-2: The proposed project could conflict with the goals and policies related to pedestrian circulation of the San Bruno General Plan and San Bruno Walk 'n Bike Plan. (S)**

The proposed project would not include the removal of any pedestrian facilities, nor would it conflict with any adopted plans or policies for new pedestrian facilities. However, there is no connecting sidewalk on Crystal Springs Road between Donner Avenue and the San Bruno Senior Center. Therefore, the following mitigation measure would be required to ensure consistency with the San Bruno General Plan and Walk 'n Bike Plan and reduce this impact to a less-than-significant level.

**Mitigation Measure TRA-2:** Prior to the issuance of a certificate of occupancy, wayfinding signage shall be installed directing pedestrians to the existing path that runs through City Park to the San Bruno Senior Center to prevent unsafe crossings of Crystal Springs Road. (LTS)

Implementation of Mitigation Measure TRA-2 would ensure that the proposed project provides access to existing pedestrian facilities and does not conflict with the goals and policies of the Bruno General Plan and Walk 'n Bike Plan. Therefore, with implementation of Mitigation Measure TRA-2, this impact would be less than significant.

Bicycle Facilities. There are no existing bike facilities in the immediate vicinity of the project site. However, there are several potential future additional bicycle facilities in the study area. The City's Walk 'N Bike Plan outlines the following potential bicycle improvement strategies although none are planned or funded projects:

- Class III bike route on Cunningham Way between Jenevein Road and Crystal Springs Road

- Class III bike route on Crystal Springs Road between Cunningham Way and Linden Avenue
- Class III bike route on De Soto Way between Bayview Avenue and Crystal Springs Road
- Class III bike route on Oak Avenue between San Bruno Avenue and Crystal Springs Road

The proposed project would not include the removal of any bicycle facilities, nor would it conflict with any adopted plans or policies for new bicycle facilities. Therefore, the proposed project would have a less-than-significant impact on bicycle facilities in the immediate vicinity of the project site.

Transit Services. The project site is well-served by SamTrans, BART, and Caltrain. The nearest bus stops are located on Crystal Springs Road, east of Cunningham Way and at the intersection of Crystal Springs Road and El Camino Real. Additional transit services are provided at the San Bruno Caltrain Station, less than 1.1 miles northeast of the project site, and the San Bruno BART station, located approximately 2 miles northeast of the project site. With the proximity to transit services, it could be expected that a portion (10 percent) of employee and patron trips would be made by transit. Assuming up to 10 percent of the project trips are transit trips, the project would generate 3 transit trips during the AM peak hour and 3 transit trips during the PM peak hour. There are between 13 and 15 scheduled buses that serve the bus stops near the site during peak hours, eight BART and four Caltrain trains that stop at the San Bruno BART and Caltrain stations. It is assumed that the trains and buses would have sufficient capacity to accommodate this relatively minor increase in ridership.

Given that the project would not remove any transit facilities, nor would it conflict with any adopted plans or policies for new transit facilities or services, the proposed project would have a less-than-significant impact on transit services in the immediate vicinity of the project site.

***Cumulative Pedestrian, Bicycle and Transit Impacts.*** As discussed above, all new development projects in San Bruno should enhance opportunities for all modes of transportation, consistent with the goals of the City's General Plan and the Walk 'n Bike Plan. In order to further the goals of the City, pedestrian and bicycle facilities should be encouraged with new development projects. The cumulative development projects identified in this section would undergo individual site plan review to ensure that pedestrian, bicycle, and transit impacts are reduced to less-than-significant levels and that the appropriate facilities are installed with each new development, as required. The less-than-significant pedestrian, bicycle, and transit impacts of the proposed project would not combine with future development projects to create a cumulatively considerable impact related to alternative modes of transportation.

**Consistency with CEQA Guidelines §15064.3, Subdivision (b).** Effective December 28, 2018, the CEQA Guidelines were updated and require the evaluation of vehicle miles transportation (VMT) as the criteria for analyzing transportation impacts for land use projects. As noted in CEQA Guidelines Section 15064.3(c), the provisions of CEQA Guidelines Section 15064.3 shall apply prospectively as

described in CEQA Guidelines Section 15007. A lead agency may elect to be governed by the provisions of CEQA Guidelines Section 15064.3 immediately; however, beginning on July 1, 2020, the provisions of this section shall apply statewide. The City of San Bruno, as lead agency, has not yet elected to be governed by the provisions of CEQA Guidelines Section 15064.3. Therefore, the proposed project would neither conflict nor be inconsistent with CEQA Guidelines Section 15064.3, and there would be no impact.

**Site Access and Onsite Circulation.** Site access and on-site circulation issues that could contribute to hazardous conditions are discussed below. As discussed, these impacts would be less than significant.

**Vehicle Site Access.** Vehicular access to the project site would be provided via Crystal Springs Road and City Park Way. The project would provide four parking lots and one drop off zone. One of the parking lots would be accessible from Crystal Springs Road, one lot would be accessed by Santa Lucia Avenue (north) and an alleyway that extends to the Beckner Shelter picnic area, another lot would be accessed by the same alleyway, and one of the parking lots, as well as the drop off zone, would be accessible from City Park Way. The four parking lots are existing to the current site. The project plans to redesign the parking lots to create more spaces. A drop off zone would be created along the project frontage on City Park Way.

**Driveway Operations.** The proposed project would provide four ingress/egress driveways along City Park Way, Crystal Springs Road and Santa Lucia Avenue/alleyway. All driveways currently exist on the project site; however, the driveways on City Park Way would be relocated and redesigned into an ingress/egress driveway for the parking lot. Inbound traffic accessing the project from Crystal Springs Road via the City Park Way driveways experiences virtually no delay since the right turns into the lot do not conflict with other vehicular movements. Inbound traffic traveling northbound on City Park Way must wait for southbound traffic on City Park Way to clear to turn left into the driveways. The tube count conducted on City Park Way showed that, on average, the mid-week AM peak hour occurred from 7:00 a.m. to 8:00 a.m. with 276 vehicles traveling southbound, and the mid-week PM peak hour occurred from 3:00 to 4:00 p.m. with 303 vehicles traveling southbound. Vehicles turning left into the driveway may experience some delay waiting for the southbound traffic to clear, but would generally be able to find a gap in the traffic. Vehicles would also have to yield to pedestrians crossing to and from the field. Outbound vehicles leaving the lot can turn either right or left onto City Park Way. Vehicles turning left out of the parking lot would have to wait for both northbound and southbound traffic on City Park Way to clear. On average, the mid-week AM peak hour had 276 vehicles and the PM peak hour had 287 vehicles. Vehicles may experience delays if the northbound queue extends past the driveways. Vehicles turning right out of the parking lot would also have to yield to pedestrians crossing from the field.

Inbound traffic accessing the project using the corporation yard parking lot via eastbound Crystal Springs Road experiences virtually no delay since the right turns into the lot do not conflict with other vehicular movements; however, vehicles traveling westbound on Crystal Springs Road would have to give the right of way to eastbound traffic on Crystal Springs Road. Field observations showed that there was often an eastbound queue blocking the driveway in the AM peak hour, but there were little to no vehicles trying to access the driveway during the

AM peak hour. The PM peak hour showed large gaps between vehicles, therefore there would not be any issues for vehicles turning left into the driveway.

Inbound traffic accessing the project via De Soto Way are able to enter the driveway on Santa Lucia Way or the alleyway. Traffic volumes on Santa Lucia Way and De Soto Way are low, therefore vehicles traveling inbound and outbound do not experience heavy delays.

**Sight Distance.** The project site access points would be free and clear of any obstructions to provide adequate sight distance, thereby ensuring that exiting vehicles can see pedestrians on the sidewalk and vehicles and bicycles traveling on Crystal Springs Road and City Park Way. Any landscaping and signage should be located in such a way to ensure an unobstructed view for drivers exiting the site.

Adequate sight distance (sight distance triangles) should be provided at each parking lot entrance/exit in order to avoid collision with oncoming traffic. Caltrans Highway Design Manual (Section 405.1) states that sight distance requirements are not applied to urban driveways, however, Caltrans standards for stopping sight distance were used in order to provide adequate sight distance at the City Park Way driveways. Sight distance triangles should be measured approximately 10 feet back from the traveled way. Sight distance requirements vary depending on the roadway speeds. Given that City Park Way has a legal speed limit of 25 miles per hour (mph), the Caltrans stopping sight distance is 200 feet (based on a design speed of 30 mph) for the entrances located on City Park Way. Thus, a driver must be able to see 200 feet north of the driveway along City Park Way in order to stop and avoid a collision. Based on the project site plan, it can be concluded that the project driveways would meet the Caltrans stopping sight distance standards.

**Drop-Off and Loading.** The existing recreation center does not have a specified drop-off area, but there is approximately 140 feet of a curbside loading zone. The proposed site plan includes a drop off zone on City Park Way of approximately 175 feet. The drop-off zone would fit 7 vehicles, given that one vehicle measures to be 25 feet long, including one police vehicle parking space. The drop off zone would operate similar to the existing loading zone. The proposed loading zone could accommodate more cars than the existing curb area, so even though the new community center would generate more traffic, the drop-off operation would be essentially the same as existing conditions. This would enhance access to the site, especially for shared-ride services. Therefore, given the reasons stated above, the proposed project would not substantially increase hazards due to a geometric design feature or incompatible uses, and this impact would be less than significant.

**Emergency Access.** The design, construction, and maintenance of project access locations and on-site roads would be in compliance with the City's Municipal Code and would meet all emergency access standards. The SBFDF would also review the proposed site plan and Fire Access Plan and would provide input on final design in relation to emergency access prior to issuance of a building permit. Additionally, as noted above, the proposed project would not result in a significant increase in the amount of traffic volume on the local roadway network. Therefore, the proposed project would have a less-than-significant impact on emergency access.

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## 4.4 AIR QUALITY

This section has been prepared using the methodologies and assumptions contained in the Bay Area Air Quality Management District (BAAQMD) CEQA Air Quality Guidelines.<sup>1</sup> In keeping with these guidelines, this section describes existing air quality and the regulatory framework for air quality. The section also describes the potential effects of the proposed project on air quality, including the effects of construction and operational traffic associated with the proposed project on regional pollutant levels and health risks. Mitigation measures to reduce potentially significant air quality impacts are identified, as necessary.

### 4.4.1 Setting

The following discussion provides an overview of existing air quality conditions in the region and in the City of San Bruno. Ambient air quality standards and the regulatory framework are summarized and climate, air quality conditions, and typical air pollutant types and sources are also described.

#### 4.4.1.1 Air Pollutants and Health Effects

Both State and federal governments have established health-based Ambient Air Quality Standards for six criteria air pollutants: carbon monoxide (CO), ozone (O<sub>3</sub>), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), lead (Pb), and suspended particulate matter. In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. Two criteria pollutants, O<sub>3</sub> and NO<sub>2</sub>, are considered regional pollutants because they (or their precursors) affect air quality on a regional scale. Pollutants such as CO, SO<sub>2</sub>, and Pb are considered local pollutants that tend to accumulate in the air locally.

The primary pollutants of concern in the project area are O<sub>3</sub>, CO, and suspended particulate matter. Significance thresholds established by an air district are used to manage total regional and local emissions within an air basin based on the air basin's attainment status for criteria pollutants. These emission thresholds were established for individual development projects that would contribute to regional and local emissions and could adversely affect or delay the air basin's projected attainment target goals for nonattainment criteria pollutants.

Because of the conservative nature of the significance thresholds, and the basin-wide context of individual development project emissions, there is no direct correlation between a single project and localized air quality-related health effects. One individual project that generates emissions exceeding a threshold does not necessarily result in adverse health effects for residents in the project vicinity. This condition is especially true when the criteria pollutants exceeding thresholds are those with regional effects, such as ozone precursors like nitrogen oxides (NO<sub>x</sub>) and reactive organic gases (ROG).

Occupants of facilities such as schools, daycare centers, parks and playgrounds, hospitals, and nursing and convalescent homes are considered to be more sensitive than the general public to air pollutants because these population groups have increased susceptibility to respiratory disease.

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<sup>1</sup> Bay Area Air Quality Management District, 2017. *CEQA Air Quality Guidelines*. May.

Persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality. Residential areas are considered more sensitive to air quality conditions, compared to commercial and industrial areas, because people generally spend longer periods of time at their residences, with greater associated exposure to ambient air quality conditions. Recreational uses are also considered sensitive compared to commercial and industrial uses due to greater exposure to ambient air quality conditions associated with exercise.

Air pollutants and their health effects, and other air pollution-related considerations, are summarized in Table 4.4.A and are described in more detail below.

**Table 4.4.A: Sources and Health Effects of Air Pollutants**

Pollutants	Sources	Primary Effects
Ozone (O <sub>3</sub> )	<ul style="list-style-type: none"> <li>• Precursor sources:<sup>a</sup> motor vehicles, industrial emissions, and consumer products.</li> </ul>	<ul style="list-style-type: none"> <li>• Respiratory symptoms.</li> <li>• Worsening of lung disease leading to premature death.</li> <li>• Damage to lung tissue.</li> <li>• Crop, forest, and ecosystem damage.</li> <li>• Damage to a variety of materials, including rubber, plastics, fabrics, paints, and metals.</li> </ul>
Particulate Matter Less than 2.5 Microns in Aerodynamic Diameter (PM <sub>2.5</sub> )	<ul style="list-style-type: none"> <li>• Cars and trucks (especially diesels).</li> <li>• Fireplaces, woodstoves.</li> <li>• Windblown dust from roadways, agriculture, and construction.</li> </ul>	<ul style="list-style-type: none"> <li>• Premature death.</li> <li>• Hospitalization for worsening of cardiovascular disease.</li> <li>• Hospitalization for respiratory disease.</li> <li>• Asthma-related emergency room visits.</li> <li>• Increased symptoms, increased inhaler usage.</li> </ul>
Particulate Matter Less than 10 Microns in Aerodynamic Diameter (PM <sub>10</sub> )	<ul style="list-style-type: none"> <li>• Cars and trucks (especially diesels).</li> <li>• Fireplaces, woodstoves.</li> <li>• Windblown dust from roadways, agriculture, and construction.</li> </ul>	<ul style="list-style-type: none"> <li>• Premature death and hospitalization, primarily for worsening of respiratory disease.</li> <li>• Reduced visibility and material soiling.</li> </ul>
Nitrogen Oxides (NO <sub>x</sub> )	<ul style="list-style-type: none"> <li>• Any source that burns fuels such as cars, trucks, construction and farming equipment, and residential heaters and stoves.</li> </ul>	<ul style="list-style-type: none"> <li>• Lung irritation.</li> <li>• Enhanced allergic responses.</li> </ul>
Carbon Monoxide (CO)	<ul style="list-style-type: none"> <li>• Any source that burns fuels such as cars, trucks, construction and farming equipment, and residential heaters and stoves.</li> </ul>	<ul style="list-style-type: none"> <li>• Chest pain in patients with heart disease.</li> <li>• Headache.</li> <li>• Light-headedness.</li> <li>• Reduced mental alertness.</li> </ul>
Sulfur Oxides (SO <sub>x</sub> )	<ul style="list-style-type: none"> <li>• Combustion of sulfur-containing fossil fuels.</li> <li>• Smelting of sulfur-bearing metal ores.</li> <li>• Industrial processes.</li> </ul>	<ul style="list-style-type: none"> <li>• Worsening of asthma: increased symptoms, increased medication usage, and emergency room visits.</li> </ul>
Lead (Pb)	<ul style="list-style-type: none"> <li>• Contaminated soil.</li> </ul>	<ul style="list-style-type: none"> <li>• Impaired mental functioning in children.</li> <li>• Learning disabilities in children.</li> <li>• Brain and kidney damage.</li> </ul>
Toxic Air Contaminants	<ul style="list-style-type: none"> <li>• Cars and trucks (especially diesels).</li> <li>• Industrial sources, such as chrome platers.</li> <li>• Neighborhood businesses, such as dry cleaners and service stations.</li> <li>• Building materials and products.</li> </ul>	<ul style="list-style-type: none"> <li>• Cancer.</li> <li>• Reproductive and developmental effects.</li> <li>• Neurological effects.</li> </ul>

Source: California Air Resources Board (2019).

<sup>a</sup> Ozone is not generated directly by these sources. Rather, chemicals emitted by these precursor sources react with sunlight to form ozone in the atmosphere.

**Ozone.** Ozone is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving ROG and NO<sub>x</sub>. The main sources of ROG and NO<sub>x</sub>, often referred to as ozone precursors, are combustion processes (including combustion in motor vehicle engines) and the evaporation of solvents, paints, and fuels. In the Bay Area, automobiles are the single largest source of ozone precursors. Ozone is referred to as a regional air pollutant because its precursors are transported and diffused by wind concurrently with ozone production through the photochemical reaction process. Ozone causes eye irritation, airway constriction, and shortness of breath and can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema.

**Carbon Monoxide.** CO is an odorless, colorless gas usually formed as the result of the incomplete combustion of fuels. The single largest source of CO is motor vehicles. CO transport is limited - it disperses with distance from the source under normal meteorological conditions. However, under certain extreme meteorological conditions, CO concentrations near congested roadways or intersections may reach unhealthy levels that adversely affect local sensitive receptors (e.g., residents, schoolchildren, the elderly, and hospital patients). Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service (LOS) or with extremely high traffic volumes. Exposure to high concentrations of CO reduces the oxygen-carrying capacity of the blood and can cause headaches, nausea, dizziness, and fatigue, impair central nervous system function, and induce angina (chest pain) in persons with serious heart disease. Extremely high levels of CO, such as those generated when a vehicle is running in an unventilated garage, can be fatal.

**Particulate Matter.** Particulate matter is a class of air pollutants that consists of heterogeneous solid and liquid airborne particles from manmade and natural sources. Particulate matter is categorized in two size ranges: PM<sub>10</sub> for particles less than 10 microns in diameter and PM<sub>2.5</sub> for particles less than 2.5 microns in diameter. In the Bay Area, motor vehicles generate about half of the air basin's particulates, through tailpipe emissions as well as brake pad, tire wear, and entrained road dust. Wood burning in fireplaces and stoves, industrial facilities, and ground-disturbing activities such as construction are other sources of such fine particulates. These fine particulates are small enough to be inhaled into the deepest parts of the human lung and can cause adverse health effects. According to the California Air Resources Board (CARB), studies in the United States and elsewhere have demonstrated a strong link between elevated particulate levels and premature deaths, hospital admissions, emergency room visits, and asthma attacks, and studies of children's health in California have demonstrated that particle pollution may significantly reduce lung function growth in children. CARB also reports that Statewide attainment of particulate matter standards could prevent thousands of premature deaths, lower hospital admissions for cardiovascular and respiratory disease and asthma-related emergency room visits, and avoid hundreds of thousands of episodes of respiratory illness in California.<sup>2</sup>

**Nitrogen Dioxide.** NO<sub>2</sub> is a reddish brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO<sub>2</sub>. Aside from its contribution to ozone formation, NO<sub>2</sub> also contributes to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition. NO<sub>2</sub> may be visible as a coloring component

<sup>2</sup> California Air Resources Board, 2009. *Air Pollution – Particulate Matter Brochures*. Website: [www.arb.ca.gov/html/brochure/pm10.htm](http://www.arb.ca.gov/html/brochure/pm10.htm) (accessed August 2019). October.

on high pollution days, especially in conjunction with high ozone levels. NO<sub>2</sub> decreases lung function and may reduce resistance to infection.

**Sulfur Dioxide.** SO<sub>2</sub> is a colorless acidic gas with a strong odor. It is produced by the combustion of sulfur-containing fuels such as oil, coal, and diesel. SO<sub>2</sub> has the potential to damage materials and can cause health effects at high concentrations. It can irritate lung tissue and increase the risk of acute and chronic respiratory disease. SO<sub>2</sub> also reduces visibility and the level of sunlight at the ground surface.

**Lead.** Lead is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been mobile and industrial sources. As a result of the phase-out of leaded gasoline, metal processing is currently the primary source of lead emissions. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery factories. Twenty years ago, mobile sources were the main contributor to ambient lead concentrations in the air. In the early 1970s, the U. S. Environmental Protection Agency (USEPA) established national regulations to gradually reduce the lead content in gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. The USEPA banned the use of leaded gasoline in highway vehicles in December 1995. As a result of USEPA regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector and levels of lead in the air decreased dramatically.

**Odors.** Odors are also an important element of local air quality conditions. Specific activities can raise concerns related to odors on the part of nearby neighbors. Major sources of odors include restaurants and manufacturing plants. Other odor producers include the industrial facilities within the region. While sources that generate objectionable odors must comply with air quality regulations (see discussion of BAAQMD regulations under Section 4.4.1.3), the public's sensitivity to locally-produced odors often exceeds regulatory thresholds.

**Toxic Air Contaminants.** In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. Some examples of TACs include: benzene, butadiene, formaldehyde, and hydrogen sulfide. Potential human health effects of TACs include birth defects, neurological damage, cancer, and death. There are hundreds of different types of TACs with varying degrees of toxicity. Individual TACs vary greatly in the health risk they present; at a given level of exposure, one TAC may pose a hazard that is many times greater than another.

TACs do not have ambient air quality standards, but are regulated by the USEPA and CARB. In 1998, CARB identified particulate matter from diesel-fueled engines as a toxic air contaminant. CARB has completed a risk management process that identified potential cancer risks for a range of activities and land uses that are characterized by use of diesel-fueled engines.<sup>3</sup> High volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic (distribution centers, truck stops) were identified as posing the highest risk to adjacent receptors. Other facilities associated with increased risk include warehouse distribution centers, large retail or industrial facili-

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<sup>3</sup> California Air Resources Board, 2000. *Fact Sheet – California's Plan to Reduce Diesel Particulate Matter Emissions*. Available online at: [www.arb.ca.gov/diesel/factsheets/rrpfactsheet.pdf](http://www.arb.ca.gov/diesel/factsheets/rrpfactsheet.pdf) (accessed August 2019). October.

ties, high volume transit centers, and schools with a high volume of bus traffic. Health risks from TACs are a function of both concentration and duration of exposure.

The BAAQMD regulates TACs using a risk-based approach. This approach uses a health risk assessment to determine what sources and pollutants to control as well as the degree of control. A health risk assessment is an analysis in which human health exposure to toxic substances is estimated, and considered together with information regarding the toxic potency of the substances, in order to provide a quantitative estimate of health risks.<sup>4</sup> As part of ongoing efforts to identify and assess potential health risks to the public, the BAAQMD has collected and compiled air toxics emissions data from industrial and commercial sources of air pollution throughout the Bay Area. Monitoring data and emissions inventories of TACs help the BAAQMD determine health risk to Bay Area residents.

Ambient monitoring concentrations of TACs indicate that pollutants emitted primarily from motor vehicles (1, 3-butadiene and benzene) account for slightly over 50 percent of the average calculated cancer risk from ambient air in the Bay Area.<sup>5</sup> According to the BAAQMD, ambient benzene levels declined dramatically in 1996 with the advent of Phase 2 reformulated gasoline. Due to this reduction, the calculated average cancer risk based on monitoring results has been reduced to 143 in one million; however, this risk does not include the risk resulting from exposure to diesel particulate matter or other compounds not monitored.

Unlike TACs emitted from industrial and other stationary sources noted above, most diesel particulate matter is emitted from mobile sources – primarily “off-road” sources such as construction and mining equipment, agricultural equipment, and truck-mounted refrigeration units, as well as trucks and buses traveling on freeways and local roadways. Agricultural and mining equipment is not commonly used in urban parts of the Bay Area, while construction equipment typically operates for a limited time at various locations. As a result, the readily identifiable locations where diesel particulate matter is emitted in the Bay Area include high-traffic roadways and other areas with substantial truck traffic.

Although not specifically monitored, recent studies indicate that exposure to diesel particulate matter may contribute significantly to a cancer risk (a risk of approximately 500 to 700 in one million) that is greater than all other measured TACs combined.<sup>6</sup> The CARB Diesel Risk Reduction Plan is intended to substantially reduce diesel particulate matter emissions and associated health risks through introduction of ultra-low-sulfur diesel fuel – a step already implemented – and cleaner-burning diesel engines. The technology for reducing diesel particulate matter emissions from heavy-duty trucks is well established, and both State and federal agencies are moving

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<sup>4</sup> In general, a health risk assessment is required if the BAAQMD concludes that projected emissions of a specific air toxic compound from a proposed new or modified source suggests a potential public health risk. Such an assessment generally evaluates chronic, long term effects, including the increased risk of cancer as a result of exposure to one or more TACs.

<sup>5</sup> Bay Area Air Quality Management District, 2015. *Toxic Air Contaminant Control Program Annual Report, Volume 1*. Website: [www.baaqmd.gov/research-and-data/air-toxics/annual-report](http://www.baaqmd.gov/research-and-data/air-toxics/annual-report) (accessed August 2019). May.

<sup>6</sup> Ibid.

aggressively to regulate engines and emission control systems to reduce and remediate diesel emissions. CARB anticipates that by 2020 average Statewide diesel particulate matter concentrations will decrease by 85 percent from levels in 2000 with full implementation of the Diesel Risk Reduction Plan, meaning that the Statewide health risk from diesel particulate matter is expected to decrease from 540 cancer cases in one million to 21.5 cancer cases in one million. It is likely that the Bay Area cancer risk from diesel particulate matter will decrease by a similar factor by 2020.

**High Volume Roadways.** Air pollutant exposures and their associated health burdens vary considerably within places in relation to sources of air pollution. Motor vehicle traffic is perhaps the most important source of intra-urban spatial variation in air pollution concentrations. Air quality research consistently demonstrates that pollutant levels are substantially higher near freeways and busy roadways, and human health studies have consistently demonstrated that children living within 100 to 200 meters (328 to 656 feet) of freeways or busy roadways have reduced lung function and higher rates of respiratory disease. At present, it is not possible to attribute the effects of roadway proximity on non-cancer health effects to one or more specific vehicle types or vehicle pollutants. Engine exhaust, from diesel, gasoline, and other combustion engines, is a complex mixture of particles and gases, with collective and individual toxicological characteristics.

#### 4.4.1.2 Existing Climate and Air Quality

The following provides a discussion of the local and regional air quality and climate in the San Bruno area.

**Regional and Local Air Quality.** The City of San Bruno is located in the southern part of the San Francisco Bay Area Air Basin, a large shallow air basin ringed by hills that taper into a number of sheltered valleys around the perimeter. Two primary atmospheric outlets exist. One is through the strait known as the Golden Gate, a direct outlet to the Pacific Ocean. The second extends to the northeast, along the west delta region of the Sacramento and San Joaquin Rivers.

The City of San Bruno is within the jurisdiction of the BAAQMD, which regulates air quality in the San Francisco Bay Area. Air quality conditions in the San Francisco Bay Area have improved significantly since the BAAQMD was created in 1955. Ambient concentrations of air pollutants and the number of days during which the region exceeds air quality standards have fallen dramatically. Neither State nor national ambient air quality standards of these chemicals have been violated in recent decades: nitrogen dioxide, sulfur dioxide, sulfates, lead, hydrogen sulfide, and vinyl chloride. Those exceedances of air quality standards that do occur primarily happen during meteorological conditions conducive to high pollution levels, such as cold, windless nights or hot, sunny summer afternoons.

Ozone levels, measured by peak concentrations and the number of days over the State 1-hour standard, have declined substantially as a result of aggressive programs by the BAAQMD and other regional, State and federal agencies. The reduction of peak concentrations represents progress in improving public health; however, the Bay Area still exceeds the State standard for 1-hour ozone as well as the State and federal 8-hour standards. Levels of PM<sub>10</sub> have exceeded State standards two of the last three years, and the area is considered a nonattainment area for this pollutant relative to the State standards. The San Francisco Bay Area is an unclassified area for the federal PM<sub>10</sub> standard. No exceedances of the State or federal CO standards have been recorded at any of the

region’s monitoring stations since 1991. The San Francisco Bay Area is currently considered a maintenance area for State and federal CO standards. State and national attainment status for ambient concentrations of air pollutants with the San Francisco air basin are shown in Table 4.4.B.

**Table 4.4.B: San Francisco Bay Area Basin Attainment Status**

	Averaging Time	California Standards <sup>a</sup>		National Standards <sup>b</sup>	
		Concentration	Attainment Status	Concentration <sup>c</sup>	Attainment Status
<b>Ozone</b> (O <sub>3</sub> )	8-Hour	0.070 ppm (137µg/m <sup>3</sup> )	Nonattainment <sup>l</sup>	0.070 ppm	Nonattainment <sup>d</sup>
	1-Hour	0.09 ppm (180 µg/m <sup>3</sup> )	Nonattainment	Not Applicable	<sup>e</sup>
<b>Carbon Monoxide</b> (CO)	8-Hour	9.0 ppm (10 mg/m <sup>3</sup> )	Attainment	9 ppm (10 mg/m <sup>3</sup> )	Attainment <sup>f</sup>
	1-Hour	20 ppm (23 mg/m <sup>3</sup> )	Attainment	35 ppm (40 mg/m <sup>3</sup> )	Attainment
<b>Nitrogen Dioxide</b> (NO <sub>2</sub> )	1-Hour	0.18 ppm (339 µg/m <sup>3</sup> )	Attainment	0.100 ppm <sup>k</sup>	<sup>k</sup>
	Annual Arithmetic Mean	0.030 ppm (57 µg/m <sup>3</sup> )	Not Applicable	0.053 ppm (100 µg/m <sup>3</sup> )	Attainment
<b>Sulfur Dioxide</b> (SO <sub>2</sub> ) <sup>l</sup>	24-Hour	0.04 ppm (105 µg/m <sup>3</sup> )	Attainment	0.14 ppm (365 µg/m <sup>3</sup> )	<sup>l</sup>
	1-Hour	0.25 ppm (655 µg/m <sup>3</sup> )	Attainment	0.075 ppm (196 µg/m <sup>3</sup> )	<sup>l</sup>
	Annual Arithmetic Mean	Not Applicable	Not Applicable	0.030 ppm (80 µg/m <sup>3</sup> )	<sup>l</sup>
<b>Particulate Matter</b> (PM <sub>10</sub> )	Annual Arithmetic Mean	20 µg/m <sup>3</sup>	Nonattainment <sup>g</sup>	Not Applicable	Not Applicable
	24-Hour	50 µg/m <sup>3</sup>	Nonattainment	150 µg/m <sup>3</sup>	Unclassified
<b>Fine Particulate Matter</b> (PM <sub>2.5</sub> )	Annual Arithmetic Mean	12 µg/m <sup>3</sup>	Nonattainment <sup>g</sup>	15 µg/m <sup>30</sup>	Unclassified/ Attainment
	24-Hour	Not Applicable	Not Applicable	35 µg/m <sup>3j</sup>	Nonattainment
<b>Sulfates</b>	24-Hour	25 µg/m <sup>3</sup>	Attainment	Not Applicable	Not Applicable
<b>Lead (Pb) <sup>m</sup></b>	30-Day Average	1.5 µg/m <sup>3</sup>	Not Applicable	Not Applicable	Attainment
	Calendar Quarter	Not Applicable	Not Applicable	1.5 µg/m <sup>3</sup>	Attainment
	Rolling 3-Month Average <sup>n</sup>	Not Applicable	Not Applicable	0.15 µg/m <sup>3</sup>	<sup>n</sup>
<b>Hydrogen Sulfide</b>	1-Hour	0.010 ppm (26 µg/m <sup>3</sup> )	Unclassified	Not Applicable	Not Applicable
<b>Vinyl Chloride</b> (chloroethene)	24-Hour	0.010 ppm (26 µg/m <sup>3</sup> )	No Information Available	Not Applicable	Not Applicable
<b>Visibility Reducing Particles</b>	8-Hour (10:00 to 18:00 PST)	<sup>h</sup>	Unclassified	Not Applicable	Not Applicable

Source: Bay Area Air Quality Management District, Bay Area Attainment Status (2017).  
Table notes are provided on the following page.

- <sup>a</sup> California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, suspended particulate matter - PM<sub>10</sub>, and visibility reducing particles are values that are not to be exceeded. The standards for sulfates, Lake Tahoe carbon monoxide, lead, hydrogen sulfide, and vinyl chloride are not to be equaled or exceeded. If the standard is for a 1-hour, 8-hour or 24-hour average (i.e., all standards except for lead and the PM<sub>10</sub> annual standard), then some measurements may be excluded. In particular, measurements are excluded that CARB determines would occur less than once per year on the average. The Lake Tahoe CO standard is 6.0 ppm, a level one-half the national standard and two-thirds the State standard.
- <sup>b</sup> National standards shown are the "primary standards" designed to protect public health. National standards other than for ozone, particulates and those based on annual averages are not to be exceeded more than once a year. The 1-hour ozone standard is attained if, during the most recent three-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than one. The 8-hour ozone standard is attained when the 3-year average of the 4th highest daily concentrations is 0.070 ppm (70 ppb) or less. The 24-hour PM<sub>10</sub> standard is attained when the 3-year average of the 99th percentile of monitored concentrations is less than 150 µg/m<sup>3</sup>. The 24-hour PM<sub>2.5</sub> standard is attained when the 3-year average of 98th percentiles is less than 35 µg/m<sup>3</sup>.  
Except for the national particulate standards, annual standards are met if the annual average falls below the standard at every site. The national annual particulate standard for PM<sub>10</sub> is met if the 3-year average falls below the standard at every site. The annual PM<sub>2.5</sub> standard is met if the 3-year average of annual averages spatially-averaged across officially designed clusters of sites falls below the standard.
- <sup>c</sup> National air quality standards are set by US EPA at levels determined to be protective of public health with an adequate margin of safety.
- <sup>d</sup> On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm. An area will meet the standard if the fourth-highest maximum daily 8-hour ozone concentration per year, averaged over three years, is equal to or less than 0.070 ppm. EPA will make recommendations on attainment designations by October 1, 2016, and issue final designations October 1, 2017. Nonattainment areas will have until 2020 to late 2037 to meet the health standard, with attainment dates varying based on the ozone level in the area.
- <sup>e</sup> The national 1-hour ozone standard was revoked by USEPA on June 15, 2005.
- <sup>f</sup> In April 1998, the Bay Area was redesignated to attainment for the national 8-hour carbon monoxide standard.
- <sup>g</sup> In June 2002, CARB established new annual standards for PM<sub>2.5</sub> and PM<sub>10</sub>.
- <sup>h</sup> Statewide VRP Standard (except Lake Tahoe Air Basin): Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70 percent. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.
- <sup>i</sup> The 8-hour CA ozone standard was approved by the Air Resources Board on April 28, 2005 and became effective on May 17, 2006.
- <sup>j</sup> On January 9, 2013, EPA issued a final rule to determine that the Bay Area attains the 24-hour PM<sub>2.5</sub> national standard. This EPA rule suspends key SIP requirements as long as monitoring data continues to show that the Bay Area attains the standard. Despite this EPA action, the Bay Area will continue to be designated as "non-attainment" for the national 24-hour PM<sub>2.5</sub> standard until such time as the Air District submits a "redesignation request" and a "maintenance plan" to EPA, and EPA approves the proposed redesignation.
- <sup>k</sup> To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100ppm (effective January 22, 2010). The US Environmental Protection Agency (EPA) expects to make a designation for the Bay Area by the end of 2017.
- <sup>l</sup> On June 2, 2010, the U.S. EPA established a new 1-hour SO<sub>2</sub> standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. The existing 0.030 ppm annual and 0.14 ppm 24-hour SO<sub>2</sub> NAAQS however must continue to be used until one year following U.S. EPA initial designations of the new 1-hour SO<sub>2</sub> NAAQS. EPA expects to make designation for the Bay Area by the end of 2017.
- <sup>m</sup> CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure below which there are no adverse health effects determined.
- <sup>n</sup> National lead standard, rolling 3-month average: final rule signed October 15, 2008. Final designations effective December 31, 2011.
- <sup>o</sup> In December 2012, EPA strengthened the annual PM<sub>2.5</sub> National Ambient Air Quality Standards (NAAQS) from 15.0 to 12.0 micrograms per cubic meter (µg/m<sup>3</sup>). In December 2014, EPA issued final area designations for the 2012 primary annual PM<sub>2.5</sub> NAAQS. Areas designated "unclassifiable/attainment" must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.

ppm = parts per million

mg/m<sup>3</sup> = milligrams per cubic meter

µg/m<sup>3</sup> = micrograms per cubic meter

**Local Climate and Air Quality.** Air quality is a function of both local climate and local sources of air pollution. Air quality is the balance of the natural dispersal capacity of the atmosphere and emissions of air pollutants from human uses of the environment. Two meteorological factors affect air quality in San Bruno: wind and temperature. Winds affect the direction of transport of air pollution emissions and wind also controls the volume of air into which pollution is mixed in a given

period of time. While winds govern horizontal mixing processes, temperature inversions determine the vertical mixing depth of air pollutants.

The City of San Bruno is located in San Mateo County, which lies in the middle of the San Francisco Peninsula, south of San Francisco County, and north of Santa Clara and Santa Cruz counties. San Mateo County is bounded by the Pacific Ocean to the west and San Francisco Bay to the east. Cool, foggy weather is prevalent along the western coast of the peninsula, particularly during the summer. Summertime average daily temperatures are moderate along the west coast and warm in the County's east side. In the winter, average daily temperatures across the County range from mild to moderate. Winds are mild, with the highest wind speeds focused along the western coast. Rainfall averages about 20 to 25 inches per year at lower elevations and up to 36 inches in the Santa Cruz Mountains.<sup>7</sup>

Ozone and fine particle pollution, or PM<sub>2.5</sub>, are the major regional air pollutants of concern in the San Francisco Bay Area. Ozone is primarily a problem in the summer, and fine particle pollution in the winter.<sup>8</sup>

In San Mateo County, ozone almost never exceeds health standards, and PM<sub>2.5</sub> exceeds the national standard only on about one day each year. San Mateo County frequently receives fresh marine air from the Pacific Ocean, which passes over the coastal hills. In winter, PM<sub>2.5</sub> may be transported into San Mateo County from other parts of the Bay Area, adding to wood smoke, which may lead to elevated concentrations, but these are rarely high enough to exceed health standards.<sup>9</sup>

**Air Quality Monitoring Results.** Air quality monitoring stations are located throughout the nation and maintained by the local air pollution control district and State air quality regulating agencies. Ambient air data collected at permanent monitoring stations are used by the USEPA to identify regions as attainment or nonattainment depending on whether the regions met the requirements stated in the primary National Ambient Air Quality Standards (NAAQS). Attainment areas are required to maintain their status through moderate, yet effective air quality maintenance plans. Nonattainment areas are imposed with additional restrictions as required by the USEPA. In addition, different classifications of attainment such as marginal, moderate, serious, severe, and extreme are used to classify each air basin in the State on a pollutant-by-pollutant basis. Different classifications have different mandated attainment dates and are used as guidelines to create air quality management strategies to improve air quality and comply with the NAAQS by the attainment date. A region is determined to be unclassified when the data collected from the air quality monitoring stations do not support a designation of attainment or nonattainment, due to lack of information, or a conclusion cannot be made with the available data.

The CARB and USEPA maintain ambient air quality monitoring stations. The air quality monitoring station closest to the project site is the 897 Barron Avenue monitoring station in Redwood City,

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<sup>7</sup> Bay Area Air Quality Management District, 2019. *Climate and Air Quality in San Mateo County*. Website: [www.baaqmd.gov/about-the-air-district/in-your-community/san-mateo-county](http://www.baaqmd.gov/about-the-air-district/in-your-community/san-mateo-county) (accessed August 2019). February 14.

<sup>8</sup> Ibid.

<sup>9</sup> Ibid.

which monitors criteria air pollutant data. The air quality trends from this station are used to represent the ambient air quality in the project area. Ambient air quality in the project area from 2016 to 2018 is shown in Table 4.4.C on the following page. The pollutants monitored were CO, O<sub>3</sub>, PM<sub>2.5</sub>, and NO<sub>2</sub>. Air quality trends for PM<sub>10</sub> and SO<sub>2</sub> are not monitored in San Mateo County.

Pollutant monitoring results indicate that air quality in the San Mateo County area has generally been good. As indicated in the monitoring results, 1-hour ozone concentrations exceeded the State standard twice in 2017 and the 8-hour ozone concentrations exceeded the federal standard twice in 2017 and the State standard twice in 2017. In addition, the federal PM<sub>2.5</sub> standard was exceeded 6 times in 2017 and 13 times in 2018. The CO and NO<sub>2</sub> standards were not exceeded in this area during the 3-year period.

#### 4.4.1.3 Regulatory Framework

Air quality standards, the regulatory framework, and State and federal attainment status are discussed below.

The BAAQMD is primarily responsible for regulating air pollution emissions from stationary sources (e.g., factories) and indirect sources (e.g., traffic associated with new development), as well as for monitoring ambient pollutant concentrations. BAAQMD jurisdiction encompasses seven counties – Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa – and portions of Solano and Sonoma counties. CARB and the USEPA regulate direct emissions from motor vehicles.

**United States Environmental Protection Agency.** At the federal level, the USEPA has been charged with implementing national air quality programs. USEPA air quality mandates are drawn primarily from the Federal Clean Air Act (FCAA), which was enacted in 1963. The FCAA was amended in 1970, 1977, and 1990.

The FCAA required USEPA to establish primary and secondary NAAQS and required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The FCAA Amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. USEPA has responsibility to review all state SIPs to determine conformity with the mandates of the FCAA and determine if implementation will achieve air quality goals. If the USEPA determines a SIP to be inadequate, a Federal Implementation Plan (FIP) may be prepared for the nonattainment area, which imposes additional control measures. Failure to submit an approvable SIP or to implement the plan within the mandated timeframe may result in sanctions on transportation funding and stationary air pollution sources in the air basin.

The USEPA is also required to develop National Emission Standards for Hazardous Air Pollutants, which are defined as those which may reasonably be anticipated to result in increased deaths or serious illness and which are not already regulated. An independent science advisory board reviews the health and exposure analyses conducted by the USEPA on suspected hazardous pollutants prior to regulatory development.

**Table 4.4.C: Ambient Air Quality at the 897 Baron Avenue, Redwood City Monitoring Station**

Pollutant	Standard	2016	2017	2018
<b>Carbon Monoxide (CO)</b>				
Maximum 1-hour concentration (ppm)		2.2	2.8	2.5
Number of days exceeded:	State: > 20 ppm	0	0	0
	Federal: > 35 ppm	0	0	0
Maximum 8-hour concentration (ppm)		1.1	1.4	1.7
Number of days exceeded:	State: > 9 ppm	0	0	0
	Federal: > 9 ppm	0	0	0
<b>Ozone (O<sub>3</sub>)</b>				
Maximum 1-hour concentration (ppm)		0.075	0.115	0.067
Number of days exceeded:	State: > 0.09 ppm	0	2	0
Maximum 8-hour concentration (ppm)		0.061	0.087	0.050
Number of days exceeded:	State: > 0.07 ppm	0	2	0
	Federal: > 0.07 ppm	0	2	0
<b>Coarse Particulates (PM<sub>10</sub>)</b>				
Maximum 24-hour concentration (µg/m <sup>3</sup> )		ND	ND	ND
Number of days exceeded:	State: > 50 µg/m <sup>3</sup>	ND	ND	ND
	Federal: > 150 µg/m <sup>3</sup>	ND	ND	ND
Annual arithmetic average concentration (µg/m <sup>3</sup> )		ND	ND	ND
Exceeded for the year:	State: > 20 µg/m <sup>3</sup>	ND	ND	ND
	Federal: > 50 µg/m <sup>3</sup>	ND	ND	ND
<b>Fine Particulates (PM<sub>2.5</sub>)</b>				
Maximum 24-hour concentration (µg/m <sup>3</sup> )		19.5	60.8	120.9
Number of days exceeded:	Federal: > 35 µg/m <sup>3</sup>	0	6	13
Annual arithmetic average concentration (µg/m <sup>3</sup> )		8.3	9.0	10.5
Exceeded for the year:	State: > 12 µg/m <sup>3</sup>	No	No	No
	Federal: > 15 µg/m <sup>3</sup>	No	No	No
<b>Nitrogen Dioxide (NO<sub>2</sub>)</b>				
Maximum 1-hour concentration (ppm)		0.046	0.067	0.077
Number of days exceeded:	State: > 0.250 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.009	0.011	0.010
Exceeded for the year:	Federal: > 0.053 ppm	No	No	No
<b>Sulfur Dioxide (SO<sub>2</sub>)</b>				
Maximum 1-hour concentration (ppm)		ND	ND	ND
Number of days exceeded:	State: > 0.25 ppm	ND	ND	ND
Maximum 3-hour concentration (ppm)		ND	ND	ND
Number of days exceeded:	Federal: > 0.50 ppm	ND	ND	ND
Maximum 24-hour concentration (ppm)		ND	ND	ND
Number of days exceeded:	State: > 0.04 ppm	ND	ND	ND
	Federal: > 0.14 ppm	ND	ND	ND
Annual arithmetic average concentration (ppm)		ND	ND	ND
Exceeded for the year:	Federal: > 0.030 ppm	ND	ND	ND

Source: CARB and USEPA (2019).

ppm = parts per million

µg/m<sup>3</sup> = micrograms per cubic meter

ND = No data. There was insufficient (or no) data to determine the value.

**California Air Resources Board.** CARB is the agency responsible for the coordination and oversight of State and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA), adopted in 1988. The CCAA requires that all air districts in the State achieve and maintain the California Ambient Air Quality Standards (CAAQS) by the earliest practical date. The CCAA specifies that districts should focus on reducing the emissions from basin-wide transportation and air pollutant sources, and provides districts with the authority to regulate indirect sources.

CARB is also primarily responsible for developing and implementing air pollution control plans to achieve and maintain the NAAQS. CARB is primarily responsible for Statewide pollution sources and produces a major part of the SIP. Local air districts provide additional strategies for sources under their jurisdiction. CARB combines this data and submits the completed SIP to USEPA.

Other CARB duties include monitoring air quality (in conjunction with air monitoring networks maintained by air pollution control and air quality management districts), establishing CAAQS (which are more stringent than the NAAQS), determining and updating area designations and maps, and setting emissions standards for mobile sources, consumer products, small utility engines, and off-road vehicles. The CARB Diesel Risk Reduction Plan<sup>10</sup> is intended to substantially reduce diesel particulate matter emissions and associated health risks through introduction of ultra-low-sulfur diesel fuel – a step already implemented – and cleaner-burning diesel engines.

Because of the robust evidence relating proximity to roadways and a range of non-cancer and cancer health effects, the CARB also created guidance for avoiding air quality conflicts in land use planning in its Air Quality and Land Use Handbook: A Community Health Perspective.<sup>11</sup> In its guidance, CARB advises that new sensitive uses (e.g., residences, schools, day care centers, playgrounds, and hospitals) not be located within 500 feet of a freeway or urban roads carrying 100,000 vehicles per day, or within 1,000 feet of a distribution center (warehouse) that accommodates more than 100 trucks or more than 90 refrigerator trucks per day.

CARB guidance suggests that the use of these guidelines be customized for individual land use decisions, and take into account the context of development projects. The Air Quality and Land Use Handbook specifically states that these recommendations are advisory and acknowledges that land use agencies must balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.

**National and State Ambient Air Quality Standards.** Pursuant to the FCAA of 1970, the USEPA established NAAQS. The NAAQS were established for major pollutants, termed “criteria” pollutants. Criteria pollutants are defined as those pollutants for which the federal and State governments have

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<sup>10</sup> California Air Resources Board, 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. Prepared by the Stationary Source Division and Mobile Source Control Division. Available online at: [www.arb.ca.gov/diesel/documents/rrpFinal.pdf](http://www.arb.ca.gov/diesel/documents/rrpFinal.pdf) (accessed August 2019). October.

<sup>11</sup> California Environmental Protection Agency and California Air Resources Board, 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*. Available online at: [www.arb.ca.gov/ch/handbook.pdf](http://www.arb.ca.gov/ch/handbook.pdf) (accessed August 2019). April.

established ambient air quality standards, or criteria, for outdoor concentrations in order to protect public health.

Both the USEPA and the CARB have established ambient air quality standards for the following common pollutants: CO, O<sub>3</sub>, NO<sub>2</sub>, SO<sub>2</sub>, Pb, and suspended particulate matter. In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. These ambient air quality standards are levels of contaminants that avoid specific adverse health effects associated with each pollutant.

Federal standards include both primary and secondary standards. Primary standards establish limits to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, and damage to animals, crops, vegetation, and buildings.<sup>12</sup> State and federal standards for the criteria air pollutants are listed in Table 4.4.D on the following page.

**Bay Area Air Quality Management District.** The BAAQMD seeks to attain and maintain air quality conditions in the San Francisco Bay Area Air Basin through a comprehensive program of planning, regulation, enforcement, technical innovation, and education. The clean air strategy includes the preparation of plans for the attainment of ambient air quality standards,<sup>13</sup> adoption and enforcement of rules and regulations, and issuance of permits for stationary sources. The BAAQMD also inspects stationary sources and responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements programs and regulations required by law.

BAAQMD Regulation 7 places general limitations on odorous substances and specific emission limitations on certain odorous compounds.<sup>14</sup> This regulation limits the “discharge of any odorous substance which causes the ambient air at or beyond the property line...to be odorous and to remain odorous after dilution with four parts of odor-free air.” The BAAQMD must receive odor complaints from ten or more complainants within a 90-day period in order for the limitations of this regulation to go into effect. If this criterion has been met, an odor violation can be issued by the BAAQMD if a test panel of people can detect an odor in samples collected periodically from the source.

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<sup>12</sup> U.S. Environmental Protection Agency, 2017. Criteria Air Pollutants. Website: [www.epa.gov/criteria-air-pollutants](http://www.epa.gov/criteria-air-pollutants) (accessed August 2019). October.

<sup>13</sup> California Air Resources Board, 2016. *Ambient Air Quality Standards*. Available online at: [www.arb.ca.gov/research/aaqs/aaqs2.pdf](http://www.arb.ca.gov/research/aaqs/aaqs2.pdf) (accessed August 2019).

<sup>14</sup> Bay Area Air Quality Management District, 1982. *Rules and Regulations, Regulation 7: Odorous Substances*. March.

**Table 4.4.D: Federal and State Ambient Air Quality Standards**

Pollutant	Averaging Time	California Standards <sup>a</sup>		Federal Standards <sup>b</sup>			
		Concentration <sup>c</sup>	Method <sup>d</sup>	Primary <sup>c,e</sup>	Secondary <sup>c,f</sup>	Method <sup>g</sup>	
Ozone (O <sub>3</sub> ) <sup>h</sup>	1-Hour	0.09 ppm (180 µg/m <sup>3</sup> )	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry	
	8-Hour	0.07 ppm (137 µg/m <sup>3</sup> )		0.070 ppm (137 µg/m <sup>3</sup> )			
Respirable Particulate Matter (PM <sub>10</sub> ) <sup>i</sup>	24-Hour	50 µg/m <sup>3</sup>	Gravimetric or Beta Attenuation	150 µg/m <sup>3</sup>	Same as Primary Standard	Inertial Separation and Gravimetric Analysis	
	Annual Arithmetic Mean	20 µg/m <sup>3</sup>		–			
Fine Particulate Matter (PM <sub>2.5</sub> ) <sup>i</sup>	24-Hour	–	Gravimetric or Beta Attenuation	35 µg/m <sup>3</sup>	Same as Primary Standard	Inertial Separation and Gravimetric Analysis	
	Annual Arithmetic Mean	12 µg/m <sup>3</sup>		12.0 µg/m <sup>3</sup>			
Carbon Monoxide (CO)	8-Hour	9.0 ppm (10 mg/m <sup>3</sup> )	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m <sup>3</sup> )	–	Non-Dispersive Infrared Photometry (NDIR)	
	1-Hour	20 ppm (23 mg/m <sup>3</sup> )		35 ppm (40 mg/m <sup>3</sup> )			
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m <sup>3</sup> )		–			
Nitrogen Dioxide (NO <sub>2</sub> ) <sup>j</sup>	Annual Arithmetic Mean	0.03 ppm (57 µg/m <sup>3</sup> )	Gas Phase Chemiluminescence	53 ppb (100 µg/m <sup>3</sup> )	Same as Primary Standard	Gas Phase Chemiluminescence	
	1-Hour	0.18 ppm (339 µg/m <sup>3</sup> )		100 ppb (188 µg/m <sup>3</sup> )			
Lead (Pb) <sup>l,m</sup>	30-Day Average	1.5 µg/m <sup>3</sup>	Atomic Absorption	–	Same as Primary Standard	High-Volume Sampler and Atomic Absorption	
	Calendar Quarter	–		1.5 µg/m <sup>3</sup> (for certain areas) <sup>l</sup>			
	Rolling 3-Month Average <sup>i</sup>	–		0.15 µg/m <sup>3</sup>			
Sulfur Dioxide (SO <sub>2</sub> ) <sup>k</sup>	24-Hour	0.04 ppm (105 µg/m <sup>3</sup> )	Ultraviolet Fluorescence	0.14 ppm (for certain areas)	–	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)	
	3-Hour	–		–			0.5 ppm (1300 µg/m <sup>3</sup> )
	1-Hour	0.25 ppm (655 µg/m <sup>3</sup> )		75 ppb (196 µg/m <sup>3</sup> ) <sup>k</sup>			–
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas) <sup>k</sup>			–
Visibility-Reducing Particles <sup>l</sup>	8-Hour	See footnote <sup>n</sup>	Beta Attenuation and Transmittance through Filter Tape	No Federal Standards			
Sulfates	24-Hour	25 µg/m <sup>3</sup>	Ion Chromatography				
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m <sup>3</sup> )	Ultraviolet Fluorescence				
Vinyl Chloride <sup>j</sup>	24-Hour	0.01 ppm (26 µg/m <sup>3</sup> )	Gas Chromatography				

Source: California Air Resources Board (2016).

Table notes are provided on the following page.

- <sup>a</sup> California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM<sub>10</sub>, PM<sub>2.5</sub>, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
- <sup>b</sup> National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM<sub>10</sub>, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m<sup>3</sup> is equal to or less than one. For PM<sub>2.5</sub>, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact USEPA for further clarification and current national policies.
- <sup>c</sup> Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- <sup>d</sup> Any equivalent measurement method which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.
- <sup>e</sup> National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
- <sup>f</sup> National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- <sup>g</sup> Reference method as described by the USEPA. An “equivalent method” of measurement may be used but must have a “consistent relationship to the reference method” and must be approved by the USEPA.
- <sup>h</sup> On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
- <sup>i</sup> On December 14, 2012, the national annual PM<sub>2.5</sub> primary standard was lowered from 15 µg/m<sup>3</sup> to 12.0 µg/m<sup>3</sup>. The existing national 24-hour PM<sub>2.5</sub> standards (primary and secondary) were retained at 35 µg/m<sup>3</sup>, as was the annual secondary standard of 15 µg/m<sup>3</sup>. The existing 24-hour PM<sub>10</sub> standards (primary and secondary) of 150 µg/m<sup>3</sup> also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
- <sup>j</sup> To attain the 1-hour national standard, the three-year average of the annual 98<sup>th</sup> percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
- <sup>k</sup> On June 2, 2010, a new 1-hour SO<sub>2</sub> standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the three-year average of the annual 99<sup>th</sup> percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO<sub>2</sub> national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved. Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
- <sup>l</sup> The CARB has identified lead and vinyl chloride as ‘toxic air contaminants’ with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
- <sup>m</sup> The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/m<sup>3</sup> as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
- <sup>n</sup> In 1989, the CARB converted both the general Statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are “extinction of 0.23 per kilometer” and “extinction of 0.07 per kilometer” for the Statewide and Lake Tahoe Air Basin standards, respectively.

°C = degrees Celsius

CARB = California Air Resources Board

USEPA = United States Environmental Protection Agency

ppb = parts per billion

ppm = parts per million

mg/m<sup>3</sup> = milligrams per cubic meter

µg/m<sup>3</sup> = micrograms per cubic meter

**Clean Air Plan.** The Clean Air Plan<sup>15</sup> guides the region’s air quality planning efforts to attain the CAAQS. The BAAQMD 2017 Clean Air Plan, which was adopted by the BAAQMD Board of Directors on April 19, 2017, is the current Clean Air Plan which contains district-wide control measures to reduce ozone precursor emissions (i.e., ROG and NO<sub>x</sub>), particulate matter and greenhouse gas (GHG) emissions.

The Bay Area 2017 Clean Air Plan:

- Describes the BAAQMD’s plan towards attaining all State and federal air quality standards and eliminating health risk disparities from exposure to air pollution among Bay Area communities;
- Defines a vision for transitioning the region to a post-carbon economy needed to achieve ambitious GHG reduction targets for 2030 and 2050;
- Provides a regional climate protection strategy that will put the Bay Area on a pathway to achieve GHG reduction targets; and
- Includes a wide range of control measures designed to decrease emissions of air pollutants that are most harmful to Bay Area residents, such as particulate matter, ozone, and toxic air contaminants; to reduce emissions of methane and other “Super-GHGs” that are potent climate pollutants in the near term; and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.

**BAAQMD CARE Program.** The Community Air Risk Evaluation (CARE) program was initiated in 2004 to evaluate and reduce health risks associated with exposures to outdoor TACs in the Bay Area. The program examines TAC emissions from point sources, area sources, and on-road and off-road mobile sources with an emphasis on diesel exhaust, which is a major contributor to airborne health risk in California. The CARE program is an on-going program that encourages community involvement and input. The technical analysis portion of the CARE program is being implemented in three phases that include an assessment of the sources of TAC emissions, modeling and measurement programs to estimate concentrations of TACs, and an assessment of exposures and health risks. Throughout the program, information derived from the technical analyses will be used to focus emission reduction measures in areas with high TAC exposures and a high density of sensitive populations. Risk reduction activities associated with the CARE program are focused on the most at-risk communities in the Bay Area.

For commercial and industrial sources, the BAAQMD regulates TACs using a risk-based approach. This approach uses a health risk assessment (HRA) to determine what sources and pollutants to control as well as the degree of control. An HRA is an analysis in which human health exposure to toxic substances is estimated and considered together with information regarding the toxic potency of the substances, in order to provide a quantitative estimate of

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<sup>15</sup> Bay Area Air Quality Management District, 2017. *Final 2017 Clean Air Plan*. Available online at: [www.baaqmd.gov/~/\\_media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a - proposed-final-cap-vol-1-pdf.pdf?la=en](http://www.baaqmd.gov/~/_media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a - proposed-final-cap-vol-1-pdf.pdf?la=en) (accessed August 2019). April 19.

health risks.<sup>16</sup> As part of ongoing efforts to identify and assess potential health risks to the public, the BAAQMD has collected and compiled air toxics emissions data from industrial and commercial sources of air pollution throughout the Bay Area. The BAAQMD has identified seven impacted communities; the City of San Bruno has not been identified as an affected community.

**BAAQMD CEQA Air Quality Guidelines.** The BAAQMD California Environmental Quality Act (CEQA) Air Quality Guidelines were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process, consistent with CEQA requirements, and include recommended thresholds of significance, mitigation measures, and background air quality information. They also include recommended assessment methodologies for air toxics, odors, and GHG emissions.

In June 2010, BAAQMD adopted updated draft CEQA Air Quality Guidelines and finalized them in May 2011. These guidelines superseded previously adopted agency air quality guidelines of 1999 and were intended to advise lead agencies on how to evaluate potential air quality impacts.

In May 2017, the BAAQMD published an updated version of the CEQA Guidelines. The 2017 CEQA Guidelines include thresholds to evaluate project impacts in order to protectively evaluate the potential effects of the project on air quality. These protective thresholds are appropriate in the context of the size, scale, and location of the project.

**City of San Bruno General Plan.** The City of San Bruno General Plan<sup>17</sup> addresses air quality in the Environmental Resources and Conservation Element. The following policies are applicable to the proposed project.

- **Policy ERC-25:** Maintain and improve air quality by requiring project mitigation, such as Transportation Demand Management (TDM) techniques, where air quality impacts are unavoidable.
- **Policy ERC-36:** Require dust abatement actions for all new construction and development projects.
- **Policy ERC-28:** Incorporate air quality beneficial programs and policies into local planning and development activities, with a particular focus on subdivision, zoning, and site design measures that reduce the number and length of single-occupant automobile trips.
- **Policy ERC-33:** Require all large construction projects to mitigate diesel exhaust emissions through use of alternate fuels and control devices.

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<sup>16</sup> In general, a health risk assessment is required if the BAAQMD concludes that projected emissions of a specific air toxic compound from a proposed new or modified source suggests a potential public health risk. Such an assessment generally evaluates chronic, long-term effects, including the increased risk of cancer as a result of exposure to one or more TACs.

<sup>17</sup> San Bruno, City of, 2009. *San Bruno General Plan. Environmental Resources and Conservation Element.*

- **Policy ERC-34:** Require that adequate buffer distances be provided between odor sources and sensitive receptors, such as schools, hospitals, and community centers.

#### 4.4.2 Impacts and Mitigation Measures

This section provides an assessment of the potential impacts related to air quality that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds for determining whether an impact is significant. The latter part of this section presents potential impacts associated with implementation of the proposed project and identifies mitigation measures, as appropriate.

##### 4.4.2.1 Criteria of Significance

The project would result in a significant impact related to air quality if it would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project is nonattainment under an applicable federal or State ambient air quality standard;
- Expose sensitive receptors to substantial pollutant concentrations; or
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

##### 4.4.2.2 Project Impacts

The following section discusses the potential air quality impacts associated with implementation of the proposed project.

**Conflict with Current Air Quality Plans.** The applicable air quality plan is the BAAQMD 2017 Clean Air Plan (Clean Air Plan),<sup>18</sup> which was adopted on April 19, 2017. The Clean Air Plan is a comprehensive plan to improve Bay Area air quality and protect public health. The Clean Air Plan defines control strategies to reduce emissions and ambient concentrations of air pollutants; safeguard public health by reducing exposure to air pollutants that pose the greatest health risk, with an emphasis on protecting the communities most heavily affected by air pollution; and reduce greenhouse gas emissions to protect the climate. Consistency with the Clean Air Plan can be determined if the project: 1) supports the goals of the Clean Air Plan; 2) includes applicable control measures from the Clean Air Plan; and 3) would not disrupt or hinder implementation of any control measures from the Clean Air Plan. The project's compliance with the Clean Air Plan goals, control measures, and implementation strategy is addressed below and, as discussed, the proposed project would not conflict with or obstruct implementation of the Clean Air Plan and this impact would be less than significant.

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<sup>18</sup> Bay Area Air Quality Management District, 2017. *Clean Air Plan*. April 19.

**Clean Air Plan Goals.** The primary goals of the Bay Area Clean Air Plan are to: attain air quality standards; reduce population exposure and protect public health in the Bay Area; and reduce greenhouse gas emissions and protect climate.

The BAAQMD has established significance thresholds for project construction and operational impacts at a level at which the cumulative impact of exceeding these thresholds would have an adverse impact on the region's attainment of air quality standards. The health and hazards thresholds were established to help protect public health. As discussed in the analysis of air quality emissions below, implementation of the proposed project would result in less-than-significant operation-period emissions and, with implementation of Mitigation Measure AIR-1, the project would result in less-than-significant construction-period emissions. Therefore, the project would not conflict with the Clean Air Plan goals.

**Clean Air Plan Control Measures.** The control strategies of the Clean Air Plan include measures in the following categories: Stationary Source Measures, Transportation Measures, Energy Measures, Building Measures, Agriculture Measures, Natural and Working Lands Measures, Waste Management Measures, Water Measures, and Super-Greenhouse Gas (GHG) Pollutants Measures. The proposed project's compliance with these control strategies is discussed below.

Stationary Source Control Measures. The stationary source measures, which are designed to reduce emissions from stationary sources such as metal melting facilities, cement kilns, refineries, and glass furnaces, are incorporated into rules adopted by the BAAQMD and then enforced by BAAQMD Permit and Inspection programs. Since the project would not include any stationary sources, the Stationary Source Measures of the Clean Air Plan are not applicable to the project.

Transportation Control Measures. The BAAQMD identifies Transportation Measures as part of the Clean Air Plan to decrease emissions of criteria pollutants, TACs, and GHGs by reducing demand for motor vehicle travel, promoting efficient vehicles and transit service, decarbonizing transportation fuels, and electrifying motor vehicles and equipment. The proposed project would redevelop a portion of the existing San Bruno City Park with the new SBRAC facility. Although the proposed project would result in a net increase in vehicle trips, the SBRAC would be located near residential, public, and institutional uses as well as the San Bruno Senior Center and Junipero Serra Park, which would help to reduce the demand for travel by single occupancy vehicles. Therefore, the project would promote BAAQMD initiatives to reduce vehicle trips and vehicle miles traveled and would increase the use of alternate means of transportation.

Energy Control Measures. The Clean Air Plan also includes Energy Measures, which are designed to reduce emissions of criteria air pollutants, TACs, and GHGs by decreasing the amount of electricity consumed in the Bay Area, as well as decreasing the carbon intensity of the electricity used by switching to less GHG-intensive fuel sources for electricity generation. Since these measures apply to electrical utility providers and local government agencies (and not individual projects), the Energy Control Measures of the Clean Air Plan are not applicable to the project.

**Building Control Measures.** The BAAQMD has authority to regulate emissions from certain sources in buildings such as boilers and water heaters, but has limited authority to regulate buildings themselves. Therefore, the strategies in the control measures for this sector focus on working with local governments that do have authority over local building codes, to facilitate adoption of best GHG control practices and policies. The proposed project would be required to comply with the latest California Green Building Standards Code (CALGreen) standards. Therefore, the Building Control Measures of the Clean Air Plan are not applicable to the project.

**Agriculture Control Measures.** The Agriculture Control Measures are designed to primarily reduce emissions of methane. Since the project does not include any agricultural activities, the Agriculture Control Measures of the Clean Air Plan are not applicable to the project.

**Natural and Working Lands Control Measures.** The Natural and Working Lands Control Measures focus on increasing carbon sequestration on rangelands and wetlands, as well as encouraging local governments to ordinances that promote urban-tree plantings. Since the project does not include the disturbance of any rangelands or wetlands, the Natural and Working Lands Control Measures of the Clean Air Plan are not applicable to the project.

**Waste Management Control Measures.** The Waste Management Measures focus on reducing or capturing methane emissions from landfills and composting facilities, diverting organic materials away from landfills, and increasing waste diversion rates through efforts to reduce, reuse, and recycle. The project would comply with local requirements for waste management (e.g., recycling and composting services). Therefore, the project would be consistent with the Waste Management Control Measures of the Clean Air Plan.

**Water Control Measures.** The Water Control Measures focus on reducing emissions of criteria pollutants, TACs, and GHGs by encouraging water conservation, limiting GHG emissions from publicly owned treatment works (POTWs), and promoting the use of biogas recovery systems. Since these measures apply to POTWs and local government agencies (and not individual projects), the Water Control Measures are not applicable to the project.

**Super GHG Control Measures.** The Super-GHG Control Measures are designed to facilitate the adoption of best GHG control practices and policies through the BAAQMD and local government agencies. Since these measures do not apply to individual projects, the Super-GHG Control Measures are not applicable to the project.

***Clean Air Plan Implementation.*** As discussed above, the proposed project would generally implement the applicable measures outlined in the Clean Air Plan, including Transportation Control Measures. Therefore, the project would not disrupt or hinder implementation of a control measure from the Clean Air Plan and this impact would be less than significant.

**Result in a Cumulatively Considerable Net Increase of Criteria Pollutants.** According to the BAAQMD CEQA Guidelines, to meet air quality standards for operational-related criteria air pollutant and air precursor impacts, the proposed project must not:

- Contribute to CO concentrations exceeding the State ambient air quality standards;
- Generate average daily construction emissions of ROG, NO<sub>x</sub> or PM<sub>2.5</sub> (exhaust) greater than 54 pounds per day or PM<sub>10</sub> exhaust emissions greater than 82 pounds per day; or
- Generate operational emissions of ROG, NO<sub>x</sub> or PM<sub>2.5</sub> of greater than 10 tons per year or 54 pounds per day or PM<sub>10</sub> emissions greater than 15 tons per year or 82 pounds per day.

The BAAQMD is currently designated as a nonattainment area for State and national ozone standards and national particulate matter ambient air quality standards. The BAAQMD nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, the BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. The following sections describe the proposed project's construction- and operation-related air quality impacts and CO impacts.

**Construction Emissions.** During construction, short-term degradation of air quality may occur due to the release of particulate matter emissions (i.e., fugitive dust) generated by demolition, grading, hauling, and other activities. Emissions from construction equipment are also anticipated and would include CO, NO<sub>x</sub>, ROG, directly-emitted particulate matter (PM<sub>2.5</sub> and PM<sub>10</sub>), and TACs such as diesel exhaust particulate matter.

**Impact AIR-1: Construction of the proposed project would generate air pollutant emissions that could violate air quality standards. (S)**

Site preparation and project construction would involve demolition, grading, paving, and other activities. Construction-related effects on air quality from the proposed project would be greatest during the site preparation phase due to the disturbance of soils. If not properly controlled, these activities would temporarily generate particulate emissions. Sources of fugitive dust would include disturbed soils at the construction site. Unless properly controlled, vehicles leaving the site would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM<sub>10</sub> emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM<sub>10</sub> emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of operating equipment. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Water or other soil stabilizers can be used to control dust, resulting in emission reductions of 50 percent or more. The BAAQMD has established standard measures for reducing fugitive dust emissions (PM<sub>10</sub>). With the implementation of these Basic Construction Mitigation Measures, fugitive dust emissions from construction activities would not result in adverse air quality impacts.

In addition to dust-related PM<sub>10</sub> emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO<sub>2</sub>, NO<sub>x</sub>, ROG and some soot particulate (PM<sub>2.5</sub> and PM<sub>10</sub>) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles are delayed. These emissions would be temporary and limited to the immediate area surrounding the construction site.

Construction emissions were estimated for the project using the California Emissions Estimator Model (CalEEMod) version 2016.3.2, consistent with BAAQMD recommendations. The proposed project would include the demolition of the existing approximately 30,700-square-foot Veterans Memorial building, which was added to the CalEEMod analysis. Project construction would occur for 20 to 24 months. To be conservative, this analysis assumes construction would occur for approximately 20 months. Construction-related emissions are presented in Table 4.4.E. CalEEMod output sheets are included in Appendix F.

**Table 4.4.E: Project Construction Emissions in Pounds Per Day**

Project Construction	ROG	NO <sub>x</sub>	Exhaust PM <sub>10</sub>	Fugitive Dust PM <sub>10</sub>	Exhaust PM <sub>2.5</sub>	Fugitive Dust PM <sub>2.5</sub>
Average Daily Emissions	2.4	14.5	0.7	4.5	0.7	0.7
BAAQMD Thresholds	54.0	54.0	54.0	BMP	82.0	BMP
<b>Exceed Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Source: LSA (August 2019).

As shown in Table 4.4.E, construction emissions associated with the project would be less than significant for ROG, NO<sub>x</sub>, PM<sub>2.5</sub>, and PM<sub>10</sub> exhaust emissions. The BAAQMD requires the implementation of the BAAQMD’s Basic Construction Mitigation Measures to reduce construction fugitive dust impacts to a less-than-significant level as follows:

**Mitigation Measure AIR-1:** In order to meet the BAAQMD fugitive dust threshold, the following BAAQMD Basic Construction Mitigation Measures shall be implemented:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

- Use Best Management Practices to prevent tracking of materials onto roadway.
- All visible mud or dirt tracked-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible.
- Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- 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.
- 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.
- A publicly-visible sign shall be posted with the telephone number and person to contact at the City of San Bruno regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD phone number shall also be visible to ensure compliance with applicable regulations. (LTS)

Implementation of the BAAQMD's Basic Construction Control Measures, which are applicable to most construction projects throughout the air basin, would ensure that potential construction-period emissions associated with exhaust and particulate matter would be reduced to the extent feasible. In addition, these emissions would be temporary and would not exceed established thresholds. Therefore, this impact would be less than significant.

**Operational Emissions.** Long-term air pollutant emission impacts are those associated with mobile sources (e.g., vehicle trips), energy sources (e.g., electricity and natural gas), and area sources (e.g., architectural coatings and the use of landscape maintenance equipment) related to the proposed project. The proposed project would also generate stationary source emissions associated with an emergency generator.

PM<sub>10</sub> emissions result from running exhaust, tire and brake wear, and the entrainment of dust into the atmosphere from vehicles traveling on paved roadways. Entrainment of PM<sub>10</sub> occurs when vehicle tires pulverize small rocks and pavement and the vehicle wakes generate airborne dust. The contribution of tire and brake wear is small compared to the other PM emission processes. Gasoline-powered engines have small rates of particulate matter emissions compared with diesel-powered vehicles.

Energy source emissions result from activities in buildings for which electricity and natural gas are used. The quantity of emissions is the product of usage intensity (i.e., the amount of electricity or natural gas) and the emission factor of the fuel source. Major sources of energy demand include building mechanical systems, such as heating and air conditioning, lighting, and plug-in electronics, such as refrigerators or computers. Greater building or appliance efficiency reduces the amount of energy for a given activity and thus lowers the resultant emissions. The emission factor is determined by the fuel source, with cleaner energy sources, like renewable energy, producing fewer emissions than conventional sources.

Typically, area source emissions consist of direct sources of air emissions located at the project site, including architectural coatings and the use of landscape maintenance equipment. Area source emissions associated with the project would include emissions from the use of landscaping equipment and the use of consumer products.

The proposed project would serve as an emergency resource center and would include an emergency backup generator that would generate stationary source emissions when in use. The emergency backup generator was included in the CalEEMod analysis. Trip generation rates for the project were based on the project's trip generation estimates, as identified in the Transportation Impact Analysis (TIA) prepared for the proposed project.<sup>19,20</sup>

Emission estimates for operation of the project were calculated using CalEEMod. Model results are shown in Table 4.4.F.

The primary emissions associated with the project are regional in nature, meaning that air pollutants are rapidly dispersed on release or, in the case of vehicle emissions associated with the project; emissions are released in other areas of the Air Basin. The daily and annual emissions associated with project operational trip generation, energy, and area sources are identified in Table 4.4.F for ROG, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>. The results shown in Table 4.4.F indicate the project would not exceed the significance criteria for daily ROG, NO<sub>2</sub>, PM<sub>10</sub> or PM<sub>2.5</sub>.

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<sup>19</sup> Hexagon Transportation Consultants, 2020. *San Bruno Recreation and Aquatics Center Transportation Impact Analysis*. January 13.

<sup>20</sup> Similar to the TIA, this analysis relies on a trip generation rate of 28.82 trips per 1,000 square feet of building area; however, the analysis assumes an increase of approximately 16,300-square-feet of new recreational space whereas the TIA assumed an increase of 17,000 square feet. Therefore, this analysis assumes a slightly lower daily trip generation rate of 470 daily trips as compared to the 490 daily trips estimated in the TIA. However, based on the emissions results identified in this analysis, changes associated with the difference in trip generation rates would be minimal and would not change the significance conclusions identified in this section.

emissions; therefore, the proposed project would not have a significant effect on regional air quality and mitigation would not be required. This impact would be less than significant and no mitigation is required.

**Table 4.4.F: Project Operational Emissions**

	ROG	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Pounds Per Day</b>				
Area Source Emissions	1.2	<0.1	<0.1	<0.1
Energy Source Emissions	<0.1	0.3	<0.1	<0.1
Mobile Source Emissions	0.7	2.6	1.5	0.4
Stationary Source Emissions	<0.1	<0.1	<0.1	<0.1
<b>Total Emissions</b>	<b>1.9</b>	<b>2.9</b>	<b>1.5</b>	<b>0.4</b>
BAAQMD Thresholds	54.0	54.0	82.0	54.0
<b>Exceed Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>
<b>Tons Per Year</b>				
Area Source Emissions	0.2	<0.1	<0.1	<0.1
Energy Source Emissions	<0.1	0.1	<0.1	<0.1
Mobile Source Emissions	0.1	0.5	0.3	0.1
Stationary Source Emissions	<0.1	<0.1	<0.1	<0.1
<b>Total Emissions</b>	<b>0.3</b>	<b>0.6</b>	<b>0.3</b>	<b>0.1</b>
BAAQMD Thresholds	10.0	10.0	15.0	10.0
<b>Exceed Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Source: LSA (May 2019).

**Localized CO Impacts.** Emissions and ambient concentrations of CO have decreased dramatically in the Bay Area with the introduction of the catalytic converter in 1975. No exceedances of the State or federal CO standards have been recorded at Bay Area monitoring stations since 1991. The BAAQMD 2017 CEQA Guidelines include recommended methodologies for quantifying concentrations of localized CO levels for proposed transportation projects. A screening level analysis using guidance from the BAAQMD CEQA Guidelines was performed to determine the impacts of the project. The screening methodology provides a conservative indication of whether the implementation of a proposed project would result in significant CO emissions. According to the BAAQMD CEQA Guidelines, a proposed project would result in a less-than-significant impact to localized CO concentrations if the following screening criteria are met:

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

Implementation of the proposed project would not conflict with the San Mateo County Transportation Authority for designated roads or highways, a regional transportation plan, or other agency plans. According to the TIA, the proposed project would generate approximately 26 net new AM peak hour trips and 35 net new PM peak hour trips; therefore, the project's contribution to peak hour traffic volumes at intersections in the vicinity of the project site would be well below 44,000 vehicles per hour. As such, the proposed project would not result in localized CO concentrations that exceed State or federal standards and this impact would be less than significant.

**Exposure of Sensitive Receptors to Toxic Air Contaminants.** Sensitive receptors are defined as residential uses, schools, daycare centers, nursing homes, and medical centers. Individuals particularly vulnerable to diesel particulate matter are children, whose lung tissue is still developing, and the elderly, who may have serious health problems that can be aggravated by exposure to diesel particulate matter. Exposure from diesel exhaust associated with construction activity contributes to both cancer and chronic non-cancer health risks.

**Impact AIR-2: Construction of the proposed project would expose surrounding sensitive receptors to toxic air contaminants. (S)**

According to the BAAQMD, a project would result in a significant impact if it would: individually expose sensitive receptors to TACs resulting in an increased cancer risk greater than 10.0 in one million, increased non-cancer risk of greater than 1.0 on the hazard index (chronic or acute), or an annual average ambient PM<sub>2.5</sub> increase greater than 0.3 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). A significant cumulative impact would occur if the project in combination with other projects located within a 1,000-foot radius of the project site would expose sensitive receptors to TACs resulting in an increased cancer risk greater than 100.0 in one million, an increased non-cancer risk of greater than 10.0 on the hazard index (chronic), or an ambient PM<sub>2.5</sub> increase greater than 0.8  $\mu\text{g}/\text{m}^3$  on an annual average basis. Impacts from substantial pollutant concentrations are discussed below.

The project site is located in an urban area in close proximity to existing residential and school uses that could be exposed to diesel emission exhaust during the construction period. The closest sensitive receptors include:

- the single-family residences along Donner Avenue, located approximately 50 feet north of the project site;
- the single- and multi-family residences along Crystal Springs Road, located approximately 80 feet north of the project site;
- the single-family residences along De Soto Way, approximately 100 feet south of the project site;
- Parkside Intermediate School, located approximately 310 feet north of the project site;
- St. Robert's Catholic School, located approximately 330 feet north of the project site; and
- El Crystal Elementary School, located approximately 430 feet south of the project site (closed—proposed for future reuse as a private preschool and kindergarten referred to as the Stratford School).

To estimate the potential cancer risk from project construction equipment exhaust (including diesel particulate matter), a dispersion model was used to translate an emission rate from the source location to a concentration at the receptor location (i.e., a nearby residential land use). Dispersion modeling varies from a simpler, more conservative screening-level analysis to a more complex and refined detailed analysis. This refined assessment was conducted using the CARB exposure methodology, with the air dispersion modeling performed using the USEPA dispersion model AERMOD. The model provides a detailed estimate of exhaust concentrations based on site and source geometry, source emissions strength, distance from the source to the receptor, and site-specific meteorological data. Table 4.4.G, below, identifies the results of the analysis utilizing the CalEEMod default of Tier 0 construction equipment. Model snap shots of the sources are provided in Appendix F.

**Table 4.4.G: Unmitigated Inhalation Health Risks from Project Construction to Off-Site Receptors**

	<b>Carcinogenic Inhalation Health Risk in One Million</b>	<b>Chronic Inhalation Hazard Index</b>	<b>Acute Inhalation Hazard Index</b>	<b>Annual PM<sub>2.5</sub> Concentration (µg/m<sup>3</sup>)</b>
Maximally Exposed Individual	31.0	0.026	0.000	0.12
<b>Threshold</b>	<b>10.0</b>	<b>1.0</b>	<b>1.0</b>	<b>0.30</b>

Source: LSA (August 2019).

PM<sub>2.5</sub> = particulate matter less than 2.5 microns in size

µg/m<sup>3</sup> = micrograms per cubic meter

As shown in Table 4.4.G, the risk associated with project construction at the maximally exposed individual (MEI) would be 31.0 in one million, which would exceed the BAAQMD cancer risk of 10 in one million. The total chronic hazard index would be 0.026, which would not exceed the threshold of 1.0. In addition, the total acute hazard index would be 0.000, which would also not exceed the threshold of 1.0. The results of the analysis indicate that the total PM<sub>2.5</sub> concentration would be 0.12 µg/m<sup>3</sup>, which would also not exceed the BAAQMD significance threshold of 0.30 µg/m<sup>3</sup>. As indicated above, the cancer risk of 31.0 in one million would exceed BAAQMD thresholds. Therefore, implementation of Mitigation Measure AIR-2 would be required to reduce substantial pollutant concentrations during project construction.

**Mitigation Measure AIR-2:** During construction of the proposed project, the project contractor shall ensure all off-road diesel-powered construction equipment of 50 horsepower or more used for the project construction at a minimum meets the California Air Resources Board (CARB) Tier 2 with level 3 diesel particulate filters emissions standards or equivalent. (LTS)

Table 4.4.H identifies the results of the analysis with implementation of Mitigation Measure AIR-2.

**Table 4.4.H: Mitigated Inhalation Health Risks from Project Construction to Off-Site Receptors**

	<b>Carcinogenic Inhalation Health Risk in One Million</b>	<b>Chronic Inhalation Hazard Index</b>	<b>Acute Inhalation Hazard Index</b>	<b>Annual PM<sub>2.5</sub> Concentration (<math>\mu\text{g}/\text{m}^3</math>)</b>
Maximally Exposed Individual	4.2	0.003	0.000	0.02
<b>Threshold</b>	<b>10.0</b>	<b>1.0</b>	<b>1.0</b>	<b>0.30</b>

Source: LSA (August 2019).

PM<sub>2.5</sub> = particulate matter less than 2.5 microns in size

$\mu\text{g}/\text{m}^3$  = micrograms per cubic meter

As shown in Table 4.4.H, the mitigated cancer risk at the MEI would be 4.2 in one million, which would not exceed the BAAQMD cancer risk of 10 in one million. Therefore, with implementation of Mitigation Measure AIR-2, construction of the proposed project would not exceed BAAQMD thresholds and would not expose nearby sensitive receptors to substantial pollutant concentrations.

Once the project is constructed, the proposed project would include an emergency backup generator. However, as identified in Table 4.4.F, project operational emissions of criteria pollutants would be below BAAQMD significance thresholds; thus, they are not likely to have a significant impact on nearby residences given the distance and the dispersion that would occur. Compliance with BAAQMD rules, including preparation of a Permit or Registration Certificate for the emergency generator, would ensure that the potential health risk related to generator operations would be less than significant.

Given the above, sensitive receptors are not expected to be exposed to substantial pollutant concentrations during project construction or operation, and potential impacts would be considered less than significant with mitigation incorporated.

**Odors.** During construction, the various diesel-powered vehicles and equipment in use on-site would create localized odors. These odors would be temporary and are not likely to be noticeable for extended periods of time beyond the project site. The potential for diesel odor impacts is therefore considered less than significant.

Odor impacts could result from siting a new odor source near existing sensitive receptors or siting a new sensitive receptor near an existing odor source. The BAAQMD considers a significant odor impact as a substantial number of odor complaints, specifically, more than five confirmed complaints per year averaged over the past three years. Examples of land uses that have the potential to generate considerable odors include wastewater treatment plants, landfills, confined animal facilities, composting stations, food manufacturing plants, refineries, and chemical plants.

The proposed project would include operation of an emergency generator and use of pool chemicals; however, any localized odors associated with these uses would be confined mainly to the project site and would readily dissipate. As such, the proposed project is not expected to produce any offensive odors that would result in frequent odor complaints. The proposed project would not create objectionable odors affecting a substantial number of people during project construction or operation, and this impact would be less than significant.

## 4.5 NOISE

This section describes existing noise and vibration conditions, sets forth criteria for determining the significance of noise and vibration impacts, and estimates the likely noise and vibration impacts that would result from construction and operation of the proposed project. Mitigation measures are identified, as necessary, to address significant environmental impacts.

### 4.5.1 Setting

This section describes the fundamentals of noise and vibration, summarizes the regulatory framework, and describes the existing noise environment of the project site and its vicinity.

#### 4.5.1.1 Characteristics of Sound

Noise is generally defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, and sleep.

To the human ear, sound has two significant characteristics: pitch and loudness. Pitch is the number of complete vibrations or cycles per second of a wave that results in the range of tone from high to low. Loudness is the strength of a sound that describes a noisy or quiet environment, and it is measured by the amplitude of the sound wave. Loudness is determined by the intensity of the sound waves combined with the reception characteristics of the human ear. Sound intensity refers to how hard the sound wave strikes an object, which in turn produces the sound's effect. This characteristic of sound can be precisely measured with instruments. The analysis of a project defines the noise environment of the project area in terms of sound intensity and its effects on adjacent sensitive land uses.

**Measurement of Sound.** Sound intensity is measured through the A-weighted scale to correct for the relative frequency response of the human ear. That is, an A-weighted noise level de-emphasizes low and very high frequencies of sound similar to the human ear's de-emphasis of these frequencies. Unlike linear units such as inches or pounds, decibels are measured on a logarithmic scale, representing points on a sharply rising curve. Table 4.5.A contains a list of typical acoustical terms and definitions. Figure 4.5-1 shows representative outdoor and indoor noise levels in units of dBA.

A decibel (dB) is a unit of measurement which indicates the relative intensity of a sound. The 0 point on the dB scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Changes of 3 dB or less are only perceptible in laboratory environments. Audible increases in noise levels generally refer to a change of 3 dB or more, as this level has been found to be barely perceptible to the human ear in outdoor environments. Sound levels in dB are calculated on a logarithmic basis. An increase of 10 dB represents a 10-fold increase in acoustic energy, while 20 dB is 100 times more intense, 30 dB is 1,000 times more intense. Each 10-dB increase in sound level is perceived as approximately a doubling of loudness.

As noise spreads from a source, it loses energy so that the farther away the noise receiver is from the noise source, the lower the perceived noise level would be. Geometric spreading causes the sound level to attenuate or be reduced, resulting in a 6 dB reduction in the noise level for each doubling of distance from a single point source of noise to the noise sensitive receptor of concern.

**Table 4.5.A: Definitions of Acoustical Terms**

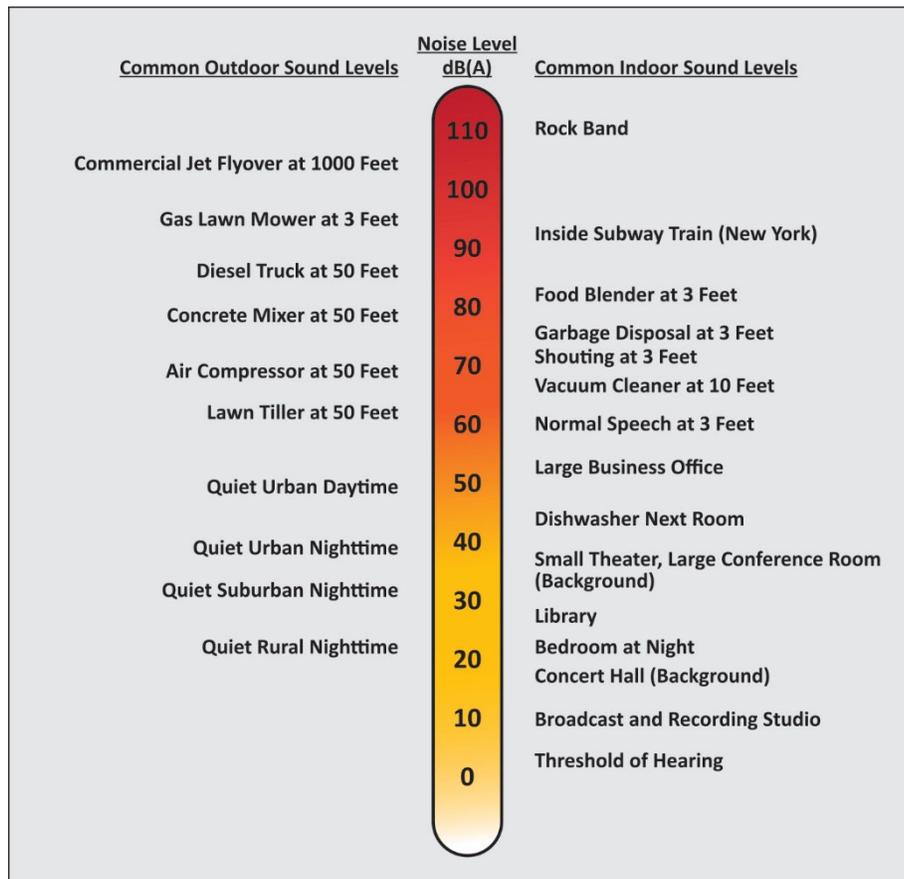
<b>Term</b>	<b>Definitions</b>
Decibel, dB	A unit of sound level that denotes the ratio between two quantities proportional to power; the number of decibels is 10 times the logarithm (to the base 10) of this ratio.
Frequency, Hz	Of a function periodic in time, the number of times that the quantity repeats itself in one second (i.e., number of cycles per second).
A-Weighted Sound Level, dBA	The sound level obtained by use of A-weighting. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. All sound levels in this report are A-weighted, unless reported otherwise.
L <sub>01</sub> , L <sub>10</sub> , L <sub>50</sub> , L <sub>90</sub>	The fast A-weighted noise levels equaled or exceeded by a fluctuating sound level for 1 percent, 10 percent, 50 percent, and 90 percent of a stated time period.
Equivalent Continuous Noise Level, L <sub>eq</sub>	The level of a steady sound that, in a stated time period and at a stated location, has the same A-weighted sound energy as the time varying sound.
Community Noise Equivalent Level, CNEL	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of five decibels to sound levels occurring in the evening from 7:00 p.m. to 10:00 p.m. and after the addition of 10 decibels to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
Day/Night Noise Level, L <sub>dn</sub>	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 10 decibels to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
L <sub>max</sub> , L <sub>min</sub>	The maximum and minimum A-weighted sound levels measured on a sound level meter, during a designated time interval, using fast time averaging.
Ambient Noise Level	The all-encompassing noise associated with a given environment at a specified time, usually a composite of sound from many sources at many directions, near and far; no particular sound is dominant.
Intrusive	The noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

Source: *Handbook of Acoustical Measurements and Noise Control* (Cyril Harris 1998)

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. Equivalent continuous sound level (L<sub>eq</sub>) is the total sound energy of time varying noise over a sample period. However, the predominant rating scales for human communities in the State of California are the L<sub>eq</sub>, the community noise equivalent level (CNEL), and the day-night average level (L<sub>dn</sub>) based on A-weighted decibels (dBA). CNEL is the time varying noise over a 24-hour period, with a 5 dBA weighting factor

applied to the hourly  $L_{eq}$  for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and 10 dBA weighting factor applied to noise occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours).  $L_{dn}$  is similar to the CNEL scale, but without the adjustment for events occurring during the evening relaxation hours. CNEL and  $L_{dn}$  are within one dBA of each other and are normally exchangeable. The noise adjustments are added to the noise events occurring during the more sensitive hours. Typical A-weighted sound levels from various sources are described in Figure 4.5-1.

Figure 4.5-1: Typical A-Weighted Sound Levels



Source: Compiled by LSA (2016).

Other noise rating scales of importance when assessing the annoyance factor include the maximum noise level ( $L_{max}$ ), which is the highest exponential time averaged sound level that occurs during a stated time period. The noise environments discussed in this analysis are specified in terms of maximum levels denoted by  $L_{max}$  for short-term noise impacts.  $L_{max}$  reflects peak operating conditions, and addresses the annoying aspects of intermittent noise.

Noise standards in terms of percentile exceedance levels,  $L_n$ , are often used together with the  $L_{max}$  for noise enforcement purposes. When specified, the percentile exceedance levels are not to be exceeded by an offending sound over a stated time period. For example, the  $L_{10}$  noise level

represents the level exceeded ten percent of the time during a stated period. The  $L_{50}$  noise level represents the median noise level. Half the time the noise level exceeds this level, and half the time it is less than this level. The  $L_{90}$  noise level represents the noise level exceeded 90 percent of the time and is considered the lowest noise level experienced during a monitoring period. It is normally referred to as the background noise level. For a relatively steady noise, the measured  $L_{eq}$  and  $L_{50}$  are approximately the same.

Noise impacts can be described in three categories. The first is audible impacts that refer to increases in noise levels noticeable to humans. Audible increases in noise levels generally refer to a change of 3.0 dBA or greater, since, as described earlier, this level of noise change has been found to be barely perceptible in exterior environments. The second category, potentially audible, refers to a change in the noise level between 1.0 and 3.0 dBA. This range of noise levels has been found to be noticeable only in laboratory environments. The last category is changes in noise level of less than 1.0 dBA that are inaudible to the human ear. A change in noise level of at least 5 dBA would be required before any noticeable change in human response would be expected and a 10 dBA change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response. Only audible changes in existing ambient or background noise levels are considered potentially significant.

**Physiological Effects of Noise.** The effects of noise on people can also be described in three categories: annoyance, interference with activities such as speech or sleep, and physiological effects such as hearing loss. Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects our entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions, and thereby affecting blood pressure, functions of the ear, and the nervous system. In comparison, extended periods of noise exposure above 90 dBA would result in permanent cell damage. When the noise level reaches 120 dBA, a tickling sensation occurs in the human ear even with short-term exposure. This level of noise is called the threshold of feeling.

Unwanted community effects of noise occur at levels much lower than those that cause hearing loss and other health effects. Noise annoyance occurs when it interferes with sleeping, conversation, and noise-sensitive work, including learning or listening to the radio, television, or music. According to World Health Organization (WHO) noise studies, few people are seriously annoyed by daytime activities with noise levels below 55 dBA, or are only moderately annoyed with noise levels below 50 dBA.<sup>1</sup>

#### 4.5.1.2 Characteristics of Groundborne Vibration

Vibrating objects in contact with the ground radiate vibration waves through various soil and rock strata to the foundations of nearby buildings. As the vibration propagates from the foundation throughout the remainder of the building, the vibration of floors and walls may cause perceptible vibration from the rattling of windows or a rumbling noise. The rumbling sound caused by the vibration of room surfaces is called groundborne noise. When assessing annoyance from groundborne noise, vibration is typically expressed as root mean square (rms) velocity in units of decibels

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<sup>1</sup> World Health Organization, 1999. *Guidelines for Community Noise*.

of 1 micro-inch per second. To distinguish vibration levels from noise levels, the unit is written as “VdB.” Human perception to vibration starts at levels as low as 67 VdB and sometimes lower. Annoyance due to vibration in residential settings starts at approximately 70 VdB. Groundborne vibration is almost never annoying to people who are outdoors. Although the motion of the ground may be perceived, without the effects associated with the shaking of the building, the motion does not provoke the same adverse human reaction.

In extreme cases, excessive groundborne vibration has the potential to cause structural damage to buildings. Vibration impacts on building structures are generally assessed in terms of peak particle velocity (PPV). Common sources of groundborne vibration include trains and construction activities such as blasting, pile driving and operating heavy earthmoving equipment. Typical vibration source levels from construction equipment are shown in Table 4.5.B.

**Table 4.5.B: Typical Vibration Source Levels for Construction Equipment**

Equipment		PPV at 25 feet (in/sec)	Approximate VdB at 25 feet
Pile Driver (impact)	Upper range	1.518	112
	Typical	0.644	104
Pile Driver (sonic)	Upper range	0.734	105
	Typical	0.170	93
Clam shovel drop (slurry wall)		0.202	94
Hydromill (slurry wall)	In soil	0.008	66
	In rock	0.017	75
Vibratory roller		0.210	94
Hoe ram		0.089	87
Large bulldozer		0.089	87
Caisson drilling		0.089	87
Loaded trucks		0.076	86
Jackhammer		0.035	79
Small bulldozer		0.003	58

Source: *Transit Noise and Vibration Impact Assessment* (Federal Transit Administration, May 2006)

**4.5.1.3 Existing Noise Environment**

The ambient noise environment in the City of San Bruno is affected by a variety of noise sources, including vehicle traffic, aircraft, railway, and industrial noise. Figure 7-5 of the San Bruno General Plan Health and Safety Element identifies existing and projected noise contours throughout the City. Based on Figure 7-5, the project site is exposed to noise levels between 65 dBA and 70 dBA L<sub>dn</sub> primarily associated with vehicle traffic noise. The following section describes the existing noise environment and identifies the primary noise sources in the vicinity of the project site.

**Existing Traffic Noise.** Motor vehicles with their distinctive noise characteristics are a major source of noise in San Bruno. The amount of noise varies according to many factors, such as volume of traffic, vehicle mix (percentage of cars and trucks), average traffic speed, and distance from the observer. San Bruno is exposed to noise generated by traffic on Interstate 280 (I-280), I-380, and U.S. Route 101 (US 101). El Camino Real is another heavily traveled roadway in the City. Traffic noise depends primarily on traffic speed (high- frequency tire noise increases with speed) and the

proportion of truck traffic, which generates engine, exhaust and wind noise. The proximity of freeways and major streets, and the large amount of truck traffic serving industrial, warehousing, and freight forwarding uses in the area make San Bruno susceptible to traffic noise. Traffic noise at the project site is primarily associated with vehicle traffic on I-280 and Crystal Springs Road.

**Existing Aircraft Noise.** The closest airport to the project site is San Francisco International Airport, located approximately 1 mile east of the project site. In addition, the Oakland International Airport is located approximately 12 miles northeast of the project site. Although aircraft-related noise is occasionally audible on the project site, the site does not lie within the 65 dBA CNEL noise contours of either of these airports.

**Existing Railway Noise.** Trains operating on the Southern Pacific Railroad Line and Bay Area Rapid Transit (BART) affect the noise environment of nearby residential areas. The project site is located approximately 0.6 miles west of the nearest rail line. At this distance, railway noise would not be audible on the project site.

**Existing Industrial Noise.** Industrial land uses in San Bruno are limited primarily to light industrial operations (e.g., manufacturing, distribution, storage) and semi-industrial uses (e.g., car repair). Industrial land uses are not located within the vicinity of the project site.

**Existing Sensitive Land Uses.** Certain land uses are considered more sensitive to noise than others. Examples of these include residential areas, educational facilities, hospitals, childcare facilities, and senior housing. The project site is generally surrounded by a variety of land uses. Across Crystal Springs Road to the north, the project site is generally surrounded by single- and multi-family residential and institutional uses. To the east the project site is bounded by Cypress Avenue and San Felipe Avenue, across which is the former El Crystal Elementary School, which is proposed as a private preschool and kindergarten, and a mix of single- and multi-family residential uses. To the south the project site is bound by residential uses and school uses, as well as an access road. West of the project site is the Junipero Serra County Park, which is owned and operated by San Mateo County. The closest sensitive receptors include:

- the single-family residences along Donner Avenue, located approximately 50 feet north of the project site;
- the single- and multi-family residences along Crystal Springs Road, located approximately 80 feet north of the project site;
- the single-family residences along De Soto Way, approximately 100 feet south of the project site;
- Parkside Intermediate School, located approximately 310 feet north of the project site;
- St. Robert's Catholic School, located approximately 330 feet north of the project site; and
- El Crystal Elementary School, located approximately 430 feet south of the project site (closed–proposed for future reuse as a private preschool and kindergarten, referred to as the Stratford School).

4.5.1.4 Regulatory Framework

The following section provides brief discussions of the federal, State, and local regulatory framework related to noise.

**Federal Regulations.** In 1972 Congress enacted the Noise Control Act. This act authorized the U.S. Environmental Protection Agency (USEPA) to publish descriptive data on the effects of noise and establish levels of sound “requisite to protect the public welfare with an adequate margin of safety.” These levels are separated into health (hearing loss levels) and welfare (annoyance levels), as shown in Table 4.5.C. The USEPA cautions that these identified levels are not standards because they do not take into account the cost or feasibility of the levels.

For protection against hearing loss, 96 percent of the population would be protected if sound levels are less than or equal to an  $L_{eq}(24)$  of 70 dBA. The “(24)” signifies an  $L_{eq}$  duration of 24 hours. The USEPA activity and interference guidelines are designed to ensure reliable speech communication at about 5 feet in the outdoor environment. For outdoor and indoor environments, interference with activity and annoyance should not occur if levels are below 55 dBA and 45 dBA, respectively.

**Table 4.5.C: Summary of USEPA Noise Levels**

Effect	Level	Area
Hearing loss	$L_{eq}(24) \leq 70$ dB	All areas.
Outdoor activity interference and annoyance	$L_{dn} \leq 55$ dB	Outdoors in residential areas and farms and other outdoor areas where people spend widely varying amounts of time and other places in which quiet is a basis for use.
	$L_{eq}(24) \leq 55$ dB	Outdoor areas where people spend limited amounts of time, such as school yards, playgrounds, etc.
Indoor activity interference and annoyance	$L_{eq} \leq 45$ dB	Indoor residential areas.
	$L_{eq}(24) \leq 45$ dB	Other indoor areas with human activities such as schools, etc.

Source: *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety* (U.S. Environmental Protection Agency, March 1974).

The noise effects associated with an outdoor  $L_{dn}$  of 55 dBA are summarized in Table 4.5.D. At 55 dBA  $L_{dn}$ , 95 percent sentence clarity (intelligibility) may be expected at 11 feet, and no substantial community reaction. However, 1 percent of the population may complain about noise at this level and 17 percent may indicate annoyance.

**Table 4.5.D: Summary of Human Effects in Areas Exposed to 55 dBA L<sub>dn</sub>**

Type of Effect	Magnitude of Effect
Speech – Indoors	100 percent sentence intelligibility (average) with a 5 dB margin of safety.
Speech – Outdoors	100 percent sentence intelligibility (average) at 0.35 meter. 99 percent sentence intelligibility (average) at 1.0 meter. 95 percent sentence intelligibility (average) at 3.5 meters.
Average Community Reaction	None evident; 7 dB below level of significant complaints and threats of legal action and at least 16 dB below “vigorous action.”
Complaints	1 percent dependent on attitude and other non-level related factors.
Annoyance	17 percent dependent on attitude and other non-level related factors.
Attitude Towards Area	Noise essentially the least important of various factors.

Source: *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety* (U.S. Environmental Protection Agency, March 1974).

**State of California.** The State of California has established regulations that help prevent adverse impacts to occupants of buildings located near noise sources. The “State Noise Insulation Standard” requires noise-sensitive land uses to meet performance standards through design and/or building materials that would offset any noise source in the vicinity of the building. State regulations include requirements for the construction of new hotels, motels, apartment houses, and dwellings other than detached single-family dwellings that are intended to limit the extent of noise transmitted into habitable spaces. These requirements are found in the California Code of Regulations, Title 24 (known as the Building Standards Administrative Code), Part 2 (known as the California Building Code), Appendix Chapters 12 and 12A. For limiting noise transmitted between adjacent dwelling units, the noise insulation standards specify the extent to which walls, doors, and floor ceiling assemblies must block or absorb sound. For limiting noise from exterior noise sources, the noise insulation standards set an interior standard of 45 dBA CNEL in any habitable room with all doors and windows closed. In addition, the standards require preparation of an acoustical analysis demonstrating the manner in which dwelling units have been designed to meet this interior standard, where such units are proposed in an area with exterior noise levels greater than 60 dBA CNEL.

The State has also established land use compatibility guidelines for determining acceptable noise levels for specified land uses.

**City of San Bruno General Plan.** The City of San Bruno addresses noise in the Health and Safety Element of the General Plan.<sup>2</sup> The Health and Safety Element sets goals and policies that work to protect the health and comfort of residents by reducing the impact of noise from automotive vehicles, San Francisco International Airport, railroad lines, and stationary sources. In addition, the Health and Safety Element sets noise land use compatibility standards, as shown in Table 4.5.E below. The following policies are applicable to the proposed project:

<sup>2</sup> San Bruno, City of, 2009. *San Bruno General Plan*. March 24.

- **Policy HS-32:** Encourage developers to mitigate ambient noise levels adjacent to major noise sources by incorporating acoustical site planning into their projects. Utilize the City's Building Code to implement mitigation measures, such as:
  - Incorporating buffers and/or landscaped berms along high-noise roadways or railways;
  - Incorporating traffic calming measures and alternative intersection design within and/or adjacent to the project;
  - Using reduced-noise pavement (rubberized asphalt); and
  - Incorporating state-of-the-art structural sound attenuation measures.
- **Policy HS-35:** Require developers to comply with relevant noise insulation standards contained in Title 24 of the California Code of Regulations (Part 2, Appendix Chapter 12A).
- **Policy HS-38:** Require developers to mitigate noise exposure to sensitive receptors from construction activities. Mitigation may include a combination of techniques that reduce noise generated at the source, increase the noise insulation at the receptor, or increase the noise attenuation rate as noise travels from the source to the receptor.

**City of San Bruno Municipal Code.** The San Bruno Municipal Code addresses noise in Chapter 6.16, Noise Regulations. The Municipal Code addresses construction activity noise and states that construction activity within a residential zone or within 500 feet of a residential zone must not exceed 85 dB at 100 feet between the hours of 7:00 a.m. and 10:00 p.m. and must not exceed 60 dB at 100 feet between the hours of 10:00 p.m. and 7:00 a.m.

**City of San Bruno Vibration Standards.** The City of San Bruno does not have established specific vibration impact criteria; therefore, the FTA criteria presented above will be utilized to assess potential damage and human annoyance during construction activities.

**Table 4.5.E: Exterior Day/Night Noise Levels DNL or L<sub>dn</sub>, dB**

Land Use Category	55	60	65	70	75	80
Residential – Single-Family	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential – Multiple Family	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Transient Lodging – Motels, Hotels	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Schools, Libraries, Churches, Hospitals, Nursing Homes	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Auditoriums, Concerts, Halls, Amphitheaters	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Sports Area, Outdoor Spectator Sports	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Playgrounds, Parks	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Golf Courses, Riding Stables, Water Recreation, Cemeteries	Normally Acceptable	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Office Buildings, Business Commercial and Professional	Normally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Industrial, Manufacturing, Utilities, Agriculture	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable

Source: City of San Bruno (2009).

Interpretation:

- Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
- Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design.
- Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
- Clearly Unacceptable: New construction or development clearly should not be undertaken.

## 4.5.2 Impacts and Mitigation Measures

This section discusses potential noise and vibration impacts that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds used to determine whether an impact is significant. The latter part of this section presents the impacts associated with implementation of the proposed project and identifies mitigation measures, as appropriate.

### 4.5.2.1 Criteria of Significance

The project would have a significant impact on noise if it would result in:

- Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the General Plan or the Municipal Code, and/or the applicable standards of other agencies;
- Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels; or
- The location of a project within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, so that the project would result in exposure of people residing or working in the project area to excessive noise levels.

### 4.5.2.2 Project Impacts

The following section discusses the potential noise and vibration impacts associated with implementation of the proposed project.

**Applicable Noise Level Standards.** The City sets forth normally acceptable noise level standards for land use compatibility and interior noise exposure of new development. The City does not identify land use compatibility standards for recreational and aquatic centers; therefore, the “library” category was conservatively chosen as the closest representative land use type. The normally acceptable exterior noise level for library land uses is up to 70 dBA  $L_{dn}$ . Noise levels of 60 dBA to 70 dBA  $L_{dn}$  are considered conditionally acceptable when a detailed analysis of noise reduction requirements and noise insulation features are included in the design to meet the interior noise standard. Noise levels of 70 to 80 dBA  $L_{dn}$  are considered normally unacceptable and require a detailed analysis of noise reduction requirements. Noise levels above 80 dBA  $L_{dn}$  are considered clearly unacceptable and new development generally should not be undertaken. The normally acceptable interior noise level is 45 dBA  $L_{dn}$ .

As identified above, the project site is exposed to noise levels between 65 dBA and 70 dBA  $L_{dn}$  primarily associated with vehicle traffic noise. According to the City’s land use compatibility standards, this land use may be permitted only after detailed analysis of the noise reduction features proposed to be incorporated in the building design. A detailed interior and exterior noise analysis is provided below.

**Impact NOI-1: The proposed project would locate recreational land uses in an area that is considered a conditionally acceptable noise environment based on the City's Noise and Land Use Compatibility Guidelines for similar land uses. (S)**

**Interior Noise Analysis.** Based on the USEPA's Protective Noise Levels,<sup>3</sup> with a combination of walls, doors, and windows, standard construction for Northern California buildings (STC-24 to STC-28) would provide more than 25 dBA in exterior-to-interior noise reduction with windows closed and 15 dBA or more with windows open. With windows open, the buildings would not meet the City's normally acceptable interior noise standard of 45 dBA  $L_{dn}$  (i.e., 70.0 dBA – 15 dBA = 55.0 dBA). Therefore, an alternate form of ventilation, such as an air-conditioning system, would be required to ensure that windows can remain closed for a prolonged period of time. A ventilation system would reduce noise levels for visitors with windows closed and would meet the City's normally acceptable interior noise level criterion of 45 dBA (i.e., 70.0 dBA – 25 dBA = 45.0 dBA). Therefore, the City should verify that the proposed building includes fresh air ventilation. Implementation of the heating, ventilation, and air conditioning (HVAC) system would allow windows to remain closed in order to reduce interior noise levels by 25 dBA, resulting in interior noise levels of 45.0 dBA  $L_{dn}$ , which would meet the City's interior noise standard of 45 dBA  $L_{dn}$ .

**Mitigation Measure NOI-1:** In order to reduce interior noise impacts in compliance with City noise standards, the building design shall incorporate mechanical ventilation, such as air conditioning, to allow windows and doors to remain closed for prolonged periods of time.

Implementation of Mitigation Measure NOI-1 would ensure that interior noise levels would be reduced to 45 dBA or less and would be acceptable under the City's land use compatibility standards. Therefore, this impact would be less than significant. (LTS)

Implementation of Mitigation Measure NOI-1 would include modifications to ensure that the proposed building would comply with the City's noise and land use compatibility standards and reduce interior noise impacts to a less-than-significant level.

**Exterior Noise Analysis.** As identified above, noise levels on the project site would be up to 70 dBA  $L_{dn}$ . Based on the City's noise and land use compatibility standards, this noise level is within the City's conditionally acceptable noise level of 60 to 70 dBA  $L_{dn}$  for library land uses. According to the City's guidelines, new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. As discussed above, with Mitigation Measure NOI-1, the existing on-site noise level would meet the City's exterior noise level standards if noise reduction requirements are included in the design to meet the interior noise standard. No exterior noise shielding is required. Therefore, this impact would be less than significant with Mitigation Measure NOI-1 incorporated.

<sup>3</sup> U.S. Environmental Protection Agency, 1978. *Protective Noise Levels, Condensed Version of EPA Levels Document*. November.

**Generation of Substantial Increase in Ambient Noise Levels.** The following describes how the short-term construction and long-term operational noise impacts of the proposed project would be less than significant with implementation of recommended mitigation measures.

**Short-Term (Construction) Noise Impacts.** Project construction would result in short-term noise impacts on the nearby sensitive receptors. Maximum construction noise would be short-term, generally intermittent depending on the construction phase, and variable depending on receiver distance from the active construction zone. The duration of noise impacts generally would be from one day to several days depending on the phase of construction. The level and types of noise impacts that would occur during construction are described below.

**Impact NOI-2: Noise from construction activities at the project site would result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. (S)**

Short-term noise impacts would occur during grading and site preparation activities. Table 4.5.F lists typical construction equipment noise levels ( $L_{max}$ ) recommended for noise impact assessments, based on a distance of 50 feet between the equipment and a noise receptor, obtained from the FHWA Roadway Construction Noise Model. Construction-related short-term noise levels would be higher than existing ambient noise levels currently in the project area but would no longer occur once construction of the project has been completed.

Two types of short-term noise impacts could occur during construction of the proposed project. The first type involves construction crew commutes and the transport of construction equipment and materials to the site, which would incrementally increase noise levels on roads leading to the site. As shown in Table 4.5.F, there would be a relatively high single-event noise exposure potential at a maximum level of 84 dBA  $L_{max}$  with trucks passing at 50 feet.

The second type of short-term noise impact is related to noise generated during excavation, grading, and construction on the project site. Construction is performed in discrete steps, or phases, each with its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on site. Therefore, the noise levels vary as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase.

Table 4.5.F lists maximum noise levels recommended for noise impact assessments for typical construction equipment, based on a distance of 50 feet between the equipment and a noise receptor. Typical maximum noise levels range up to 87 dBA  $L_{max}$  at 50 feet during the noisiest construction phases. Pile driving noise levels can generate noise levels up to 95 dBA at 50 feet. The site preparation phase, including excavation and grading of the site, tends to generate the highest noise levels because earthmoving machinery is the noisiest construction equipment. Earthmoving equipment includes excavating machinery such as backfillers, bulldozers, draglines, and front loaders. Earthmoving and compacting equipment includes compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full-power operation followed by 3 or 4 minutes at lower power settings.

**Table 4.5.F: Typical Construction Equipment Noise Levels**

Equipment Description	Acoustical Usage Factor (%)	Maximum Noise Level ( $L_{max}$ ) at 50 Feet <sup>1</sup>
Backhoes	40	80
Compactor (ground)	20	80
Compressor	40	80
Cranes	16	85
Dozers	40	85
Dump Trucks	40	84
Excavators	40	85
Flat Bed Trucks	40	84
Forklift	20	85
Front-end Loaders	40	80
Graders	40	85
Impact Pile Drivers	20	95
Jackhammers	20	85
Pick-up Truck	40	55
Pneumatic Tools	50	85
Pumps	50	77
Rock Drills	20	85
Rollers	20	85
Scrapers	40	85
Tractors	40	84
Welder	40	73

Source: Roadway Construction Noise Model (FHWA 2006).

Note: Noise levels reported in this table are rounded to the nearest whole number.

<sup>1</sup> Maximum noise levels were developed based on Spec 721.560 from the Central Artery/Tunnel (CA/T) program to be consistent with the City of Boston's Noise Code for the "Big Dig" project.

$L_{max}$  = maximum instantaneous sound level

The closest sensitive receptors include the single-family residences along Donner Avenue, located approximately 50 feet north of the project site, the single- and multi-family residences along Crystal Springs Road, located approximately 80 feet north of the project site, the single-family residences along De Soto Way, approximately 100 feet south of the project site, Parkside Intermediate School, located approximately 310 feet north of the project site, St. Robert's Catholic School, located approximately 330 feet north of the project site, and the former El Crystal Elementary School, which is proposed for future reuse as a private preschool and kindergarten (the Stratford School), located approximately 430 feet south of the project site. Therefore, the closest sensitive receptor may be subject to short-term maximum construction noise between 87 dBA and 95 dBA  $L_{max}$  at 50 feet during construction when construction is occurring at the project site boundary. However, construction equipment would operate at various locations within the 5.6-acre project site and would only generate this maximum noise level when operations are occurring at the boundary of the project site closest to the receptor.

As discussed above, the City requires that construction activity within 500 feet of residential land uses must not exceed 85 dB at 100 feet between the hours of 7:00 a.m. and 10:00 p.m. and must not exceed 60 dB at 100 feet between the hours of 10:00 p.m. and 7:00 a.m. Therefore, based on the maximum construction noise level of 87 dBA  $L_{max}$  at 50 feet, adjusted for distance, construction

noise levels would be approximately 81 dBA  $L_{max}$  at 100 feet. This noise level would not exceed the City's daytime (7:00 a.m. to 10:00 p.m.) construction noise limits, but would exceed the City's nighttime (10:00 p.m. to 7:00 a.m.) construction noise limits. Therefore, implementation of the following mitigation measure would be required to limit construction activity to the less noise-sensitive periods of the day and reduce potential construction-period noise impacts for the indicated sensitive receptors to less-than-significant levels.

**Mitigation Measure NOI-2:** The project contractor shall implement the following best management practice measures during construction of the project:

- Equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers' standards.
- Place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the active project site.
- Locate equipment staging in areas that would create the greatest possible distance between construction-related noise sources and noise-sensitive receptors nearest the active project site during all project construction.
- Install temporary noise barriers around stationary noise sources (such as compressors) and locate stationary noise sources as far from adjacent or nearby sensitive receptors as possible.
- Prohibit extended idling time of internal combustion engines.
- All noise producing construction activities shall be limited to between the hours of 7:00 a.m. and 5:00 p.m. unless permitted by the City of San Bruno.
- Designate a "disturbance coordinator" at the City of San Bruno who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaint (e.g., starting too early, bad muffler) and would determine and implement reasonable measures warranted to correct the problem. (LTS)

Implementation of Mitigation Measure NOI-2 would ensure that construction activity is limited to the less noise-sensitive periods of the day and that potential construction-period noise experienced by noise-sensitive receptors is reduced to the extent feasible. With implementation of Mitigation Measure NOI-2, construction period noise generated by the proposed project would be temporary,

reduced to the extent feasible, and would comply with the City's construction noise requirements; therefore, this impact would be less than significant.

**Operational Noise Impacts.** The project would generate long-term noise impacts from traffic, stationary, and other operational noise sources, as discussed below. A 3 dBA increase is considered to be perceptible by the human ear in an outdoor environment. Therefore, this analysis assumes that a significant impact would occur if the project would result in a substantial (3 dBA or greater) permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

Traffic Noise Impacts. Motor vehicles with their distinctive noise characteristics are the dominant noise source in the project vicinity. The amount of noise varies according to many factors, such as volume of traffic, vehicle mix (percentage of cars and trucks), average traffic speed, and distance from the observer.

Implementation of the proposed project would result in new daily trips on local roadways in the project site vicinity, as estimated in the Transportation Impact Analysis (TIA) prepared for the proposed project.<sup>4</sup> This analysis assumes that the proposed project would generate approximately 470 net new average daily trips.<sup>5</sup> The adjacent Crystal Springs Road carries approximately 9,390 average daily trips. Project trips would represent a small increase in noise level, up to approximately 0.2 dBA  $L_{dn}$  based on the following equation:

$$\text{Change in (dBA)} = 10 * \log_{10} \left( \frac{\text{Current Volume}}{\text{Future Volume}} \right)$$

Therefore, daily project trips would not result in a perceptible noise increase along any roadway segment in the project vicinity and therefore, would be less than significant.

Stationary Source Noise Impacts. Stationary noise sources associated with the proposed project could include heating, ventilation, and air conditioning (HVAC) mechanical equipment and typical motor vehicle/parking area activities.

Of the on-site stationary noise sources during operation of the project, noise generated by parking lot activities would generate the highest maximum noise levels. Based on reference noise measurements previously conducted by LSA, HVAC-related noise would generate

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<sup>4</sup> Hexagon Transportation Consultants, 2019. *San Bruno Recreation and Aquatics Center Transportation Impact Analysis*. December 5.

<sup>5</sup> Similar to the TIA, this analysis relies on a trip generation rate of 28.82 trips per 1,000 square feet of building area; however, the analysis assumes an increase of approximately 16,300-square-feet of new recreational space whereas the TIA assumed an increase of 17,000 square feet. Therefore, this analysis assumes a slightly lower daily trip generation rate of 470 daily trips as compared to the 490 daily trips estimated in the TIA. However, based on the emissions results identified in this analysis, changes associated with the difference in trip generation rates would be minimal and would not change the significance conclusions identified in this section.

noise levels of approximately 75 dBA  $L_{max}$  at 3 feet, while typical parking activities would generate noise levels of approximately 60 dBA to 70 dBA  $L_{max}$  at 50 feet.

With the increase in daily vehicle trips, use of the parking lots within the San Bruno City Park would intensify, which could in turn result in an increase in noise levels. As noted above, representative parking lot activities, such as visitors conversing and slamming doors, would generate approximately 60 to 70 dBA  $L_{max}$  at 50 feet. The closest sensitive receptors to the proposed parking lot area include the single- and multi-family residences located approximately 80 feet north of the proposed parking lot area. Adjusted for distance, the nearest sensitive receptors would be exposed to a noise level of 56 to 66 dBA  $L_{max}$  generated by parking lot activities. However, when averaged over a 24-hour period, parking lot activities would not cause an increase in noise levels of more than 3 dBA. Therefore, it is not expected that the proposed project would substantially increase noise levels over existing conditions and impacts would be less than significant.

Operational Noise. The proposed project would include the construction of a new recreation facility, which could result in an increase in ambient noise levels in the vicinity of the project site with increased recreational and aquatic activities. Recreational activity, including voices, typically generates maximum noise levels of 70 dBA  $L_{max}$  at 50 feet.

The closest sensitive receptors include the single-family residences along Donner Avenue, located approximately 150 feet north of the proposed facility. Adjusted for distance, the nearest sensitive receptors would be exposed to a noise level of 60 dBA  $L_{max}$  generated by recreational activities. These residences have wood fences, which would reduce noise levels by approximately 5 dBA. Therefore, the closest residences would be exposed to a maximum noise level of approximately 55 dBA  $L_{max}$ . Due to the intermittent nature of recreational activity noise, when averaged over a 24-hour period, these activities would not cause an increase in noise levels of more than 3 dBA. Therefore, it is not expected that the proposed project would substantially increase noise levels over existing conditions and impacts would be less than significant.

**Groundborne Vibration and Groundborne Noise.** Vibration refers to groundborne noise and perceptible motion. Groundborne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors. Vibration energy propagates from a source, through intervening soil and rock layers, to the foundations of nearby buildings. The vibration then propagates from the foundation throughout the remainder of the structure. Building vibration may be perceived by the occupants as the motion of building surfaces, rattling of items on shelves or hanging on walls, or as a low-frequency rumbling noise. The rumbling noise is caused by the vibrating walls, floors, and ceilings radiating sound waves. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by 10 dB or less. This is an order of magnitude below the damage threshold for normal buildings.

Typical sources of groundborne vibration are construction activities (e.g., pavement breaking and operating heavy-duty earthmoving equipment), and occasional traffic on rough roads. In general, groundborne vibration from standard construction practices would result in impacts when construction occurs within 25 feet of sensitive structures. Groundborne vibration levels from

construction activities very rarely reach levels that can damage structures; however, these levels are perceptible near the active construction site. With the exception of older buildings built prior to the 1950s or buildings of historic significance, potential structural damage from heavy construction activities rarely occurs. When roadways are smooth, vibration from traffic (even heavy trucks) is rarely perceptible.

The streets surrounding the project area are paved, smooth, and unlikely to cause significant groundborne vibration. In addition, the rubber tires and suspension systems of buses and other on-road vehicles make it unusual for on-road vehicles to cause groundborne noise or vibration problems. It is, therefore, assumed that no such vehicular vibration impacts would occur and, therefore, no vibration impact analysis of on-road vehicles is necessary. Additionally, once constructed, the proposed project would not contain uses that would generate groundborne vibration. This impact would be less than significant.

**Construction Vibration.** Construction of the proposed project could result in the generation of groundborne vibration. This construction vibration impact analysis discusses the level of human annoyance using vibration levels in VdB and assesses the potential for building damages using vibration levels in PPV (in/sec). The Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment<sup>6</sup> guidelines indicate that a vibration level up to 102 VdB (an equivalent to 0.5 in/sec in PPV) is considered safe for buildings consisting of reinforced concrete, steel, or timber (no plaster), and would not result in any construction vibration damage. For a non-engineered timber and masonry building, the construction vibration damage criterion is 94 VdB (0.2 in/sec in PPV).

Table 4.5.G shows the reference PPV and VdB values at 25 feet from a construction vibration source. As shown in Table 4.5.G, bulldozers and other heavy-tracked construction equipment (except for pile drivers and vibratory rollers) generate approximately 87 VdB of groundborne vibration when measured at 25 feet, based on the Transit Noise and Vibration Impact Assessment. At this level, groundborne vibration would result in potential annoyance to residents and workers but would not cause any damage to the buildings. Construction vibration, similar to vibration from other sources, would not have any significant effects on outdoor activities (e.g., those outside of residences and commercial/office buildings in the project vicinity). Outdoor site preparation for the proposed project is expected to include the use of bulldozers and loaded trucks. The greatest levels of vibration are anticipated to occur during the site preparation phase. All other phases are expected to result in lower vibration levels. The distance to the nearest buildings for vibration impact analysis is measured between the nearest off-site buildings and the location where construction equipment would be used. The formula for vibration transmission is provided below.

$$L_{\text{vdB}}(D) = L_{\text{vdB}}(25 \text{ ft}) - 30 \log(D/25)$$

$$PPV_{\text{equip}} = PPV_{\text{ref}} \times (25/D)^{1.5}$$

<sup>6</sup> Federal Transit Administration, 2006. Office of Planning and Environment. *Transit Noise and Vibration Impact Assessment*. FTA-VA-90-1003-06. May.

Construction of the proposed project could include a drilled pier or auger cast pile foundation or could be supported on a structural mat, requiring the use of a pile driver, which would generate 104 VdB at 25 feet. The closest residential structures to the proposed building include the single-family residences along Donner Avenue, which are located approximately 80 feet north of the proposed building. Based on distance attenuation, the closest residences would experience vibration levels of up to 89 VdB (0.113 PPV [in/sec]). This vibration level at the closest residential structures from construction equipment would not exceed the FTA threshold of 94 VdB (0.2 in/sec PPV) for building damage. However, this level is higher than the FTA’s “barely perceptible” human response criteria of 0.04 PPV for transient sources of vibration events. Although construction vibration levels at residential uses would have the potential to result in annoyance, these vibration levels would no longer occur once construction of the project is completed. Therefore, groundborne vibration impacts from construction activities associated with the proposed project would be considered less than significant.

**Table 4.5.G: Vibration Source Amplitudes for Construction Equipment**

Equipment	Reference PPV/L <sub>v</sub> at 25 feet	
	PPV (in/sec)	L <sub>v</sub> (VdB) <sup>a</sup>
Pile Driver (Impact), Typical	0.644	104
Pile Driver (Sonic), Typical	0.170	93
Vibratory Roller	0.210	94
Hoe Ram	0.089	87
Large Bulldozer	0.089	87
Caisson Drilling	0.089	87
Loaded Trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Sources: *Transit Noise and Vibration Impact Assessment* (FTA 2006).

<sup>a</sup> RMS vibration velocity in decibels (VdB) is 1 μin/sec.

μin/sec = micro-inches per second

FTA = Federal Transit Administration

in/sec = inches per second

L<sub>v</sub> = velocity in decibels

PPV = peak particle velocity

RMS = root-mean-square

VdB = vibration velocity decibels

**Aircraft Noise.** As noted in the existing conditions discussion above, the closest airport to the project site is San Francisco International Airport, located approximately 1 mile east of the project site. In addition, the Oakland International Airport is located approximately 12 miles northeast of the project site. Although aircraft-related noise is occasionally audible on the project site, the site does not lie within the 65 dBA CNEL noise contours of either of these airports. Therefore, the proposed project would not expose people working in or visiting the project area to excessive noise levels and no impact would occur.

#### 4.5.2.3 Cumulative Impacts

For the topic of noise, the scope for assessing cumulative impacts encompasses past, current, or probable future projects under review by the City and within proximity to the project site, as well as applicable planning level documents that affect the transportation network (i.e., land use assumptions from the General Plan that would increase trips on area roadways, thereby increasing traffic noise).

As described above, project trips would represent a small increase in noise levels, up to approximately 0.2 dBA CNEL, which would not exceed the 3 dBA increase considered to be perceptible by the human ear in an outdoor environment. Given the small increase in noise levels generated by the proposed project on the transportation network and location of cumulative projects (see Section 4.3, Transportation) and anticipated increase in traffic noise anticipated in the vicinity, the proposed project would not result in a cumulatively considerable increase in transportation-related noise.

A significant cumulative impact would also occur if implementation of the proposed project would combine with other cumulative development projects to result in any permanent increase of 3 dBA or more in ambient noise levels at the existing sensitive receptors in the project site vicinity that are currently exposed to noise levels above the City's normally acceptable threshold for that type of land use. As discussed above, long-term operation of the proposed project would not create a significant increase in stationary source noise, including noise associated with recreational activities, parking lot activities, and HVAC equipment. Because the cumulative development projects are not located immediately adjacent to the project site, permanent increases in noise generated by these projects would not combine with the noise levels generated by the proposed project to create a cumulatively considerable increase in ambient noise levels and this impact would be less than significant.

With implementation of Mitigation Measure NOI-2, the proposed project would not result in adverse noise impacts from construction activities. Although the proposed project may be under construction at the same time as one or more cumulative development projects, each project would be required to implement similar measures as those identified in Mitigation Measure NOI-2 in order to ensure that construction noise levels are reduced to the extent feasible and to ensure that construction activities comply with the City's Noise Ordinance. In addition, construction-related noise impacts would be temporary and would no longer occur once construction of each project is completed. Therefore, construction activities would not be considered a cumulatively considerable contribution to the total noise environment in the project site vicinity and this impact would be less than significant.

## 4.6 GEOLOGY AND SOILS

This section describes the geotechnical conditions potentially affecting buildout of the proposed project. The setting section describes the geologic environment of the proposed project based on published and unpublished geologic reports and maps and technical reports, as well as the site-specific Preliminary Geotechnical Investigation (Geotechnical Report) prepared for the proposed project.<sup>1</sup> This section also assesses potential impacts related to geologic and seismic hazards, including impacts from strong ground shaking, liquefaction, slope failure, lateral slope deformation, differentiated settlement, unstable or expansive soils, and paleontological resources.

### 4.6.1 Setting

This section describes the existing geologic and seismic conditions of the proposed project, the vicinity, and associated hazards.

#### 4.6.1.1 Geologic Conditions

The geology, topography, and soils of the project site and vicinity are described below.

**Geology.** The project site is located within the northern portion of the Coast Ranges geomorphic province, a relatively geologically young and seismically-active region.<sup>2</sup> The Coast Ranges extend from near the Oregon border to southern California. The only major break in the Coast Range mountains is the depression containing the San Francisco Bay, where the project site is located.

**Topography.** The approximately 5.6-acre project site is located along the southeast side of Crystal Springs Road. The project site generally slopes down gently to moderately to the northeast corner. El Zanjon Creek flows in a shallow concrete channel across the project site and was reportedly contained within the channel during the original development of San Bruno City Park. An existing concrete site retaining wall supporting cut up to about 15 feet high is located behind the west corner of the recreation center. The site and immediate vicinity are located in an area that slopes northeast toward San Francisco Bay. The site is located at an elevation of approximately 70 feet above sea level.

**Soils.** Regional soil mapping indicates that the western portion of the project site is underlain by Pleistocene-aged Colma Formation, and the eastern and southern portions are underlain by Holocene-aged younger alluvium, Qya, and a small portion of the northwestern corner of the Veterans Memorial building is underlain by Holocene-aged artificial fill, Qf. The Colma formation generally consists of yellowish-gray and gray to yellowish-orange and red-brown, friable to loose, fine to medium-grained arkosic sand with subordinate amounts of gravel, silt, and clay. The alluvium generally consists of unconsolidated and undissected, poorly sorted gravel, sand, silt, clay, and organic matter in active drainage channels and small fans that grades into fine coarse grained alluvial deposits. The fill generally consists of poorly consolidated to well consolidated gravel, sand, silt, and rock fragments in various combinations used in a variety of applicants including and

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<sup>1</sup> ROMIG Engineers Inc., 2019. *Preliminary Geotechnical Investigation, San Bruno Recreation & Aquatic Center, 251 City Park Way, San Bruno, California 94066*. May 9.

<sup>2</sup> California Geological Survey, 2002a. California Geomorphic Provinces, Note 36, December.

highway and building site grades.<sup>3</sup> According to the Preliminary Geotechnical Investigation and based on the available groundwater information, the highest projected groundwater level is approximately 5 feet below ground surface (bgs).

#### 4.6.1.2 Seismic Conditions

The entire San Francisco Bay Area is located within the San Andreas Fault Zone, a complex of active faults (i.e., faults with evidence of rupture in the past 11,000 years). Numerous historic earthquakes have been generated in northern California by the San Andreas Fault Zone. This level of active seismicity results in relatively high seismic risk in the San Francisco Bay Area. There are no mapped through-going faults within or adjacent to the site and the site is not located within a State of California Earthquake Fault Zone. The closest active fault is the San Andreas Fault, located approximately 1.1 miles southwest of the project site. The San Gregorio fault is located approximately 6.5 miles southwest of the project and the Hayward and Calaveras faults are located 17 and 26 miles northeast of the project site.

A panel of experts convened by the United States Geologic Survey have concluded that there is a 72 percent chance for at least one 6.7 magnitude ( $M_w$  or Moment Magnitude) or greater earthquake in the Bay Area before 2043. The Hayward fault has the highest likelihood of an earthquake greater than or equal to a magnitude 6.7 in the Bay Area, estimated at 33 percent, while the likelihood on the San Andreas and Calaveras fault is estimated at approximately 22 and 26 percent, respectively.<sup>4</sup>

#### 4.6.1.3 Seismic and Geologic Hazards

Seismic and geologic hazards include surface rupture, ground shaking, liquefaction and lateral spreading, expansive soils, slope instability, and settlement and differential settlement. Each of these potential hazards is discussed below.

**Surface Rupture.** Surface rupture occurs when the ground surface is broken due to fault movement during an earthquake. Surface rupture generally occurs along an existing (usually active) fault trace. Areas susceptible to surface fault rupture are delineated by Alquist-Priolo Earthquake Fault Zones mapping performed by the California Geological Survey (CGS). The project site is not located in an Alquist-Priolo Fault Zone. The nearest Alquist-Priolo Fault Zone to the project site is the San Andreas Fault, located approximately 1-mile southwest of the project site.<sup>5</sup> The Serra Fault is located approximately 1,000 feet west of the project site and has had Holocene fault displacement without historic record (no known activity within the last 200 years).<sup>6</sup> Therefore, the potential for surface rupture at the project site is low.

**Ground Shaking.** Seismic ground shaking generally refers to all aspects of motion of the earth's surface resulting from an earthquake, and is normally the major cause of damage in seismic events. The extent of ground shaking is controlled by the magnitude and intensity of the earthquake, distance from the epicenter, and local geologic conditions. The magnitude of a seismic event is a

<sup>3</sup> ROMIG Engineers Inc., 2019, op. cit.

<sup>4</sup> Ibid.

<sup>5</sup> State of California, 1982. Special Studies Zones, Montara Mountain, Revised Official Map, January 1.

<sup>6</sup> California Geological Survey, 2010. Fault Activity Map of California. Available online at: [maps.conservation.ca.gov/cgs/fam/](https://maps.conservation.ca.gov/cgs/fam/) (accessed September 10, 2019).

measure of the energy released by an earthquake; it is assessed by seismographs that measure the amplitude of seismic waves. The intensity of an earthquake is a subjective measure of the perceptible effects of a seismic event at a given point. The Modified Mercalli Intensity scale is the most commonly used scale to measure the subjective effects of earthquake intensity. It uses values ranging from I to XII (Table 4.6A).<sup>7</sup>

The San Andreas Fault is considered capable of generating a  $M_w$  7.8 earthquake.<sup>8</sup> An earthquake of this magnitude on the San Andreas Fault would generate violent (MMI IX) ground shaking at the project site.<sup>9</sup> The project site also has the potential to be subject to very strong (MMI VIII) ground shaking generated by an earthquake on the San Gregorio Fault, and strong (MMI VII) ground shaking generated by an earthquake on the Hayward and Calaveras faults.

**Table 4.6A: Modified Mercalli Intensity Scale**

Intensity	Description/Damage
I	Not felt except by a very few under especially favorable circumstances.
II	Felt only by a few persons at rest, especially on upper floors of buildings. Delicately suspended objects may swing.
III	Felt quite noticeably indoors, especially on upper floors of buildings, but many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibration like passing of truck. Duration estimated.
IV	During the day felt indoors by many, outdoors by few. At night some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.
V	Felt by nearly everyone, many awakened. Some dishes, windows, etc., broken; a few instances of cracked plaster; unstable objects overturned. Disturbances of trees, poles, and other tall objects sometimes noticed. Pendulum clocks may stop.
VI	Felt by all, many frightened and run outdoors. Some heavy furniture moved; a few instances of fallen plaster or damaged chimneys. Damage slight.
VII	Everybody runs outdoors. Damage negligible in building of good design and construction; slight to moderate in well-built ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving motor cars.
VIII	Damage slight in specially designed structures; considerable in ordinary substantial buildings, with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Persons driving motor cars disturbed.
IX	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb; great in substantial buildings, with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken.
X	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations; ground badly cracked. Rails bent. Landslides considerable from river banks and steep slopes. Shifted sand and mud. Water splashed (slopped) over banks.
XI	Few, if any, (masonry) structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipelines completely out of service. Earth slumps and land slips in soft ground. Rails bent greatly.
XII	Damage total. Practically all works of construction are damaged greatly or destroyed. Waves seen on ground surface. Lines of sight and level are distorted.

Source: *How Earthquakes and Their Effects are Measured, Note 32, Modified* (California Geological Survey 2002).

<sup>7</sup> U.S. Geological Survey, 2019. The Modified Mercalli Intensity Scale. Website: [earthquake.usgs.gov/learn/topics/mercalli.php](http://earthquake.usgs.gov/learn/topics/mercalli.php) (accessed October 18, 2019).

<sup>8</sup> Association of Bay Area Governments, 2018. Shaking Scenarios. Website: [resilience.abag.ca.gov/earthquakes](http://resilience.abag.ca.gov/earthquakes) (accessed October 18, 2019). July 21.

<sup>9</sup> Ibid.

**Liquefaction and Lateral Spreading.** Liquefaction is the temporary transformation of loose, saturated granular sediments from a solid state to a liquefied state as a result of seismic ground shaking. In the process, the soil undergoes transient loss of strength, which commonly causes ground displacement or ground failure to occur. Since saturated soils are a necessary condition for liquefaction, soil layers in areas where the groundwater table is near the surface have higher liquefaction potential than those in which the water table is located at greater depths. As noted above, the highest projected groundwater level within the site is approximately 5 feet bgs.

Lateral spreading is a form of horizontal displacement of soil toward an open channel or other “free” face, such as an excavation boundary. In a lateral spread failure, a layer of ground at the surface is carried on an underlying layer of liquefied material over a nearly flat surface toward a river channel or other bank. The lateral spreading hazard tends to mirror the liquefaction hazard for a site. The majority of the project site is located within a Seismic Hazard Zone for liquefaction as mapped by CGS.<sup>10</sup>

**Expansive Soils.** Expansive soils are characterized by the potential for shrinking and swelling as the moisture content of the soil decreases and increases, respectively. Shrink-swell potential is influenced by the amount and type of clay minerals present and can be measured by the percent change of the soil volume. As a consequence of such volume changes, structural damage to buildings and infrastructure can occur if potentially expansive soils are not considered in project design and during construction. The Preliminary Geotechnical Investigation<sup>11</sup> indicates that surface soil at the project site generally consists of sandy lean clay; however, the expansion potential of soil at the project site was not discussed in the Preliminary Geotechnical Investigation. The City’s General Plan indicates that the project site is underlain by moderately expansive soil.<sup>12</sup>

**Slope Stability.** Slope failure can occur as either rapid movement of large masses of soil (landslide) or slow, continuous movement (creep) on slopes of varying steepness. The project site is not located within a Seismic Hazard Zone for earthquake-induced landslides as mapped by CGS; however, there is a steep slope located along the northwestern boundary of the project site, and there is an existing retaining wall located at the base of this slope behind the existing Veterans Memorial building.

**Settlement and Differential Settlement.** Settlement is the lowering of the land-surface elevation as a result of loading (i.e., placing heavy loads, typically fill or structures), which often occurs with the development of a site. Settlement or differential (e.g., unequal) settlement could occur if buildings or other improvements are built on low-strength foundation materials (including imported non-engineered fill) or if improvements straddle the boundary between different types of subsurface materials (e.g., a boundary between native material and fill). Although settlement generally occurs slowly enough that its effects are not dangerous to inhabitants, it can cause significant building damage over time. The Preliminary Geotechnical Investigation<sup>13</sup> estimated that total settlement of about 0.25 inches could occur at the ground surface due to severe ground shaking caused by a major earthquake.

<sup>10</sup> California Geological Survey, 2019. Earthquake Zones of Required Investigation, Montara Mountain Quadrangle, April 4.

<sup>11</sup> Ibid.

<sup>12</sup> San Bruno, City of, 2009. *General Plan, Chapter 7, Health and Safety Element*. Adopted March 24.

<sup>13</sup> ROMIG Engineers, Inc., 2019, op. cit.

#### 4.6.1.4 Regulatory Context

Federal, State, and local regulations related to geology, seismicity, soils and building safety that are applicable to the project site are described below.

**Federal National Earthquake Hazards Reduction Program.** The National Earthquake Hazards Reduction Program (NEHRP) was established by the US Congress when it passed the Earthquake Hazards Reduction Act of 1977, Public Law (PL) 95–124. In establishing NEHRP, Congress recognized that earthquake-related losses could be reduced through improved design and construction methods and practices, land use controls and redevelopment, prediction techniques and early-warning systems, coordinated emergency preparedness plans, and public education and involvement programs. The four basic NEHRP goals are:

- Develop effective practices and policies for earthquake loss reduction and accelerate their implementation.
- Improve techniques for reducing earthquake vulnerabilities of facilities and systems.
- Improve earthquake hazards identification and risk assessment methods, and their use.
- Improve the understanding of earthquakes and their effects.
- Implementation of NEHRP priorities is accomplished primarily through original research, publications, and recommendations to assist and guide State, regional, and local agencies in the development of plans and policies to promote safety and emergency planning.

**California Alquist-Priolo Earthquake Fault Zoning Act.** The California Alquist-Priolo Earthquake Fault Zoning Act (AP Act) was passed in 1972, and its main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active earthquake faults. The AP Act requires the State Geologist to establish regulatory zones (known as Earthquake Fault Zones) around the surface traces of active faults and to issue appropriate maps. “Earthquake Fault Zones” were called “Special Studies Zones” prior to January 1, 1994. The maps are distributed to all affected cities, counties, and state agencies for their use in planning and controlling new or renewed construction. Local agencies must regulate most development projects within the zones. The AP Act only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards. Surface rupture is the most easily avoided seismic hazard. As discussed below, the California Seismic Hazards Mapping Act (SHMA), passed in 1990, addresses non-surface fault rupture earthquake hazards, including liquefaction and seismically-induced landslides.

**California Building Standards Code.** The 2016 California Building Code (CBC), which refers to Part 2 of the California Building Standards Code in Title 24 of the California Code of Regulations, is based on the 2012 International Building Code. The 2016 CBC covers grading and other geotechnical issues, building specifications, and non-building structures. The CBC requires that a site-specific geotechnical investigation report be prepared by a licensed professional for proposed developments of one or more buildings greater than 4,000 square feet to evaluate geologic and seismic hazards. Buildings less than or equal to 4,000 square feet also require preparation of a geologic engineering

report, except for one-story, wood-frame and light-steel-frame buildings of Type V construction that are located outside of the Alquist-Priolo Earthquake Faults Zones.

The purpose of a site-specific geotechnical investigation is to identify seismic and geologic conditions that require project mitigation, such as surface fault rupture, ground shaking, liquefaction, differential settlement, lateral spreading, expansive soils, and slope stability. Requirements for the geotechnical investigation are presented in Chapter 16 “Structural Design” and Chapter 18 “Soils and Foundation” of the 2016 CBC.

**California Seismic Hazards Mapping Act.** The SHMA of 1990 (Public Resources Code, Section 2690-2699.6) directs the Department of Conservation, California Geologic Survey (CGS) to identify and map areas prone to liquefaction, earthquake-induced landslides and amplified ground shaking. The purpose of the SHMA is to minimize loss of life and property through the identification, evaluation and mitigation of seismic hazards. The SHMA was passed by the legislature following the 1989 Loma Prieta earthquake. Staff geologists in the Seismic Hazard Zonation Program gather existing geological, geophysical and geotechnical data from numerous sources to produce the Seismic Hazard Zone Maps. They integrate and interpret these data regionally in order to evaluate the severity of the seismic hazards and designate as Zones of Required Investigation (ZORI) those areas prone to liquefaction and earthquake-induced landslides. Cities and counties are then required to use the Seismic Hazard Zone Maps in their land use planning and building permit processes. The Seismic Hazards Mapping Act requires site-specific geotechnical investigations be conducted within ZORI areas to identify and evaluate seismic hazards and formulate mitigation measures prior to permitting most developments designed for human occupancy.

**City of San Bruno General Plan.** The City of San Bruno General Plan<sup>14</sup> addresses geologic and seismic hazards in the Health and Safety Element. The following policies are applicable to the proposed project.

- **Policy HS-3:** Require geotechnical investigation of all sites, except single-family dwellings, proposed for development in areas where geologic conditions or soil types are subject to landslide risk, slippage, erosion, liquefaction, or expansive soils. (Require submission of geotechnical investigation and demonstration that the project conforms to all recommended mitigation measures prior to City approval).
- **Policy HS-4:** Prevent soil erosion by retaining and replanting vegetation, and by siting development to minimize grading and land form alteration.
- **Policy HS-5:** Require preparation of a drainage and erosion control plan for land alteration and vegetation removal on sites greater than 10,000 square feet in size.
- **Policy HS-7:** Development in areas subject to seismic hazards, including ground shaking, liquefaction, and seismically-induced landslides (Figure 7-2) will comply with guidelines set forth in the most recent version of the California Division of Mines and Geology Special Publication 117.

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<sup>14</sup> San Bruno, City of, 2009. *San Bruno General Plan. Health and Safety Element.*

## 4.6.2 Impacts and Mitigation Measures

This section discusses potential impacts to geology, soils, and seismicity that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds used to determine whether an impact is significant. The latter part of this section presents the impacts associated with the proposed project and identifies mitigation measures, as appropriate.

### 4.6.2.1 Criteria of Significance

The proposed project would result in a significant impact related to geology, soils, and seismicity if it would:

- Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault;
  - Strong seismic ground shaking;
  - Seismic-related ground failure, including liquefaction; or
  - Landslides;
- Result in substantial soil erosion or the loss of topsoil;
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property;
- 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; or
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

### 4.6.2.2 Project Impacts

The following section discusses potential geology, soils, and seismicity impacts associated with implementation of the proposed project.

**Rupture of a Known Earthquake Fault.** As previously discussed, the project site is not located in an Alquist-Priolo Fault Zone. The nearest Alquist-Priolo Fault Zone to the project site is the San Andreas Fault, located approximately 1-mile southwest of the project site.<sup>15</sup> The Serra Fault is located approximately 1,000 feet west of the project site and has had Holocene fault displacement without historic record (no known activity within the last 200 years).<sup>16</sup> The Preliminary Geotechnical Investigation<sup>17</sup> for the project site found no evidence of active faults on-site, and indicated that the potential for fault rupture to occur at the project site is considered low. Therefore, the potential for impacts related to fault rupture would be less than significant.

**Strong Seismic Groundshaking.** The Association of Bay Area Governments (ABAG) maintains mapping of ground shaking intensity based on various earthquake fault and magnitude scenarios. As described above, the closest active fault to the proposed project is the San Andreas Fault. A large earthquake (magnitude 7.2 or greater) on the San Andreas Fault could generate violent (MMI IX) ground shaking at the project site.<sup>18</sup>

The risk of ground shaking impacts is reduced through adherence to the design and materials standards set forth in the 2016 California Building Code (CBC) (Title 24, California Code of Regulations). The City of San Bruno has adopted the 2016 CBC, as indicated in Chapter 11 of the City's Municipal Code. The City's Building Division is responsible for reviewing plans, issuing building permits, and conducting field inspections. The 2016 CBC provides for stringent construction requirements on projects in areas of high seismic risk. The proposed project would be required to conform with, or exceed, current best standards for earthquake resistant construction in accordance with the 2016 CBC (or subsequent applicable CBC) and with the generally accepted standards of geotechnical practice for seismic design in Northern California. Adherence to the 2016 CBC and General Plan Policy HS-3 would require a site-specific, design-level geotechnical investigation to be performed for the proposed project to evaluate soil stability, soil strength, position and adequacy of load-bearing soils, the effect of moisture variation on soil-bearing capacity, compressibility, liquefaction, and expansiveness; and that a geotechnical report be prepared to provide recommendations on foundation type and design criteria. As noted below, the Preliminary Geotechnical Investigation<sup>19</sup> prepared for the project site is preliminary in nature. As required by Mitigation Measure GEO-1, a design-level geotechnical report would be required prior to issuance of any grading or building permits. Compliance with the 2016 CBC would ensure that the proposed project would be designed and constructed to account for and withstand seismic and geologic hazards which could have adverse effects on the project, thereby minimizing exposure of people and structures to substantial risk of loss, injury, or death during a large regional earthquake. It is acknowledged that seismic hazards cannot be completely eliminated, even with site-specific geotechnical investigation/design and advanced building practices. However, the seismic design standards of the 2016 CBC are intended to prevent catastrophic building failure in the most severe earthquakes currently anticipated. Therefore, potential impacts associated with strong seismic ground shaking would be less than significant.

<sup>15</sup> State of California, 1982. Special Studies Zones, Montara Mountain, Revised Official Map, January 1.

<sup>16</sup> California Geological Survey, 2010, op. cit.

<sup>17</sup> ROMIG Engineers Inc., 2019, op. cit.

<sup>18</sup> Association of Bay Area Governments, 2018, op. cit.

<sup>19</sup> ROMIG Engineers Inc., 2019, op. cit.

**Liquefaction.** Soil liquefaction is a phenomenon primarily associated with saturated soil layers located close to the ground surface. During ground shaking, these soils can lose strength and acquire “mobility” sufficient to permit both horizontal and vertical movements. Soils that are most susceptible to liquefaction are clean, loose, uniformly graded, saturated, fine-grained sands that lie relatively close to the ground surface. However, loose sands that contain a significant amount of fines (silt and clay) may also liquefy. The majority of the project site is located within a Seismic Hazard Zone for liquefaction as mapped by CGS.<sup>20</sup>

The Preliminary Geotechnical Investigation<sup>21</sup> prepared for the project site included an evaluation of the potential for earthquake-induced liquefaction which found that total settlement at the ground surface during seismic shaking is estimated to range from approximately 1.1 to 8.8 inches, with differential settlement on the order of up to about 5 to 6 inches over a horizontal distance of 50 feet. The Preliminary Geotechnical Investigation included the following recommendations:

- The proposed building should be supported on a drilled pier or auger cast pile foundation extending well below the liquefiable layers, or be supported on a structural mat on a subgrade improved by deep soil mixing, drilled displacement columns or rammed aggregate piers extending to depths ranging from about 20 to 40 feet;
- To help refine the vertical and lateral extent of the ground improvement that would be required, at least 6 to 7 additional cone penetrometer tests (CPTs) should be advanced across the footprint of the building after the demolition of the existing structures;
- In order to reduce the potential for severe slab distress and differential settlement between the floor slabs and the building foundations following a strong earthquake, the floor slabs at the ground level could be designed as structural slabs supported on the foundation. As an alternative, a raised wood floor supported on deep foundations may be considered; and
- Because subsurface conditions may vary from those encountered at the locations of geotechnical borings and CPT's, and to observe that geotechnical recommendations are properly implemented, the geotechnical engineer should be retained to 1) review the project plans for conformance with geotechnical recommendations and 2) perform observation and testing during the earthwork and foundation installation phases of construction.

**Impact GEO-1: The proposed project could expose occupants to seismic hazards related to liquefaction. (S)**

The geotechnical recommendations summarized above are preliminary in nature. Additional CPTs, design-level geotechnical recommendations, geotechnical review of project designs, and geotechnical observation and testing during construction activities would be required to ensure that the project would be designed and constructed to withstand potential liquefaction-induced settlement. Implementation of Mitigation Measure GEO-1, described below, would ensure that the potential impacts associated with liquefaction would be less than significant.

<sup>20</sup> California Geological Survey, 2019, op. cit.

<sup>21</sup> ROMIG Engineers Inc., 2019, op. cit.

**Mitigation Measure GEO-1:** Prior to the issuance of any site-specific grading or building permits, the City's Building Division shall confirm that: 1) additional borings/cone penetrometer tests have been performed across the footprint of the proposed building after the demolition of the existing structures to refine foundation/ground improvement recommendations and depth to groundwater; 2) a design-level geotechnical report has been prepared which includes evaluations of the potential for: lateral spreading, including at the landscaped slope on the northeast side of the proposed building and earthen creek embankments along the relocated creek alignment, slope instability from removal of an existing retaining wall and excavation into/at the toe of the hillside, and expansive soils at the project site; 3) the design-level geotechnical report includes design-level recommendations for grading activities, removal of the existing retaining wall, hillside excavation, engineered fill, foundation and ground improvement designs, retaining wall designs, and measures to address expansive soils, if present; and 4) project plans have incorporated geotechnical recommendations and the project's geotechnical engineer has reviewed and approved project plans. Prior to the issuance of building occupancy permits, the City's Building Division shall ensure that implementation of all the geotechnical recommendations including design criteria, specifications, and construction observations/inspection/testing has been performed and documented in a construction completion report prepared by the project's geotechnical engineer. (LTS)

Implementation of Mitigation Measure GEO-1 would ensure that the project would be designed and constructed to withstand potential liquefaction-induced settlement and other seismic hazards; therefore, this impact would be less than significant.

**Landslides.** The project site is not located within a Seismic Hazard Zone for earthquake-induced landslides as mapped by CGS;<sup>22</sup> however, there is a steep slope located along the northwestern boundary of the project site, and there is an existing retaining wall located at the base of this slope behind the existing Veterans Memorial building which would need to be removed for construction of the proposed building. The Preliminary Geotechnical Investigation<sup>23</sup> indicated that the northwestern side of the proposed building is expected to have retaining walls supporting cuts up to about 15 feet high into this hillside.

Removal of the existing hillside retaining wall, making cuts into the hillside, and excavation along the toe of this hillside could result in slope instability and landslides that could impact Crystal Springs Road and residential properties located northwest of Crystal Springs Road.

<sup>22</sup> California Geological Survey, 2019, op. cit.

<sup>23</sup> ROMIG Engineers Inc., 2019, op. cit.

Implementation of Mitigation Measure GEO-1 would ensure that potential slope stability impacts would be addressed. Preparation of a design-level geotechnical report which includes an evaluation of the potential slope instability from removal of the existing retaining wall, excavation into/at the toe of the hillside; and implementation of geotechnical recommendations for grading activities, removal of the existing retaining wall, hillside excavation, and retaining wall designs, as required by Mitigation Measure GEO-1, would ensure that potential impacts of the project related to landslides would be less than significant.

**Soil Erosion and Loss of Topsoil.** As described above, potential impacts related to liquefaction and landslides would be less than significant with implementation of Mitigation Measure GEO-1.

Subsidence or collapse can result from the removal of groundwater, resulting in either catastrophic or gradual depression of the surface elevation of the project site. The only removal of groundwater that may occur as part of the project would be limited dewatering of excavations during construction. The localized and limited dewatering of excavations would not cause significant ground subsidence or collapse. Therefore, potential impacts related to subsidence or soil collapse would be less than significant.

Dynamic densification (settlement) can occur when non-saturated, cohesionless soil is densified by earthquake vibrations. The Preliminary Geotechnical Investigation<sup>24</sup> estimated that total settlement of about 0.25 inches could occur at the ground surface due to severe ground shaking caused by a major earthquake. Final grading, foundation, and building plans must be designed in accordance with the 2016 CBC and recommendations of a design-level geotechnical report as required by Mitigation Measure GEO-1. These designs would include measures that would address, as necessary, the potential for surface settlement. Therefore, potential impacts associated with dynamic settlement would be less than significant with implementation of Mitigation Measure GEO-1.

Lateral spreading occurs when a continuous layer of soil liquefies at depth and the soil layers above move toward an unsupported face, such as a break in grade, slope, or creek embankment. As discussed above, liquefiable soil has been identified in the subsurface of the project site. The proposed project would create free faces that could be susceptible to lateral spreading including a retaining wall on the northwest side of the proposed building, a landscaped slope on the northeast side of the proposed building, and earthen creek embankments along the relocated creek.

Implementation of Mitigation Measure GEO-1 would ensure that potential lateral spreading impacts would be addressed. Preparation of a design-level geotechnical report which includes an evaluation of the potential for lateral spreading and implementation of geotechnical recommendations for grading activities, ground improvement, foundations, and retaining walls, as required by Mitigation Measure GEO-1, would ensure that potential impacts related to lateral spreading would be less than significant.

**Expansive Soils.** Expansive soils are characterized by the potential for shrinking and swelling as the moisture content of the soil decreases and increases, respectively. Shrink-swell potential is influenced by the amount and type of clay minerals present and can be measured by the percent

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<sup>24</sup> Ibid.

change of the soil volume. As a consequence of such volume changes, structural damage to buildings and infrastructure can occur if potentially expansive soils are not considered in project design and during construction. The Preliminary Geotechnical Investigation<sup>25</sup> indicates that surface soil at the project site generally consists of sandy lean clay; however, the expansion potential of soil at the project site was not discussed in the Preliminary Geotechnical Investigation. The City's General Plan indicates that the project site is underlain by moderately expansive soil.<sup>26</sup>

Implementation of Mitigation Measure GEO-1 would ensure that potential impacts related to expansive soils would be addressed. Preparation of a design-level geotechnical report which includes an evaluation of the potential for expansive soils to be present at the project site, and implementation of geotechnical recommendations to address expansive soil, as required by Mitigation Measure GEO-1, would ensure that potential impacts related to expansive soil would be less than significant.

**Alternative Wastewater Disposal Systems.** The proposed project would connect to the existing wastewater infrastructure within the vicinity of the project site and would not involve the use of septic tanks or alternative waste water disposal systems. Therefore, no impact would occur.

**Paleontological Resources.** There is no documentation that suggests paleontological resources are present within the project site. The San Bruno General Plan Draft EIR notes that small marine and nonmarine invertebrate fossils may be present east of I-280.<sup>27</sup> Therefore, because the project site is located east of I-280, there is a possibility that construction activities could uncover paleontological resources beneath the surface.

**Impact GEO-2: Construction of the proposed project could directly or indirectly destroy a previously unknown paleontological resource or a unique geologic feature. (S)**

Implementation of the following mitigation measure would ensure that potential impacts to paleontological resources would be reduced to a less-than-significant level.

**Mitigation Measure GEO-2:** If paleontological resources are encountered during site preparation or grading activities, all work within 25 feet of the discovery shall be redirected until a qualified paleontologist has assessed the discoveries and made recommendations. Paleontological resources include fossil plants and animals, and evidence of past life such as trace fossils and tracks.

If the paleontological resources are found to be significant, adverse effects to such resources shall be avoided by project activities to the extent feasible. If project activities cannot avoid the resources, the adverse effects shall be mitigated in accordance with CEQA Guidelines Section 15126.4(b)(3). Mitigation may include data recovery and analysis, preparation of a final report, and the formal

<sup>25</sup> Ibid.

<sup>26</sup> San Bruno, City of, 2009. *San Bruno General Plan. Health and Safety Element.*

<sup>27</sup> San Bruno, City of, 2008. *San Bruno 2025: General Plan Draft Environmental Impact Report.* December.

transmission or delivery of any fossil material recovered to a paleontological repository, such as the University of California Museum of Paleontology (UCMP). Upon completion of project activities, the final report shall document methods and findings of the mitigation and be submitted to the City's Community and Economic Development Department for the project file and a suitable paleontological repository. (LTS)

Implementation of Mitigation Measure GEO-2 would ensure that any potential paleontological resources encountered during project construction activities would be appropriately treated in accordance with statutory regulations. Therefore, this impact would be less than significant.

#### 4.6.2.3 Cumulative Impacts

The proposed project would not contribute considerably to any cumulative impacts related to geology, soils, and seismicity. Development of the proposed project in conjunction with other past, present, and reasonable foreseeable future development would increase the number of individuals that could be exposed to regional seismic risks in the seismically active San Francisco Bay Area. However, this cumulative risk would be reduced to a less-than-significant level through the implementation of the requirements of modern building codes and practices. New structures could be built on areas susceptible to liquefaction or expansive and/or unstable soils. However, these impacts are confined to specific development site (i.e., they would not contribute to any cumulative impacts) and are not expected to be significant once incorporation of standard geotechnical mitigation measures have been implemented.

Other approved or probable future projects within the City may be located near known paleontological sites, and ground disturbance associated with these projects could result in potentially significant impacts on unidentified paleontological sites unearthed during ground disturbance. However, impacts on resources accidentally discovered during implementation of these projects would be mitigated to less-than-significant levels with appropriate mitigation measures adopted as conditions of approval. Collectively, recent past, approved, and probable future projects that may occur in the vicinity—including the proposed project—would not result in a cumulative increase in impacts on paleontological resources, as these resources would be avoided or otherwise removed, analyzed, and reported.

When the City considers future development proposals, these proposals would undergo environmental review pursuant to CEQA and, when necessary, mitigation measures would be adopted as appropriate. In most cases, this environmental review and compliance with project conditions of approval and relevant policies of the General Plan would ensure that significant impacts on geology and soils would be avoided or otherwise mitigated to less-than-significant levels.

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## 4.7 HAZARDS AND HAZARDOUS MATERIALS

This section provides an overview of the potential presence of hazardous materials and other public health hazards on and near the proposed project site and assesses potential impacts to public health and safety and the environment that could result from implementation of the proposed project. Potential impacts related to hazardous conditions associated with implementation of proposed project are described, and mitigation measures are identified, where required.

### 4.7.1 Setting

This section describes the existing conditions related to hazardous materials at and near the proposed project site, as well as applicable regulatory agency framework and local policies.

#### 4.7.1.1 Potential Sources of Hazardous Materials at and Near the Project Site

The closest potential sources of hazardous materials within the vicinity of the site include gasoline stations and automobile repair facilities located approximately 0.4 miles east of the project site along El Camino Real.<sup>1</sup> Several of these sites are either being investigated, including 100 and 1799 El Camino Real, or have been granted case closure, including 170 and 200 El Camino Real. Based on the extent of impacts and distance, the hazardous materials release at these sites are unlikely to have affected the project site.

An Asbestos and Lead Report<sup>2</sup> was prepared for the Veterans Memorial building and pool which indicates that asbestos containing materials (ACMs), lead-containing paint (LCP), and lead-based paint (LBP) are present in structures on the project site. The Asbestos and Lead Report indicated the following:

- Pool tiles and lining could not be sampled and these materials should be sampled for asbestos when out of service;
- The Asbestos and Lead Report was a limited survey and is not a comprehensive inspection or evaluation. An expanded, comprehensive asbestos survey should be conducted at the project site if renovation or demolition activities are expected to impact any building materials other than those specifically addressed in the Asbestos and Lead Report; and,
- Because the survey was conducted in an occupied building, intrusive inspection methods were limited.

Fill material was encountered beneath the project site during geotechnical investigation activities.<sup>3</sup> There is no documentation available regarding the source and quality of this fill material. It is common for fill material historically placed along the margins of San Francisco Bay to include

<sup>1</sup> California State Water Resources Control Board, 2015. GeoTracker. Website: [geotracker.waterboards.ca.gov/](http://geotracker.waterboards.ca.gov/) (accessed September 13, 2019).

<sup>2</sup> ProTech, 2019. *Asbestos and Lead (Pb) Report, Limited Pre-Demolition/Renovation Survey & Evaluation, San Bruno Aquatic & Recreation Center, San Bruno, California*. February 26.

<sup>3</sup> ROMIG Engineers, Inc., 2019. *Preliminary Geotechnical Investigation, San Bruno Recreation & Aquatic Center, 251 City Park Way, San Bruno, California 94066*. May 9.

construction debris and rubble in the fill. It is possible that these fill materials could be impacted with hazardous materials.

#### 4.7.1.2 Regulatory Framework

The use, storage, and disposal of hazardous materials – including management of contaminated soils and groundwater – is regulated by numerous federal, State, and local laws and regulations. Federal, State, and regional agency’s jurisdiction in the management of hazards and hazardous materials, as applicable to the proposed project, is described below.

**Federal.** At the federal level, the United States Environmental Protection Agency (USEPA) administers hazardous materials and hazardous waste regulations, the Occupational Safety and Health Administration (OSHA) regulates worker safety related to hazardous materials handling, and the United States Department of Transportation (DOT) regulates hazardous waste transportation.

**United States Environmental Protection Agency.** The USEPA is the agency responsible for enforcement and implementation of federal laws and regulations pertaining to hazardous materials and hazardous waste. The federal regulations are primarily codified in Title 40 of the Code of Federal Regulations (CFR). The legislation includes the Resource Conservation and Recovery Act of 1976 (RCRA); the Superfund Amendments and Reauthorization Acts of 1986; and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980. The USEPA provides oversight for site investigation and remediation projects, and has developed protocols for sampling, testing, and evaluation of solid wastes.<sup>4</sup>

**Occupational Safety and Health Administration.** Worker health and safety is regulated at the federal level by OSHA. The federal Occupational Safety and Health Act of 1970 authorizes the states to establish their own safety and health programs with OSHA approval. Worker health and safety protections in California are regulated by the California Occupational Safety and Health Administration (Cal/OSHA), as described below. California standards for workers dealing with hazardous materials are contained in Title 8 of the California Code of Regulations (CCR); they include practices for all industries (General Industrial Safety Orders), as well as specific practices for construction. Workers at hazardous waste sites (or workers who may be exposed to hazardous wastes that might be encountered during excavation of contaminated soils) must receive specialized training and medical supervision according to OSHA Hazardous Waste Operations and Emergency Response regulations. Additional regulations have been developed for construction workers potentially exposed to lead and asbestos. Cal/OSHA enforcement units conduct on-site evaluations and issue notices of violation to enforce necessary improvements to health and safety practices.

**Department of Transportation.** In 1990 and 1994, the federal Hazardous Material Transportation Act was amended to improve the protection of life, property, and the environment from the inherent risks of transporting hazardous material in all major modes of commerce. The DOT developed hazardous materials regulations, which govern the classification, packaging,

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<sup>4</sup> U.S. Environmental Protection Agency, 2017. Hazardous Waste Test Methods/ SW-846, updated April 24, 2019. Website: [www.epa.gov/hw-sw846](http://www.epa.gov/hw-sw846) (accessed September 10, 2019).

communication, transportation, and handling of hazardous materials, as well as employee training and incident reporting. The transportation of hazardous materials is subject to both RCRA and DOT regulations. The California Highway Patrol, Caltrans, and the Department of Toxic Substances Control (DTSC) are responsible for enforcing federal and State regulations pertaining to the transportation of hazardous materials.

**State Agencies.** At the State level, the California Environmental Protection Agency (CalEPA), which includes DTSC and the State Water Board (which operates via nine Regional Water Quality Control Boards [Regional Water Boards]) administers hazardous materials and hazardous waste regulations, the California Air Resources Board (CARB) regulates air pollution control programs, and Cal/OSHA regulates worker safety related to hazardous materials handling.

**Department of Toxic Substances Control.** In California, the DTSC is authorized by the USEPA to enforce and implement federal hazardous materials laws and regulations. California regulations pertaining to hazardous materials are equal to or exceed the federal regulation requirements. Most State hazardous materials regulations are contained in Title 22 of the CCR. The DTSC generally acts as the lead agency for soil and groundwater cleanup projects that affect public health and establishes cleanup levels for subsurface contamination that are equal to or more restrictive than federal levels. The DTSC has also developed land disposal restrictions and treatment standards for hazardous waste disposal in California.

**State Water Resources Control Board.** The State Water Board enforces regulations on implementation of UST programs. It also allocates funding to eligible parties that request reimbursement of costs to clean up soil and groundwater pollution from underground storage tank (UST) leaks. The State Water Board also enforces the Porter-Cologne Water Quality Act through its nine Regional Water Boards, including the Regional Water Board, described below.

**California Air Resources Board.** This agency is responsible for coordination and oversight of State and local air pollution control programs in California, including implementation of the California Clean Air Act of 1988. CARB has developed State air quality standards and is responsible for monitoring air quality in conjunction with the local air districts.

**California Occupational Safety and Health Administration.** Worker health and safety protections in California are regulated by Cal/OSHA. California standards for workers dealing with hazardous materials are contained in Title 8 of the CCR; they include practices for all industries (General Industrial Safety Orders), as well as specific practices for construction. Workers at hazardous waste sites (or workers who may be exposed to hazardous wastes that might be encountered during excavation of contaminated soils) must receive specialized training and medical supervision according to OSHA Hazardous Waste Operations and Emergency Response regulations. Additional regulations have been developed for construction workers potentially exposed to lead and asbestos. Cal/OSHA enforcement units conduct on-site evaluations and issue notices of violation to enforce necessary improvements to health and safety practices.

**Regional and Local Agencies.** The following regional and local agencies have regulatory authority over the proposed project's management of hazardous materials and hazards.

**San Francisco Bay Regional Water Quality Control Board.** The nine Regional Water Boards provide for the protection of Waters of the State in accordance with the Porter-Cologne Water Quality Act of 1969. The Regional Water Board can act as lead agency to provide oversight of sites in Region 2 where the quality of groundwater or surface waters is threatened. It has the authority to require investigations and remedial actions. The Regional Water Board has developed Environmental Screening Levels (ESLs) to help expedite the preparation of environmental risk assessments at sites where contaminated soil and groundwater have been identified. The Regional Water Board is currently the lead agency providing oversight of environmental investigation and cleanup activities for the project site.

**Bay Area Air Quality Management District.** The Bay Area Air Quality Management District (BAAQMD) has primary responsibility for control of air pollution from sources other than motor vehicles and consumer products (which are the responsibility of the USEPA and CARB). BAAQMD is responsible for preparing attainment plans for non-attainment criteria pollutants, control of stationary air pollutant sources, and the issuance of permits for activities including asbestos demolition and renovation activities (District Regulation 11, Rule 2).

**San Mateo County Environmental Health Services.** The San Mateo County Environmental Health Services (SMCEHS) is the primary agency responsible for local enforcement of State and federal laws pertaining to hazardous materials management. It has jurisdiction in San Bruno. SMCEHD is a Certified Unified Program Agency; it is responsible for the Hazardous Materials Business Plan Program; the local hazardous waste generator program; UST management; investigation of leaking USTs; oversight of remediation of contaminated sites; and the California Accidental Release Program for highly toxic, flammable, or explosive materials. SMCEHD also administers a County Household Hazardous Waste Program to educate the public about the dangers of toxic household wastes and to provide for proper disposal of household hazardous wastes.

**City/County Association of Governments of San Mateo County Airport Land Use Committee.** Land uses near the San Francisco International Airport (SFO), the nearest airport to the site, are regulated by the City/County Association of Governments (C/CAG) of San Mateo County Airport Land Use Committee (ALUC). The ALUC maintains and implements the Comprehensive Airport Land Use Compatibility Plan (ALUCP) for SFO. The ALUCP is intended to prevent development that is incompatible with airport operations and include specific regulations, such as height restrictions based on proximity to the airport and flight patterns.

**City of San Bruno General Plan.** The Health and Safety Element of the San Bruno General Plan contains the following policies related to hazardous materials.

- **Policy HS-24:** Control the transport of hazardous substances to minimize potential hazards to the local population. Identify appropriate regional and local routes for transportation of hazardous materials, and require that fire and emergency personnel can easily access these routes for response to spill incidents.
- **Policy HS-25:** Review and revise City regulations regarding manufacturing, storage, and usage of hazardous materials as necessary to minimize potential hazards.

- **Policy HS-28:** Require that lead-based paint and asbestos surveys be conducted by qualified personnel prior to structural demolition or renovation, in buildings constructed prior to 1980.
- **Policy HS-29:** Require abatement of lead-based paint and asbestos prior to structural renovation and demolition, and compliance with all State, federal, OSHA, Bay Area Air Quality Management District, and San Mateo County Health, Environmental Health Division rules and regulations.

The Public Facilities and Services Element of the San Bruno General Plan contains the following policies related to fire and emergency preparedness.

- **Policy PFS-30:** Require installation and maintenance of fire protection measures in high-risk and urban-interface areas, including but not limited to:
  - Proper siting, road and building clearances, and access;
  - Brush clearance (non-fire resistant landscaping 50 feet from structures);
  - Use of fire resistive materials (pressure-impregnated, fire resistive shingles or shakes);
  - Landscaping with fire restrictive species; and
  - Installation of early warning systems (alarms and sprinklers).
- **Policy PFS-34:** Identify and remove mature and/or diseased Eucalyptus trees in rights-of-way and other open areas, if they pose a fire hazard or other threat to health and safety.

#### 4.7.2 Impacts and Mitigation Measures

This section discusses potential impacts to public health that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds used to determine whether an impact is significant. The latter part of this section presents the impacts associated with the proposed project and identifies mitigation measures, as appropriate.

##### 4.7.2.1 Criteria of Significance

A significant hazardous material or public health and safety impact would occur if the proposed project would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- 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;

- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- 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;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

#### 4.7.2.2 Project Impacts

The following section describes the potential impacts of the project related to hazards and hazardous materials. Potential impacts are differentiated between the construction and operation phases of the project, where applicable.

**Routine Transportation, Use, or Disposal of Hazardous Materials.** Hazardous materials (e.g., fuel, oils, and paints) would be routinely transported, stored, and used at the project site during construction activities. The routine transportation, storage, and use of hazardous materials such as pool treatment chemicals, cleaning products, and fertilizers may also occur during operation of the proposed project. The routine transportation, use, and disposal of hazardous materials during construction and operation may pose health and safety hazards to workers if the hazardous materials are improperly handled, or to nearby residents and the environment if the hazardous materials are accidentally released into the environment. Potential impacts associated with accidental releases of hazardous materials into the environment are discussed below.

The routine handling and use of hazardous materials by construction workers would be performed in accordance with OSHA regulations, which include training requirements for construction workers and a requirement that hazardous materials are accompanied by manufacturer's Safety Data Sheets (SDSs). Cal/OSHA regulations include requirements for protective clothing, training, and limits on exposure to hazardous materials. Compliance with these existing regulations would ensure that construction workers are protected from exposure to hazardous materials that may be used on site.

Because the proposed project would result in soil disturbance greater than 1 acre, management of hazardous materials during construction activities would be subject to the requirements of the Construction General Permit (described in detail under Section 4.8, Hydrology and Water Quality of this EIR), which requires preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes hazardous materials storage requirements. For example, construction site

operators must store chemicals in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed).

Construction of the proposed project would result in the generation of various waste materials that would require recycling and/or disposal, including some waste materials that would be classified as hazardous waste. Hazardous materials would be transported by a licensed hazardous waste hauler and disposed of at facilities that are permitted to accept such materials as required by the DOT, federal RCRA, and State regulations.

Chapter 6.95 of the California Health and Safety Code establishes minimum Statewide standards for Hazardous Materials Business Plans (HMBPs), and requires businesses to prepare an HMBP if the business uses, handles, or stores a hazardous material and/or waste or an extremely hazardous material in quantities greater than or equal to: 55 gallons for a liquid, 500 pounds of a solid, 200 cubic feet for any compressed gas, or the threshold planning quantities of an extremely hazardous substance. HMBPs must include facility information, a Hazardous Materials Inventory Statement, an Emergency Response Plan, and an Emergency Response Training Plan. HMBPs have to be re-certified for completeness and accuracy every year or updated and revised as necessary. The SMCEHS is the administrative agency that coordinates and enforces numerous local, State, and federal hazardous materials management and environmental protection programs in San Mateo County, including the HMBP program. If the proposed project would result in the storage of hazardous material (e.g., pool treatment chemicals) in quantities greater than or equal to those listed above, an HMBP would be prepared for operation of the project and submitted it to SMCEHS.

Compliance with existing regulations described above would ensure that potential impacts from the routine transport, use, or disposal of hazardous materials during construction and operation of the proposed project would be less than significant.

**Accidental Release of Hazardous Materials.** An accidental release of hazardous materials (e.g., oils, fuels, solvents, paints, or contaminated soil) during project construction could result in exposure of construction workers, the public, and/or the environment to hazardous materials. As discussed above, the proposed project would be subject to the requirements of the Construction General Permit, which requires preparation and implementation of a SWPPP to reduce the risk of spills or leaks from reaching the environment, including procedures to address minor spills of hazardous materials. Measures to control spills, leakage, and dumping must be addressed through structural as well as nonstructural best management practices (BMPs), as required by the Construction General Permit. For example, equipment and materials for cleanup of spills must be available on site, and spills and leaks must be cleaned up immediately and disposed of properly. BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

As discussed above, the transportation of hazardous materials is subject to both RCRA and DOT regulations. If a discharge or spill of hazardous materials occurs during transportation, the transporter is required to take appropriate immediate action to protect human health and the environment (e.g., notify local authorities and contain the spill), and is responsible for the discharge cleanup.

Construction of the project would involve demolition of the existing Veterans Memorial building and pool, which could result in the disturbance and release of hazardous building materials including asbestos containing materials (ACMs), lead containing paint (LCP), lead-based paint (LBP),<sup>5</sup> and polychlorinated biphenyls (PCBs) containing equipment and material. As noted above, the Asbestos and Lead Report prepared for the Veterans Memorial building and pool indicates that ACMs, LCP, and LBP are present in structures on the project site.

The project would be required to comply with the State's construction lead standard (Title 8, CCR, Section 1532.1) which would ensure that handling of demolition debris that could contain lead would not result in the release of lead into the environment. Contractors whose employees disturb more than 100 square feet of LBP, are required to submit written notification to Cal/OSHA 24 hours in advance of any LBP disturbance (per Health and Safety Code, Title 17 CCR Section 36000 (c)).

Section 19827.5 of the California Health and Safety Code requires that local agencies not issue demolition or alteration permits until an applicant has demonstrated compliance with notification requirements under applicable federal regulations regarding hazardous air pollutants, including asbestos. When asbestos is identified, Bay Area Air Quality Management District (BAAQMD) Regulation 11-2-401.3 requires notification to be made to BAAQMD prior to demolition activities.

Hazardous building materials removed during construction must be transported in accordance with DOT regulations and disposed of in accordance with RCRA and State regulations at a facility permitted to accept the wastes.

Evaluation of the project site for the presence of PCBs containing equipment and material has not been performed. PCBs were historically used as coolants and lubricants in transformers, capacitors, heating/cooling equipment, and other electrical equipment, and were also used as plasticizers in paints, plastics, rubber products, and caulking. PCBs have been demonstrated to cause cancer and a variety of other adverse health effects in animals, including effects on the immune system, reproductive system, nervous system, and endocrine system. Although manufacturing of PCBs has been banned in the United States since 1979, they may still be found in older electrical equipment and other building materials such as light ballasts and caulking. PCBs or PCBs-contaminated items require proper off-site transport and disposal at a facility that can accept such wastes, in accordance with the Toxic Substances Control Act of 1976 and other federal and State regulations. PCBs in manufactured materials such as caulking may also move directly into adjoining materials, particularly porous materials such as wood, concrete, and other types of masonry.<sup>6</sup>

The USEPA has indicated that there was potential widespread use of PCB-containing building materials in buildings built or renovated between about 1950 and 1979. Prior to removal, USEPA recommends PCB testing of caulk and other building materials that are going to be removed to

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<sup>5</sup> Lead Based Paint contains at least 1 milligram per square centimeter or 0.5 percent by weight of lead, while LCP contains lead below these thresholds.

<sup>6</sup> U.S. Environmental Protection Agency, 2015a. PCBs in Building Materials – Questions & Answers. July 28. Available online at: [www.epa.gov/sites/production/files/2016-03/documents/pcbs\\_in\\_building\\_materials\\_questions\\_and\\_answers.pdf](http://www.epa.gov/sites/production/files/2016-03/documents/pcbs_in_building_materials_questions_and_answers.pdf) (accessed April 9, 2019).

determine what protections are needed during removal and to determine proper disposal requirements.<sup>7</sup>

While electrical equipment and lighting ballasts that may contain PCBs can be readily identified; PCBs-containing building materials such as caulking, specialized paints, mastics and other adhesives would require testing to evaluate whether these materials contain PCBs; however, there are no existing regulations that require testing to identify PCBs in building materials. The Veterans Memorial building was constructed in 1955, therefore PCBs-containing building materials may be present at the project site.

**Impact HAZ-1: Demolition of the existing buildings on the project site could result in the release of PCBs into the environment. (S)**

The project would be required to properly handle and dispose of electrical equipment, lighting ballasts, and other building materials that may be identified to contain PCBs, in accordance with the Toxic Substances Control Act and other federal and State regulations; however, if testing for PCBs in building material is not performed prior to demolition activities, the improper handling of potential PCBs-containing materials could result in the release of PCBs into the environment. Implementation of Mitigation Measures HAZ-1, described below, and compliance with existing regulations would ensure that potential impacts related to accidental releases of hazardous materials would be less than significant.

**Mitigation Measure HAZ-1:** Prior to the issuance of any demolition permits for existing structures on the project site, a comprehensive Hazardous Building Materials Survey (HBMS) for the project site shall be prepared and signed by a qualified environmental professional, documenting the presence or lack thereof of asbestos-containing materials, lead containing paint, lead based paint, PCBs containing equipment and materials, and any other hazardous building materials. The HBMS and abatement specifications shall be submitted to and approved by the City prior to the start of abatement activities. The HBMS shall include abatement specifications for the stabilization and/or removal of the identified hazardous building materials in accordance with all applicable laws and regulations. The demolition contractor(s) shall implement the abatement specifications and submit to the City evidence of completion of abatement activities prior to demolition of the existing structures. (LTS)

Implementation of Mitigation Measure HAZ-1 would ensure that potential impacts associated with the presence of hazardous materials, particularly PCBs, would be reduced to a less-than-significant level by ensuring that any such materials are appropriately handled, treated, and disposed of prior

<sup>7</sup> U.S. Environmental Protection Agency, 2015b. Practical Actions for Reducing Exposure to PCBs in Schools and Other Buildings. Available online at: [www.epa.gov/sites/production/files/2016-03/documents/practical\\_actions\\_for\\_reducing\\_exposure\\_to\\_pcb\\_in\\_schools\\_and\\_other\\_buildings.pdf](http://www.epa.gov/sites/production/files/2016-03/documents/practical_actions_for_reducing_exposure_to_pcb_in_schools_and_other_buildings.pdf) (accessed April 9, 2019).

to and during demolition activities, thereby ensuring that construction workers and the general public are not exposed to hazardous conditions associated with the presence/disturbance of such materials.

**Hazardous Materials within a Quarter Mile of Schools.** Active schools located within a quarter mile of the project site include Parkside Intermediate, a public middle school located at 1801 Niles Avenue, approximately 300 feet northwest of the project site; and St. Robert, a private elementary school located at 345 Oak Avenue, approximately 300 feet north of the project site. El Crystal Elementary School was located at 201 North Balboa Way, approximately 350 feet southwest of the project site, and was closed in June 2018.<sup>8</sup> However, the El Crystal Elementary School site may be used as a private preschool in the future, and therefore is considered to be active for the purposes of this analysis. The proposed project would not involve the handling of acutely hazardous materials. Implementation of Mitigation Measures HAZ-1 and compliance with existing regulations would ensure that potential impacts related to handling of hazardous materials within a quarter mile of schools would be less than significant.

**Hazardous Materials Sites Listed Pursuant to Government Code Section 65962.5.** The project site is not included on any of the lists of hazardous materials release sites compiled pursuant to Government Code Section 65962.5, also known as the "Cortese List".<sup>9</sup> Therefore, the proposed project would not result in impacts related to being included on a list of hazardous materials release sites compiled pursuant to Government Code Section 65962.5.

**Airport Safety Hazards.** The project site is located approximately 4,500 feet west of SFO. The project site is located within Airport Influence Areas (AIAs) A and B of SFO, and is located within the boundary of the 14 CFR Part 77 Conical Surface of SFO.<sup>10</sup> The project site is located outside of the 60 decibel Community Noise Equivalent Level contour forecast for 2020 for SFO,<sup>11</sup> and therefore exposure to excessive aviation noise would not occur at the project site. The AIA A covers all of San Mateo County and is the area within which real estate disclosure requirements of State law apply. All properties within AIA B require review by the Airport Land Use Commission for major planning actions as specified in the Airport Land Use Compatibility Plan. Typically these actions are for rezoning and General Plan amendments. The proposed building is located in an area where the terrain penetrates the Airspace Surface (a surface rising 1-foot vertically for every 100 horizontal feet from the nearest point of the nearest runway within the boundary of the 14 CFR Part 77 Conical Surface), which requires that Federal Aviation Administration (FAA) Form 7460-1, Notice of Proposed Construction or Alteration, be filed with the FAA at least 30 days prior to construction so

<sup>8</sup> California Department of Education, 2019. California School Directory, Website: [www.cde.ca.gov/SchoolDirectory](http://www.cde.ca.gov/SchoolDirectory) (accessed May 14, 2019).

<sup>9</sup> California Environmental Protection Agency, 2019. Cortese List data Resources. Website: [calepa.ca.gov/sitecleanup/corteselist](http://calepa.ca.gov/sitecleanup/corteselist) (accessed on May 15, 2019).

<sup>10</sup> City/County Association of Governments of San Mateo County, 2012. *Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport*, November.

<sup>11</sup> Ibid.

that the project can be reviewed for aviation compatibility, or a signed exemption form pursuant to 14 CFR Part 77.9(b) be submitted prior to construction.<sup>12</sup>

Based on the height of the proposed building and the types of improvements proposed as part of the project, the project would not be expected to interfere with aviation. Compliance with the FAA regulations described above would ensure that the proposed project would not result in a safety hazard related to aviation.

**Emergency Response and Evacuation Plans.** The County of San Mateo adopted the Countywide Emergency Operations Plan (EOP) in May 2015.<sup>13</sup> The EOP does not designate specific roadways as evacuation routes, and instead empowers law enforcement resources to designate evacuation scheduling and routes in the event of an emergency. Roadways that could serve emergency response and evacuation routes in the vicinity of the project site include Crystal Springs Road, City Park Way, De Soto Way, and Santa Lucia Avenue. The proposed project would not impact these roadways with the exception that it would require temporary closures of City Park Way for construction activities within or adjacent to the existing City Park Way alignment, and for the relocation of a portion of the City Park Way alignment. Traffic control requirements imposed by the City for the permitting of temporary closure of street areas, such as detour signs directing vehicular traffic to use alternate routes in the event of an emergency, would ensure that appropriate emergency access is maintained to the project site and surrounding areas at all times during construction activities.

The existing Veterans Memorial building is currently used as an emergency resource center that provides services to the community during emergency situations. The proposed SBRAC would also be used as an emergency resource center, as noted in Section 3.0, Project Description. Construction of the proposed project would result in the temporary closure of the existing resource center. However, there is an existing Red Cross Shelter located at 975 Sneath Lane, and other public facilities, such as schools and universities, could be used in a similar capacity in the event of an emergency. Therefore, the project would have a less-than-significant impact related to interfering with emergency response and evacuation.

**Wildland Fire.** The project site and adjacent areas are not located in a Very High Fire Hazard Severity Zone as mapped by the California Department of Forestry and Fire Protection (CAL Fire);<sup>14</sup> however the project site and adjacent areas includes areas of dense vegetation and trees (including highly flammable Eucalyptus trees), particularly on the northwest side of the proposed building and in the western portion of the project site. The City's General Plan indicates that the project site is located within a Wildland/Urban Interface Hazard Area for wildland fire, and that Junipero Serra Park, which is adjacent to and west of the project site, is a Wildland Fire Hazard Area.<sup>15</sup>

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<sup>12</sup> Ibid.

<sup>13</sup> San Mateo, County of, 2015. *County of San Mateo Emergency Operations Plan*. May 22.

<sup>14</sup> CAL Fire, 2008. San Mateo County, Very High Fire Hazard Severity Zones in LRA, November 24.

<sup>15</sup> San Bruno, City of, 2009. *General Plan, Chapter 8, Public Facilities and Services Element*. Adopted March 24.

**Impact HAZ-2: Construction and operation of the proposed project could temporarily and permanently increase fire risks. (S)**

Construction of the project would use construction equipment that could generate sparks and storage and use of flammable/combustible materials (e.g., fuel and wood) which would temporarily increase fire risks. Operation of the project would also involve the use of land scape/vegetation management equipment that could generate sparks and increase fire risks. If vegetation on the project site is not appropriately managed, the project could increase the risk of fire spreading on the project site and from the project site to surrounding areas. Implementation of Mitigation Measures HAZ-2a and HAZ-2b, described below, would ensure that the proposed project would result in less than significant impacts related to wildfires.

**Mitigation Measure HAZ-2a:** Construction contractors shall ensure spark arrestors are fitted on all construction vehicles and equipment to minimize the potential for accidental ignition of construction materials and vegetation and shall store flammable/combustible materials away from vegetated areas and structures.

**Mitigation Measure HAZ-2b:** The City shall develop a Vegetation Management and Fire Prevention Plan and shall implement the approved Plan during construction and operation of the proposed project. The Vegetation Management and Fire Prevention Plan shall include, at a minimum, the following measures:

- Use of spark arrestors on all vehicles and equipment used for landscape and vegetation management;
- Schedule for removal of vegetation overhanging roof areas;
- Schedule for removal of leaves and needles from roofs;
- Planting and placement of fire-resistant plants near the structure and phasing out flammable vegetation;
- Schedule for trimming back vegetation around windows;
- Pruning the lower branches of tall trees
- Clearing out ground-level brush and debris; and,
- Storing combustible materials away from vegetated areas. (LTS)

Implementation of Mitigation Measures HAZ-2a and HAZ-2b would ensure that the potential for wildland fires to occur either during project construction or operation would be reduced to the extent feasible; therefore, this impact would be less than significant.

#### 4.7.2.3 Cumulative Impacts

As discussed above, accidents involving hazardous materials releases or building materials that may be impacted with hazardous materials during construction activities could result in adverse effects to construction workers, the public, or the environment. Occurrence of a cumulative effect would require that multiple projects released hazardous materials at the same time in close proximity to each other. Compliance with existing regulations and implementation of Mitigation Measure HAZ-1 would ensure that potential construction period impacts associated with releases of hazardous materials or soil disturbances that may be impacted with hazardous materials are less than significant. Each site, including the proposed project, would be required to comply with existing hazardous materials regulations to reduce the risk of impacts associated with hazardous materials releases. Similarly, occurrence of a cumulative effect related to wildland fire risk would require multiple projects expose people or structures to significant risks. Compliance with Mitigation Measures HAZ-2a and HAZ-2b would ensure that potential construction and operation period impacts associated with wildland fire are less than significant. Therefore, the potential for impacts associated with hazardous materials releases or wildland fire from the proposed project to combine with impacts associated with hazardous materials releases or wildland fire from other sites is not cumulatively considerable.

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## 4.8 HYDROLOGY AND WATER QUALITY

This section describes the hydrologic environment of the proposed project, including surface receiving waters, groundwater, flooding, and water quality characteristics, based on information obtained from a review of available federal, State, and local agency documents. Potential impacts related to hydrology and water quality associated with implementation of the proposed project are described, and mitigation measures are identified, where required.

### 4.8.1 Setting

This section describes the existing climate, hydrology, and water quality conditions of the project site, as well as the applicable regulatory framework and local policies.

#### 4.8.1.1 Climate

The climate of the project vicinity is characterized as Mediterranean, with cool wet winters and warm dry summers. The closest climate monitoring station to the project site is located approximately 2.75 miles to the west of the project site at the San Francisco International Airport. Climate data at this station is available for the period between July 1, 1945 and June 9, 2016. The average annual high temperature is 73.4 degrees Fahrenheit (F), and the average annual low temperature is 42.6 degrees F. The mean annual rainfall at this station is 19.94 inches, and primarily occurs from October through April. During the period of record (1945 to 2016), annual rainfall has varied from approximately 19.94 inches (in 1976) to approximately 38.34 inches (in 1983), with a highest one-day precipitation total of approximately 5.59 inches on January 4, 1982. Analysis of long-term precipitation records indicates that wetter and drier cycles lasting several years are common in the region.<sup>1</sup>

#### 4.8.1.2 Surface Waters

The project site is located in the El Zanjón Creek Watershed, which drains approximately 1 square mile of the southern part of the City. El Zanjón Creek, which is the receiving water body for runoff from the project site, originates in Junipero Serra County Park, to the east of the project site, and is characterized by a relatively natural stream channel through Junipero Serra County Park.<sup>2</sup> Within San Bruno City Park and the project site, El Zanjón Creek flows through a concrete-lined channel until it enters an underground storm drain at the northeast corner of San Bruno City Park. This underground storm drain generally follows the alignment of Crystal Springs Road until El Zanjón Creek daylights in a concrete lined engineered channel located east of Highway 101.<sup>3</sup> El Zanjón Creek discharges to an earthen lined engineered channel west of US 101 which transitions into San Bruno Creek. San Bruno Creek discharges into Lower San Francisco Bay on the north side of San Francisco International Airport.

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<sup>1</sup> Western Regional Climate Center, 2018. Period of Record Monthly Climate Summary, San Francisco International Airport, California. Website: [wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca7769](http://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca7769) (accessed August 20, 2019).

<sup>2</sup> San Bruno, City of, 2009. *San Bruno General Plan, Chapter 7, Health and Safety Element*. Adopted March 24.

<sup>3</sup> Ibid.

#### 4.8.1.3 Flooding

As shown in Figure 4.8-1, Federal Emergency Management Agency (FEMA) mapping indicates that the majority of the project site is located in Zone D, an area where the flood risk is undetermined but possible.<sup>4</sup> However, the southwestern portion of the project site is located in Zone X, an area of minimal flood hazard (i.e. not within 100-year or 500-year flood hazard zones), as mapped by the FEMA.

The Health and Safety Element of the City's General Plan indicates that the central and eastern portions of the project site and a portion of Crystal Springs Road adjacent to the north of the project site are located in a potential flood zone.<sup>5</sup> The General Plan indicates that flooding is known to occur in this area because of inadequate stormwater drainage at times of heavy rains and high tide. Although proposed improvements to the City's off-site stormwater drainage systems would substantially reduce the City's flooding problem, inundation of some problem areas could still be expected during a 25-year storm event.

#### 4.8.1.4 Seiche and Tsunami

Tsunamis are large ocean waves generated by displacement of the sea flow by tectonic activity, such as shallow earthquakes, sea floor landslides, rock falls, and exploding volcanic islands. Tsunamis can inundate areas near the coastline. According to the *Tsunami Inundation Map for Emergency Planning, San Francisco South Quadrangle*, the project site is not within a tsunami inundation area.<sup>6</sup>

A seiche is the oscillation of a body of water. Seiches occur most frequently in enclosed or semi-enclosed basins such as lakes, bays, or harbors. They can be triggered in an otherwise still body of water by strong winds, changes in atmospheric pressure, earthquakes, tsunamis, or tides. Triggering forces that set off a seiche are most effective if they operate at specific frequencies relative to the size of an enclosed basin. San Andreas Lake is the nearest water body to the project site, located up-gradient approximately one mile southwest of the project site. In the area between San Andreas Lake and the project site there are two ridges that are at higher elevation than San Andreas Lake, and Interstate 280 (I-280) is located between these two ridges. If a major seiche occurred in San Andreas Lake and overtopped the first ridge adjacent to its east, the flooding would be diverted away from the project site by I-280 and the second ridge to its east.

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<sup>4</sup> Federal Emergency Management Agency, 2019. Flood Insurance Rate Maps, Map Number 06081C0131F, effective April 5.

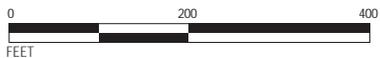
<sup>5</sup> San Bruno, City of, 2009, op. cit.

<sup>6</sup> California Emergency Management Agency, 2009. California Geological Survey and University of Southern California. *Tsunami Inundation Map for Emergency Planning, San Francisco South Quadrangle*. June 15.



FIGURE 4.8-1

LSA



-  Zone D: Area of Undetermined, But Possible Flood Risk
-  Zone X: Area of Minimal Flood Hazard
-  Project Site

San Bruno Recreation and Aquatic Center Project EIR  
Flood Hazard Zones

SOURCES: GOOGLE EARTH, 3/26/18; FEMA, 4/5/19; LSA, 2019.

P:\GRP1803 San Bruno Rec Center\PRODUCTS\Graphics\EIR\Figure 4.8-1.ai (1/22/2020)

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#### 4.8.1.5 Groundwater

The project site is located in the Westside Groundwater Basin.<sup>7</sup> The South Westside Basin underlies approximately 25 square miles and provides groundwater to Colma, Daly City, San Bruno, South San Francisco, unincorporated areas, cemeteries, golf courses, and several smaller users. Sources of recharge to the groundwater basin include infiltration of rainfall, infiltration of irrigation water, and leakage from water and sewer pipes.<sup>8</sup>

During borings conducted as part of the Preliminary Geotechnical Investigation prepared for the project,<sup>9</sup> groundwater was measured at a depth of approximately 12 feet below ground surface (bgs) in 2 of the 11 borings. Groundwater was not encountered during the other 9 borings; however, depth of groundwater at those locations was inferred to be at approximately 25 to 27 feet bgs based on pore pressure dissipation tests. The historic high groundwater level is less than 10 feet bgs. Groundwater on the project site could fluctuate seasonally and from variations in rainfall and may be influenced by water seepage near El Zanjon Creek. According to the Preliminary Geotechnical Investigation and based on the available groundwater information, the highest projected groundwater level is approximately 5 feet bgs.

Although shallow groundwater is present on the project site, the primary production aquifer used for water supply is located at greater depth. The groundwater elevation in the primary production aquifer in the vicinity of the project site is approximately 190 feet below sea level,<sup>10</sup> and the elevation of the project site is approximately 70 feet above sea level;<sup>11</sup> therefore, the depth to groundwater in the primary production aquifer in the vicinity of the project site is approximately 260 feet below the ground surface.

The South Westside Basin groundwater aquifer provides up to 50 percent of some localities' water supplies. In 2010, 59 percent of the City of San Bruno's total water use consisted of groundwater. The South Westside Basin Groundwater Management Plan (GWMP) indicates that a municipal groundwater well (identified as SB-18) which produced between 250 and 500 acre feet of water in 2008 is located near the project site (the well is located at the intersection of Crystal Springs Road and Cypress Avenue, approximately 350 to the northeast of the project site).<sup>12</sup>

#### 4.8.1.6 Water Quality

Surface and groundwater quality within the project area is described below.

**Surface Water Quality.** The State Water Resources board (SWRCB) compiles a list of impaired water bodies in California pursuant to Section 303(d) of the Clean Water Act. Surface waters listed on the

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<sup>7</sup> WRIME, 2012. *South Westside Basin Groundwater Management Plan*. July.

<sup>8</sup> California Department of Water Resources, 2006. California's Bulletin 118. San Francisco Bay Hydrologic Region, Westside Groundwater Basin. January.

<sup>9</sup> ROMIG Engineers, Inc., 2019. *Preliminary Geotechnical Investigation, San Bruno Recreation & Aquatic Center, 251 City Park Way, San Bruno, California 94066*. May 9.

<sup>10</sup> WRIME, 2012, op. cit.

<sup>11</sup> ROMIG Engineers, Inc., 2019, op. cit.

<sup>12</sup> WRIME, 2012, op. cit.

303(d) list of impaired waters are those whose beneficial uses are being compromised by poor water quality. El Zanjon Creek and San Bruno Creek are not listed as impaired on the 303(d) list. However, Lower San Francisco Bay is impaired by chlordane, dichlorodiphenyltrichloroethane (DDT), dieldrin, trash, mercury, polychlorinated biphenyls (PCBs), dioxin compounds (including 2,3,7,8-TCDD), furan compounds, invasive species, and dioxin-like PCBs.

**Groundwater Quality.** According to the South Westside Basin Groundwater Management Plan, the most prominent water quality concerns in the Westside Groundwater Basin Groundwater Basin are iron, manganese, nitrate, and total dissolved solids.<sup>13</sup>

#### 4.8.1.7 Regulatory Context

Federal, State, and local regulations and plans related to hydrology and water quality for the area of the project site are described below.

**Federal Clean Water Act.** In 1972, the Federal Water Pollution Control Act (now referred to as the Clean Water Act [CWA]) was amended to require that the discharge of pollutants into waters of the United States from any point source be effectively prohibited unless the discharge is in compliance with an NPDES permit. In 1987, the CWA was again amended to require that the United States Environmental Protection Agency (EPA) establish regulations for the permitting of stormwater discharges (as a point source) by municipal and industrial facilities and construction activities under the NPDES permit program. The regulations require that Municipal Separate Storm Sewer System (MS4) discharges to surface waters be regulated by an NPDES permit.

The CWA requires states to adopt water quality standards for water bodies and have those standards approved by the EPA. Water quality standards consist of designated beneficial uses for a particular water body (e.g., wildlife habitat, agricultural supply, fishing), along with water quality criteria necessary to support those uses. Water quality criteria are set concentrations or levels of constituents (e.g., lead, suspended sediment, and fecal coliform bacteria) or narrative statements that represent the quality of water that support a particular use. Because California had not established a complete list of acceptable water quality criteria for toxic pollutants, the EPA Region IX established numeric water quality criteria for toxic constituents in the form of the California Toxics Rule (CTR).

When designated beneficial uses of a particular water body are being compromised by water quality, Section 303(d) of the CWA requires that water body to be identified and listed as impaired. Once a water body has been deemed impaired, a Total Maximum Daily Load (TMDL) must be developed for each impairing water quality constituent. A TMDL is an estimate of the total load of pollutants from point, nonpoint, and natural sources that a water body may receive without exceeding applicable water quality standards (often with a “factor of safety” included, which limits the total load of pollutants to a level well below that which could cause the standard to be exceeded). Once established, the TMDL is allocated among current and future dischargers into the water body.

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<sup>13</sup> Ibid.

Direct discharges of pollutants into waters of the United States are not allowed except in accordance with the NPDES program established in Section 402 of the CWA.

**Federal Clean Water Act, Section 303, List of Impaired Water Bodies.** The State Water Resources Board (SWRCB), in compliance with Section 303(d) of the CWA, prepared a 2014/2016 list of impaired water bodies in California. The SWRCB approved the 2014/2016 California Integrated Report (CWA Section 303(d) List/305(b) Report) on October 3, 2017. On April 6, 2018, the EPA approved the 2014/2016 California 303(d) List of Water Quality Limited Segments (303[d] list). The 303(d) list includes a priority schedule for the development of TMDL implementation for each contaminant impacting the water body. El Zanjon Creek and San Bruno Creek are not listed as impaired on the 303(d) list. There are also no existing TMDLs or TMDLs being developed for El Zanjon Creek or San Bruno Creek. However, Lower San Francisco Bay is impaired by chlordane, dichlorodiphenyltrichloroethane (DDT), dieldrin, trash, mercury, polychlorinated biphenyls (PCBs), dioxin compounds (including 2,3,7,8-TCDD), furan compounds, invasive species, and dioxin-like PCBs. There are existing TMDLs for mercury and PCBs for San Francisco Bay.

**National Flood Insurance Act.** Congress acted to reduce the costs of disaster relief by passing the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. The intent of these acts was to reduce the need for large, publicly funded flood control structures and disaster relief efforts by restricting development in floodplains. FEMA administers the National Flood Insurance Program (NFIP) to provide subsidized flood insurance to communities that comply with FEMA regulations limiting development in a floodplain. FEMA issues FIRMs of communities participating in the NFIP. These maps delineate flood hazard zones in the community.

**California Porter-Cologne Water Quality Control Act of 1970.** The federal CWA places the primary responsibility for the control of water pollution and planning the development and use of water resources with the states, although it does establish certain guidelines for the states to follow in developing their programs.

California's primary statute governing water quality and water pollution is the Porter-Cologne Water Quality Control Act of 1970 (Porter-Cologne Act). The Porter-Cologne Act grants the SWRCB and the nine RWQCBs broad powers to protect water quality and is the primary vehicle for the implementation of California's responsibility under the federal CWA. The Porter-Cologne Act grants the SWRCB and RWQCBs the authority and responsibility to adopt plans and policies, to regulate discharges to surface water and groundwater, to regulate waste disposal sites, and to require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, oil, or petroleum product.

Each RWQCB must formulate and adopt a water quality plan for its region. The regional plans are to conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its State water policy. The Porter-Cologne Act also provides that an RWQCB may include in its region a regional plan with water discharge prohibitions applicable to particular conditions, areas, or types of waste. The City, including the project site, is within the jurisdictional boundaries of the San Francisco RWQCB (Region 2); herein after referred to as the Water Board.

**California Toxics Rule.** As stated previously, because California had not established a complete list of acceptable water quality criteria for toxic pollutants, EPA Region IX established numeric water quality criteria for toxic constituents in the form of the CTR. The CTR provides water quality criteria for certain potentially toxic compounds for inland surface waters, enclosed bays, estuaries, and waters designated for human health or aquatic life uses. The CTR is often used by the RWQCBs when establishing water quality objectives and TMDLs. Although the CTR criteria do not apply directly to discharges of stormwater runoff, they are utilized as benchmarks for toxics in urban runoff. The CTR is used as a benchmark to evaluate the potential ecological impacts of stormwater runoff to receiving waters. The CTR establishes acute and chronic surface water quality standards for certain water bodies. Acute criteria provide benchmarks for the highest permissible concentration below which aquatic life can be exposed for short periods of time without deleterious effects. Chronic criteria provide benchmarks for an extended period of time (i.e., 4 days or more) without deleterious effects. The acute CTR criteria have a shorter relevant averaging period (less than 4 days) and provide a more appropriate benchmark for comparison for stormwater flows.

CTR criteria apply to the receiving water body and are calculated based on the probable hardness values of the receiving waters. At higher hardness values for receiving waters, certain constituents (including copper, lead, and zinc) are more likely to be complexed (bound with) components in the water column. This in turn reduces the bioavailability and resulting potential toxicity of these metals.

**Construction General Permit.** The General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ, NPDES No. CAS000002, as amended by Order Nos. 2010-0014-DWQ and 2012-0006-DWQ (Construction General Permit), adopted by the SWRCB, regulates construction activity that includes clearing, grading, and excavation resulting in soil disturbance of at least 1 acre of total land area. The Construction General Permit authorizes the discharge of stormwater to surface waters from construction activities.

The Construction General Permit requires that all developers of land where construction activities will occur over more than 1 acre do the following:

- Complete a Risk Assessment to determine pollution prevention requirements pursuant to the three risk levels established in the General Permit;
- Eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the United States;
- Develop and implement a Storm Water Pollution Prevention Plan (SWPPP) that specifies BMPs that will reduce pollution in stormwater discharges to the Best Available Technology/Economically Achievable/Best Conventional Pollutant Control Technology standards;
- Perform inspections and maintenance of all BMPs; and
- Conduct stormwater sampling, if required based on risk level.

To obtain coverage under the Construction General Permit, a project applicant must electronically file all permit registration documents with the SWRCB prior to the start of construction. Permit registration documents must include a: Notice of Intent (NOI), Risk Assessment, site map, SWPPP, annual fee, and signed certification statement.

Typical BMPs contained in SWPPPs are designed to minimize erosion during construction, stabilize construction areas, control sediment, and control pollutants from construction materials. The SWPPP must also include a discussion of the program to inspect and maintain all BMPs.

**California Sustainable Groundwater Management Act.** The Sustainable Groundwater Management Act (SGMA) of 2014 is a comprehensive three-bill package that Governor Jerry Brown signed into California State law in September 2014. The SGMA provides a framework for sustainable management of groundwater supplies by local authorities, with a limited role for State intervention if necessary to protect the resource. The plan is intended to ensure a reliable groundwater supply for California for years to come.

The SGMA requires governments and water agencies of high- and medium-priority basins to halt overdrafts of groundwater basins. The SGMA requires the formation of local groundwater sustainability agencies (GSAs) that are required to adopt Groundwater Sustainability Plans to manage the sustainability of the groundwater basins.

The Westside Groundwater Basin is designated as Very Low Priority and therefore the provisions of SGMA are not applicable to the basin. However, as discussed below, the water agencies within the basin currently manage groundwater through implementation of a groundwater management plan.

**San Francisco Water Quality Control Plans (Basin Plans).** The San Francisco RWQCB has adopted a Basin Plan for their region of responsibility that delineates water resource area boundaries based on hydrological features. For the purposes of achieving and maintaining water quality protection, specific beneficial uses have been identified for each of the surface waters and groundwater basins described in the Basin Plan. Once beneficial uses are designated, appropriate water quality objectives can be established, and programs that maintain or enhance water quality can be implemented to ensure the protection of beneficial uses.

The Basin Plan does not identify beneficial uses for El Zanjon Creek. Designated beneficial uses of San Bruno Creek are warm water habitat, wildlife habitat, and water contact and noncontact recreation. Designated beneficial uses of Lower San Francisco Bay are industrial service supply, commercial and sport fishing, shellfish harvesting, estuarine habitat, fish migration, preservation of rare and endangered species, fish spawning, wildlife habitat, water contact and noncontact recreation, and navigation. The Basin Plan indicates that groundwater in the Westside Groundwater Basin in the vicinity of the project site has existing beneficial uses as municipal and domestic water supply, industrial process water supply, industrial service water supply, and potential beneficial use as agricultural water supply.<sup>14</sup>

Basin Plans also establish implementation programs to achieve water quality objectives to protect beneficial uses and require monitoring to evaluate the effectiveness of the programs. These objectives must comply with the State antidegradation policy (State Board Resolution No. 68-16), which is designed to maintain high-quality waters while allowing some flexibility if beneficial uses are not unreasonably affected.

<sup>14</sup> San Francisco Bay Regional Water Quality Control Board, 2017. *San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan)*. Incorporating all amendments as of May 4, 2017.

Basin Plans have also established narrative and numeric water quality objectives for inland surface waters and groundwater. If water quality objectives are exceeded, the RWQCBs can use their regulatory authority to require municipalities to reduce pollutant loads to the affected receiving waters.

**Municipal Regional Permit (MRP).** Pursuant to Section 402 of the CWA and the Porter-Cologne Water Quality Control Act, municipal stormwater discharges in the City of San Bruno are regulated under the San Francisco Bay Region Municipal Regional Stormwater NPDES Permit, Order No. R2-2015-0049, NPDES Permit No. CAS612008 (the Municipal Regional Permit [MRP]). The MRP is issued and overseen by the San Francisco RWQCB. The City is a part of the San Mateo County Water Pollution Prevention Program (SMCWPPP), which assists cities, towns, and unincorporated areas across the County with complying with the MRP by providing guidance and staff training and by implementing some public outreach and water-quality monitoring.

Provision C.3 of the MRP addresses post-construction stormwater management requirements for regulated development and redevelopment projects. The proposed project is considered a regulated project because it is a redevelopment project that would create and/or replace 10,000 square feet or more of impervious surface (collectively over the entire project site). Additionally, because the proposed project would include alteration of over 50 percent of the existing impervious surface of the project site, stormwater treatment systems would be required to be designed and sized to treat stormwater runoff from the entire project site pursuant to the requirements of Provision C.3 of the MRP.<sup>15</sup>

Regulated projects must prepare a Stormwater Management Plan in accordance with the C.3 Stormwater Technical Guidance<sup>16</sup> prepared by SMCWPPP to detail the BMPs to be implemented as part of the project. Regulated projects must implement low impact development (LID), source control, site design, and treatment BMPs. LID BMPs mimic a project site's natural hydrology by using design measures that capture, filter, store, evaporate, detain, and infiltrate runoff rather than allowing runoff to flow directly to storm drains or receiving waters. LID employs principles such as preserving and recreating natural landscape features and minimizing impervious surfaces to create functional and appealing site drainage that treats stormwater as a resource, rather than a waste product. Source control BMPs are preventative measures that are implemented to prevent the introduction of pollutants into stormwater. Site design BMPs are stormwater management strategies that emphasize conservation and use of existing site features to reduce the amount of runoff and pollutant loading generated from a project site. Treatment BMPs are structural BMPs designed to treat and reduce pollutants in stormwater runoff prior to releasing it to receiving waters.

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<sup>15</sup> San Francisco Bay Regional Water Quality Control Board, 2015. San Francisco Bay Region Municipal Regional Stormwater NPDES Permit, Order No. R2-2015-0049, NPDES Permit No. CAS612008. November 19.

<sup>16</sup> San Mateo County Water Pollution Prevention Program, 2016. C.3 Stormwater Technical Guidance, Version 5.0, June.

Regulated projects must also comply with the hydromodification<sup>17</sup> management requirements of the MRP. The proposed project is subject to the hydromodification management requirements because the project site is located in an area which is subject to hydromodification management requirements and the project would replace over 1 acre of impervious surfaces and would increase impervious surface area.<sup>18</sup> Provision C.3.g. of the MRP requires that increases in runoff flow and volume (e.g., through detention, retention, and/or infiltration) be managed so that the post-project runoff does not exceed estimated pre-project rates and durations, such that increased flow and/or volume would not cause increased potential for erosion of creek beds and banks, silt pollutant generation, or other adverse impacts on beneficial uses due to increased erosive force.

**South Westside Basin Groundwater Management Plan.** The water agencies within the basin currently manage groundwater in the vicinity of the project site through implementation of the South Westside Basin Groundwater Management Plan (GWMP).<sup>19</sup> The purpose of the GWMP is to provide a framework for regional groundwater management that sustains the beneficial use of the groundwater resource.

The goal of the GWMP is to ensure a sustainable, high-quality, reliable water supply at a fair price for beneficial uses achieved through local groundwater management. “Sustainable” is defined in the GWMP as being able to continue groundwater production over the next 50 years or more with a similar real cost, quantity, and end-user quality as today. The following five Basin Management Objectives are defined to support this goal:<sup>20</sup>

1. Maintain Acceptable Groundwater Levels
2. Maintain or Improve Groundwater Quality
3. Limit the Impact of Point Source Contamination
4. Explore Need for Land Subsidence Monitoring
5. Manage the Interaction of Surface Water and Groundwater for the Benefit of Groundwater and Surface Water Quantity and Quality

**City of San Bruno Municipal Code.** The City of San Bruno Storm Water Management and Discharge Control Ordinance (Title 10, Chapter 10.10 of the City Municipal Code) regulates stormwater discharge within the City in compliance with the MRP.

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<sup>17</sup> Hydromodification is defined as the modification of a stream’s hydrograph, caused in general by increases in flows and durations that result when land is developed (e.g., made more impervious). The effects of hydromodification include, but are not limited to, increased bed and bank erosion, loss of habitat, increased sediment transport and deposition, and increased flooding.

<sup>18</sup> San Francisco Bay Regional Water Quality Control Board, 2015, op. cit.

<sup>19</sup> WRIME, 2012, op. cit.

<sup>20</sup> Ibid

Title 12, Article I, Chapter 12, Section 12.12.050 of the City Municipal Code requires that grading plans include a detailed plan for erosion control.

**City of San Bruno General Plan.** The San Bruno General Plan Environmental Resources and Conservation Element includes the following policies related to hydrology and water quality that are applicable to the proposed project.

- **Policy ERC-19:** Regulate new development—specifically industrial uses—as well as construction and demolition practices to minimize pollutant and sediment concentrations in receiving waters and ensure waterbodies within San Bruno and surface water discharged into San Francisco Bay meets or exceeds relevant regulatory water quality standards.
- **Policy ERC-20:** Require implementation of Best Management Practices to reduce accumulation of non-point source pollutants in the drainage system originating from streets, parking lots, residential areas, businesses, and industrial operations.
- **Policy ERC-23:** Regulate new development to minimize stormwater runoff rates and volumes generated by impervious surfaces, and maximize recharge of local groundwater aquifers when feasible. Utilize the recommendations provided in the Bay Area Stormwater Management Agency’s Start at the Source Design Guidance Manual for Stormwater Quality Protection.
- **Policy ERC-24:** Require that new development incorporate features into site drainage plans that reduce impermeable surface area and surface runoff volumes. Such features may include:
  - Additional landscaped areas including canopy trees and shrubs;
  - Reducing building footprint;
  - Removing curbs and gutters from streets and parking areas where appropriate to allow stormwater sheet flow into vegetated areas;
  - Permeable paving and parking area design;
  - Stormwater detentions basins to facilitate infiltration; and
  - Building integrated or subsurface water retention facilities to capture rainwater for use in landscape irrigation and other non-potable uses.

#### 4.8.2 Impacts and Mitigation Measures

This section discusses potential impacts to hydrology and water quality that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds used to determine whether an impact is significant. The latter part of this section presents the impacts associated with the proposed project and identifies mitigation measures, as appropriate.

#### 4.8.2.1 Criteria of Significance

Implementation of the proposed project would have a significant impact on the environment related to hydrology and water quality if it would:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality;
- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
  - Result in substantial erosion or siltation on- or off-site
  - Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite
  - 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
  - Impede or redirect flood flows;
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; or
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

#### 4.8.2.2 Project Impacts

The following section discusses potential hydrology and water quality impacts associated with implementation of the proposed project. Potential impacts are differentiated between project construction and operational phases, where applicable.

**Water Quality Standards.** The following includes a discussion of construction and operation period impacts related to potential violation of water quality standards and waste discharge requirements that have the potential to affect surface and groundwater quality.

**Construction-Period Impacts.** Pollutants of concern during construction include sediments, trash, petroleum products, concrete waste (dry and wet), sanitary waste, and chemicals. Each of these pollutants on its own or in combination with other pollutants can have a detrimental effect on water quality. During soil-disturbing construction activities, excavated soil would be exposed, and there would be an increased potential for soil erosion and sedimentation compared to existing conditions. In addition, chemicals, liquid products, petroleum products (e.g., paints, solvents, and fuels), and concrete-related waste may be spilled or leaked and have the potential to be transported via stormwater runoff into receiving waters (i.e. El Zanjon Creek, San Bruno Creek, and Lower San Francisco Bay). Sediment from increased soil erosion and

chemicals from spills and leaks have the potential to be discharged to downstream receiving waters during storm events, which can affect water quality and impair beneficial uses.

Construction of the proposed project would disturb greater than 1 acre of land, and therefore would be required to obtain coverage under the Construction General Permit. On-site construction activities subject to the Construction General Permit include clearing, grading, excavation, and soil stockpiling. The Construction General Permit requires the development of a SWPPP by a certified Qualified SWPPP Developer. A SWPPP identifies all potential pollutants and their sources, including erosion, sediments, and construction materials and must include a list of BMPs to reduce the discharge of construction-related stormwater pollutants. A SWPPP must include a detailed description of controls to reduce pollutants and outline maintenance and inspection procedures. Typical sediment and erosion control BMPs include protecting storm drain inlets and establishing and maintaining construction exits and perimeter controls to avoid tracking sediment off-site onto adjacent roadways. A SWPPP also defines proper building material staging and storage areas, paint and concrete washout areas, describes proper equipment/vehicle fueling and maintenance practices, measures to control equipment/vehicle washing and allowable non-stormwater discharges, and includes a spill prevention and response plan. The SWPPP must also include a construction site monitoring program. Depending on the project risk level, the monitoring program would involve visual observations of site discharges, water quality monitoring of site discharges (e.g., pH, turbidity, and non-visible pollutants, if applicable), and receiving water monitoring (e.g., pH, turbidity, suspended sediment concentration, and bioassessment, if applicable). Compliance with the requirements of the Construction General Permit would ensure that construction activities do not adversely affect runoff water quality that could result in a violation of water quality standards.

During borings conducted on the project site, groundwater was measured at a depth of approximately 12 feet bgs. However, based on the available groundwater information, the Preliminary Geotechnical Investigation prepared for the project indicated that groundwater levels on the project site can be as shallow as 5 feet below the existing grade, therefore dewatering of groundwater may be required during construction activities involving excavation. Dewatering effluent may have high turbidity. Turbid groundwater could cause degradation of the receiving water quality if discharged directly to storm drains or surface water without treatment. Any groundwater dewatering would be limited in duration (i.e., during construction) and the discharge of dewatering effluent would be subject to permits from the City of South San Francisco (which operates the South San Francisco/San Bruno Water Quality Control Plant) or the San Francisco Bay Regional Water Quality Control Board (Regional Water Board), depending if the discharge were to the sanitary sewer or storm drain system, respectively.

Under existing State law, it is illegal to allow unpermitted non-stormwater discharges to receiving waters. As stated in the Construction General Permit, non-stormwater discharges directly connected to receiving waters or the storm drain system have the potential to negatively impact water quality. The discharger must implement measures to control all non-stormwater discharges during construction, and from dewatering activities associated with construction. Discharging any pollutant-laden water from a dewatering site or sediment basin into any receiving water or storm drain that would cause or contribute to an exceedance of applicable water quality standards is prohibited.

The Construction General Permit allows the discharge of dewatering effluent if the source of the water is uncontaminated groundwater and is properly filtered or treated, using appropriate technology. These technologies include but are not limited to retention in settling ponds (where sediments settle out prior to discharge of water) and filtration using gravel and sand filters (to mechanically remove the sediment). If the dewatering activity is deemed by the Regional Water Board not to be covered by the Construction General Permit, then the discharger may prepare a Report of Waste Discharge, and if approved by the Regional Water Board, be issued site-specific Waste Discharge Requirements (WDRs) under the National Pollutant Discharge Elimination System (NPDES) regulations. Site-specific WDRs contain rigorous monitoring requirements and performance standards that, when implemented, ensure that receiving water quality is not substantially degraded. The discharge of dewatering effluent is authorized under the Construction General Permit if the following conditions are met:

- The discharge does not cause or contribute to a violation of any water quality standard;
- The discharge does not violate any other provision of the Construction General Permit;
- The discharge is not prohibited by the applicable Basin Plan;
- The discharger has included and implemented specific BMPs required by the Construction General Permit to prevent or reduce the contact of the non-stormwater discharge with construction materials or equipment;
- The discharge does not contain toxic constituents in toxic amounts or (other) significant quantities of pollutants;
- The discharge is monitored and meets the applicable numeric action levels; and
- The discharger reports the sampling information in the annual report.

If any of the above conditions are not satisfied, the discharge of dewatering effluent is not authorized by the Construction General Permit. The discharger must notify the local RWQCB of any anticipated non-stormwater discharges not already authorized by the Construction General Permit or another NPDES permit, to determine whether a separate NPDES permit is necessary.

If the water is not suitable for discharge to the storm drain/receiving water, as discussed above, dewatering effluent may be discharged to the sanitary sewer system if discharge criteria are met. These include, but are not limited to, application of treatment technologies or BMPs which achieve compliance with the wastewater discharge limits. Discharges to the City's sanitary sewer facilities must occur under a Discharge Permit from the City of South San Francisco. The City of South San Francisco manages the wastewater it accepts into its treatment facilities so that it can ensure proper treatment prior to discharge.<sup>21</sup> Groundwater cannot be directly discharged into the City's sanitary

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<sup>21</sup> South San Francisco, City of, 2019. Department of Public Works, Water Quality Control Plant, Environmental Compliance. Website: [www.ssf.net/departments/public-works/water-quality-control-plant/environmental-compliance](http://www.ssf.net/departments/public-works/water-quality-control-plant/environmental-compliance) (accessed May 23, 2019).

sewer collection system, consistent with Section 10.12.040 of the City's Municipal Code. Baker tanks are required to be used to separate solids and liquid prior to discharging. The discharge rate is required to be regulated to ensure it does not impede the existing sanitary sewer flow and cause an overflow.

If it is infeasible to meet the requirements of the Construction General Permit, acquire site-specific WDRs, or meet the City of South San Francisco's sewer discharge requirements, the construction contractor would be required to transport the dewatering effluent off-site for treatment and disposal.

Compliance with the Construction General Permit requirements would ensure that the proposed project would result in less than significant impacts to water quality during the construction period.

**Operation-Period Impacts.** During the operational phase of the proposed project, pollutants associated with vehicles (e.g., fuel, oil/lubricants, brake dust, and fallout from exhaust) would be deposited on the surface of parking areas and driveways which would contribute petroleum hydrocarbons, heavy metals, and sediment to the pollutant load in runoff being transported to receiving waters. Debris and particulates that gather on impervious surfaces such as paved play areas and roofs of buildings can also add metals and sediment to the pollutant load in runoff. In addition, landscape maintenance activities may involve the use of chemicals such as pesticides/herbicides and fertilizers which could also impact the quality of stormwater runoff. Long-term degradation of runoff water quality from the project site could adversely affect water quality in the receiving waters.

Stormwater discharges in the City are regulated by the MRP. Because the proposed project is considered a regulated project under the MRP, a Stormwater Management Plan must be prepared and BMPs and hydromodification management measures implemented to manage increases in runoff flow and volume and reduce pollutants in stormwater discharged from the project site. Five stormwater treatment areas are proposed on the project site to comply with the requirements of the MRP. One of the stormwater treatment areas would be located south of the proposed SBRAC building, one would be located east of the parking lot, and three would be located north of the realigned El Zanjon Creek. The stormwater treatment areas would be vegetated with a layer of bioretention soil and a layer of permeable rock. Overflow would be discharged from the stormwater treatment areas to the onsite storm drain system which would connect to outfalls in the realigned, concrete lined El Zanjon Creek channel.

As discussed above, the proposed project would involve alteration of over 50 percent of the existing impervious surface of the project site, and therefore stormwater treatment systems would be required to be designed and sized to treat stormwater runoff from the entire project site, and not just the new proposed building, parking lot, and roadway. Provision C.3 of the MRP indicates that biotreatment (or bioretention) systems must be designed to have a surface area no smaller than what is required to accommodate a 5 inches per hour stormwater runoff surface loading rate, infiltrate runoff through biotreatment soil media at a minimum of 5 inches per hour, and maximize infiltration to the native soil during the life of the regulated project. The soil media for biotreatment (or bioretention) systems must meet specifications in the MRP and be designed to sustain healthy, vigorous plant growth and maximize stormwater runoff

retention and pollutant removal. Provision C.3 of the MRP also indicates that stormwater treatment systems which function primarily as infiltration devices must not cause or contribute to the degradation of groundwater quality. To protect groundwater, infiltration areas/features must be located a minimum of 100 feet horizontally away from any known water supply wells, and the vertical distance from the base of any infiltration feature to the seasonal high groundwater mark should be at least 10 feet. In areas with highly porous soils and/or high groundwater tables, a greater vertical distance from the base of the infiltration feature to the seasonal high groundwater mark may be appropriate, and treatment system approvals should be subject to a higher level of analysis for groundwater safety.<sup>22</sup> Groundwater levels on the project site can be as shallow as 5 feet below the existing grade,<sup>23</sup> and a municipal groundwater production well is located approximately 350 feet northeast of the project site.<sup>24</sup> The San Bruno General Plan indicates that the central and eastern portions of the project site are underlain by sand and gravel alluvial deposits,<sup>25</sup> which would be expected to have high permeability. Additionally, sandy (porous) soils were encountered in geotechnical borings at the project site.<sup>26</sup>

In accordance with the requirements of Provision C.3 of the MRP, the City must incorporate additional stormwater control and treatment measures (including hydromodification management measures) into the project design to control and treat stormwater runoff prior to its discharge into El Zanjon Creek; and the City must account for the presence of a municipal groundwater production well, shallow groundwater, and permeable soils if infiltration features would be utilized for stormwater control and treatment to ensure that infiltration of stormwater would not impact groundwater quality. As stated above, five stormwater treatment areas are proposed on the project site to comply with the requirements of the MRP. Treatment of stormwater runoff prior to infiltration would ensure that the use of infiltration features would not impact groundwater quality.

The proposed project would include relocation of a portion of El Zanjon Creek to a concrete lined trapezoidal channel that would be located south of the existing creek. All construction activities within the banks of surface waters would require compliance with resource agency permit requirements. These requirements, which would be specified by the appropriate resource agency (i.e., the Water Board), could include erosion and sedimentation control measures such as protection of the creek banks with gravel/rock, geotextile/burlap fabric, temporary vegetation (e.g., non-invasive, non-persistent grass species), and mulching, and use of silt traps/fences that would reduce potential impacts on water quality during construction and subsequent to construction activities along the banks of surface waters and within surface waters. All construction activities within the banks of surface waters would require a United States Army Corps of Engineers Section 404 permit and associated Section 401 Water Quality Certification and WDRs from the Regional Water Board. The work within a stream or on a streambank would also require a California Department of Fish and Wildlife Section 1602

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<sup>22</sup> San Francisco Bay Regional Water Quality Control Board, 2015, op. cit.

<sup>23</sup> ROMIG Engineers, Inc., 2019, op. cit.

<sup>24</sup> WRIME, 2012, op. cit.

<sup>25</sup> San Bruno, City of, 2009, op. cit.

<sup>26</sup> ROMIG Engineers, Inc., 2019, op. cit.

Streambed Alteration Agreement. These permit applications must include a discussion of construction BMPs, including erosion and sediment control BMPs, which would minimize impacts on water quality. The permits would include any additional requirements for protection of water quality as deemed necessary by the reviewing agencies. Also refer to the discussion of regulatory permitting in Section 4.1, Biological Resources of this EIR.

Compliance with Provision C.3 of the MRP, and resource agency permit requirements, as discussed above, would ensure that the proposed project would result in less than significant impacts to water quality during project operation. In the long term, relocation of El Zanjon Creek would improve the quality of stormwater runoff from the project site compared to the existing condition, as El Zanjon Creek currently flows adjacent to paved parking areas and a roadway in the northern portion of the project site, and untreated runoff from the parking areas and roadway flows directly into the creek.

**Groundwater Supplies and Recharge.** The project site is located in the Westside Groundwater Subbasin within the plan area of the South Westside Basin GWMP. As discussed previously, dewatering of groundwater may be required during construction activities involving excavation. Construction related dewatering would be temporary and localized within shallow water-bearing zones. The depth to groundwater in the primary production aquifer used for water supply is approximately 260 feet below the ground surface. Temporary and localized construction dewatering of shallow groundwater would not impact the deeper water levels in the primary production aquifer. Therefore, the potential for the proposed project to deplete groundwater supplies during construction is less than significant.

The proposed project would increase the amount of impervious surface area compared to the existing condition, which could decrease the amount of infiltration and groundwater recharge. The GWMP indicates that the estimated groundwater recharge rate in the vicinity of the project site is 4 to 8 inches per year, which is within the mid-range of recharge rates mapped within the South Westside Basin. The GWMP maps higher recharge rates primarily in the areas of cemeteries and golf courses. As discussed above, compliance with Provision C.3 of the MRP would require the project to implement hydromodification management measures and LID stormwater control/treatment measures for runoff from the entire project site. Implementation of these hydromodification management measures and LID stormwater control/treatment measures would allow much of the runoff from impervious surfaces to infiltrate the ground surface and recharge groundwater. Therefore, the project would result in less than significant impacts related to groundwater recharge and would not impede sustainable groundwater management of the South Westside Basin.

**Alteration of the Existing Drainage Pattern.** The following includes a discussion of potential impacts related to alterations of the existing drainage pattern of the project site, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would: 1) result in substantial erosion or siltation on- or off-site; 2) increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; 3) 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; and 4) impede or redirect flood flows.

**Erosion or Siltation.** As discussed above, compliance with the Construction General Permit, Provision C.3 of the MRP, and resource agency permit requirements would require implementation of BMPs to ensure that the proposed project would result in less than significant impacts related to erosion or siltation.

**Increase Surface Runoff/Flooding.** As discussed above, the proposed project would be required to implement hydromodification management measures. Increases in runoff flow and volume from the project site must be managed (e.g., through detention, retention, and/or infiltration) in compliance with Provision C.3 of the MRP so that the post-project runoff does not exceed estimated pre-project rates and durations. Therefore, the proposed project would result in less than significant impacts related to flooding on or off the project site as a result of increased runoff from impervious areas.

**Stormwater Drainage System Capacity/Additional Polluted Runoff.** As discussed previously, compliance with the Construction General Permit, Provision C.3 of the MRP, and resource agency permit requirements, which require implementation of BMPs to reduce pollutants of concern in stormwater runoff, would ensure that the proposed project would result in less than significant impacts related to discharge of polluted runoff. Implementation of hydromodification management measures in compliance with Provision C.3 of the MRP would ensure that post-project runoff does not exceed estimated pre-project rates and durations. Therefore, the proposed project would result in less than significant impacts related to exceeding the capacity of stormwater drainage systems.

**Flood Flows.** The northwestern portion of the project site is located in an area of minimal flood hazard (i.e., not within 100-year or 500-year flood hazard zones) as mapped Federal Emergency Management Agency (FEMA). FEMA mapping indicates that the remainder of the project site is located in an area where the flood risk is undetermined. The City's General Plan indicates that the central and eastern portions of the project site and a portion of Crystal Springs Road adjacent to the north of the project site are located in a potential flood zone.

**Impact HYD-1: The proposed project would alter the drainage pattern of the site in a manner which could impede or redirect flood flows. (S)**

The proposed project would alter the path of El Zanjon Creek and would place new impervious surfaces and improvements (e.g., the proposed structure, roadway, parking area, and planters) within an area that is subject to flooding based on the City's General Plan.<sup>27</sup> Altering the course of El Zanjon Creek and construction of new improvements within areas of potential flooding could impede or redirect flood flows. However, as shown in Figure 4.8-2, the improvements within Zone D (the area where the flood risk is undetermined but possible) would include parking area and landscaping. Because the majority of these improvements would be at-grade, they would have minimum potential to impede or redirect flood flows.

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<sup>27</sup> Ibid.

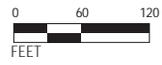
A small corner of the proposed building could be located within Zone D, as shown in Figure 4.8-2, which could impede and redirect flood flows compared to existing conditions. However, because the project would relocate El Zanjon Creek to the southeast, flood hazard area Zone D (shown on Figure 4.8-2) would also be shifted to the southeast. Once El Zanjon Creek is relocated, the building may be outside of the area of possible flooding and there would be minimal potential for the project to redirect flood flows. However, the hydraulic evaluation of potential flooding cannot be performed until a more detailed site design has been developed. Therefore, as specified in Mitigation Measure HYD-1, a detailed design-level hydraulic evaluation would be conducted when the project design has been developed to the necessary level of detail needed for the hydraulic evaluation to yield meaningful results. If hydraulic evaluation indicates that the project could increase flooding risks or that the proposed structure could be exposed to flooding inundation, the project plans would be modified (e.g., changing the location and/or design of improvements, increasing on-site stormwater detention/retention, increasing impervious area) to reduce the flooding risk. Implementation of Mitigation Measure HYD-1 would ensure that potential impacts related to impeding or redirecting flood flows would be less than significant.

**Mitigation Measure HYD-1:** Prior to issuance of grading or building permits, a detailed hydraulic evaluation shall be performed by a qualified professional engineer and submitted to the City's Building Division for review and approval. The detailed hydraulic evaluation shall include analysis of post-project potential flooding conditions (including 25-year, 50-year, and 100-year storm events) and shall be performed using hydraulic modeling (i.e., HEC-RAS or similar program). The detailed hydraulic evaluation shall demonstrate that the proposed project, when combined with all other existing and anticipated development, would not contribute to increased flooding or impede or redirect flood flows such that it would increase the extent or depth of flooding on or off the project site. If hydraulic evaluation indicates that the project could increase flooding risks or that the proposed structure could be exposed to flooding inundation, the project plans shall be modified (e.g., changing the location and/or design of improvements, increasing on-site stormwater detention/retention, increasing impervious area) and/or improvement of existing off-site stormwater drainage systems shall be incorporated into the project such that subsequent hydraulic modeling demonstrates that the proposed project, when combined with all other existing and anticipated development, would not impede or redirect flood flows, contribute to increased flooding risks, or expose the proposed pool and/or structure to flooding inundation. (LTS)



FIGURE 4.8-2

LSA



- Project Site Boundary
- Phase 2
- Zone D: Area of Undetermined, But Possible Flood Risk
- Zone X: Area of Minimal Flood Hazard

SOURCES: FEMA 4/5/19; GROUP 4; SWA, 2019.

P:\GRP1803 San Bruno Rec Center\PRODUCTS\EIR\Figures\Figure 4.8-2.ai (1/23/2020)

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Implementation of Mitigation Measure HYD-1 requires a detailed design-level hydraulic evaluation of post-project potential flooding conditions to demonstrate that the proposed project, when combined with all other existing and anticipated development, would not contribute to increased flooding or impede or redirect flood flows. If the hydraulic modeling indicates that increased flooding impacts would occur, the project must be modified to ensure that this impact remains less than significant. If substantial modifications to the project are required, additional environmental review may be necessary.

**Flood, Tsunami and Seiche Hazards.** As previously discussed, the project site is located inland and at an elevation that would ensure it would not be inundated by tsunamis. In addition, the project site would not be inundation in the event that a major seiche occurred in San Andreas Lake.

As discussed under Impact HYD-1, flooding is known to occur at the project site due to inadequate stormwater drainage systems. If flooding occurs during operation of the project, inundation of the proposed structure or swimming pool could result in the release of pollutants (e.g., pool treatment chemicals or treated pool water) into surface water. Implementation of Mitigation Measure HYD-1 would ensure that the project improvements would not be located within a flood-prone area and that potential impacts related to the release of pollutants during flooding inundation would be less than significant during operation of the project.

If flooding occurs during construction activities and construction materials (including potential hazardous materials) and equipment are stored within the potential flooding inundation areas, pollutants may be released into surface water.

**Impact HYD-2: During a construction-period flooding event at the project site, pollutants could be released into surface waters. (S)**

Construction materials and equipment could be inundated by flooding and release pollutants into surface water. Implementation of Mitigation Measure HYD-2 would ensure that potential impacts related to the release of pollutants during flooding inundation would be less than significant during construction of the project.

**Mitigation Measure HYD-2:** When working within areas of potential storm flooding inundation at the northeast portion of the project site (defined as Zone D on the Federal Emergency Management Agency [FEMA] Flood Insurance Rate Map (FIRM) Panel No. 06081C0131F, dated April 5, 2019 and shown on Figure 4.8-1 of the EIR) and any other areas of potential storm inundation identified by the hydraulic evaluation required by Mitigation Measure HYD-1, the construction contractor(s) shall closely monitor weather forecasts and shall ensure that construction materials and equipment are temporarily moved out of areas of potential flooding inundation prior to the start of the storm event. The improvements anticipated to be located within areas of potential storm flooding inundation include the proposed parking lot and relocation of El Zanjon Creek. (LTS)

Implementation of Mitigation Measure HYD-2 would ensure that pollutants would not be released to surface waters during construction-period flooding events and that this impact would be less than significant.

**Water Quality Control and Groundwater Management Plans.** The applicable water quality control plan for the project site is the Regional Water Board's San Francisco Bay Basin Water Quality Control Plan (Basin Plan). The Basin Plan designates beneficial uses for all surface and groundwater within its jurisdiction and establishes the water quality objectives and standards necessary to protect those beneficial uses. The applicable sustainable groundwater management plan for the project site is the South Westside Basin GWMP. The GWMP provides recommendations for the water agencies to implement to sustain the beneficial use of the groundwater resource and ensure the long-term sustainability of groundwater resources in the Westside Basin.

As discussed above, the proposed project would be required to comply with the Construction General Permit, Provision C.3 of the MRP, and resource agency permit requirements which would ensure that the project would have less than significant impacts on the quality of stormwater runoff, surface water, and groundwater. Therefore the proposed project would not conflict with or obstruct implementation the surface or groundwater objectives in the Basin Plan or the groundwater quality objectives in the South Westside Basin GWMP.

As discussed above, temporary and localized construction dewatering of shallow groundwater would not impact the deeper water levels in the primary production aquifer used for water supply in the vicinity of the project site; and implementation of hydromodification management measures and LID stormwater control/treatment measures that would include infiltration, would ensure that the proposed project would result in less than significant impacts related to groundwater recharge. Therefore, the proposed project would not conflict with or obstruct implementation of the South Westside Basin GWMP.

#### 4.8.2.3 Cumulative Impacts

The geographic area of concern for cumulative hydrology and water quality impacts is the areas of San Bruno Creek Watershed which discharge stormwater to the same stormwater drainage systems that serve the project site, and the surface water bodies that receive runoff from the project site, primarily Zanjon Creek, San Bruno Creek, and Lower San Francisco Bay. Stormwater discharges are affected by urban pollutants that contribute to the degradation of water quality in surface waters near the project site. Urban pollutants in stormwater include nutrients, petroleum hydrocarbons, sediments, metals, pesticides, and trash. The cumulative projects in the vicinity of the project site (located at 406 San Mateo Avenue, 160 El Camino Real Hotel, 271 El Camino Real, and 201 Balboa Way) could result in cumulative impacts associated with stormwater discharges, similar to the potential impacts from construction of the proposed project. In order to adequately address cumulative water quality impacts, stormwater regulations have become progressively more stringent since the passage of the federal CWA, and current NPDES permits now require new development and redevelopment projects to manage and treat stormwater runoff to reduce pollutants and runoff. NPDES permit requirements apply to the cumulative projects as well as the proposed project. As such, a reduction in runoff and overall pollutant loads in stormwater in the vicinity of the project site is anticipated over time, thereby reducing cumulative impacts. Although overall water quality in Zanjon Creek, San Bruno Creek, and Lower San Francisco Bay is anticipated

to improve over time, the Lower San Francisco Bay is currently designated as “impaired” by the SWRCB.

Compliance with existing NPDES requirements, including implementation of BMPs and hydromodification measures, and the implementation of Mitigation Measures HYD-1 and HYD-2 would ensure that stormwater runoff from the proposed project would not result in cumulatively considerable impact associated with hydrology and water quality.

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## 5.0 ALTERNATIVES

In accordance with CEQA and the CEQA Guidelines (Section 15126.6), an EIR must describe a range of reasonable alternatives to the project, or to the location of the project, that would “feasibly attain most of the project's basic objectives, while avoiding or substantially lessening any of the significantly adverse environmental effects of the project.” An EIR does not need to consider every conceivable alternative to a project; rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation. The range of alternatives required in an EIR is governed by a “rule of reason.”

The proposed project would include the following components: 1) demolition of the existing Veterans Memorial building and pool; 2) construction of a new 47,000 square-foot San Bruno Recreation and Aquatic Center, future construction of an outdoor pool, and installation of associated water, sewer, and stormwater infrastructure; 3) the reconfiguration of adjacent existing parking areas and roadways within the park; and 4) the relocation of the existing channelized creek within a portion of the park. The proposed project has been described and analyzed in the previous chapters with an emphasis on determining and evaluating potential significant impacts resulting from the project and identifying mitigation measures to avoid or reduce these impacts to a less-than-significant level. The following identifies and discusses three feasible alternatives to the proposed project, compares the impacts of each alternative to the impacts of the project, and determines whether the alternatives meet the project objectives.

The three alternatives to the proposed project that are discussed in this chapter are:

- The **No Project alternative**, which assumes the project site would not be subject to redevelopment and would generally remain in its existing condition. Existing programming and use of the Veterans Memorial building and pool would not change. Existing roadways and parking areas within City Park would remain and no tree removal would occur. The existing channelized creek would remain in its current condition and alignment.
- The **Existing Creek Alignment alternative**, which assumes that the existing Veterans Memorial Building and pool facility would be demolished and that a new recreation center would be constructed, similar in size to the proposed project. However, the existing alignment of City Park Way and El Zanon Creek would be maintained. The parking lot adjacent to the existing building would be demolished to accommodate the proposed SBRAC, and the existing angled parking along City Park Way would be retained to provide approximately 46 parking spaces. The parking provided by the project would be reduced by approximately 25 spaces to accommodate the existing alignment of City Park Way and El Zanon Creek.
- The **Existing Building Reuse alternative**, which assumes that the existing building would be reused with interior improvements and an exterior addition. The existing second-floor gymnasium and the first-floor space underneath it would be retained and repurposed, for reuse of a total of approximately 19,000 square feet of existing space. The remaining portions of the existing building that surround the gymnasium would be demolished and replaced with new construction that would wrap three sides of the existing gymnasium, a total of approximately

30,000 square feet. Spaces in the addition would include program rooms, staff spaces, locker rooms, and a new indoor pool. Similar to the proposed project, this alternative would include the demolition of the existing outside pool facility, realignment of City Park Way and El Zanjon Creek, and the reconfigured parking layout. A new outdoor pool would also be constructed, similar to the proposed project.

These alternatives represent a reasonable range of potential alternatives to the proposed project in light of the objective of reducing or avoiding environmental impacts identified in this EIR. Several other potential alternatives were also considered, as discussed later in this chapter; however, none of these alternatives would substantially reduce or avoid the environmental impacts of the proposed project and/or would not meet many of the basic project objectives and were therefore ultimately not selected for further analysis in this EIR.

Project objectives are identified in Section 3.0, Project Description. To assist in evaluating project alternatives, the objectives are repeated below.

The City's objectives for the proposed project are to provide a new recreation center and aquatic facility that offers long-term benefits to the entire San Bruno community, including:

- Flexible, integrated, and attractive spaces that serve the community's current and future recreation, aquatics, and event-space needs;
- A place that promotes and advances San Bruno's community, social, and recreational programs;
- Vibrant indoor and outdoor community gathering spaces;
- Building design that reflects the natural beauty of San Bruno City Park and integrates the natural and built environment through indoor/outdoor transparency and strong connections to useable outdoor spaces;
- Maximized operational efficiencies;
- Intuitive systems and layout;
- Programming in a California Code-compliant building;
- An energy-efficient building, which maximizes sustainable design strategies within project constraints; and
- A highly valued community resource.

The purpose of this discussion of alternatives to the proposed project is to enable decision-makers to evaluate how alternatives to the project as proposed might reduce or avoid the project's impacts on the physical environment. The analysis in this chapter provides a qualitative evaluation of the environmental impacts that could be associated with each alternative and compares those potential impacts to those identified for the proposed project as described in Section 4.0 of this EIR.

## 5.1 NO PROJECT ALTERNATIVE

The following provides a description of the No Project alternative and its anticipated environmental impacts. The emphasis of the analysis is on comparing the anticipated environmental impacts of the No Project alternative to the environmental impacts associated with the proposed project. The following discussion includes a determination of whether or not the No Project alternative would reduce, eliminate, or create new significant environmental impacts and the extent to which the No Project alternative would meet the objectives of the project.

### 5.1.1 Principal Characteristics

The No Project alternative assumes that the proposed project would not be developed and that the project site would generally remain in its current condition. The project site would continue to be occupied by the Veterans Memorial building and pool facility, the existing roadways and parking lots would remain in their current conditions and alignments, and El Zanjon Creek would remain in its current alignment.

Under this alternative, the existing Veterans Memorial building would not be structurally upgraded to meet current code requirements for seismic, life safety, and accessibility. A Structural Evaluation<sup>1</sup> prepared for the proposed project determined that the Veterans Memorial Building is potentially deficient in a number of areas. A Tier 1 structural evaluation identified 10 structural areas in the building that are potentially deficient, they include: lack of wall anchorage, overstressed concrete shear walls, deterioration of wood elements, overstressed roof diaphragm system and excessive diaphragm spans, lack of column reinforcement, inadequately designed foundation system, overstressed exterior trusses, non-compliant CMU wall and chimney design. In addition to the potential structural deficiencies the building does not meet current life safety requirements for fire, egress and federal and State accessibility requirements. An Asbestos & Lead Report<sup>2</sup> also identified the presence of hazardous building materials within the existing building, including lead-based paint and asbestos (refer to Section 4.7, Hazard and Hazardous Materials for additional discussion).

### 5.1.2 Analysis of the No Project Alternative

The potential impacts associated with the No Project alternative are described below. As discussed, the No Project alternative would reduce or avoid all of the significant impacts of the proposed project. However, the No Project alternative would also not achieve any of the objectives of the proposed project and existing conditions related to recreational use of a non-code-compliant structure and presence of hazardous building materials would remain. In addition, under current conditions, vehicular traffic crosses through the existing shallow creek bed to access immediately adjacent existing parking spaces, likely resulting in the transmission of polluted surface runoff into this water body. This condition would remain under the No Project alternative. El Zanjon Creek also regularly floods and impacts access and parking; without improvements proposed as part of the project, this condition would continue.

<sup>1</sup> Degenkolb, 2018. Limited Tier 1 Seismic Evaluation, San Bruno Recreation and Aquatics Center Building Assessment, San Bruno, California. February 26.

<sup>2</sup> ProTech, 2019. Asbestos and Lead (Pb) Report, Limited Pre-Demolition/Renovation Survey & Evaluation, San Bruno Aquatic & Recreation Center, San Bruno, California. February 26.

#### 5.1.2.1 Biological Resources

Under the No Project alternative, the project site would not be redeveloped, and El Zanjon Creek and existing vegetation would not be realigned or disturbed. Impacts to biological resources identified for development of the proposed project would not occur. Specifically, impacts related to special-status species, federally protected water resources, riparian habitat, and nesting and native birds would not result from implementation of the No Project alternative and implementation of Mitigation Measures BIO-1a, BIO-1b, BIO-2a, BIO-2b, BIO-3a, BIO-3b, BIO-3c, and BIO-4 would not be required. In addition, none of the existing heritage trees on the site would be removed. Similar to the proposed project, there would be no impacts related to local policies protecting biological resources or any adopted habitat conservation plans or adopted natural community conservation plans. Ultimately, implementation of the No Project alternative would avoid all impacts to biological resources associated with development of the proposed project.

#### 5.1.2.2 Cultural Resources

Under the No Project alternative, the project site would not be redeveloped and no construction activities, including demolition, grading, and excavation would occur. The Veterans Memorial building, which qualifies as a historic resource under CEQA, would not be demolished or modified in any way, and implementation of Mitigation Measures CUL-1a, CUL-1b, and CUL-1c would not be required. Potential impacts to archaeological resources that may be located at the project site would not occur because no ground disturbing or construction activities would take place; therefore, implementation of Mitigation Measures CUL-2a and CUL-2b would not be required. Similar to the proposed project, there would be no impacts related to previously undiscovered human remains. Ultimately, implementation of the No Project alternative would avoid all impacts to cultural resources associated with development of the proposed project.

#### 5.1.2.3 Transportation and Circulation

The transportation network within, and in the vicinity of, the project site would remain unchanged with the No Project alternative. The No Project alternative would not result in the realignment of City Park Way. Because no development would occur on the project site, less-than-significant impacts related to intersection operations, public transit, pedestrian, and bicycle facilities, and emergency vehicle access and circulation would not occur with implementation of the No Project alternative. In addition, the No Project alternative would not result in additional project trips; therefore signalization or a roundabout at this intersection would not be required (Mitigation Measure TRA-1). The No Project alternative also would not generate any new vehicle or pedestrian trips, and therefore implementation of Mitigation Measure TRA-2 would not be required. Ultimately, implementation of the No Project alternative would avoid all impacts related to transportation and circulation associated with development of the proposed project.

#### 5.1.2.4 Air Quality

Under the No Project alternative, construction activities at the project site would not occur and the potentially significant impact associated with construction-period air quality emissions would not result; therefore, implementation of Mitigation Measure AIR-1 and AIR-2 would not be required. The less-than-significant impacts related to consistency with the Bay Area Air Quality Management District's (BAAQMD) Clean Air Plan, local and regional operation-period air emission associated with

vehicle trips, substantial pollutant concentrations that could affect sensitive receptors, and odors would also not occur with implementation of the No Project alternative. Ultimately, implementation of the No Project alternative would avoid all impacts related to air quality associated with development of the proposed project.

#### 5.1.2.5 Noise

Under the No Project alternative, no construction activities would occur on the site and therefore implementation of Mitigation Measures NOI-1 and NOI-2 would not be required. In addition, the less-than-significant noise-related impacts associated with operation of the proposed project would not occur with implementation of the No Project alternative. Similar to the proposed project, no groundborne vibration or noise impacts would occur. Ultimately, implementation of the No Project alternative would avoid all impacts related to noise associated with development of the proposed project.

#### 5.1.2.6 Geology and Soils

Under the No Project alternative, the project site would not be redeveloped, and no construction activities would occur on the site. Therefore, implementation of Mitigation Measures GEO-1 and GEO-2 would not be required. However, implementation of the No Project alternative would result in the continuation of existing recreational programming within a seismically-deficient facility, exposing people to substantial risks associated with seismic ground shaking. Ultimately, implementation of the No Project alternative would increase impacts related to geology and soils as compared to development associated with the proposed project.

#### 5.1.2.7 Hazards and Hazardous Materials

Under the No Project alternative, the project site would not be redeveloped and would remain in its current condition and no construction or demolition activities would take place; therefore, impacts associated with the potential release or exposure to hazardous materials and increase in wildland fire risk would not occur and implementation of Mitigation Measures HAZ-1, HAZ-2a, and HAZ-2b would not be required. However, under this alternative, existing hazardous conditions related to PCB-containing material would not be remediated and building materials would continue to be contaminated (although no immediate risks to people or the environment are present if these materials remain undisturbed). The less-than-significant impacts related to the routine transport use, or disposal of hazardous materials, acutely hazardous materials near sensitive receptors, hazardous materials within a quarter mile of a school, emergency access and evacuation routes, and aviation hazards would also not occur with implementation of the No Project alternative.

Ultimately, implementation of the No Project alternative would avoid all impacts related to hazardous materials associated with development of the proposed project, although existing hazardous conditions at the site would continue because the site would not be remediated.

#### 5.1.2.8 Hydrology and Water Quality

Under the No Project alternative, the project site would be subject to existing hydrologic conditions and would not include the realignment of El Zanjon Creek. Therefore, under the No Project alternative, the proposed project's significant impacts associated with alteration of existing drainage

patterns and flood hazards would not occur. Therefore, implementation of Mitigation Measures HYD-1 and HYD-2 would not be required. In addition, the less-than-significant impacts related water quality standards, groundwater supplies, and compliance with water quality control plans would not occur. Ultimately, implementation of the No Project alternative would avoid all impacts related to hydrology and water quality associated with development of the proposed project. However, it should be noted that under current conditions, vehicular traffic crosses through the existing shallow creek bed to access immediately adjacent existing parking spaces, likely resulting in the transmission of polluted surface runoff into this water body. This condition would be improved with development of the proposed project; however, this improvement in existing conditions would not occur with development of the No Project alternative.

## 5.2 EXISTING CREEK ALIGNMENT ALTERNATIVE

The following provides a description of the Existing Creek Alignment alternative and its anticipated environmental impacts. The emphasis of the analysis is on comparing the anticipated environmental impacts of the Existing Creek Alignment alternative to the environmental impacts associated with the proposed project. The discussion includes a determination of whether or not the Existing Creek Alignment alternative would reduce, eliminate, or create new significant environmental impacts and the extent to which the Existing Creek Alignment alternative would meet the objectives of the project.

### 5.2.1 Principal Characteristics

The Existing Creek Alignment alternative assumes that the existing Veterans Memorial building and pool facility would be demolished and that a new recreation center and outdoor pool would be constructed, similar to the proposed project and generally within a similar building footprint. Installation of new utilities would also be required, similar to the proposed project. However, the existing alignment of City Park Way and El Zanjon Creek would be maintained. To accommodate these existing alignments, the parking lot adjacent to the existing building would be demolished to accommodate the proposed SBRAC, and the existing angled parking along City Park Way would be retained to provide approximately 46 parking spaces. The parking provided by the project would be reduced by approximately 25 spaces to accommodate the existing alignment of City Park Way and El Zanjon Creek. All other improvements proposed as part of the project would occur.

### 5.2.2 Analysis of the Existing Creek Alignment Alternative

The potential impacts associated with the Existing Creek Alignment alternative are described below. As discussed, the Existing Creek Alignment alternative would include a new recreation center similar in size and planned programming to the proposed project and maintain the existing alignment of El Zanjon Creek and City Park Way, resulting in a reduction of parking spaces. Impacts related to federally protected waters and riparian habitat would be avoided with implementation of the Existing Creek Alignment alternative as El Zanjon Creek would not be modified. However, under existing conditions, El Zanjon Creek regularly floods and impacts access and parking. Without improvements proposed as part of the project, this condition would continue. In addition, under current conditions, vehicular traffic crosses through the existing shallow creek bed to access immediately adjacent existing parking spaces, likely resulting in the transmission of polluted surface

runoff into this water body. This condition would remain under the Existing Creek Alignment alternative.

The Existing Creek Alignment alternative would achieve most of the project objectives; however, not to the same extent as the proposed project given that the number of parking spaces provided would not satisfy current or future space needs. The Existing Creek Alignment alternative would not achieve the goal of providing flexible, integrated, and attractive spaces that serve the community's current and future recreation, aquatics, and event-space needs, and would not achieve maximized operational efficiencies.

This alternative would achieve the project objectives related to building design and energy efficiency, as the design would not change under the Existing Creek Alignment alternative.

#### 5.2.2.1 Biological Resources

Under the Existing Creek Alignment alternative, El Zanjon Creek and City Park Way would not be realigned to construct a larger parking lot, avoiding the project's impact to federally protected water resources and riparian habitat. Therefore, implementation of Mitigation Measures BIO-3a, BIO-3b, and BIO-3c, as identified for the proposed project, would not be required. However, similar or modified mitigation measures may be required to address impacts of construction activities occurring within the immediate vicinity of the creek, including roadway demolition, installation of utilities, and potential removal of trees within the riparian corridor. These measures may include those outlined in Mitigation Measure BIO-3a and BIO-3c, to ensure that the creek is protected during these activities and that this impact would be less than significant. However, permits from the regulatory agencies (California Department of Fish and Wildlife and United States Fish and Wildlife Service) are not likely to be required, provided that no work within or immediately within the creek corridor occurs.

Although this alternative would avoid impacts to El Zanjon Creek, impacts related to special-status species and nesting and native birds would still occur, as the proposed project would be located in the same general area as the proposed project and would continue to result in the removal of trees. It is currently unknown if the number of trees to be removed would be greater or fewer than the proposed project, as the building footprint would shift compared to the proposed project. Therefore, implementation of Mitigation Measures BIO-1a, BIO-1b, BIO-2a, BIO-2b, and BIO-4 would still be required. Similar to the proposed project, there would be no impacts related to local policies protecting biological resources or any adopted habitat conservation plans or adopted natural community conservation plans.

Ultimately, implementation of the Existing Creek Alignment alternative would avoid direct impacts to federally protected water resources and would slightly reduce the potentially significant impact related to riparian habitat and native and nesting birds due to a potential decrease in the total number of trees that would be removed, though not to a level that would not require mitigation.

#### 5.2.2.2 Cultural Resources

Under the Existing Creek Alignment alternative, the Veterans Memorial building, which qualifies as a historic resource under CEQA, and pool facility would continue to be demolished, and therefore

implementation of Mitigation Measures CUL-1a, CUL-1b, and CUL-1c would be required. Construction activities at the project site would still occur, although the total amount of ground disturbance may be reduced; however, the potentially significant impact associated with archaeological deposits would be similar. Therefore, implementation of Mitigation Measures CUL-2a, and CUL-2b would also be required. The less-than-significant impact related to human remains would also occur with implementation of the Existing Creek Alignment alternative. Ultimately, implementation of the Existing Creek Alignment alternative would slightly reduce impacts related to archaeological resources, but not to the level that would not require mitigation and would result in the same significant unavoidable impact related to historic resources as the proposed project.

### 5.2.2.3 Transportation and Circulation

Under the Existing Creek Alignment alternative, El Zanjon Creek and City Park Way would not be realigned to construct a larger parking lot and access and parking would continue to be impeded when the creek area floods, which is an existing condition. However, this alternative would result in the development of a new recreational center similar in size to the proposed project, and therefore would generate a similar amount of vehicle trips. Therefore, similar to the proposed project, the Existing Creek Alignment alternative would result in less-than-significant impacts related to public transit, pedestrian, and bicycle facilities, and emergency vehicle access and operations. The Existing Creek Alignment alternative would result in similar impacts related to the operation of the Crystal Springs Road and Oak Avenue/City Park Way intersection and pedestrian safety impacts, and therefore implementation of Mitigation Measures TRA-1 and TRA-2 would be required.

Ultimately, implementation of the Existing Creek Alignment alternative would result in similar impacts related to transportation and circulation as those associated with the proposed project.

### 5.2.2.4 Air Quality

Under the Existing Creek Alignment alternative, construction activities at the project site would still occur, although the overall length and duration may be reduced; however, the potentially significant impact associated with construction-period air quality would be similar. Therefore, implementation of Mitigation Measures AIR-1 and AIR-2 would be required. The less-than-significant impacts related to consistency with the Bay Area Air Quality Management District's (BAAQMD) Clean Air Plan, local and regional operation-period air emission associated with vehicle trips, substantial pollutant concentrations that could affect sensitive receptors, and odors would also occur with implementation of Existing Creek Alignment alternative. Ultimately, implementation of the Existing Creek Alignment alternative would slightly reduce impacts related to air quality associated with development of the proposed project due to the reduced level of development.

### 5.2.2.5 Noise

Under the Existing Creek Alignment alternative, construction activities would occur on the site, including building demolition and construction and installation of underground utilities and roadway repaving, although the overall length and duration may be reduced given that the existing creek channel would not be modified. In addition, noise impacts associated with the location of recreational uses in an area that is generally considered an unacceptable noise environment for residential land uses would also still occur. Therefore, implementation of Mitigation Measure NOI-1

would be required. Construction activities would also still result in substantial temporary or periodic increases in ambient noise levels, and Mitigation Measure NOI-2 would be required. In addition, the less-than-significant noise-related impacts associated with operation of the proposed project and vibration would still occur. Ultimately, implementation of the Existing Creek Alignment alternative would result in similar impacts related to noise associated with development of the proposed project.

#### 5.2.2.6 Geology and Soils

Under the Existing Creek Alignment alternative, redevelopment of the project site would still occur in the same location as the proposed project. Therefore, implementation of Mitigation Measures GEO-1 and GEO-2 would be required. In addition, the less-than-significant impacts related to fault rupture, seismic ground shaking, and alternative wastewater disposal systems would still occur. Ultimately, implementation of the Existing Creek Alignment alternative would result in similar impacts related to geology and soils as those associated with the proposed project.

#### 5.2.2.7 Hazards and Hazardous Materials

Under the Existing Creek Alignment alternative, the project site would be redeveloped, and demolition and construction activities would take place, similar to the proposed project. Therefore, impacts associated with the potential release of or exposure to hazardous building materials would be similar to the proposed project and implementation of Mitigation Measure HAZ-1 would be required. In addition, the Existing Creek Alignment alternative could also temporarily and permanently increase wildland fire risks, as it would be in the same location of the proposed project, and implementation of Mitigation Measures HAZ-2a and HAZ-2b would be required. The less-than-significant impacts related to the routine transport use, or disposal of hazardous materials, acutely hazardous materials near sensitive receptors, hazardous materials within a quarter mile of a school, emergency access and evacuation routes, and aviation hazards would also occur. Ultimately, implementation of the Existing Creek Alignment alternative would result in similar impacts related to hazards and hazardous materials as those associated with the proposed project.

#### 5.2.2.8 Hydrology and Water Quality

Under the Existing Creek Alignment alternative, hydrologic conditions at the project site would still change, though to a lesser degree as El Zanjon Creek and City Park Way would remain in their current alignments. However, new impervious surfaces and improvements (e.g., the proposed structure and planters) would still be placed within an area that is subject to flooding based on the City's General Plan and new improvements could impede or redirect flood flows. Therefore, implementation of Mitigation Measure HYD-1 would be required. In addition, the new building and other improvements that would be constructed under the Existing Creek Alignment alternative would generally be located in the same area as the proposed project, and therefore implementation of Mitigation Measure HYD-2 would be required. Similar to the proposed project, the less-than-significant impacts related water quality standards, groundwater supplies, and compliance with water quality control plans would occur. However, under existing conditions, El Zanjon Creek regularly floods and impacts access and parking. Without improvements proposed as part of the project, this condition would continue. In addition, under current conditions, vehicular traffic crosses through the existing shallow creek bed to access immediately adjacent existing parking

spaces, likely resulting in the transmission of polluted surface runoff into this water body. This condition would remain under the Existing Creek Alignment alternative. Ultimately, implementation of the Existing Creek Alignment alternative would likely result in slightly greater impacts related to hydrology and water quality as those associated with the proposed project.

### 5.3 EXISTING BUILDING REUSE ALTERNATIVE

The following provides a description of the Existing Building Reuse alternative and its anticipated environmental impacts. The emphasis of the analysis is on comparing the anticipated environmental impacts of the Existing Building Reuse alternative to the environmental impacts associated with the proposed project. The discussion includes a determination of whether or not the Existing Building Reuse alternative would reduce, eliminate, or create new significant environmental impacts and the extent to which the Existing Building Reuse alternative would meet the objectives of the project.

#### 5.3.1 Principal Characteristics

The Existing Building Reuse alternative assumes that the existing building would be reused with interior improvements and an exterior addition, to allow for a similar building size and programming as the proposed project. The second-floor gymnasium and the first-floor space underneath it would be retained and repurposed, for reuse of a total of approximately 19,000 square feet of space. The remaining portions of the existing building that surround the gymnasium would be demolished and replaced with new construction that would wrap three sides of the existing gymnasium, a total of approximately 30,000 square feet. Spaces in the addition would include program rooms, staff spaces, locker rooms, and a new indoor pool. Similar to the proposed project, this alternative would include the demolition of the existing outside pool facility, realignment of City Park Way and El Zanjon Creek, and the reconfigured parking layout.

Except for the large volume of the gymnasium, the existing spaces in the Veterans Memorial building do not support the proposed program and functional requirements for a new 21st century recreation and aquatic center. The existing spaces, other than the gymnasium, are insufficient and cannot support the proposed programs, services, and events, due to size constraints, and limited functionality. In addition, physical limitations include inadequate flooring, lighting, power, technology, flexibility, acoustics, and worn, unattractive finishes. Originally built in the mid-1950s, the Veterans Memorial building has aged building systems (mechanical, plumbing, and electrical systems) and suffers from non-code conforming accessibility and seismic design, as noted in Section 5.1. The character and ambiance of many spaces within the facility are dated and limit the revenue potential. The two-story layout compromises staff ability to provide adequate supervision, prompting security concerns and limits the ability to efficiently operate the disjointed center.

Therefore, the Existing Building Reuse alternative only includes the retention of the two-story gymnasium volume of the existing building, which would include refurbishing the gym on the second floor, and repurposing and renovating the portion of the building below the gym on the first-floor to accommodate mechanical rooms and other building support spaces. The building footprint would also allow for an increase in the number of parking spaces within the adjacent parking lot.

### 5.3.2 Analysis of the Existing Building Reuse Alternative

The potential impacts associated with the Existing Building Reuse alternative are described below. As discussed, the Existing Building Reuse alternative would include the retention of the gymnasium and first-floor space beneath it and the remaining portions of the existing building that surround the gymnasium would be demolished and replaced with new construction. The Existing Building Reuse alternative would result in an addition to the existing recreation center with a net increase of approximately 2,000 square feet.

The Existing Building Reuse alternative would achieve most of the project objectives; however, those that it would achieve would not be to the same extent as the proposed project given that a portion of the existing building would be retained. The Existing Building Reuse alternative would not achieve the goals of maximized operational efficiencies, intuitive systems and layout, and an energy-efficient and code-compliant building, as the design would be required to accommodate the gymnasium which includes aged building systems, compromises staff ability to provide adequate supervision, and limits the ability to efficiently operate, as noted above.

The project's ability to provide a flexible, integrated, and attractive building; provide vibrant indoor and outdoor community gathering spaces; and provide a building design that reflects the natural beauty of San Bruno City Park would be minimized, as building and space design constraints would be required to retain the existing gymnasium.

This alternative would achieve the project objectives related to the provision of a highly valued community resource, as the Existing Building Reuse alternative would include the same program space as the proposed project.

#### 5.3.2.1 Biological Resources

Under the Existing Building Reuse alternative, El Zanjon Creek and City Park Way would be realigned and impacts related to special-status species and nesting and native birds would still occur, as the proposed project would be located in the same general area as the proposed project and would continue to result in the removal of trees. Therefore, implementation of Mitigation Measures BIO-1a, BIO-1b, BIO-2a, BIO-2b, BIO-3a, BIO-3b, BIO-3c, and BIO-4, would still be required. Similar to the proposed project, there would be no impacts related to local policies protecting biological resources or any adopted habitat conservation plans or adopted natural community conservation plans.

Ultimately, implementation of the Existing Building Reuse alternative would result in similar impacts related to biological resources as those associated with the proposed project.

#### 5.3.2.2 Cultural Resources

Under the Existing Building Reuse alternative, the Veterans Memorial building, which qualifies as a historic resource under CEQA, would be materially altered, including the demolition of character-defining features such as the barrel groin vaulted roof, symmetrical two-story façade, and flying buttresses on the north and south façades, among others. Therefore, implementation of Mitigation Measures CUL-1a, CUL-1b, and CUL-1c would be required and this impact would remain significant and unavoidable. Construction activities at the project site would still occur, although the total

amount of ground disturbance may be reduced; however, the potentially significant impact associated with archaeological deposits would be similar. Therefore, implementation of Mitigation Measures CUL-2a and CUL-2b would also be required. The less-than-significant impact related to human remains would also occur with implementation of the Existing Building Reuse alternative.

Ultimately, implementation of the Existing Building Reuse alternative would slightly reduce impacts related to archaeological resources, but not to the level that would not require mitigation and would result in the same significant unavoidable impact related to historic resources as the proposed project.

### 5.3.2.3 Transportation and Circulation

Similar to the proposed project, the Existing Building Reuse alternative would result in the development of a new recreational center and realignment of El Zanjon Creek and City Park Way. The Existing Building Reuse alternative would result in an approximately 2,000-square-foot increase compared to the proposed project. Therefore, this alternative would result in an increase of approximately 4 vehicle trips in the AM peak hour, for a total of 34, and an increase of approximately 5 vehicle trips in the PM peak hour, for a total of 44. This increase in vehicle trips would not result in any new or more significant impacts than those identified in Section 4.3, Transportation and Circulation, of this EIR. Therefore, similar to the proposed project, the Existing Building Reuse alternative would result in less-than-significant impacts related to intersection operations, public transit, pedestrian, and bicycle facilities, and emergency vehicle access and operations. The Existing Building Reuse alternative would result in similar impacts related to the operation of the Crystal Springs Road and Oak Avenue/City Park Way intersection and pedestrian safety impacts, and therefore implementation of Mitigation Measures TRA-1 and TRA-2 would be required.

Ultimately, implementation of the Existing Building Reuse alternative would result in similar impacts related to transportation and circulation as those associated with the proposed project.

### 5.3.2.4 Air Quality

Under the Existing Building Reuse alternative, construction activities at the project site would still occur, although the overall length and duration may be reduced as approximately 19,000 square feet of building space would be retained; however, the potentially significant impact associated with construction-period air quality would be similar. Therefore, implementation of Mitigation Measures AIR-1 and AIR-2 would be required. The less-than-significant impacts related to consistency with the Bay Area Air Quality Management District's (BAAQMD) Clean Air Plan, local and regional operation-period air emission associated with vehicle trips, substantial pollutant concentrations that could affect sensitive receptors, and odors would also occur with implementation of Existing Building Reuse alternative.

Ultimately, implementation of the Existing Building Reuse alternative would slightly reduce construction-related impacts related to air quality associated with development of the proposed project due to the reduced level of development; however, the operation-period impacts of the project could slightly increase, due to the slight increase in net new building square footage.

### 5.3.2.5 Noise

Under the Existing Building Reuse alternative, construction activities would occur on the site, although the overall length and duration may be reduced, as noted above. In addition, noise impacts associated with the location of recreational uses in an area that is generally considered an unacceptable noise environment for residential land uses would also still occur. Therefore, implementation of Mitigation Measure NOI-1 would be required. Construction activities would also still result in substantial temporary or periodic increases in ambient noise levels, and Mitigation Measure NOI-2 would be required. In addition the less-than-significant noise-related impacts associated with operation of the proposed project and vibration would still occur. Ultimately, implementation of the Existing Building Reuse alternative would slightly reduce impacts related to noise associated with development of the proposed project due to the reduced level of development.

### 5.3.2.6 Geology and Soils

Under the Existing Building Reuse alternative, redevelopment of the project site would still occur in the same location as the proposed project and the existing building would require seismic upgrades to meet current code requirements. Therefore, implementation of Mitigation Measures GEO-1 and GEO-2 would be required. In addition, the less-than-significant impacts related to fault rupture, seismic ground shaking, and alternative wastewater disposal systems would still occur. Ultimately, implementation of the Existing Building Reuse alternative would result in similar impacts related to geology and soils as those associated with the proposed project.

### 5.3.2.7 Hazards and Hazardous Materials

Under the Existing Building Reuse alternative, the project site would be redeveloped, and demolition and construction activities would take place, similar to the proposed project. Therefore, impacts associated with the potential release of or exposure to hazardous building materials would be similar to the proposed project and implementation of Mitigation Measure HAZ-1 would be required. In addition, the Existing Building Reuse alternative could also temporarily and permanently increase wildland fire risks, as it would be in the same location of the proposed project, and implementation of Mitigation Measures HAZ-2a and HAZ-2b would be required. The less-than-significant impacts related to the routine transport use, or disposal of hazardous materials, acutely hazardous materials near sensitive receptors, hazardous materials within a quarter mile of a school, emergency access and evacuation routes, and aviation hazards would also occur.

Ultimately, implementation of the Existing Building Reuse alternative would result in similar impacts related to hazards and hazardous materials as those associated with the proposed project.

### 5.3.2.8 Hydrology and Water Quality

Under the Existing Building Reuse alternative, hydrologic conditions at the project site would still change, as El Zanjon Creek and City Park Way would be realigned. In addition, new impervious surfaces and improvements (e.g., the proposed structure and planters) would still be placed within an area that is subject to flooding based on the City's General Plan and new improvements could impede or redirect flood flows. Therefore, implementation of Mitigation Measure HYD-1 would be required. In addition, the Existing Building Reuse alternative would generally be located in the same

area as the proposed project, and therefore implementation of Mitigation Measure HYD-2 would be required. Similar to the proposed project, the less-than-significant impacts related water quality standards, groundwater supplies, and compliance with water quality control plans would occur.

Ultimately, implementation of the Existing Building Reuse alternative would result in similar impacts related to hydrology and water quality as those associated with the proposed project. In addition, under existing conditions, El Zanjon Creek regularly floods and impacts access and parking. Similar to the proposed project, this condition would improve with development of the Existing Building Reuse alternative. Under current conditions, vehicular traffic crosses through the existing shallow creek bed to access immediately adjacent existing parking spaces, likely resulting in the transmission of polluted surface runoff into this water body. Similar to the proposed project, this condition would also improve under this alternative.

## 5.4 OTHER ALTERNATIVES CONSIDERED

The following provides a description of various potential alternatives that were identified and considered, and the reasons why they were ultimately not selected for further evaluation in this EIR.

### 5.4.1 Off-Site Locations

An alternative location was not considered for analysis because no other suitable locations that are currently owned by the City were identified, and the City would not feasibly otherwise be able to gain control of a suitable vacant site within the City. In addition, an objective of the proposed project includes reflecting the natural beauty of San Bruno City Park, and therefore an alternative location would fail to meet this objective. Additionally, the existing recreation center and pool facility are an integral part of San Bruno City Park, the City's largest and most-centralized park, and should be retained in their current location. Therefore, such an alternative was ultimately not selected for further analysis in the EIR.

### 5.4.2 Reduced Size Alternative

An alternative was considered that would reduce the overall size of the building that would have eliminated the proposed community lounge, community hall, and elevated walking track, resulting in a reduction of approximately 5,000 square feet. Major objectives of the proposed project including the provision of community gathering space, and therefore a smaller building that lacks these spaces would fail to meet several objectives. In addition, an alternative that would reduce the overall massing and scale of the proposed building, but would be in the same location and include the same infrastructure changes as the proposed project, would not substantially reduce or avoid any of the impacts of the project as identified in this EIR. Therefore, such an alternative was ultimately not selected for further analysis in the EIR.

### 5.4.3 Preservation Alternative

A project alternative that would consider preservation of the existing Veterans Memorial building's character-defining features, such that the significant unavoidable impact to historic resources identified for the proposed project would be avoided, was considered. Such an alternative would require reconfiguration and reuse of the existing building interior and implementation of required seismic upgrades to achieve compliance with current code requirements. Exterior building

modifications would not occur so as to preserve the building's character-defining features that contribute to its status as a historic resource under CEQA. However, as described under the Existing Building Reuse alternative, the existing spaces in the Veterans Memorial building do not support the proposed program and functional requirements for a new 21st century recreation and aquatics center. Although a Preservation alternative would avoid the significant and unavoidable impacts to historic resources of the project, it would not meet most of the basic project objectives and was therefore not selected for further analysis in the EIR.

#### **5.4.4 Valley Alternative**

An alternative was considered that would result in the construction of a new building on the southern edge of the project site within the same area as the existing pool facility, and the existing Veterans Memorial building would be returned to open space. However, outreach determined that the public preferred the existing location. Therefore, an alternative in a different location would fail to meet the objective of being a highly valued community resource. In addition, the Valley Alternative would also require the demolition of the Veterans Memorial building and a realignment of El Zanjon Creek, and therefore would not substantially reduce or avoid any of the impacts of the project as identified in this EIR. Therefore, such an alternative was ultimately not selected for further analysis in the EIR.

### **5.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE**

CEQA requires the identification of the environmentally superior alternative in an EIR from among the range of reasonable alternatives that are evaluated. For this project, the No Project alternative would be considered the environmentally superior alternative as environmental impacts associated with the project would be reduced or avoided under this alternative. However, this alternative does not meet any of the objectives of the proposed project.

CEQA Guidelines Section 15126.6(d)(2) states that if the environmentally superior alternative is the No Project alternative, the EIR shall also identify an environmentally superior alternative from among the other alternatives. When compared to the proposed project, the Existing Creek Alignment alternative would be considered the environmentally superior alternative because this alternative would result in an overall smaller development footprint and no permanent disturbance to El Zanjon Creek, although temporary construction-period impacts to the creek could still occur and all other impacts of the project would still occur. In addition, development of this alternative would meet all of the project objectives, although some to a lesser degree.

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## 6.0 OTHER CEQA CONSIDERATIONS

As required by CEQA, this chapter discusses the following types of impacts that could result from implementation of the proposed project: growth-inducing impacts; significant irreversible changes; effects found not to be significant; and significant unavoidable effects.

### 6.1 GROWTH INDUCING IMPACTS

This section summarizes the project's potential growth-inducing impacts on the surrounding community. A project is typically considered growth-inducing if it would foster economic or population growth or the construction of additional housing; if it would remove obstacles to population growth or tax community services to the extent that the construction of new facilities would be necessary; or if it would encourage or facilitate other activities that cause significant environmental effects.<sup>1</sup> Examples of projects likely to have significant growth-inducing impacts include extensions or expansions of infrastructure systems beyond what is needed to serve project-specific demand, and development of new residential subdivisions or industrial parks in areas that are currently only sparsely developed or are undeveloped.

The proposed project consists of a new recreation and aquatic center, to be developed generally within the same footprint as the existing community center and outdoor pool facility, within the existing San Bruno City Park. Development of the proposed project would not result in direct population growth within the City, as it would not include residential units. Additionally, the proposed SBRAC would include similar staffing levels to the existing community center, and therefore would not indirectly induce substantial population growth. As such, the proposed project would neither directly nor indirectly lead to substantial or unforeseen economic or population growth.

Additionally, the proposed project would consist of construction on a previously developed site in an existing urbanized area and would not require the extension of utilities or roads into undeveloped areas or directly or indirectly lead to the development of greenfield sites. Due to the location of the project site and the presence of existing uses on and in the vicinity of the site, construction of the proposed project would not induce unplanned growth in the area. Therefore, the growth that would occur as a result of the proposed project would not be substantial or adverse.

### 6.2 SIGNIFICANT IRREVERSIBLE CHANGES

An EIR must identify any significant irreversible environmental changes that could result from implementation of a proposed project. These may include current or future uses of non-renewable resources, and secondary growth-inducing impacts that commit future generations to similar uses. CEQA suggests that irretrievable commitments of resources should be evaluated to assure that such current consumption is justified. The CEQA Guidelines describe three categories of significant irreversible changes that should be considered, as further detailed below.

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<sup>1</sup> CEQA Guidelines, 2019. Section 15126.2(d).

### 6.2.1 Changes in Land Use Which Commit Future Generations

The project site is located within San Bruno City Park and is generally surrounded by recreational, residential, and institutional uses. The approximately 5.6-acre project site is currently developed with the Veterans Memorial building and pool, existing roadways and parking areas directly in front of and adjacent to the building, the existing gazebo area, and portions of the channelized creek. Development associated with the proposed project would occur on a site that has been developed with urban uses for at least the last 60 years. The proposed project would result in development of recreational uses on the project site, and therefore it would be compatible with the existing uses already occurring within the vicinity of the site. The proposed project would not commit future generations to more intense development and there would be nothing to preclude the location or redevelopment of some other type of use on the project site in the future.

### 6.2.2 Irreversible Damage from Environmental Accidents

No significant environmental damage, such as accidental spills or explosion of a hazardous material, is anticipated with implementation of the proposed project. Compliance with federal, State, and local regulations, and implementation of Mitigation Measures HAZ-1, HAZ-2a, and HAZ-2b, as outlined in Section 4.7 of this EIR, would ensure that this potential impact would be reduced to a less-than-significant level. As such, no irreversible changes – such as those that might result from construction of a large-scale mining project, a hydroelectric dam project, or other industrial project – would result from development of the proposed project.

### 6.2.3 Consumption of Nonrenewable Resources

Consumption of nonrenewable resources includes increased energy consumption, conversion of agricultural lands, and lost access to mining reserves. As discussed in the Initial Study (Appendix B), the State Department of Conservation designates the site as “Urban and Built-Up Land,” and the site is located in an urbanized area of San Bruno. Therefore, no existing agricultural lands would be converted to non-agricultural uses. In addition, the project site does not contain known mineral resources and does not serve as a mining reserve; thus, development of the proposed project would not result in the loss of access to mining reserves. Please refer to Sections 4.2 and 4.12 of the Initial Study included in Appendix B for a discussion of impacts related to agricultural and mining resources.

Construction of the proposed project would require the use of energy, including energy produced from non-renewable resources. Energy consumption would also occur during the operational period of the proposed project. As discussed in Section 4.6, Energy, of the Initial Study, the proposed project would not result in the wasteful, inefficient, or unnecessary consumption of fuel or energy and would incorporate renewable energy or energy efficiency measures into building design, equipment use, and transportation. Additionally, the proposed project would not require the construction of major new lines to deliver energy or natural gas as these services are already provided in the area. Therefore, the proposed project would not result in a significant impact associated with the consumption of nonrenewable resources.

### 6.3 EFFECTS FOUND NOT TO BE SIGNIFICANT

Based on the analysis provided in the Initial Study, included in Appendix B, the proposed project would not result in significant impacts related to the following topics, which are not further evaluated in the EIR.

#### 6.3.1 Aesthetics

The proposed SBRAC would be generally in the same location as the existing Veterans Memorial building and would be of a similar height; therefore, the new building would not be more visible from any scenic vista, nor would it block existing public views of a scenic vista as compared to existing conditions. Crystal Springs Road, which borders the project site to the north, is designated as a local scenic corridor in the City's General Plan. The proposed project would include the removal of a number of trees near Crystal Springs Road; however, many of the existing trees would remain. Consistent with General Plan Policy T-26, the proposed project would not include widening, modification, or realignment of Crystal Springs Road, would preserve large trees and other natural features, would not include any signage, and would maintain a setback from the property line.

As also noted in Section 3.0, Project Description of this EIR, a Conditional Use Permit and Architectural Review Permit would be required for the proposed project, which would provide for the review of the physical improvements to the project site, including the overall building scale, massing, and design to ensure compatibility and compliance with City requirements governing scenic quality. Lighting installed as a part of the proposed project would result in lighting levels similar to current conditions on the project site and would not result in a significant increase in light and glare over current conditions. Therefore, there would be a less-than-significant impact related to aesthetics.

#### 6.3.2 Agricultural and Forestry Resources

The project site and vicinity are located within an urban area in the City of San Bruno. The site is currently zoned as Open Space (O) on the City's Zoning Map and is classified as "Urban and Built-Up Land" by the State Department of Conservation.<sup>2</sup> The project site is not used for agricultural production nor does it support forestry resources. Therefore, there would be no impact to agricultural and forestry resources.

#### 6.3.3 Energy

As described in the Initial Study, energy usage on the project site during construction would be temporary in nature and would be relatively small in comparison to the State's available energy sources. In order to increase energy efficiency on the site during project construction, the project would restrict equipment idling times to 5 minutes or less and would require construction workers to shut off idle equipment, as required by Mitigation Measure AIR-1.

Energy use consumed by the proposed project would be associated with natural gas use, electricity consumption, and fuel used for vehicle trips associated with the project. However, energy usage

<sup>2</sup> California Department of Conservation, 2016. Division of Land Use Resource Protection. California Important Farmland Finder. Website: [maps.conservation.ca.gov/dlrp/ciff](https://maps.conservation.ca.gov/dlrp/ciff) (accessed February 19, 2019).

associated with operation of the proposed project would be relatively small in comparison to the State's available energy sources and energy impacts would be negligible at the regional level. Because California's energy conservation planning actions are conducted at a regional level, and because the project's total impact to regional energy supplies would be minor, the proposed project would not conflict with California's energy conservation plans as described in the California Energy Commission's (CEC's) 2017 Integrated Energy Policy Report. Thus, the project would avoid or reduce the inefficient, wasteful, and unnecessary consumption of energy and not result in any irreversible or irretrievable commitments of energy.

#### 6.3.4 Greenhouse Gas Emissions

During construction of the proposed project, greenhouse gas (GHG) emissions would be emitted through the operation of construction equipment and from worker and builder supply vendor vehicles, each of which typically uses fossil-based fuels to operate. However, implementation of Mitigation Measure AIR-1 would reduce construction GHG emissions by limiting construction idling emissions. Construction emissions would not be considered significant.

Long-term operation of the proposed project would generate GHG emissions from area and mobile sources, and indirect emissions from sources associated with energy consumption. The calculated GHG emissions for the proposed project indicate motor vehicle emissions as the largest source at approximately 63 percent of the total. Model results indicate the project would generate approximately 465.7 metric tons per year CO<sub>2</sub>e; these emissions would not exceed the BAAQMD significance criteria of 1,100 metric tons CO<sub>2</sub>e per year. Operation of the proposed project would not generate substantial GHG emissions; therefore, impacts related to operational GHG emissions would be less than significant.

The proposed project would be required to comply with the latest Title 24 standards of the California Code of Regulations regarding energy conservation and green building standards. Therefore, the proposed project would comply with existing State regulations adopted to achieve the overall GHG emissions reduction goals identified in AB 32 and would be consistent with applicable plans and programs designed to reduce GHG emissions. Therefore, the proposed project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

#### 6.3.5 Land Use and Planning

Implementation of the proposed project would result in the demolition of the Veterans Memorial building and pool, and the construction of the proposed SBRAC and associated site improvements. The proposed project would include the realignment of City Park Way, which traverses the project site; however, this realignment would be minimal and would not result in a change of access through the site of the closure of any existing roads upon project completion. Therefore, the proposed project would not physically divide an established community. The project site is designated as Parks/Open Space on the City's General Plan Land Use Map<sup>3</sup> and is within the O zoning district on the City's Zoning Map.<sup>4</sup> The proposed project would include the expansion of an

<sup>3</sup> San Bruno, City of, 2009. *San Bruno General Plan*. March 24.

<sup>4</sup> San Bruno, City of, 2007. Zoning Map. August 2.

existing legally permitted use that does not currently have a Conditional Use Permit, and therefore a Conditional Use Permit would be required.<sup>5</sup> The proposed project would be consistent with the type and intensity of development assumed for the project site in the General Plan and Zoning Ordinance, and would not require any variances. Therefore, the proposed project would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

### 6.3.6 Mineral Resources

The project site is located within an urban area on a developed site. Additionally, the San Bruno General Plan does not identify known mineral resources or mineral recovery sites within or adjacent to the project site. Therefore, the proposed project would not result in the loss of availability of a known mineral resource of value to the region or residents of the State or the loss of availability of a locally-important mineral resource recovery site.

### 6.3.7 Population and Housing

The proposed project would be undertaken to provide the residents of the City with a new and updated recreation center and improved park facilities and parking. The proposed project would neither directly nor indirectly lead to substantial or unforeseen economic or population growth in San Bruno beyond that planned for by the City, nor displace housing or people necessitating the construction of replacement housing elsewhere.

### 6.3.8 Public Services

The proposed project would be adequately served by existing public services. New facilities would not be required to provide police or fire services in order to meet service standards. As a part of the proposed project, improvements would be made to the San Bruno City Park, including the proposed SBRAC, reorganizing the parking area, and improving the creek within the project site. The proposed project would reduce demand at other public facilities by providing a larger recreation center and pool uses with more capacity to serve users. Therefore, the proposed project would not result in an adverse effect on public services and would not require the construction of new facilities.

### 6.3.9 Recreation

The proposed project would temporarily increase at the use of other parks and recreation facilities during the construction period; however, the increased use would be temporary in nature and would subside after construction of the proposed project is complete. Additionally, the proposed SBRAC may decrease use at other parks and recreation facilities once the project is complete, as the proposed project would provide additional recreational opportunities for the community. Therefore, the proposed project would not result in an adverse effect on recreational services and would not require the construction of new facilities.

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<sup>5</sup> San Bruno, City of, 2018. *San Bruno Municipal Code*. Title 12, Article III, Chapter 12.96.170.

### 6.3.10 Tribal Cultural Resources

The City sent letters describing the proposed project and maps depicting the project site to Native American tribes that the Native American Heritage Commission identified as traditionally and culturally affiliated with the project area.<sup>6</sup> To date, no California Native American tribe has formally requested consultation with the City, consistent with the requirements of Public Resources Code 21080.3.1. As such, formal City-tribal government consultations for the proposed project were not initiated. The project would have no impact on known tribal cultural resources.

### 6.3.11 Utilities and Service Systems

The project site is located in an urban area already served by existing utility systems. The proposed project would require the installation and/or upgrades to the following utility connections to the satisfaction of the applicable utility providers: water, wastewater, stormwater drainage, power, and telecommunications service. The proposed project would increase water demand, wastewater generated, and solid waste; however, as discussed in the Initial Study, these increases could be met by existing service providers and existing facilities and impacts to utilities and service systems would be less than significant.

### 6.3.12 Wildfire

The project site and adjacent areas are not located in a Very High Fire Hazard Severity Zone as mapped by the California Department of Forestry and Fire Protection (CAL FIRE)<sup>7</sup> and the project site is not located within any State responsibility areas (SRA) for fire service.<sup>8</sup> The project site is located within a Wildland/Urban Interface Hazard Area for wildland fire, and Junipero Serra Park, which is adjacent to and west of the project site, is a Wildland Fire Hazard Area.<sup>9</sup> However, it is not anticipated that wildfire risks would be exacerbated such that project occupants would be exposed to substantial pollutant concentrations associated with wildfires. Also refer to Section 4.7, Hazards and Hazardous Materials for additional discussion.

## 6.4 SIGNIFICANT UNAVOIDABLE ENVIRONMENTAL IMPACTS

Even with the implementation of the mitigation measures recommended in this EIR, the proposed project would result in a significant and unavoidable impact related to the demolition of the Veterans Memorial building as it qualifies as a historical resource under CEQA. Refer to Section 4.2, Cultural Resources, for additional discussion.

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<sup>6</sup> Totton, Gayle, 2019. Associate Governmental Program Analyst, Native American Heritage Commission. Letter to Michael Smith, City of San Bruno, regarding Native American tribal consultation for the San Bruno Recreation Center Project. February 12.

<sup>7</sup> CAL FIRE, 2008. San Mateo County, Very High Fire Hazard Severity Zones in LRA, November 24.

<sup>8</sup> California, State of, 2007. San Mateo County Fire Hazard Severity Zones in SRA (map). Available online at: [rap.fire.ca.gov/webdata/maps/san\\_mateo/fhszs\\_map.41.pdf](http://rap.fire.ca.gov/webdata/maps/san_mateo/fhszs_map.41.pdf) (accessed June 7, 2019).

<sup>9</sup> San Bruno, City of, 2009. *General Plan, Chapter 8, Public Facilities and Services Element*. Adopted March 24.

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