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## **3.5 AIR QUALITY**

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### **Introduction**

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This section describes existing air quality conditions in the region and in the vicinity of the Project Site. Changes to these conditions would occur with construction and operation of the Project, primarily because of increases in local traffic associated with the higher intensity and mix of uses. Information reported in this section is derived from BAAQMD air emission models that predict regional emissions and localized pollutant concentrations, traffic data prepared for this Draft EIR by Hexagon, and the site plans for the 300 Airport Boulevard Site presented in Chapter 2, Project Description. Information on climate change and greenhouse gas emissions are not presented in this section but can be found in Section 3.6, Climate Change.

Issues identified in response letters to the Notice of Preparation (NOP) (see Appendix A) and during the Planning Commission public scoping meetings for the Project were considered in preparing this analysis. However, no applicable issues that were identified pertain to the Project's potential effect on air quality.

### **Existing Conditions**

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#### **Climate, Topography, and Meteorology**

The City of Burlingame (City) is located within the San Francisco Bay Area Air Basin (SFBAAB), named so because the surrounding mountains confine the movement of air and the pollutants it contains. This area includes all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, the western half of Solano and the southern half of Sonoma counties. The regional climate in the SFBAAB is considered semi-arid and is characterized by mild, dry summers and mild, moderately wet winters (about 90 percent of the annual total rainfall is received in the November-April period); moderate daytime onshore breezes; and moderate humidity. The climate is dominated by a strong, semi-permanent, subtropical high-pressure cell over the northeastern Pacific Ocean. Climate is also affected by the moderating effects of the adjacent oceanic heat reservoir. In summer, when the high-pressure cell is strongest and farthest north, fog forms in the morning, and temperatures are mild. In winter, when the high-pressure cell is weakest and farthest south, occasional rainstorms occur.

#### **Air Quality Background**

In addition to climate, topography, and meteorology, a wide range of emissions sources such as dense population centers, heavy vehicular traffic, and industry influence the air quality within the SFBAAB. Air pollutant emissions within the Bay Area are generated by stationary (or point), area-wide, and mobile sources. Stationary sources exist at identified locations and are usually associated with specific large manufacturing and industrial facilities; examples include fossil-fuel power plants or large boilers that provide industrial process heat. Area-wide sources consist of many smaller point sources that are widely distributed spatially; examples include residential and commercial water heaters,

painting/coating operations, power lawn mower use, agricultural operations, landfills, and the use of consumer products such as barbeque lighter fluid, hair spray, etc. Mobile sources include on-road motor vehicles and other transportation sources like aircraft, ships, trains, and self-propelled construction equipment. Air pollutants can also be generated by natural sources such as fine dust particles suspended in the air by high winds.

## **Criteria Pollutants**

Both the federal and State governments have established ambient air quality standards for outdoor concentrations of various pollutants in order to protect public health. The national and State ambient air quality standards have been set at levels where concentrations could be generally harmful to human health and welfare, and to protect the most sensitive persons from illness or discomfort with a margin of safety.

The air pollutants for which national and State standards have been promulgated and which are most relevant to air quality planning and regulation in the Bay Area include ozone, carbon monoxide (CO), respirable particulate matter (PM<sub>10</sub>), fine particulate matter (PM<sub>2.5</sub>), sulfur dioxide (SO<sub>2</sub>), and lead. In addition, toxic air contaminants (TACs) are of concern in the Bay Area. Each of these is briefly described below.

- *Ozone* is a gas that is formed when reactive organic gases (ROG) and nitrogen oxides (NO<sub>x</sub>) (both byproducts of internal combustion engine exhaust) undergo slow photochemical reactions in the presence of sunlight. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are conducive to its formation.
- *Carbon Monoxide* (CO) is a colorless, odorless gas produced by the incomplete combustion of fuels. CO concentrations tend to be the highest in the winter morning when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone, and motor vehicles operating at slow speeds are the primary source of CO in the Bay Area, the highest ambient CO concentrations are generally found near congested transportation corridors and intersections.
- *Respirable Particulate Matter* (PM<sub>10</sub>) and *Fine Particulate Matter* (PM<sub>2.5</sub>) consist of extremely small, suspended particles or droplets 10 microns and 2.5 microns or smaller in diameter, respectively. Most particulate matter in urban areas is produced by fuel combustion, motor vehicle travel, and construction activities.
- *Nitrogen Dioxide* (NO<sub>2</sub>) is a reactive, oxidizing gas capable of damaging cells lining the respiratory tract and is an essential ingredient in the formation of ozone. It is emitted as a by-product of fuel combustion.
- *Sulfur dioxide* (SO<sub>2</sub>) is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal, and from chemical processes occurring at chemical plants and refineries.

- *Toxic Air Contaminants* (TACs) is a general term for a diverse group of air pollutants that can adversely affect human health, but have not had ambient air quality standards established for them. There are over 244 designated TACs. TACs are not fundamentally different from the pollutants discussed above, but lack ambient air quality standards for a variety of reasons (e.g., insufficient data on toxicity, association with particular workplace exposures rather than general environmental exposure, etc.). The health effects of TACs can result from either acute or chronic exposure, and many types of cancer are associated with chronic TAC exposures.

## Existing Regional Air Quality

With the assistance of BAAQMD, the California Air Resources Board (CARB) compiles inventories of CO, ROG (reactive organic gases, which are ozone precursors), NO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions for the SFBAAB. Table 3.5-1 presents a summary of the most recent year of emissions data for the SFBAAB and San Mateo County.

**Table 3.5-1**  
**2010 Estimated Average Daily Emissions**  
**in San Mateo County and the San Francisco Bay Area**

Emissions Source	Emissions in Tons per Day					
	ROG	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
San Francisco Bay Area Air Basin	359	414	1,596	62	216	82
San Mateo County	33	56	158	9	21	8

*Source:* California Air Resources Board, California Almanac of Emissions and Air Quality. <http://www.arb.ca.gov/app/emsmv/emssumcat.php>, 2009.

Measurements of ambient concentrations of the criteria pollutants are used by the US Environmental Protection Agency (EPA) and CARB to assess and classify the air quality of each regional air basin, county, or, in some cases, a specific urbanized area. The classification is determined by comparing actual monitoring data with national and State standards. If a pollutant concentration in an area is lower than the standard, the area is classified as being in “attainment” for that pollutant. If the pollutant concentration exceeds the standard, the area is classified as a “nonattainment” area. If there are not enough data available to determine whether the standard is exceeded in an area, the area is designated “unclassified.”

EPA and CARB use different standards for determining whether the Bay Area is an attainment area. Under national standards, the Bay Area is currently classified as a nonattainment area for ozone. However, In June 2004, the Bay Area was designated as a marginal nonattainment area of the national 8-hour ozone standard. EPA lowered the national 8-hour ozone standard from 0.080 to 0.075 parts per million (ppm) (i.e., 75 parts per billion [ppb]) effective May 27, 2008. In addition, under national standards the Bay Area is classified as a nonattainment area for the 24-hour PM<sub>2.5</sub>. The Bay Area is in attainment or designated as unclassified for all other pollutants under national standards. Under

California State standards, the Bay Area is designated as a nonattainment area for ozone, PM<sub>2.5</sub>, and PM<sub>10</sub>, and an attainment or unclassified area for all other pollutants.<sup>1</sup>

The SFBAAB has instances of recorded violations of federal and State standards for ozone, CO, and PM<sub>10</sub> over the last 30 years. Since the early 1970s, substantial progress has been made toward controlling these pollutants. Emissions and ambient concentrations of CO decreased in the SFBAAB with the introduction of the catalytic converter in 1975, and with subsequent improvements in motor vehicle engine technology and the introduction of oxygenated fuel. No violations of the State or federal standards for CO have been recorded in the Bay Area since 1991. The Bay Area is in attainment for all State and federal standards except those for ozone, PM<sub>10</sub>, and PM<sub>2.5</sub>. For ozone, the SFBAAB does not meet either the State or federal standards. For PM<sub>10</sub> and PM<sub>2.5</sub>, the SFBAAB does not meet the State standards but does meet the current federal standards,<sup>2</sup> except that the SFBAAB is in nonattainment for PM<sub>2.5</sub> for the federal 24-hour standard.

### Existing Local Air Quality

BAAQMD monitors ambient air pollutant concentrations through a series of monitoring stations located throughout the Bay Area. There is no monitoring station in Burlingame, but there is one in Redwood City, approximately 9 miles to the south, that measures criteria pollutant concentrations, including ozone, CO, NO<sub>2</sub>, and particulates (both PM<sub>10</sub> and PM<sub>2.5</sub>). The air quality in the South Bay, including Burlingame, has generally improved over the past 20 years, as motor vehicles have become cleaner, agricultural and residential burning has been curtailed, and consumer products containing ROG have been reformulated or replaced.

Table 3.5-2 identifies the national and State ambient air quality standards for relevant air pollutants along with the ambient pollutant concentrations that have been measured at the Redwood City monitoring station through the period of 2007 to 2009. Measurements over the past three years indicate that State standards for ozone were not exceeded. However, particulate air quality is a moderate problem in the South Bay. There was one exceedance of the national PM<sub>2.5</sub> and State PM<sub>10</sub> 24-hour standard in 2007 at the Redwood City monitoring site. Carbon monoxide, a product of incomplete combustion, was formerly a problem for the South Bay; however, with improved motor vehicles and fuels, air quality at Redwood City easily meets State and federal standards. Due to Burlingame's close proximity to the monitoring station in Redwood City, it can be assumed that pollutant concentrations are similar in Burlingame.

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<sup>1</sup> Bay Area Air Quality Management District (BAAQMD), Planning, Rules, and Research, Emission Inventory and Air Quality Related, Air Quality Standards, "Air Quality Standards and Attainment Status," website: [http://hank.baaqmd.gov/pln/air\\_quality/ambient\\_air\\_quality.htm](http://hank.baaqmd.gov/pln/air_quality/ambient_air_quality.htm), accessed May 17, 2011.

<sup>2</sup> U.S. EPA lowered the 24-hour PM<sub>2.5</sub> standard from 65 µg/m<sup>3</sup> to 35 µg/m<sup>3</sup> in 2006 and issued attainment status designations for the 35 µg/m<sup>3</sup> standard on December 22, 2008. U.S. EPA designated the SFBAAB as a nonattainment for the 35 µg/m<sup>3</sup> PM<sub>2.5</sub> standard; however, that designation has not yet been published in the Federal Register and is, therefore, not yet effective. On January 25, 2010, EPA set the new one-hour standard for NO<sub>2</sub> at a level of 100 parts per billion (ppb). EPA also is retaining the existing annual average standard of 53 ppb.

## Existing Land Uses

Land uses such as schools, hospitals, and convalescent homes are considered to be sensitive receptors to poor air quality because the very young, the old, and the infirm are more susceptible to respiratory infections and other air quality-related health problems than the general public. Residential uses are also considered sensitive because people in residential areas are often at home and are therefore exposed to pollutants for extended periods of time. Recreational areas are considered moderately sensitive to poor air quality because vigorous exercise associated with recreation places a high demand on the human respiratory function.

**Table 3.5-2  
Summary of Ambient Air Quality in the Project Vicinity**

Air Pollutants Monitored at San Mateo County Monitoring Stations	Year		
	2007	2008	2009
<b>Ozone</b>			
Maximum 1-hour concentration measured	0.077 ppm <sup>a</sup>	0.082 ppm	0.087 ppm
Days exceeding State 0.09 ppm 1-hour standard	0	0	0
Maximum 8-hour concentration measured	0.070 ppm	0.070 ppm	0.063 ppm
Days exceeding national 0.075 ppm 8-hour standard <sup>b</sup>	0	0	0
Days exceeding State 0.07 ppm 8-hour standard	0	0	0
<b>Respirable Particulate Matter (PM<sub>10</sub>)</b>			
Maximum 24-hour concentration measured (national)	52 µg/m <sup>3</sup> <sup>c</sup>	38 µg/m <sup>3</sup>	NA µg/m <sup>3</sup>
No. of days exceeding national 150 µg/m <sup>3</sup> 24-hour standard	0	0	0
Days exceeding State 50 µg/m <sup>3</sup> 24-hour standard	1	0	0
<b>Fine Particulate Matter (PM<sub>2.5</sub>)</b>			
Maximum 24-hour concentration measured	45 µg/m <sup>3</sup>	28 µg/m <sup>3</sup>	32 µg/m <sup>3</sup>
No. of days exceeding national 35 µg/m <sup>3</sup> 24-hour standard <sup>d</sup>	1	0	0
<b>Carbon Monoxide (CO)</b>			
Maximum 8-hour concentration measured	2.33 ppm	1.86 ppm	1.76 ppm
Number of days exceeding national and State 9.0 ppm 8-hour standard	0	0	0
<b>Nitrogen Dioxide (NO<sub>2</sub>)</b>			
Maximum 1-hour concentration measured	0.057 ppm	0.069 ppm	0.056 ppm
Days exceeding national 0.100 ppm 1-hour standard	0	0	0

Source: California Air Resources Board, *Select 8 Summary*, <http://www.arb.ca.gov/adam/select8/sc8start.php>, or the California Air Resources Board, *Top 4 Summary*, <http://www.arb.ca.gov/adam/topfour/topfour1.php>.

Notes:

- ppm = parts by volume per million of air.
- US EPA lowered the national 8-hour ozone standard from 0.080 to 0.075 ppm effective May 27, 2008. In early January 2010, the US EPA proposed a stricter air quality standard for ground level ozone. The new ozone proposal would set the primary smog standard at a level between 0.060 and 0.070 ppm measured over an eight hour period. EPA expects to finalize the newly proposed national 8-hour ozone standard by July 31, 2011.
- µg/m<sup>3</sup> = micrograms per cubic meter.
- U.S. EPA lowered the 24-hour PM<sub>2.5</sub> standard from 65 µg/m<sup>3</sup> to 35 µg/m<sup>3</sup> in 2006 and issued attainment status designations for the 35 µg/m<sup>3</sup> standard on December 22, 2008. U.S. EPA designated the SFBAAB as a nonattainment for the 35 µg/m<sup>3</sup> PM<sub>2.5</sub> standard; however, that designation has not yet been published in the Federal Register and is, therefore, not yet effective.

Within a 0.25-mile radius of the Project Site land uses include Fisherman's Park, the Bay Trail, light-industrial buildings and warehouses, and office buildings. The 300 Airport Boulevard Site is bounded by Airport Boulevard to the north, Airport Boulevard and the Bay to the east, light-industrial buildings along Beach Road to the south, and Sanchez Channel to the west. The 350 Airport Boulevard Site is bounded by the Bay to the north, Fisherman's Park to the east, Airport Boulevard to the south, and the outlet of Sanchez Channel to the west. Motor vehicles are the primary source of air pollutants in the vicinity of the Project Site. See Figure 2-1, in Section 2, Project Description, which depicts the Project Site boundary and its surroundings.

## **Applicable Plans and Regulations**

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Air quality within the Bay Area is addressed through the efforts of various federal, State, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies responsible for improving the air quality within the Bay Area are discussed below.

### **Federal**

**U.S. Environmental Protection Agency.** EPA is responsible for setting and enforcing the federal ambient air quality standards for atmospheric pollutants. It regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain locomotives.

EPA also has jurisdiction over emissions sources outside state waters (outer continental shelf), and establishes various emissions standards for vehicles sold in states other than California. As part of its enforcement responsibilities, EPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the federal standards. The SIP must integrate federal, State, and local plan components and regulations to identify specific measures to reduce pollution, using a combination of performance standards and market-based programs within the timeframe identified in the SIP.

### **State**

**California Air Resources Board.** CARB, a part of the California EPA, is responsible for the coordination and administration of both federal and State air pollution control programs within California. In this capacity, CARB conducts research, sets California Ambient Air Quality Standards, compiles emission inventories, develops suggested control measures, provides oversight of local programs, and prepares the SIP. CARB establishes emissions standards for motor vehicles sold in California, consumer products (e.g., hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions.

The California Energy Commission (CEC) established the Energy Efficient Standards in 1978 for Residential and Nonresidential Buildings, or Title 24, in response to a legislative mandate to reduce California's energy consumption. The State's Title 24 energy-efficiency standards require the design of new buildings to be energy conserving. The standards are updated periodically to allow consideration and possible incorporation of new energy-efficiency technologies and methods.

## Regional

**Bay Area Air Quality Management District.** BAAQMD is the primary agency responsible for comprehensive air pollution control in the SFBAAB, including San Mateo County and the City of Burlingame. BAAQMD, a regional agency, works directly with the Association of Bay Area Governments (ABAG), the Metropolitan Transportation Commission (MTC), and local governments and cooperates actively with all federal and State government agencies. BAAQMD develops rules and regulations, establishes permitting requirements for stationary sources, inspects emissions sources, and enforces such measures through educational programs or fines, when necessary.

BAAQMD is directly responsible for reducing emissions from stationary (area and point)<sup>3</sup> sources and for assuring that State controls on mobile sources are effectively implemented. It has responded to this requirement by preparing a sequence of Ozone Attainment Plans and Clean Air Plans that comply with the Federal Clean Air Act and the California Clean Air Act (CCAA) to accommodate growth, reduce the pollutant levels in the Bay Area, meet federal and State ambient air quality standards, and minimize the fiscal impact that pollution control measures have on the local economy. The Ozone Attainment Plans are prepared for the federal ozone standard, and the Clean Air Plans are prepared for the State ozone standards. The most recent Ozone Attainment Plan was adopted by the BAAQMD Board of Directors on October 2001 and demonstrates attainment of the federal ozone standard in the Bay Area by 2006. In January 2006, BAAQMD adopted the 2005 Ozone Strategy to identify further steps needed to continue reducing the public's exposure to unhealthy levels of ozone. Most recently, the 2010 Clean Air Plan (CAP) was adopted by the Board of Directors on September 15, 2010, which serves to:

- Update the Bay Area 2005 Ozone Strategy in accordance with the requirements of the California Clean Air Act to implement "all feasible measures" to reduce ozone;
- Provide a control strategy to reduce ozone, particulate matter (PM), air toxics, and greenhouse gases in a single, integrated plan;
- Review progress in improving air quality in recent years; and
- Establish emission control measures to be adopted or implemented in the 2010-2012 timeframe.

These planning efforts have substantially decreased the population's exposure to unhealthful levels of pollutants, even while substantial population growth has occurred within the Bay Area.

In 2003, the California Legislature enacted Senate Bill 656 (SB 656) to reduce public exposure to PM<sub>10</sub> and PM<sub>2.5</sub>. SB 656 required CARB, in consultation with local air districts, to develop and adopt, by January 1, 2005, a list of the most readily available, feasible, and cost-effective control measures that could be used by CARB and the air districts to reduce PM<sub>10</sub> and PM<sub>2.5</sub>. In November 2005, BAAQMD adopted a Particulate Matter Implementation Strategy focusing on those measures most applicable and cost effective for the Bay Area.

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<sup>3</sup> A point source is a single, identifiable source of air pollutant emissions. Area sources are small pollution sources that are relatively small, but collectively their emissions can be of concern.

Although BAAQMD is responsible for regional air quality planning efforts, it does not have the authority to directly regulate the air quality issues associated with plans and new development projects within the Bay Area. Instead, BAAQMD has used its expertise and prepared the BAAQMD CEQA Guidelines to indirectly address these issues in accordance with the projections and programs of the Ozone Attainment Plan and Clean Air Plan. The purpose of the BAAQMD CEQA Guidelines is to assist lead agencies, as well as consultants, project proponents, and other interested parties, in evaluating potential air quality impacts of projects and plans proposed in the Bay Area. Specifically, the BAAQMD CEQA Guidelines explain the procedures that BAAQMD recommends be followed during environmental review processes required by CEQA. The BAAQMD CEQA Guidelines provide direction on how to evaluate potential air quality impacts, how to determine whether these impacts are significant, and how to mitigate these impacts. BAAQMD intends that by providing this guidance, the air quality impacts of plans and development proposals will be analyzed accurately and consistently throughout the Bay Area, and adverse impacts will be minimized.

BAAQMD recently updated its CEQA Guidelines, and adopted revised CEQA significance thresholds on June 2, 2010. The most recent revision to the CEQA Guidelines was on June 17, 2010. All of the adopted CEQA thresholds of significance, except for the risk and hazards thresholds for new receptors, were effective June 2, 2010. The risk and hazards thresholds for new receptors became effective May 1, 2011. The new guidelines provide methodologies for analyzing air quality impacts for the updated CEQA significance thresholds for construction-related and operational emissions of criteria pollutants, ozone precursors, health risks, and greenhouse gases (GHGs).<sup>4</sup>

## Local

Local jurisdictions, such as the City of Burlingame, have the authority and responsibility to reduce air pollution through their police power and decision-making authority. Specifically, the City is responsible for assessing the potential for and mitigating air quality problems that result from its land use decisions.

**Burlingame General Plan.** The Burlingame General Plan does not contain any policies or programs that specifically address the clean air goals of the community. However, the General Plan does include the following conservation policies that would contribute to improved air quality in the City:

- *Policy C(F):* To participate in regional conservation programs of direct concern to the City.
- *Policy C(G):* To promote economic growth which is consistent with an improvement in the quality of the environment.

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<sup>4</sup> BAAQMD, “Updated CEQA Guidelines,” website: <http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Updated-CEQA-Guidelines.aspx>, accessed May, 17 2011.

## Impacts and Mitigation Measures

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### Standards of Significance

Based on Appendix G of the CEQA Guidelines, the Project would result in a significant air quality impact if it would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or Projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal, State, or regional ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations; or
- Create objectionable odors affecting a substantial number of people.

The recently adopted (May 2011) BAAQMD CEQA Guidelines include Thresholds of Significance relating to emissions of criteria air pollutants from construction and operational sources, and exposures of sensitive receptors to ambient TACs and PM<sub>2.5</sub>, as shown below in Table 3.5-3.

### Methodology

The BAAQMD CEQA community risk and hazards screening tools are provided for lead agencies to consider in deciding whether there should be further environmental review of a project. These tools provide screening for stationary sources, highways, and roadways within each county that include risk and hazard estimates. The screening tools are intentionally conservative, such that if a project passes the initial screen, no additional review related to the impact is necessary. The screening tools provide conservative estimates and are not based on actual Health Risk Screening Assessments.<sup>5</sup>

Air quality conditions are evaluated in this section under construction and operational scenarios for the 300 Airport Boulevard and 350 Airport Boulevard Projects. Each Project was analyzed using URBEMIS for the following scenarios:

#### Construction

- *300 Airport Boulevard Phase I Only (East Campus.):* Consists of the realignment of Airport Boulevard, civil grading, utilities installation, construction of the underground parking structure at Buildings 1 and 2, construction of Buildings 1 and 2, construction of the amenities building, and landscaping improvements.

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<sup>5</sup> BAAQMD CEQA Guidelines, “Risk and Hazard Screening Analysis Process Flow Chart,” website: [http://www.baaqmd.gov/~ /media/Files/Planning%20and%20Research/CEQA/Screening%20Analysis%20Flow%20Chart\\_May%202011.ashx?la=en](http://www.baaqmd.gov/~ /media/Files/Planning%20and%20Research/CEQA/Screening%20Analysis%20Flow%20Chart_May%202011.ashx?la=en), accessed August 4, 2011.

**Table 3.5-3  
2011 BAAQMD CEQA Air Quality Thresholds of Significance**

Criteria Air Pollutants and Ozone Precursors	Construction-Related	Operational-Related	
	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/day)	Maximum Annual Emissions (tons/year)
<i>Project-Level</i>			
ROG	54	54	10
NO <sub>x</sub>	54	54	10
PM <sub>10</sub> (equipment exhaust)	82	82	15
PM <sub>2.5</sub> (equipment exhaust)	54	54	10
PM <sub>10</sub> /PM <sub>2.5</sub> (fugitive dust)	No Impact with Implementation of Best Management Practices	None	
CO (local concentration)	None	9.0 ppm (8-hour average) 20.0 ppm (1-hour average)	
Risks and Hazards (Project Level)	Same as Operational Thresholds	Compliance with Qualified Community Risk Reduction Plan Or Increased cancer risk of > 10.0 in a million Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute) Ambient PM <sub>2.5</sub> increase: > 0.3 µg/m <sup>3</sup> annual average Zone of Influence: 1,000-foot radius from fence line of source or receptor	
Risks and Hazards (Cumulative)	Same as Operational Thresholds	Compliance with Qualified Community Risk Reduction Plan Or Increased cancer risk of > 100.0 in a million Increased non-cancer risk of > 10.0 Hazard Index (Chronic only) Ambient PM <sub>2.5</sub> increase: > 0.8 µg/m <sup>3</sup> annual average Zone of Influence: 1,000-foot radius from fence line of source or receptor	
<i>Plan-Level</i>			
Criteria Air Pollutants and Ozone Precursors	None	Consistency with Current Air Quality Plan control measures, and Projected VMT or vehicle trip increase is less than or equal to Projected population increase	
Toxic Air Contaminants	None	No net increase in emissions  Overlay zones of at least 500 feet from all freeways and high volume roadways	

*Source:* California Environmental Quality Act Air Quality Guidelines, BAAQMD, adopted June 2010. The risk and hazards thresholds for new receptors are effective May 1, 2011.

- *300 Airport Boulevard Phase II Only (West Campus.):* Consists of remaining civil and grading activities, construction of Buildings 3 and 4, construction of the parking structure, and additional landscaping and public access improvements.
- *300 Airport Boulevard One Phase Only (East & West Campus):* Consists of the realignment of Airport Boulevard, civil grading, utilities installation, construction of the underground parking structure at Buildings 1 and 2, construction of Buildings 1, 2, 3, and 4, construction of the amenities building, and landscaping and public access improvements in a single phase. See Section 2.6 Project Construction, Construction Schedule and Phasing for construction schedule components.
- *350 Airport Boulevard One Phase Construction:* For the purposes of this programmatic analysis, development of the 350 Airport Boulevard Site is assumed to be office uses at 1.0 FAR as no project specifics are known at this time.

### **Operation**

- *300 Airport Boulevard Operation:* Stationary and Vehicle sources individually and combined.
- *350 Airport Boulevard Operation:* Stationary and Vehicle sources individually and combined.
- *300 Airport Boulevard & 350 Airport Boulevard Operation:* Stationary and Vehicle sources individually and combined because construction and operation of 350 Airport Boulevard would occur after the 300 Airport Boulevard Project was operational.

**Regional Emissions.** Mobile and stationary source emissions of ROG, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> were estimated using CARB's URBEMIS 2007 computer model assuming the Project would be complete by 2015. Mobile source emissions estimates are derived from vehicle trip generation rates for the proposed office and amenities buildings, and Project-specific vehicle turning movements (see Section 3.4, Transportation). The results are used to determine if the Project would exceed the BAAQMD's significance thresholds, substantially contribute to an air quality violation, or affect attainment of any air quality management plans. Vehicle operating characteristics are determined by each land use type in the Project and the setting of the Project. Default values recommended by BAAQMD CEQA Guidelines are used for the average trip length. URBEMIS reports can be found in Appendix D of this document.

**Construction Emissions.** During implementation of the Project, heavy equipment used in the construction activities would cause emissions of diesel exhaust and generate emissions of dust (i.e., PM<sub>10</sub>). Construction-related emissions are generally short-term in duration but may still cause adverse air quality impacts. Emissions caused during construction phases are analyzed according to BAAQMD CEQA Guidelines. The 2010 CEQA Guidelines state that for a project to have a less-than-significant air quality impact from construction-generated dust, the project shall implement BAAQMD-identified dust control measures.

**Localized CO Emissions.** BAAQMD provides a preliminary screening methodology that provides a conservative indication of whether the implementation of the Project would result in CO emissions that exceed the Thresholds of Significance. The screening criteria do not apply to proposed stationary

source projects. The Project would result in a less-than-significant impact to localized CO concentrations if the following screening criteria are met:

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

#### **Toxic Air Contaminants:**

BAAQMD provides methodology for preliminary screening and refined modeling for both construction and operational analysis with respect to TACs.

**Construction Activities:** BAAQMD's *Screening Tables for Air Toxics Evaluation During Construction* were used to evaluate the minimum distance required between the fence line of a construction site and nearby sensitive receptors to ensure that cancer and non-cancer risks associated with the Project are less than significant. Receptors that fall within the radius determined by the screening tables have the potential to be significantly impacted and refined modeling must be considered. According to the screening tables, for an 18.12 and 8.58 acre site, the minimum distances are 225 and 200 meters,<sup>6</sup> respectively.

As the construction on 300 Airport Boulevard would potentially occur in two phases and the onsite childcare center could be constructed with the first phase, impacts from construction of the second phase on the childcare center were evaluated with respect to health risk. Concentrations of DPM and PM<sub>2.5</sub> with respect to West Campus Construction impacts on the childcare center were analyzed using the EPA's ISCST3 Dispersion Model, in accordance with guidance from BAAQMD<sup>7</sup>. Risks for DPM were determined using the BAAQMD's 2011 *Guidelines*. Concentrations were then compared against the BAAQMD threshold for PM<sub>2.5</sub> and used to determine cancer and non-cancer risk. A detailed account of the methodology used to determine refined concentrations is included in the Health Risk Assessment (Appendix E).

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<sup>6</sup> BAAQMD 2010. *Screening Tables for Air Toxics Evaluation During Construction*, version 1.0, May 2010, pg. 9.

<sup>7</sup> BAAQMD 2010. Personal Communication James Cordova BAAQMD, September 16, 2011.

**Operational Activities:** The screening tools provided by BAAQMD<sup>8,9,10</sup> estimate PM<sub>2.5</sub> concentrations, cancer risk, chronic hazard risk, and acute hazard risk. These are conservative estimates of risks and are not based on actual project specific health risk screening assessments. The screening tools are designed such that if a project results in levels below thresholds with the initial screening, then no additional review is required.

The following steps were followed for the screening level analysis. First an initial conservative screening was conducted. Permitted sources were identified in Google Earth using the Stationary Source Screening Analysis Tool. Where estimations for PM<sub>2.5</sub>, cancer risk, and hazard values were provided, they were identified and used. Screening level PM<sub>2.5</sub> concentrations and risk levels for those stationary sources that were not provided by the Screening Tool were obtained directly from BAAQMD. Estimated concentrations and cancer risks for highways were obtained from the BAAQMD's *Highway Screening Analysis Tool*. No major roadways (those non-freeway roadways where average annual daily trips (AADT) are greater than 10,000 vehicles) were identified within the Project zone of influence.

As necessary, following the screening analysis, concentrations of DPM and PM<sub>2.5</sub> with respect to onsite stationary source impacts on the childcare center and offsite receptors would be analyzed using the EPA's ISCST3 Dispersion Model or Cal3QHCR Dispersion Model, in accordance with guidance from BAAQMD<sup>11</sup>. Cancer and non-cancer risks for DPM would be determined using the BAAQMD's 2011 *Guidelines*. A detailed account of the methodology used to determine refined concentrations is included in the Health Risk Assessment (Appendix E)

## **Environmental Analysis**

For each potential impact associated with the Project, a level of significance is determined and is reported in the impact statement. Conclusions of significance are defined as follows: significant impact (S), potentially significant impact (PS), less-than-significant impact (LTS), or no impact (NI). For each impact identified as being significant (S) or potentially significant (PS), this EIR provides mitigation measures to reduce, eliminate, or avoid the adverse effect. If the mitigation measures would reduce the impact to a less-than-significant (LTS) level successfully, this is stated in this EIR. If the mitigation measures would not diminish significant or potentially significant impacts to a less-than-significant level, the impacts are classified as "significant unavoidable impacts (SU)." The impacts of the potential development of the 350 Airport Boulevard Site are evaluated in this EIR on a programmatic level. Following the submittal of a project-specific development proposal for the 350 Airport Boulevard Site, additional environmental analysis would be required. For this section, AQ refers to Air Quality.

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<sup>8</sup> BAAQMD *Screening Analysis Flow Chart*, May 2011.

<sup>9</sup> BAAQMD *Stationary Source Screening Analysis Tool*, San Francisco, May 2011.

<sup>10</sup> BAAQMD *Roadway Screening Analysis Tables*, April 2011.

<sup>11</sup> BAAQMD 2010. Personal Communication James Cordova BAAQMD, September 16, 2011.

*AQ-1 Consistency with Applicable Air Quality Plans. Implementation of the Project would conflict with or obstruct implementation of the Clean Air Plan. Therefore, impacts would be significant.*  
(S)

### **300 Airport Boulevard**

The most current air quality plan for the region is the recently adopted 2010 CAP, which updates the 2005 Ozone Strategy and represents a unique approach to air planning by including greenhouse gases as well as criteria air pollutants and TACs. For the 2010 CAP, the travel activity adjustments used in preparing the on-road mobile source inventory are the same as those used in the Transportation Air Quality Conformity Analysis for MTC's regional transportation plans. MTC's travel demand model utilizes regional demographic forecasts from ABAG's socioeconomic and population projections. Under BAAQMD methodology, for consistency with the 2010 CAP, a project or plan must demonstrate that the population or vehicle miles traveled (VMT) assumptions contained in the CAP would not be exceeded and that the project or plan implements transportation control measures (TCMs) as applicable.

The Project includes amendments to the Bayfront Specific Plan and zoning regulations noted in Section 2, Project Description, for the 300 Airport Boulevard Site, which would also apply to the 350 Airport Boulevard Site. As stated in Section 25.48.020 of the City's Municipal Code, a variety of uses are currently permitted in the Anza Point North (APN) zoning district including but not limited to hotels, restaurants, offices, and commercial recreation. Each is allowed at a different floor area ratio (FAR). Taking the most conservative scenario, which assumes all office uses at 0.6 FAR, the maximum amount of employees allowed at the 300 Airport Boulevard Site, under current zoning regulations, would be approximately 1,578 employees.<sup>12</sup> Under the proposed zoning, including the increased FAR, development of the 300 Airport Boulevard Site would result in an increase in the amount of employees beyond what would result from development under current zoning regulations.

MTC maintains an inventory of population for the region and by county, the latest version of which was published in 2008.<sup>13</sup> The MTC population estimates cite a 2035 San Mateo County population of 861,600. Development of the 300 Airport Boulevard Site, under the worst case scenario, could result in an employment increase of approximately 897 persons over the current number of jobs, which would be generated based on the existing zoning (2,475 future 300 Airport Boulevard employee population minus the allowable existing employee population of 1,578). This could result in an increase of 897 residents in the County,<sup>14</sup> representing a population increase of 0.10 percent.

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<sup>12</sup> 789,107 total square feet at the 300 Airport Boulevard Site x 0.6 FAR for office uses = 473,464 sf. 473,464 sf/300 sf per employee = 1,578 employees.

<sup>13</sup> Travel Forecasts Data Summary, "Transportation 2035 Plan for the San Francisco Bay Area," website: [http://www.mtc.ca.gov/planning/2035\\_plan/Supplementary/T2035-Travel\\_Forecast\\_Data\\_Summary.pdf](http://www.mtc.ca.gov/planning/2035_plan/Supplementary/T2035-Travel_Forecast_Data_Summary.pdf), accessed July 26, 2011.

<sup>14</sup> It is important to note that the increase of 2,475 new residents is considered the maximum potential that would be generated by the 300 Airport Boulevard Project at buildout, and assumes no job vacancies, which is

MTC also maintains an inventory of VMT for the region and by county. For 2035, MTC data shows VMT for San Mateo County 19,657,142 miles. Development of the 300 Airport Boulevard Site would result in a net new vehicle trip generation of 8,086 trips per day.<sup>15</sup> Using trip length assumptions from the 300 Airport Boulevard Operational CARB URBEMIS 2007 model (Appendix D), the resulting regional increase in VMT would be 64,629 miles per day. The addition of Project-related VMT to the 2035 forecast results in a total increase of 0.33 percent in VMT with the Project. Consequently, the increase in VMT (0.33 percent) would be more than the increase in population (0.10 percent) and would therefore be considered inconsistent with the population and VMT assumptions of the CAP.

Both the 2010 CAP and the 2005 Ozone Strategy emphasize the need for smart growth and a reduction of single automobile usage. The 300 Airport Boulevard Project would include a Transportation Demand Management (TDM) program to reduce vehicular traffic generated by the site. The TDM program would include shuttle buses to the Millbrae Intermodal Station and Downtown Burlingame. Improved bicycle and pedestrian linkages along the roadways and within the 300 Airport Boulevard Site would also support the use of alternative modes of travel. Although the TDM program would reduce the effect of traffic impacts, conservatively, it may not be enough to reduce the impact associated with an increase VMT. The realignment of Airport Boulevard to bisect the 300 Airport Boulevard Site would enhance circulation objectives of the City's Bayfront Specific Plan and would provide traffic-calming measures to maintain a pedestrian-friendly atmosphere within the campus. The Project would improve and enhance public access to and within the site, including the waterfront, by extending the Bay Trail through the site and expanding and improving the waterfront edges, creating improved access for alternative transportation routes and use of alternative transportation modes.

The transportation improvements mentioned above, and explained in more detail in Section 3.4, Transportation, would collectively enhance connectivity through the Project Site, promote safe bicycle and pedestrian circulation, increase accessibility to transit, and calm traffic. These improvements are supportive of the transportation control measures (TCMs) identified in the 2005 Ozone Strategy as critical to attaining the CCAA ozone standard. Specifically, the 300 Airport Boulevard Project transportation improvements would satisfy TCM #3 (improve local and area wide bus service), TCM #5 (improve access to rail and ferries), TCM #9 (improve bicycle access and facilities), TCM #12 (improve arterial traffic management), TCM #19 (improve pedestrian access and facilities), and TCM #20 (promote traffic calming measures). However, because the 300 Airport Boulevard Project would increase VMT assumed under the CAP, it would not conform to regional air quality plans, and would have a significant impact on the implementation of State and federal air quality plans.

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unlikely. Therefore, actual employment generation would likely be somewhat lower than indicated, depending on the rate of project buildout and regional business and economic conditions.

<sup>15</sup> Hexagon Transportation Consultants, *Burlingame Point Traffic Impact Analysis*, July 15, 2011.

### **350 Airport Boulevard**

As stated above, the most current air quality plan for the region is the recently adopted 2010 CAP, which updates the 2005 Ozone Strategy. Under BAAQMD methodology, for consistency with the 2010 CAP, a project or plan must demonstrate that the population or VMT assumptions contained in the CAP would not be exceeded and that the project or plan implements TCMs as applicable. Each use permitted in the APN zoning district is allowed at a different FAR. Taking the most conservative scenario, which assumes all office uses at 0.6 FAR, the maximum amount of employees expected at the 350 Airport Boulevard Site, under current zoning regulations, would be approximately 748 employees.<sup>16</sup> Due to the zoning changes proposed as part of the Project, including increased FAR, development of the 350 Airport Boulevard Site could result in an increase in the potential number of employees over what would occur with the current zoning.

MTC maintains an inventory of population for the region and county,<sup>17</sup> and estimates a 2035 San Mateo County population of 861,600. As discussed in Section 3.10, Population and Housing, development of the 350 Airport Boulevard Project, under the worst case scenario, could result in a population increase of approximately 499 persons (1,247 future 350 Airport Boulevard employee population minus the expected existing employee population of 748).<sup>18</sup> This represents a population increase of 0.06 percent within the City.

MTC also maintains an inventory of VMT for the region and county. For 2035, MTC data shows VMT for San Mateo County at 19,657,142 miles. The 350 Airport Boulevard Project would result in a net new vehicle trip generation of 2,952 trips per day. Using trip length assumptions from the 350 Airport Boulevard Operational CARB URBEMIS 2007 model (Appendix D), the resulting regional increase in VMT would be 88,552 miles per day.<sup>19</sup> The addition of VMT from the development of the 350 Airport Boulevard Site to the 2035 forecast would result in a total increase of 0.45 percent in the VMT.

Consequently, the rate of increase in VMT (0.45 percent) would be greater than the rate of increase in population (0.06 percent) for development of the 350 Airport Boulevard Site and

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<sup>16</sup> 374,000 total square feet at the 350 Airport Boulevard Site x 0.6 FAR for office uses = 224,400 sf. 224,400 sf/300 sf per employee = approximately 748 employees.

<sup>17</sup> Travel Forecasts Data Summary, "Transportation 2035 Plan for the San Francisco Bay Area," website: [http://www.mtc.ca.gov/planning/2035\\_plan/Supplementary/T2035-Travel\\_Forecast\\_Data\\_Summary.pdf](http://www.mtc.ca.gov/planning/2035_plan/Supplementary/T2035-Travel_Forecast_Data_Summary.pdf), accessed July 26, 2011.

<sup>18</sup> As the building program would occupy 1.0 FAR, it is assumed that buildings at the 8.58-acre 350 Airport Boulevard Site would consist of approximately 374,000 sf and about 1,247 employees (Based on an employee generation rate of one employee per 300 sf.) It is important to note that the increase of 1,247 new residents is considered the maximum potential that would be generated by the 350 Airport Boulevard Project at buildout, and assumes no job vacancies, which is unlikely. Therefore, actual employment generation would likely be somewhat lower than indicated, depending on the rate of project buildout and regional business and economic conditions.

<sup>19</sup> Using trip length assumptions from the 350 Airport Operational CARB URBEMIS 2007 model (Appendix D), the resulting regional increase in VMT would be 23,923 miles per day plus 64,629 miles per day associated with 300 Airport Boulevard.

would be considered inconsistent with the population and VMT assumptions of the CAP. In addition, it should be noted that operation of 350 Airport Boulevard would likely occur concurrently with that of 300 Airport Boulevard. As such, the combined effect of the Project would be to remain inconsistent with the CAP, thus resulting in a significant impact on the implementation of State and federal air quality plans.

MITIGATION MEASURE. Since there is no proposed project for the 350 Airport Boulevard Site, Mitigation Measure AQ-1.1 would require implementation of TDM measures for the 350 Airport Boulevard Project, similar to those included as a Project component of the 300 Airport Boulevard Project. Inclusion of these measures for future development at the 350 Airport Boulevard Site could reduce air quality impacts; however, the extent of that reduction is unknown at this time. With the extensive TDM measures already included in the 300 Airport Boulevard Project, there are no additional feasible mitigation measures that would further reduce impacts as a result of increased VMT associated with Project. Therefore, because the amount of reduction possible for 350 Airport Boulevard is unknown, and the increase in VMT for 300 Airport Boulevard cannot be further mitigated, impacts would be significant and unavoidable. (SU)

*AQ-1.1 Implement TDM Program as part of 350 Airport Boulevard Project.* These measures could include: secure bicycle storage, showers and changing rooms, shuttle service, preferential parking for carpoolers, preferential parking for vanpoolers, commute assistance center, employees' surveys, video conferencing centers, on-site amenities accommodations, on-site bicycles for employees, childcare services, guaranteed ride home program, transportation action plan, transportation management association, and coordination of TDM programs.

*AQ-2 Violation of Particulate Matter Ambient Air Quality Standards. Fugitive dust (PM<sub>10</sub>) from construction activities associated with the Project would result in short-term violations of particulate matter ambient air quality standards. This would be a temporary but potentially-significant impact. (PS)*

### **300 Airport Boulevard and 350 Airport Boulevard**

The 300 Airport Boulevard Project development would occur on an approximately 18.12-acre site (which was formerly occupied by the Burlingame Drive-In Theater) and on approximately 1.57 acres of Eastern Shoreline land. Phase I of construction activities would involve development of the East Campus and would include site preparation, grading, placement of utilities and other infrastructure, road realignment, placement of foundations for structures, and actual construction of the buildings. Phase II of construction activities would involve development of the West Campus and would include site preparation, grading, placement of utilities and other infrastructure, placement of foundations for structures, and construction of the West Campus buildings.

The 350 Airport Boulevard Site is currently vacant and consists of an abandoned one-story wooden structure and associated paved surfaces. No specific development for the site has been proposed at this time, and thus, specific construction details, such as construction phasing and equipment, are unknown. However, this analysis assumes that construction activities for the site would include similar activities to those proposed for development of the 300 Airport Boulevard Site.

BAAQMD bases its determination of significance on implementation of fugitive PM<sub>10</sub> dust control measures.<sup>20</sup> Accordingly, the approach to CEQA analyses of construction-related fugitive PM<sub>10</sub> dust emissions under the BAAQMD Guidelines is to require implementation of effective and comprehensive control measures rather than a detailed quantification of construction emissions. Construction activities would require the use of heavy trucks, excavating and grading equipment, concrete mixers, and other mobile and stationary construction equipment. Fugitive dust emissions during construction would be caused by material handling, traffic on unpaved or unimproved surfaces, and demolition of pavement and structures (350 Airport Boulevard Project only). Heavy construction activity on dry soil exposed during construction activities could cause dust emissions (usually monitored as PM<sub>10</sub>), which could be annoying and/or unhealthy to persons near the construction area. Throughout the construction period, emissions would vary day-to-day depending on the phase of the Project. When considered in the context of long-term Project operations, construction-related emissions would be short-term and temporary, but these activities could still cause significant impacts on local air quality.

BAAQMD considers construction-related fugitive dust emissions to be less than significant with implementation of BAAQMD-identified defined best management practices (BMPs) dust control measures. If all appropriate emissions control measures recommended by the BAAQMD CEQA Guidelines relating to dust are implemented for a project, then construction emissions are considered less than significant. However, without implementation of the mitigation measures, the impact of the Project is considered potentially significant.

MITIGATION MEASURE. Mitigation Measure AQ-2.1 would require implementation of all appropriate dust control measures recommended by BAAQMD. Inclusion of these measures in the construction contracts for future development at the Project Site would reduce construction-related air quality impacts to a less-than-significant level. (LTS)

*AQ-2.1 Implement Recommended Dust Control Measures.* To reduce particulate matter emissions during Project excavation and construction phases, the Project contractor(s) shall comply with the dust control strategies developed by BAAQMD. The Project Sponsor shall include in all construction contracts the following requirements or measures:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

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<sup>20</sup> Bay Area Air Quality Management District, *California Environmental Quality Act, Air Quality Guidelines*, pp. 2-6 and 8-3 (updated May 2011).

- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- 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.
- Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.<sup>21</sup>

*AQ-3 Criteria Air Pollutants and Ozone Precursor Emissions Compliance. Equipment used for construction activities associated with the Project would result in short-term emission increases of criteria air pollutants and ozone precursors that exceed the 2011 BAAQMD CEQA significance criteria, thus resulting in a significant impact. (S)*

### **300 Airport Boulevard**

Construction at the 300 Airport Boulevard Site would contribute to air emissions in the Bay Area, which is designated as non-attainment for ozone and PM<sub>2.5</sub> at the federal and State levels and PM<sub>10</sub> at the State level. As described above, construction activities for the 300 Airport Boulevard Site would include site preparation, grading, placement of infrastructure, placement of foundations for structures, and fabrication of structures. Grading and construction activities would likely require the use of heavy trucks, excavating and grading equipment, concrete breakers, concrete mixers, and other mobile and stationary construction equipment. Emissions during construction would be generated from the use of paving materials and architectural

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<sup>21</sup> Bay Area Air Quality Management District, *CEQA Air Quality Guidelines*, Updated May 2011, p. 9-17.

coatings, exhaust from construction and worker vehicles, and exhaust from powered construction equipment.

For this Project-level analysis, this section provides a quantitative assessment of the 300 Airport Boulevard Project's construction-related emissions to determine whether it would exceed the significance thresholds. Emissions of criteria air pollutants and ozone precursors were modeled using URBEMIS program defaults and BAAQMD-recommended settings and parameters which are attributable to the activity period and site location. The model factored in the land use type and size of each Project component, as well as the expected duration of construction activity. The model also estimated daily construction emissions for each construction scenario and phase of construction, as shown in Table 3.5-4.

**Table 3.5-4  
300 Airport Boulevard Construction Criteria Pollutant Emissions**

	<b>ROG (lbs/day)</b>	<b>NOx (lbs/day)</b>	<b>Exhaust PM<sub>10</sub> (lbs/day)</b>	<b>Exhaust PM<sub>2.5</sub> (lbs/day)</b>
<b>Maximum Unmitigated Daily Emissions</b>				
Phase I Only (East Campus) <sup>a</sup>	64.13	79.75	4.49	4.13
Phase II Only (West Campus) <sup>b</sup>	80.04	66.79	3.18	2.93
One Phase Only (East & West Campus) <sup>c</sup>	108.43	84.13	4.74	4.36
<b>Maximum Mitigated Emissions</b>				
Phase I Only (East Campus)	58.71	64.51	2.53	2.32
Phase II Only (West Campus)	72.82	55.24	2.03	1.84
One Phase Only (East & West Campus)	83.5	74.14	3.05	2.77
BAAQMD Threshold <sup>d</sup>	54	54	82	54
Combined Components Exceeds Threshold?	Yes	Yes	No	No

*Source:* Atkins, 2011. Based on URBEMIS 2007 Version 9.2.4, and compliance with BAAQMD Regulation 8, Rule 3. URBEMIS Models are provided in Appendix D.

*Notes:*

- a. Phase I Only (East Campus) consists of the realignment of Airport Boulevard, civil grading, utilities installation, construction of the underground parking structure at Buildings 1 & 2, construction of Buildings 1 & 2, construction of the amenities building, and landscaping improvements.
- b. Phase II Only (West Campus) consists of remaining civil and grading activities, construction of Buildings 3 & 4, construction of the parking structure, and additional landscaping and public access improvements.
- c. One Phase Only (East & West Campus) consists of the realignment of Airport Boulevard, civil grading, utilities installation, construction of the underground parking structure at Buildings 1 & 2, construction of Buildings 1, 2, 3, and 4, construction of the amenities building, and landscaping and public access improvements in a single phase. See Section 2.6 Project Construction, Construction Schedule and Phasing for construction schedule components.
- d. BAAQMD CEQA Guidelines, May 2011.

For the purpose of this analysis, two different construction scenarios were analyzed. One scenario separated construction of the East Campus and West Campus into two phases and the other scenario combined construction of both campuses into a single phase. For each of the scenarios, it was assumed that building construction would potentially overlap at some point

with at least one of the grading, paving, and architectural coating phases. As shown in the table, the “worst-case” construction-related emissions of criteria air pollutants and ozone precursors would be associated with concurrent construction of both campuses (as included as “One Phase Only” in Table 3.5-4).

As shown in the Table 3.5-4, construction-related emissions of ROG and NOx for each scenario would have the potential to exceed the 2011 BAAQMD thresholds of significance. If the campuses were constructed in two separate phases, emissions of ROG and NOx would have the potential to exceed the 2011 BAAQMD thresholds of significance for construction criteria pollutants; they would also be more severe than the One Phase Only scenario without mitigation. Because the PM<sub>10</sub> and PM<sub>2.5</sub> exhaust emissions associated with the improvements are well below BAAQMD thresholds, even if construction of both campuses were to be constructed at the same time, emissions the PM<sub>10</sub> and PM<sub>2.5</sub> would remain below the thresholds. However, emissions of ROG and NOx would result in significant impacts on air quality under the worst case scenario.

### **350 Airport Boulevard**

The 350 Airport Boulevard Site is currently vacant and consists of an abandoned one-story wooden structure and associated paved surfaces. At this time, a development proposal for 350 Airport Boulevard has not been submitted. For the purposes of this programmatic analysis, development of the 350 Airport Boulevard Site is assumed to be office uses at 1.0 FAR. Table 3.5-5 summarizes the modeled construction-related emissions of each criteria air pollutant and ozone precursors for a generic construction schedule of an office building, as no project specifics are known at this time. As shown in the table, construction-related emissions of ROG would have the potential to exceed the 2011 BAAQMD thresholds of significance. Therefore, construction of 350 Airport would result in significant air quality impacts.

**Table 3.5-5  
350 Airport Boulevard Construction Criteria Pollutant Emissions**

	<b>ROG (lbs/day)</b>	<b>NOx (lbs/day)</b>	<b>Exhaust PM<sub>10</sub> (lbs/day)</b>	<b>Exhaust PM<sub>2.5</sub> (lbs/day)</b>
<b>Maximum Unmitigated Daily Emissions</b>				
350 Airport Boulevard	179.10	20.61	1.07	0.99
<b>Maximum Mitigated Emissions</b>				
350 Airport Boulevard	81.95	16.50	0.65	0.59
BAAQMD Threshold <sup>a</sup>	54	54	82	54
Combined Components Exceeds Threshold?	Yes	No	No	No

*Source:* Atkins, 2011. Based on URBEMIS 2007 Version 9.2.4, and compliance with BAAQMD Regulation 8, Rule 3. URBEMIS Models are provided in Appendix D.

*Note:*

a. BAAQMD CEQA Guidelines, May 2011.

MITIGATION MEASURE. Implementation of Mitigation Measure AQ-3.1 would reduce construction-related emissions from the development of the 300 Airport Boulevard Site and potential development of the 350 Airport Boulevard Site. Table 3.5-4 and Table 3.5-5, above, both include an estimate of emissions with the application of Mitigation Measure AQ-3.1 and AQ-3.2. As shown, even with implementation of Mitigation Measure AQ-3.1 and AQ-3.2, construction-related emissions would still have the potential to exceed the 2011 BAAQMD significance thresholds for ROG and NO<sub>x</sub> with the 300 Airport Boulevard Project, and the significance threshold for ROG with the 350 Airport Boulevard Project. Therefore, construction emissions from Project development are considered significant and unavoidable. (SU)

*AQ-3.1 Construction Equipment Emissions Minimization.* To reduce the potential impacts resulting from Project construction activities, the Project Sponsor shall include in contract specifications a requirement for the following measures:

- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes;
- The Project shall develop a construction plan demonstrating that the off-road equipment (more than 50 horsepower) to be used in the construction Project (i.e., owned, leased, and subcontractor vehicles) would achieve a Project wide fleet-average 20 percent NO<sub>x</sub> reduction and 45 percent PM reduction compared to the most recent CARB fleet average (as specified in California Code of Regulations Article 4.8, Section 2449 General Requirements for In-Use Off-Road Diesel-Fueled Fleets). Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available;
- All construction equipment, diesel trucks, and generators shall be equipped with Best Available Control Technology for emission reductions of NO<sub>x</sub> and PM;
- Use of Interim Tier 4, if applicable, or equivalent equipment for all uses where such equipment is available;
- Use of Tier 3 equipment with Best Available Control Technology (BACT) or alternative fuel vehicles for applications where Tier 4 Interim engines are not available;
- Prohibition of diesel generators for construction purposes where feasible alternative sources of power are available;
- All construction equipment shall be maintained in proper working condition in accordance with manufacturer's specifications;

- Diesel-powered construction equipment shall comply with BAAQMD requirements or meet Tier 3 or Tier 4 EPA/CARB standards; and
- To the extent feasible, the existing electricity infrastructure surrounding the construction sites shall be used rather than electrical generators powered by internal combustion engines.

*AQ-3.2 Application of Low-VOC Coatings.* The Project Sponsor shall use low VOC (i.e., ROG) coatings beyond the local requirements as per the BAAQMD Guideline (i.e., Regulation 8, Rule 3: Architectural Coatings).

*AQ-4 Compliance with BAAQMD CEQA Significance Criteria Regarding Operational Criteria Air Pollutants and Ozone Precursor Emissions.* Operational emissions associated with the Project would emit criteria air pollutants and ozone precursors that exceed 2011 BAAQMD CEQA significance criteria, thus resulting in a significant impact. (S)

### **300 Airport Boulevard**

Operational emissions generated by both stationary and mobile sources would result from normal day-to-day activities proposed at the 300 Airport Boulevard Site. Stationary and area source emissions would be generated by the consumption of natural gas for space and water heating devices, the operation of landscape maintenance equipment, and the use of consumer products. Mobile emissions would be generated by the motor vehicles traveling to and from the 300 Airport Boulevard Project.

BAAQMD has established thresholds for projects that BAAQMD would review for potential air quality impacts. These thresholds are based on the minimum size project that BAAQMD considers capable of generating emissions with the potential to exceed the thresholds of 54 pounds per day each of ROG, NO<sub>x</sub>, and PM<sub>2.5</sub> and 82 pounds per day of PM<sub>10</sub>.<sup>22</sup> Proposed development of the 300 Airport Boulevard Site would generate emissions of these pollutants during operation since it would include new buildings that would result in an increase of area source emissions and a net new trip generation of 8,086 daily vehicle trips.

The analysis of daily operational emissions has been prepared using the URBEMIS 2007 computer model recommended by BAAQMD and the projected daily motor vehicle trip generation from the Traffic Impact Analysis for the Project (as included in Appendix C). As shown in Table 3.5-6, the net increase in emissions under the 300 Airport Boulevard Project would be greater than BAAQMD's thresholds for PM<sub>10</sub>. Therefore, substantial operational emissions generated by the 300 Airport Boulevard Project would have a significant impact related to these criteria pollutants.

As noted in Section 2, Project Description, TDM measures would be included for 300 Airport Boulevard. These measures include the incorporation of shuttle buses to the Millbrae

<sup>22</sup> Bay Area Air Quality Management District (BAAQMD), California Environmental Quality Act (CEQA), Air Quality Guidelines, Updated May, 2011.

Intermodal Station and Downtown Burlingame, improved bicycle and pedestrian linkages along the roadway and within the 300 Airport Boulevard Site, and support the use of alternative modes of travel. Since implementation of the TDM program is part of the 300 Airport Boulevard Project, the reduction in trips attributable to the TDM program was reflected in the URBEMIS model. However, as shown in Table 3.5-6, this reduction in trips would not result in emissions below the significance thresholds. Therefore, even with TDM measures, operational PM<sub>10</sub> emissions generated by the 300 Airport Boulevard Project would exceed BAAQMD thresholds. Exceedance of BAAQMD significance standards for these criteria pollutants would be a significant impact.

**Table 3.5-6  
300 Airport Boulevard & 350 Airport Boulevard Project Daily  
Operational Air Pollutant Emissions<sup>a</sup>**

Emissions Source	Project Emissions (Pounds per Day)			
	ROG	NOx	PM <sub>10</sub>	PM <sub>2.5</sub>
<b><u>300 Airport Boulevard</u></b>				
Stationary	5.49	5.44	0.04	0.04
Vehicle	41.17	46.02	111.37	21.17
<b>Sub-Total</b>	<b>46.66</b>	<b>51.46</b>	<b>111.41</b>	<b>21.21</b>
BAAQMD Significance Thresholds	54	54	82	54
Exceeds BAAQMD Thresholds?	No	No	Yes	No
<b><u>350 Airport Boulevard</u></b>				
Stationary	2.49	2.51	0.01	0.01
Vehicle	17.06	18.37	44.53	8.47
<b>Sub-Total</b>	<b>19.55</b>	<b>20.88</b>	<b>44.54</b>	<b>8.84</b>
BAAQMD Significance Thresholds	54	54	82	54
Exceeds BAAQMD Thresholds?	No	No	No	No
<b><u>300 Airport Boulevard &amp; 350 Airport Boulevard</u></b>				
<b>Combined Total</b>	<b>66.21</b>	<b>72.34</b>	<b>155.95</b>	<b>30.05</b>
BAAQMD Significance Thresholds	54	54	82	54
Exceeds BAAQMD Thresholds?	Yes	Yes	Yes	No

*Source:* Atkins, 2011. Based on URBEMIS 2007 Version 9.2.4. URBEMIS Models are provided in Appendix D.

*Note:*

- a. Emissions are based on maximum development potential for the plan area in 2015, as described in Chapter II, Project Description.

### **350 Airport Boulevard**

As previously mentioned, a development proposal for 350 Airport Boulevard has not been submitted. Future development would increase the number of employees who travel to the site and visitors who may use surrounding recreation facilities. However, for the purposes of programmatic analysis, development of the 350 Airport Boulevard Site is assumed to be office uses at 1.0 FAR. This assumption represents a conservative scenario on the basis that office

uses would accommodate a higher ratio of employees per square foot of floor area, compared to other uses (i.e., life-science uses, hotel restaurant, etc.) and therefore would have greater effects on transportation and related impacts.

Table 3.5-6, above, also summarizes the modeled operation-related emissions of each criteria air pollutant and ozone precursors for generic operational uses associated with an office building, as no project specifics are known at this time. As shown in the table, operation-related emissions only associated with the 350 Airport Boulevard Project would not have the potential to exceed the 2011 BAAQMD thresholds of significance based on the estimated model. However, since a project application has not yet been submitted for the 350 Airport Boulevard Site, it is assumed that it would be operating after implementation of 300 Airport Boulevard and operational activities associated with the 350 Airport Boulevard Site would occur concurrently with operational activities of the 300 Airport Boulevard Site. As shown in Table 3.5-6, the combined effect of the operation at both the 300 Airport Boulevard Site and the 350 Airport Boulevard Site would exceed BAAQMD thresholds. The exceedance of BAAQMD significance standards for these criteria pollutants would be significant.

**MITIGATION MEASURE.** Since there is no proposed project for the 350 Airport Boulevard Site, Mitigation Measure AQ-1.1 would require implementation of TDM measures for the 350 Airport Boulevard Project, similar to those which are included as a Project component of the 300 Airport Boulevard Project. Inclusion of these measures for future development at the 350 Airport Boulevard Site could reduce air quality impacts; however, the extent of that reduction is unknown at this time. With the extensive TDM measures already included in the 300 Airport Boulevard Project, there are no additional feasible mitigation measures that would further reduce impacts as a result of increased VMT associated with the 300 Airport Boulevard Project. Therefore, because the amount of reduction possible for 350 Airport Boulevard is unknown, and the increase in VMT for the 300 Airport Boulevard Project cannot be further mitigated, impacts would be significant and unavoidable.

In addition, the Project Sponsor for the 300 Airport Boulevard Site has committed to seeking LEED Gold or equivalent certification and to exceed energy efficiency beyond Title 24 requirements (26 percent energy reduction over Title 24 baseline building), which would further aid in reducing stationary source emissions. Mitigation Measure AQ-4.1 to implement energy efficiency measures for the 350 Airport Boulevard Project could reduce air quality impacts. However, since there is no proposed project for the 350 Airport Boulevard Site, the amount of VMT reduction possible for 350 Airport Boulevard is unknown, and the increase in VMT for 300 Airport Boulevard cannot be further mitigated. As such, impacts associated with the 300 Airport Boulevard Project would be significant and unavoidable. (SU)

*AQ-4.1 Implement energy efficiency measures with 350 Airport Boulevard Project.* These measures could include: LEED certification or to exceed energy efficiency beyond Title 24 requirements which would further aid in reducing stationary source emissions.

*AQ-5 Expose Sensitive Receptors to PM<sub>2.5</sub> and Toxic Air Contaminant (TAC) Concentrations During Operation or Construction. The Project would expose sensitive receptors to PM<sub>2.5</sub> and TAC concentrations during operation; however, the operational PM<sub>2.5</sub> and TAC generated by the Project would be below the regulatory threshold. Additionally, the Project could expose sensitive receptors to PM<sub>2.5</sub> and TAC concentrations above regulatory thresholds during construction, resulting in a potentially significant impact. (PS)*

BAAQMD identifies common, complex, and minor, low-impact sources of TACs or PM<sub>2.5</sub>. Some common sources include freeways, gas stations, back-up generators, dry cleaners, construction projects, and railroad tracks for trains with diesel engines. Complex sources include major ports, rail yards, airports, oil refineries, power plants, metal melting facilities, and cement plants.<sup>23</sup> The nearest sensitive receptors include residences that are located to the south and west of US 101, approximately 0.25 miles away. Existing adjacent uses along the roadways near the Project Site include offices, hotels, and light-industrial buildings. These uses are not considered sensitive receptors. A health risk assessment (HRA) was prepared for assessing impacts from PM<sub>2.5</sub> concentrations and TAC emissions. The HRA is summarized herein and is included as Appendix E.

### **300 Airport Boulevard**

Individuals do not permanently reside at the 300 Airport Boulevard Site however construction of the 300 Airport Boulevard Project would introduce a childcare center. As described in Chapter 2, Project Description, the 300 Airport Boulevard Project construction may occur in two phases. Depending on market conditions, these two phases may occur sequentially, simultaneously, or the two phases may overlap. If the childcare center is constructed during Phase 1, it could be operational while Phase 2 is under construction. Therefore, the construction of Phase 2 could result in health risks to receptors at the childcare center, as discussed below.

Development of the 300 Airport Boulevard Site would also introduce new sources of PM<sub>2.5</sub> and diesel related TACs due to the inclusion of four back-up generators in the Project. These back-up generators have the potential to impact both onsite as well as offsite sensitive receptors. In addition, the location of the childcare center within 1,000 feet of US 101 would potentially result in health risks to the students attending the facility.

### **350 Airport Boulevard**

As previously mentioned, no specific project application has been submitted for the 350 Airport Boulevard Site and the construction type and time frame is unknown. For the purposes of this analysis, it is assumed that the 350 Airport Boulevard Site would likely be developed for office use. Development at the 350 Airport Boulevard Site would not place offsite residential sensitive

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<sup>23</sup> BAAQMD, “Recommended Methods for Screening and Modeling Local Risks and Hazards,” website: <http://www.baaqmd.gov/~media/Files/Planning%20and%20Research/CEQA/BAAQMD%20Modeling%20Approach.ashx>, accessed August 4, 2011.

receptors at risk of exposure to substantial amounts of pollutants that could result in health risks because they are not within the 1,000 foot radius recommended for assessing risks and hazards. However, since construction and operation of the 350 Airport Boulevard Project may not occur until after the 300 Airport Boulevard Project is operational, it may place sensitive receptors at the childcare center at risk from construction and operational activities. 350 Airport Boulevard may include a back-up generator associated with onsite operations, however it is assumed for the purposes of this analysis, that the generator would operate under the same restrictions as those identified for the 300 Airport Boulevard Site. Future project-specific environmental review for the 350 Airport Boulevard Project would determine whether an HRA is necessary. If construction activities for the 350 Airport Boulevard Site occurred within 1,000 feet of the childcare center, a HRA would be required as part of the environmental review of the project to ensure the impacts to the childcare center would be less than significant.

### **Construction Risk Analysis**

BAAQMD's Screening Tables for Air Toxics Evaluation During Construction were used to evaluate the minimum distance required between the fence line of a construction site and nearby sensitive receptors to ensure that PM<sub>2.5</sub> concentrations and cancer and non-cancer risks associated with the project are less than significant. According to the screening tables for an 18.12 acre site, such as the 300 Airport Boulevard Site, and an 8.58 acre site, such as the 350 Airport Boulevard Site, the minimum distances are 225 and 200 meters, respectively. The nearest offsite receptors with respect to 300 Airport Boulevard are located south of US 101 at a distance of approximately 255 meters. While there is a 0.39-acre portion of the 300 Airport Boulevard Site that extends to approximately 215 meters of the residential receptors, minimal construction would occur in this area. The screening distance associated with a 0.39 acre site is approximately 100 meters, meaning receptors can be significantly closer to this small area during construction than to the main portion of the site. Therefore, the distance with respect to screening the 300 Airport Boulevard construction activities was set at the boundary of the main construction area.

The nearest offsite receptor with respect to 350 Airport Boulevard is the proposed childcare center, which would be located at the southern border of the 300 Airport Boulevard Site. The 350 Airport Boulevard Site is 203 meters to the building and 213 meters to the outside play area. Because the offsite receptors are located at distance greater than the minimum required screening distance for both 300 Airport Boulevard and 350 Airport Boulevard, construction activities are not anticipated to result in cancer risk, non-cancer risk, or PM<sub>2.5</sub> concentrations above the regulatory thresholds. As discussed above, this will be confirmed through project-level environmental analysis of any future proposed project at the 350 Airport Boulevard Site.

Construction of the 300 Airport Boulevard Project in phases has the potential to result in cancer risk, non-cancer risk, and PM<sub>2.5</sub> concentrations above regulatory thresholds for operations at the onsite childcare center during construction of Phase 2. Results of the refined analysis for construction-related impacts are summarized below. Detailed calculations of the risk and PM<sub>2.5</sub> concentration calculations are included in the HRA. It is not anticipated that additional projects

would be constructed at the same time as Phase 2 within a 1,000 foot radius of the Project, therefore cumulative impacts would be the same as individual impacts with respect to construction of Phase 2 of the Project.

Cancer risk from the construction of Phase 2 within 200 meters of the operating childcare center (a portion of the amenities center) was determined by the dose multiplied by the cancer potency factor and then converted to risk per million people. The range of unmitigated cancer risk at the modeled locations representing the location of the amenities center and the outside play area is from 41.04 in one million to 133.02 in one million, well above the 10 in one million threshold for individual sources, and 100 in one million for cumulative sources. Risk associated only with the outdoor play yard is anticipated at between 41.04 in one million and 51.30 in one million, which are also well above the individual impact threshold.

Non-Cancer risk from the construction of Phase 2 within 200 meters of the operating childcare center is anticipated to range from 0.08 in one million to 0.25 in one million, well below the regulatory threshold of 1 in one million for individual sources and 10 in one million for cumulative. Therefore, non-cancer risk would be less than significant with respect to construction activities in the vicinity of the childcare center.

PM<sub>2.5</sub> exposure from the construction of Phase 2 is estimated from 0.38 to 1.23 µg/m<sup>3</sup>, well above the 0.3 µg/m<sup>3</sup> threshold for individual sources and 0.8 µg/m<sup>3</sup> for cumulative sources. Risk for the outdoor play yard is anticipated at 0.38 and 0.47 µg/m<sup>3</sup>, which would also exceeds the individual threshold but not the cumulative threshold.

### **Operational Risk Analysis**

BAAQMD Guidelines recommend that all TAC and PM<sub>2.5</sub> sources within 1,000 feet of the Project boundaries be identified and their individual impacts on a proposed receptor development determined. The development at 350 Airport Boulevard is not anticipated to include any sensitive receptors. 350 Airport Boulevard may construct a back-up generator associated with onsite operations, however it is assumed for the purposes of this analysis, that the generator would operate under the same restrictions as those identified for 300 Airport Boulevard. Therefore, operational health risk with respect to this site is considered on a qualitative level in this analysis. At the time full project definition and development specifications for 350 Airport Boulevard are known a full health risk evaluation with respect to the new development design shall need to be undertaken if the development includes a sensitive receptor or the back-up generator will not observe the same operating conditions as identified for the 300 Airport Boulevard development.

For the development at 300 Airport Boulevard four onsite stationary sources, two offsite stationary sources and one mobile source were identified within the 1,000 foot zone of influence for the Project at 300 Airport Boulevard. The following are the four sources analyzed with respect to individual risk within the HRA:

- Source ID# 17695: A back-up generator operated by Virgin America and located at 555 Airport Boulevard, approximately 300 feet west the Project Site.
- Source ID# 16542: Is operated by CA-Bay Park Plaza, LP and is also located at 555 Airport Boulevard, approximately 300 feet west of the Project Site.
- Source ID#:14464: A diesel generator operated by the City of Burlingame at a pump station located at 399 Rollins Road, approximately 900 feet south of the Project Site.
- US 101: Located approximately 680 feet from the childcare center, south of the Project Site.
- Onsite Sources: Four onsite diesel operated back-up generators located at or below ground adjacent to the four new onsite office buildings. The closest of these sources are located approximately 200 feet from the outside play are of the childcare center and over 1,100 feet from the nearest sensitive receptors south of US 101.

The screening level analysis for the permitted sources and roadways was conducted with Table 3.5-7 summarizing the results. As shown, the Project would not be exposed to individual emissions above the thresholds for cancer risk (10 per million) from offsite stationary sources or non-cancer hazard (1 and 10) or PM<sub>2.5</sub> concentrations (0.3 and 0.8 µg/m<sup>3</sup>) from either offsite stationary sources or US 101.

**Table 3.5-7  
Screening Level Analysis**

Source #	Source ID	PM <sub>2.5</sub> (> 0.3 µg/m <sup>3</sup> )	Hazard Index (>1)	Risk (> 10 per mil)
1	17695	0.009	0.006	2.992
2	14464	0.029	0.005	9.350
3	16542	0.002	0.003	7.600
4	US 101	0.262	0.040	29.868
5	350 Airport Boulevard <sup>a</sup>	UNK	UNK	UNK
6	Onsite <sup>b</sup>	UNK	UNK	UNK
	<i>Significant</i>	<i>No</i>	<i>No</i>	<i>No</i>

*Sources:*

BAAQMD Stationary Source Screening Analysis Tool, San Francisco, May 2011. Source inquiry form included in Appendix E.

*Note:*

- There is the potential for emergency back-up generators to be located at 350 Airport Boulevard. They are listed as UNK (unknown) as the number of potential generators is unknown and there is no screening data available and may impact both onsite and offsite sensitive receptors.
- Onsite sources represent the 4 potential emergency back-up generators. They are listed as UNK (unknown) as they have no screening data available and may impact both onsite and offsite sensitive receptors.

Project operations would include a stipulation that the testing and maintenance of onsite generators would operate outside of the normal business hours for the childcare facility. Further, the locations of the generators are greater than 1,000 feet from the nearest offsite

sensitive receptors. Therefore, based on location and operating restrictions, the onsite back-up generators are not anticipated to result in significant risk for either the childcare center or the offsite receptors. However, the screening levels anticipated from US 101 exceed the individual risk thresholds for the childcare center for cancer risk. Therefore, refined analysis with respect to cancer risk from proximity to US 101 was conducted.

For the purposes of this analysis it was assumed that the generators anticipated at 350 Airport Boulevard would operate under the same conditions as those identified for Airport Boulevard and therefore are not anticipated to result in significant risk for the childcare center at 300 Airport Boulevard. Should these conditions not be applied, additional sources that are not back-up generators be included in the Project, or sensitive receptors be sited as part of the refined Project, then a full health risk assessment will be required prior to the development of 350 Airport Boulevard.

Cancer risk from locating the childcare center within 1,000 feet of US 101 was determined by the dose multiplied by the cancer potency factor and then converted to risk per million people. Detailed calculation of risk with respect to individual receptor locations on the Project Site is included in the HRA. The maximum potential cancer risks to any modeled onsite location is 3.0 per million, which is below the 10 in one million individual source threshold. The modeled locations representing the anticipated location of the amenities center and the outside play area would result in a cancer risk of between 2.7 and the maximum 3.0 per million. Cancer risk determinations are below the respective threshold of 10 per million for individual risk assessment; therefore, cancer risk for occupants of the childcare center would be less-than-significant with respect to offsite as well as onsite operational emissions.

**MITIGATION MEASURE.** If the construction of the 300 Airport Boulevard Project is phased such that the childcare center is operational while subsequent phases of the Project are being constructed, the 300 Airport Boulevard Project would result in cancer risk and PM<sub>2.5</sub> exposure above the recommended regulatory thresholds at both the individual and cumulative levels. With the implementation of Mitigation Measure AQ-5.1a and b, risk for inside the childcare center would be reduced to 8.30 in one million adjacent in the portion of the building associated with the childcare center's location. Therefore, with the implementation of Mitigation Measure AQ-5.1a and b, potential risk during operation of the childcare center would be reduced to less than significant for both individual and cumulative risk during construction.

With implementation of Mitigation Measure AQ-5.1a and b, PM<sub>2.5</sub> exposure risk for inside the childcare center would be reduced to 0.08 and 0.18 µg/m<sup>3</sup>, well below both the individual and cumulative thresholds. Therefore with the implementation of Mitigation Measure AQ-5.1, potential impacts from PM<sub>2.5</sub> exposure from operation of the childcare center would be reduced to less than significant on both an individual and cumulative level during construction. While non-cancer risk is below the thresholds without mitigation, the implementation of Mitigation Measure AQ-5.1 risk would be further reduced to between 0.02 in one million and 0.09 in one million.

Implementation of Mitigation Measure AQ-5.1c would reduce the risk for the outdoor activity center to a less than significant level for both individual and cumulative risk during construction. If implementation of Mitigation Measure AQ-5.1c is not feasible, the childcare center shall not be allowed to open until all construction activities for Phase 2 have been completed. (LTS)

*AQ-5.1 Reduce Risk of Exposure During Construction.* If the childcare center is operational during the construction of Phase 2 of the Project, the following shall be implemented:

- a. The childcare center building shall be designed such that the air intake would be located at the far eastern edge of the building with the air intake facing east.
- b. A MERV 15 or higher rated filter shall be installed and operated for at least the duration of construction activities. The MERV 15 or higher rated filters have the potential to remove up to 85 percent of particles of 2.5 microns or greater thereby reducing interior levels of pollutants.
- c. All outdoor activities at the childcare center shall be suspended while construction activities are occurring.

If implementation of Mitigation Measure AQ-5.1 is infeasible, then the childcare center would be prohibited from operating during Phase II construction.

IMPROVEMENT MEASURES. As indicated above, operation of the 300 Airport Boulevard Project would not result in significant health risks to sensitive receptors. The Project Sponsor has indicated that as part of the operating conditions of the back-up generators, all testing and maintenance operations of the generators would be conducted when the childcare center is not in operation. This would eliminate the potential for these onsite sources to represent an increased health risk for the students of the childcare center. The following improvement measures are included to further reduce the less-than-significant impact and to ensure implementation of these operating conditions.

- As part of the conditions of operation for the onsite back-up generators, all diesel emissions associated with the maintenance and testing of the generators should be conducted at such times as the childcare center is not in operation, particularly nights and weekends.
- While not required based on the refined modeling, the Project Sponsor may wish to consider implementing MERV 15 or higher rated filters for the amenities building. This would further reduce exposure of childcare students to emissions from US 101. The MERV 15 or higher rated filters have the potential to remove up to 85 percent of PM<sub>2.5</sub> and would reduce risk while students were inside the building.

*AQ-6 CO Compliance with State and Federal Ambient Air Quality Standards. Operational emissions from motor vehicles trips associated with the Project would not cause local concentrations of CO to exceed State and federal ambient air quality standards; therefore, impacts would be less than significant. (LTS)*

### **300 Airport Boulevard and 350 Airport Boulevard**

The Project would increase vehicular trips and thus mobile source air emissions. These emissions would contribute to localized CO concentrations. For CO emissions, BAAQMD Guidelines provide screening criteria for assessing potential CO impacts. A project would result in less-than-significant impacts on localized CO concentrations if it would not increase traffic volumes at any intersection to 44,000 vehicles per hour or 24,000 vehicles per hour in a tunnel or urban canyon created by buildings.

The Traffic Impact Analysis indicates that the intersection with the highest approach volume for any scenario under the Traffic Impact Analysis is Bayshore Highway and Broadway, for which peak hourly intersection approach volume is 5,994 vehicles per hour. Because this volume is substantially less than even the most stringent criterion (24,000 vehicles per hour), CO concentrations are considered to be less than significant.

*AQ-7 Objectionable Odors. The Project would not be expected to create objectionable odors that would affect a substantial number of people. There would be no impact from the Project. (NI)*

### **300 Airport Boulevard and 350 Airport Boulevard**

The occurrence and severity of potential odor impacts depend on several factors: the nature of the source, the frequency and strength of the emissions, the presence/absence of odor-sensitive receptors near the source, and the local pattern of wind speeds and directions. While offensive odors rarely cause any physical harm, they can be unpleasant and cause distress among the public and generate citizen complaints.

Construction activities with the Project would generate airborne odors associated with the operation of construction vehicles (i.e., diesel exhaust) and the application of architectural coatings. These emissions would likely occur during daytime hours only and would be isolated to the immediate vicinity of the construction site. As explained previously, there are no residential uses adjacent to the Project area and no residential uses are proposed as a part of the Project. Therefore, odors from Project construction would not affect a substantial number of people.

Office uses are not among the land uses that BAAQMD has identified as prime sources of odors (such sources include wastewater treatment plants, sanitary landfills, and certain manufacturing plants). The most likely potential operational airborne odors associated with operation of the office or life science uses could emanate from refuse storage area(s). These odors would be confined to the immediate vicinity of the storage area(s), and since the refuse receptacles would have lids and be emptied on a regular basis, substantial odors would not

likely have a chance to develop. In addition, as aforementioned there are no residential uses proposed as a part of the Project. Therefore, there would be no adverse odor impacts to on-site or off-site sensitive receptors, and no Project-related odor impacts.

## **Cumulative Analysis**

The geographic context for addressing cumulative impacts of the Project on regional air quality is the SFBAAB. The BAAQMD CEQA Guidelines cumulative significance criteria are applied to the cumulative analysis of impacts to regional air quality, as discussed below. The geographic context for a discussion of cumulative impacts to localized air quality, such as for CO and PM<sub>10</sub>, is the Burlingame vicinity, in which the Project is located. This cumulative analysis examines the effects of the Project, in combination with other current projects, probable future projects, and projected future growth within the City in the next 20 years.

This section identifies other cumulative air quality impacts that could occur from implementation of the Project in combination with other foreseeable development. Specifically, the following cumulative impacts are described: regional plan consistency; criteria air pollutants and ozone precursors from cumulative construction activities; health risks from construction and operations; and mobile and area source emissions.

Odors are not addressed cumulatively for this Project because the types of uses anticipated to be developed, or allowed under the APN and APS zoning districts would not generate significant sources of odor. In addition, the Project Site is not located in an area where existing or future odor-producing uses are proposed. Therefore, the additive effect of assessing cumulative odor impacts is not relevant for this project.

*AQ-8 Consistency with Applicable Air Quality Plans. The Project, combined with other development within the City, would not be consistent with the Ozone Attainment Plan and the Clean Air Plan. This would be a significant cumulative impact. (S)*

### **300 Airport Boulevard and 350 Airport Boulevard**

Clean Air Plan control strategies were intended to reduce the Bay Area's high ozone levels without significantly restricting regional population and economic growth. Consequently, as long as growth in the City is within ABAG growth projections (which in turn depend on an assumption of future development adhering to local zoning restrictions in place at the time of CAP adoption) and as long as new development projects in Burlingame make efforts to reduce the number of vehicle trips associated with their land uses, implementation of the CAP would not be obstructed by cumulative growth. However, the anticipated growth associated with the Project would not be consistent with the CAP in that the Project is increasing VMT compared to base conditions without the Project. The Project would implement transportation control and trip reduction measures that are consistent with BAAQMD's goals for reducing regional air pollutant emissions, as would likely be the case for all other development projects approved under the City of Burlingame's environmental review process. However, the Project's

contribution to conflicts with or obstruction of implementation of the CAP is significant, and the cumulative effects with the Project would be significant.

MITIGATION MEASURE. Implementation of Mitigation Measure AQ-1.1 for the 350 Airport Boulevard Project would require TDM as a project component. However, the amount of reduction for the 350 Airport Boulevard Project and the increase in VMT cannot be further mitigation for the 300 Airport Boulevard Project, resulting in significant and unavoidable impacts. (SU)

*AQ-9 Cumulative Criteria Air Pollutants and Ozone Precursor Emission - Construction Activities. Construction activity associated with the development of the Project Site, in combination with other development in the area, would generate criteria air pollutants and ozone precursors that would exceed the 2011 BAAQMD CEQA significance criteria. This would be a significant cumulative impact. (S)*

### **300 Airport Boulevard and 350 Airport Boulevard**

As discussed under Impact AQ-3, Project development would potentially exceed the 2011 BAAQMD thresholds of significance during construction. BAAQMD considers projects that result in a significant criteria air pollutant impact on a project-level to also result in a cumulatively considerable contribution to regional criteria air pollutants.<sup>24</sup> Therefore, construction activities associated with the Project would contribute to a significant cumulative impact with respect to criteria air pollutants and ozone precursors.

MITIGATION MEASURE. Mitigation Measure AQ-3.1 is proposed to reduce criteria air pollutant and ozone precursor emissions from construction of all project components; however, even with implementation of the mitigation measure, construction-related emissions associated with the Project would still have the potential to exceed the 2011 BAAQMD significance thresholds. As such, cumulative construction-related air emissions would be significant and unavoidable. (SU)

*AQ-10 Cumulative Criteria Air Pollutants and Ozone Precursor Emissions - Operational Activities. Operational activities associated with the Project, in combination with other development in the area, would emit criteria pollutants. Although a TDM program is included as a Project component, operational emissions would exceed the 2011 BAAQMD significance thresholds, resulting in a significant impact. (S)*

### **300 Airport Boulevard and 350 Airport Boulevard**

Operational emissions generated by both stationary and mobile sources would result from normal day-to-day activities proposed in the Project area along with those associated with cumulative projects. As discussed under AQ-4, it is assumed that 350 Airport Boulevard would be operating after 300 Airport Boulevard and operational activities associated with the

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<sup>24</sup> Bay Area Air Quality Management District (BAAQMD), California Environmental Quality Act (CEQA), Air Quality Guidelines, Thresholds of Significance, Updated May, 2011.

350 Airport Boulevard site would occur concurrently with operational activities of the 300 Airport Boulevard Site. BAAQMD considers projects capable of generating emissions with the potential to exceed the thresholds of 54 pounds per day each of ROG, NOx, and PM<sub>2.5</sub>, and 82 pounds per day of PM<sub>10</sub> significant.<sup>25</sup> The Project would generate emissions of these pollutants during operation. As shown above in Table 3.5-6, even with the TDM that is incorporated as a Project component the Project's net increase in emissions would be greater than BAAQMD's thresholds for ROG, NOx, and PM<sub>10</sub>. BAAQMD considers projects that result in a significant criteria air pollutant impact on a project level to also result in a cumulatively considerable contribution to regional criteria air pollutants.<sup>26</sup> Therefore, operational activities associated with the Project would contribute to a significant cumulative impact with respect to criteria air pollutant and ozone precursors.

MITIGATION MEASURE. Mitigation measures to further reduce VMT would not be feasible because, according to the transportation impact analysis, in order to further reduce VMT, the daily trips would need to be further reduced. The Transportation Impact Analysis and URBEMIS models already reflect the implementation of a TDM program. Therefore, impacts would be significant and unavoidable. (SU)

*AQ-11 Cumulative Exposure of Sensitive Receptors to PM<sub>2.5</sub> and Toxic Air Contaminant (TAC) Concentrations During Operation or Construction. The Project would not expose sensitive receptors to PM<sub>2.5</sub> and TAC concentrations above regulatory thresholds. Therefore cumulative impacts to sensitive receptors would be less than significant. (LTS)*

The combination of risk from all individual sources as analyzed under Impact AQ-5 above would determine the cumulative risk for the Project Site. Detailed calculation of risk with respect to cumulative impacts on the Project Site is included in the HRA. The maximum potential cancer risks to any modeled onsite location is 3.00 per million. While the unrefined cumulative cancer risk was below the regulatory threshold before the refined analysis (49.810 per million with the threshold of 100 per million), the incorporation of the refined modeling for the amenities center results in a further decrease in the cumulative cancer risk. As analyzed in AQ-5 above, all individual stationary sources result in less than significant impacts with respect to the childcare center either through screening or refined analysis. The summation of these individual risks, as shown in Table 3.5-8, represent the potential cumulative risk to students of the childcare center. Implementation of the above improvement measures would further reduce the cumulative impacts, which are expected to be below the respective thresholds for PM<sub>2.5</sub>, cancer risk, and non-cancer risk. Therefore, the Project would result in less-than-significant impacts with respect to cumulative cancer, non-cancer, and PM<sub>2.5</sub> impacts.

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<sup>25</sup> Bay Area Air Quality Management District (BAAQMD), California Environmental Quality Act (CEQA), Air Quality Guidelines, Updated May, 2011.

<sup>26</sup> Bay Area Air Quality Management District (BAAQMD), California Environmental Quality Act (CEQA), Air Quality Guidelines, Thresholds of Significance, Updated May, 2011.

**Table 3.5-8  
Screening Level Analysis**

<b>Source #</b>	<b>Source ID</b>	<b>PM<sub>2.5</sub> (&gt; 0.8 µg/m<sup>3</sup>)</b>	<b>Hazard Index (&gt; 10)</b>	<b>Risk (&gt; 100 per mil)</b>
1	17695	0.009	0.006	2.992
2	14464	0.029	0.005	9.350
3	16542	0.002	0.003	7.600
4	US 101	0.262	0.040	3.005
5	350 Airport Boulevard <sup>a</sup>	0.00	0.000	0.000
6	Onsite <sup>b</sup>	0.00	0.000	0.000
	<i>Total</i>	<i>0.303<sup>c</sup></i>	<i>0.055<sup>c</sup></i>	<i>22.947</i>
	<i>Significant</i>	<i>No</i>	<i>No</i>	<i>No</i>

*Sources:*

BAAQMD Stationary Source Screening Analysis Tool, San Francisco, May 2011. Source inquiry form included in Appendix E.

*Note:*

- a. Potential back-up generators were assumed to operate under the same conditions as those generators developed at 300 Airport Boulevard. Therefore, they are listed here as 0.00 risk because timing of operation exclude them from impacting sensitive onsite receptors.
- b. Onsite sources represent the 4 potential emergency back-up generators. They are listed here as 0.00 risk because timing of operation exclude them from impacting sensitive onsite receptors.
- c. Individual numbers do not sum to the totals due to rounding.

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## 3.6 CLIMATE CHANGE

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### Introduction

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This section of the EIR analyzes the potential impacts on climate change from implementation of the Project. This includes the potential for the Project to directly or indirectly generate greenhouse gas (GHG) emissions, which may have a significant impact on the environment, or conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Data for this section were obtained from the Bay Area Air Quality Management District (BAAQMD) CEQA Air Quality Guidelines, Section 3.5 of this document, Air Quality, and the Traffic Impact Analysis completed for the Project (Appendix C) and the climate change calculations completed for the Project (Appendix F).

Issues identified in response letters to the Notice of Preparation (NOP) (Appendix A) and during the Planning Commission public scoping meetings for the Project were considered in preparing this analysis. Applicable issues that were identified pertain to the Project's ability to adapt to various sea-level-rise scenarios over the lifetime of the Project. This issue is addressed in this section and in Section 3.9, Hydrology.

### Existing Conditions

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The Project Site is in the eastern section of the City of Burlingame (City) bordered by the San Francisco Bay (Bay) to the north and east, Sanchez Channel to the west, and US 101 to the south. The City is within the San Francisco Bay Area Air Basin (SFBAAB) under the jurisdiction of BAAQMD.

**Climate Change Background.** Parts of the Earth's atmosphere act as an insulating blanket trapping sufficient solar energy to keep the global average temperature in a suitable range. The "blanket" is a collection of atmospheric gases called "greenhouse gases" based on the idea that these gases trap heat like the glass walls of a greenhouse. These gases, mainly water vapor, carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), ozone (O<sub>3</sub>), and chlorofluorocarbons (CFCs), all act as effective global insulators, reflecting visible light and infrared radiation back to earth. Human activities, such as producing electricity and driving internal combustion vehicles, have contributed to the elevated concentration of these gases in the atmosphere. This in turn is causing the Earth's temperature to rise. A warmer Earth may lead to changes in rainfall patterns, smaller polar ice caps, a rise in sea level, and a wide range of impacts on plants, wildlife, and humans.

The relationships of water vapor and ozone as GHGs are poorly understood. It is unclear how much water vapor acts as a GHG. The uncertainty is due to the fact that water vapor can also produce cloud cover, which reflects sunlight away from Earth and can counteract its effect as a GHG. Also, water vapor tends to increase as the Earth warms, so it is not well understood whether the increase in water vapor is contributing to, or rather a result of, climate change. Ozone tends to break down in the presence of solar radiation but is not understood well enough for evaluation. For these reasons, methodologies approved by the Intergovernmental Panel on Climate Change (IPCC), US

Environmental Protection Agency (EPA), and the California Air Resources Board (ARB) focus on CO<sub>2</sub>, N<sub>2</sub>O, CH<sub>4</sub>, and CFCs. The following provides a brief description of each of these GHGs.

*Carbon Dioxide.* The natural production and absorption of CO<sub>2</sub> occurs through the burning of fossil fuels (e.g., oil, natural gas, and coal), solid waste, trees and wood products, and as a result of other chemical reactions, such as those required to manufacture cement. Globally, the largest source of CO<sub>2</sub> emissions is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, and industrial facilities. A number of specialized industrial production processes and product uses leads to CO<sub>2</sub> emissions, such as mineral or metal production, and the use of petroleum-based products.

CO<sub>2</sub> is removed from the atmosphere (or sequestered) when it is absorbed by plants as part of the biological carbon cycle. Natural sources of CO<sub>2</sub> occur within the carbon cycle where billions of tons of atmospheric CO<sub>2</sub> are removed by oceans and growing plants and are emitted back into the atmosphere through natural processes. When in balance, total CO<sub>2</sub> emissions and removals from the entire carbon cycle are roughly equal. Since the Industrial Revolution in the 1700s human activities, including burning of oil, coal, and gas and deforestation, had increased CO<sub>2</sub> concentrations in the atmosphere by 35 percent as of 2005.

*Methane.* CH<sub>4</sub> is emitted from a variety of both human-related and natural sources. CH<sub>4</sub> is emitted during the production and transport of coal, natural gas, and oil, from livestock and other agricultural practices, and from the decay of organic waste in municipal solid waste landfills. It is estimated that 60 percent of global CH<sub>4</sub> emissions are related to human activities. Natural sources of CH<sub>4</sub> include wetlands, gas hydrates,<sup>1</sup> permafrost, termites, oceans, freshwater bodies, non-wetland soils, and wildfires. CH<sub>4</sub> emission levels from a particular source can vary significantly from one country or region to another. These variances depend on many factors, such as climate, industrial and agricultural production characteristics, energy types and usage, and waste management practices. For example, temperature and moisture have a significant effect on the anaerobic digestion process, which is one of the key biological processes resulting in CH<sub>4</sub> emissions from both human and natural sources. Also, the implementation of technologies to capture and utilize CH<sub>4</sub> from sources such as landfills, coal mines, and manure management systems affects the emission levels from these sources.

*Nitrous Oxide.* Concentrations of N<sub>2</sub>O also began to rise at the beginning of the Industrial Revolution reaching 314 parts per billion (ppb) by 1998. Microbial processes in soil and water, including those reactions that occur in fertilizer containing nitrogen, produce nitrous oxide. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to the atmospheric load of N<sub>2</sub>O.

*Chlorofluorocarbons.* CFCs have no natural source, but were synthesized for uses as refrigerants, aerosol propellants, and cleaning solvents. Since their creation in 1928, the concentrations of CFCs in the atmosphere have been rising. Due to the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken, and levels of the major CFCs are now

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<sup>1</sup> Gas hydrates are crystalline solids that consist of a gas molecule, usually methane, surrounded by a “cage” of water molecules. (USGS, 1992)

remaining static or are declining. However, their long atmospheric lifetimes mean that some of the CFCs will remain in the atmosphere for over 100 years. Since CFCs are also a GHG, along with such other long-lived synthesized gases as CF<sub>4</sub> (carbontetrafluoride) and SF<sub>6</sub> (sulfurhexafluoride), they are of concern. Another set of synthesized compounds called HFCs (hydrofluorocarbons) are also considered GHGs, though they are less stable in the atmosphere and therefore have a shorter lifetime and less of an impact. CFCs, CF<sub>4</sub>, SF<sub>6</sub> and HFCs have been banned and are no longer available. Therefore, these GHGs are not included further in this analysis.

**Potential Effects of Global Climate Change.** Climate change could have a number of adverse effects. Although these effects would have global consequences, in most cases they would not disproportionately affect any one site or activity. In other words, many of the effects of climate change are not site-specific. Emission of greenhouse gases would contribute to the changes in the global climate, which would in turn, have a number of physical and environmental effects. A number of general effects are discussed below.

*Sea Level Rise and Flooding.* The California Climate Change Center predicts that sea level in California would rise between 10.9 to 71.6 centimeters (cm) (0.36 to 2.3 feet) above existing mean sea level (MSL) by 2099 as a result of climate change.<sup>2</sup> Measurements taken in the City of Alameda indicate that the current rate of sea level rise is about 0.29 feet per century.<sup>3</sup> Therefore, projected climate change effects on sea level would increase the existing rate of sea level rise by 0.07 to 1.94 feet per century. When combined with astronomical tides, even a 1-foot increase in MSL would result in the 100-year event high tide peak occurring at the 10-year event frequency.<sup>4</sup> In other words, the frequency of a current 100-year high tide (about 9.5 feet above current MSL) would occur 10 times more often if sea levels increase by 1 foot above current MSL.

In the future, precipitation events are predicted to vary in terms of timing, intensity, and volume according to many climate change models. Extreme storm events may occur with greater frequency. Changes in rainfall and runoff could affect flows in surface water bodies, causing increased flooding and runoff to the storm drain system.

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<sup>2</sup> Cayan, D., P. Bromirski, K. Hayhoe, M. Tyree, M. Dettinger, and R. Flick. 2006. *Projecting Future Sea Level: Table 3 Projected global sea level rise (SLR) (cm) for the SRES A1fi, A2, and B1 greenhouse gas emission scenarios.* SLR for A2 and B1 scenarios is estimated by combining output recent global climate change model simulations with MAGICC projections for the ice melt component. SLR estimates for A1fi estimated from MAGICC based on A2 temperature changes scaled according to those in A1fi. A Report From the California Climate Change Center CEC-500-2005-2002-SF. p. 19.

<sup>3</sup> Floyd, M., M. Anderson, M. Roos, R. Peterson, M. Perrone, and D. Todd. 2006. Chapter 2: Potential Impacts of Climate Change on California's Water Resources, Table 2-6 Relative Sea Level Trends for Eight Tide Gauges Along the Coast of California with 50 Years or More of Record. pp. 2-43. In Medelin, J., J. Harou, M. Olivares, J. Lund, R. Howitt, S. Tanaka, M. Jenkins, K. Madani, and T. Zhu (Eds), *Climate Warming and Water Supply Management In California: White Paper.* A Report From Climate Change Center CEC-500-2005-195-SF.

<sup>4</sup> Floyd, M., M. Anderson, M. Roos, R. Peterson, M. Perrone, and D. Todd. 2006. Chapter 2: Potential Impacts of Climate Change on California's Water Resources, Figure 2.32 Impact of One Foot Sea Level rise on the Relative Effect of Astronomical tides in the Delta. pp. 2-53. In Medelin, J., J. Harou, M. Olivares, J. Lund, R. Howitt, S. Tanaka, M. Jenkins, K. Madani, and T. Zhu (Eds), *Climate Warming and Water Supply Management In California: White Paper.* A Report From Climate Change Center CEC-500-2005-195-SF.

*Water Supply.* California Health and Safety Code Section 38501(a) recognizes that climate change “poses a serious threat to the economic well-being, public health, natural resources, and the environment of California,” and notes, “the potential adverse impacts of [climate change] include...reduction in the quality and supply of water to the State from the Sierra snowpack.” As most of the State, including the City of Burlingame, depends on surface water supplies originating in the Sierra Nevada, this water supply reduction is a concern.

Most of the scientific models addressing climate change show that the primary effect on California’s climate would be a reduced snow pack and a shift in stream-flow seasonality. A higher percentage of the winter precipitation in the mountains would likely fall as rain rather than as snow in some locations, reducing the overall snowpack. Further, as temperatures rise, snowmelt is expected to occur earlier in the year. As a result, peak runoff would likely come a month or so earlier. The end result would be that the State may not have sufficient surface storage to capture the early runoff; therefore, without construction of additional water storage projects, a portion of the current supplies would flow to the oceans and be unavailable for use in the State’s water delivery systems.

*Water Quality.* Climate change could have adverse effects on water quality, which would in turn affect the beneficial uses (habitat, water supply, etc.) of surface water bodies and groundwater. The changes in precipitation discussed above could result in increased sedimentation, higher concentration of pollutants, higher dissolved oxygen levels, increased temperatures, and an increase in the amount of runoff constituents reaching surface water bodies. Sea level rise, discussed above, could result in the encroachment of saline water into freshwater bodies.

*Ecosystems and Biodiversity.* Climate change is expected to have effects on diverse types of ecosystems, from alpine to deep sea habitat. As temperatures and precipitation change, seasonal shifts in vegetation will occur, which could affect the distribution of associated flora and fauna species. As the range of species shifts, habitat fragmentation could occur, with acute impacts on the distribution of certain sensitive species. The IPCC states that “20 percent to 30 percent of species assessed may be at risk of extinction from climate change impacts within this century if global mean temperatures exceed 2 to 3°C (3.6 to 5.4°F) relative to pre-industrial levels.”<sup>5</sup> Shifts in existing biomes<sup>6</sup> could also make ecosystems vulnerable to invasive species encroachment. Wildfires, which are an important control mechanism in many ecosystems, may become more severe and more frequent, making it difficult for native plant species to repeatedly re-germinate. In general terms, climate change is expected to put a number of stressors on ecosystems, with potentially catastrophic effects on biodiversity.

*Human Health Impacts.* Climate change may increase the risk of vector-borne infectious diseases, particularly those found in tropical areas and spread by insects such as malaria, dengue fever, yellow

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<sup>5</sup> Intergovernmental Panel on Climate Change, 2007: *Climate Change 2007: Impacts, Adaptation, and Vulnerability*. Contribution of Working Group II to the Third Assessment Report of the Intergovernmental Panel on Climate Change [Parry, Martin L., Canziani, Osvaldo F., Palutikof, Jean P., van der Linden, Paul J., and Hanson, Clair E. (eds.)]. Cambridge University Press, Cambridge, United Kingdom, 1000 pp.

<sup>6</sup> A biome is a major ecological community classified by the predominant vegetation and hence animal inhabitants.

fever, and encephalitis.<sup>7</sup> While these health impacts would largely affect tropical areas in other parts of the world, effects would also be felt in California. Warming of the atmosphere would be expected to increase smog and particulate pollution, which could adversely affect individuals with heart and respiratory problems, such as asthma. Extreme heat events would also be expected to occur with more frequency, and could adversely affect the elderly, children, and the homeless. Finally, the water supply impacts and seasonal temperature variations expected as a result of climate change could affect the viability of existing agricultural operations, making the food supply more vulnerable.

**Potential Effects of Human Activity on Climate Change.** The burning of fossil fuels, such as coal and oil, especially for the generation of electricity and powering of motor vehicles, has led to substantial increases in CO<sub>2</sub> emissions (and thus substantial increases in atmospheric concentrations). In 1994, atmospheric CO<sub>2</sub> concentrations were found to have increased by nearly 30 percent above pre-industrial (c.1860) concentrations.

The effect each GHG has on climate change is measured as a combination of the volume of its emissions, and its global warming potential (GWP), and is expressed as a function of how much warming would be caused by the same mass of CO<sub>2</sub>. Thus, GHG emissions are typically measured in terms of pounds or tons of CO<sub>2</sub> equivalents (CO<sub>2</sub>e), and are often expressed in metric tons (MT CO<sub>2</sub>e) or millions of metric tons of CO<sub>2</sub> equivalents (MMT CO<sub>2</sub>e). The following list summarizes the extent of GHG emissions from a global level to the local level:

- *Global Emissions.* Worldwide emissions of GHGs in 2004 were nearly 30 billion tons of CO<sub>2</sub>e per year (including both ongoing emissions from industrial and agricultural sources, but excluding emissions from land-use changes).<sup>8</sup>
- *U.S. Emissions.* In 2004, the United States emitted 7 billion tons of CO<sub>2</sub>e. Of the four major sectors nationwide — residential, commercial, industrial, and transportation — transportation accounts for the highest percentage of GHG emissions (approximately 35 to 40 percent); these emissions are entirely generated from direct fossil fuel combustion. In 2008, the United States emitted 6.9 billion tons of CO<sub>2</sub>e, with transportation accounting for the highest percentage of GHG emissions, approximately 32 percent.<sup>9</sup>
- *State of California Emissions.* In 2004, California emitted approximately 483 MT CO<sub>2</sub>e, or about 6 percent of the US emissions. This large number is due primarily to the sheer size of California compared to other states. By contrast, California has one of the fourth lowest per-capita GHG emission rates in the country, due to the success of its energy-efficiency and renewable energy programs and commitments that have lowered the State's GHG emissions rate of growth by more than half of what it would have been otherwise. Another factor that

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<sup>7</sup> EPA, 2008. Climate Change – Health and Environmental Effects. at: <http://www.epa.gov/climatechange/effects/health.html#climate>, Accessed December 13, 2009.

<sup>8</sup> United Nations Framework Convention on Climate Change, *Sum of Annex I and Non-Annex I Countries Without Counting Land-Use, Land-Use Change and Forestry (LULUCF). Predefined Queries: GHG total without LULUCF* (Annex I Parties). Bonn, Germany, website: [http://unfccc.int/ghg\\_emissions\\_data/predefined\\_queries/items/3814.php](http://unfccc.int/ghg_emissions_data/predefined_queries/items/3814.php), accessed May 18, 2011.

<sup>9</sup> US EPA, 2006, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2004.

has reduced California's fuel use and GHG emissions is its mild climate compared to that of many other states. In 2008, California's GHG emissions were approximately 478 million metric tons CO<sub>2</sub>e, generally attributed to the reduced travel and therefore transportation emissions.<sup>10</sup>

The California Energy Commission found that transportation is the source of approximately 41 percent of the State's GHG emissions, followed by electricity generation (both in-State and out-of-State) at 23 percent, and industrial sources at 20 percent. Agriculture and forestry is the source of approximately 8.3 percent, as is the source categorized as "other," which includes residential and commercial activities.<sup>11</sup>

- *San Mateo County Emissions.* The County of San Mateo 2005 Community-Scale inventory found that the unincorporated community generated 1,093,899 MT CO<sub>2</sub>e in 2005. The largest source of emissions is associated with transportation on State highways, which accounts for 43 percent of total emissions. Commercial and industrial energy use and gases from existing landfill deposits are the next largest source of emissions at 22 percent and 11 percent, respectively. Transportation on local roads and residential energy use account for nine percent and eight percent, respectively. Emissions from agriculture, off-road sources, wastewater treatment plants and emissions from waste generated in the unincorporated area of the County each represent less than three percent of the total emissions.<sup>12</sup>
- *City of Burlingame Emissions.* The City of Burlingame's Community GHG Emissions Inventory was completed using the tools and methodologies of ICLEI (Local Governments for Sustainability), formerly the International Council for Local Environmental Initiatives. This initial Emissions Inventory was completed in December of 2008 in coordination with the development of Burlingame's Climate Action Plan. The purpose of the emissions inventory was to identify levels and sources of emissions in Burlingame for the selected base year of 2005. In the base year 2005, the community of Burlingame emitted approximately 336,944 MT CO<sub>2</sub>e. The emissions were distributed among the primary source sectors as follows: residential emissions accounted for 14.1 percent, commercial emissions accounted for 22.1 percent, transportation emissions accounted for 60.3 percent, and waste-related emissions accounted for 3.5 percent.<sup>13</sup>

Various aspects of constructing, operating, and eventually discontinuing the use of industrial, commercial and residential development will result in GHG emissions. Operational GHG emissions result from energy use associated with heating, lighting, and powering buildings (typically through natural gas and electricity consumption), pumping and processing water (which consumes electricity),

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<sup>10</sup> US EPA, 2010, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2008. EPA# 430-R-10-006, April 2010.

<sup>11</sup> California Energy Commission, Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004 - Final Staff Report, publication # CEC-600-2006-013-SF, Sacramento, CA, December 22, 2006; and January 23, 2007 update.

<sup>12</sup> County of San Mateo, 2005 Community-Scale GHG Inventory Summary, website: [http://www.co.sanmateo.ca.us/bos.dir/BosAgendas/agendas2010/Agenda20100608/20100608\\_att1\\_11.pdf](http://www.co.sanmateo.ca.us/bos.dir/BosAgendas/agendas2010/Agenda20100608/20100608_att1_11.pdf), accessed May 18, 2011.

<sup>13</sup> City of Burlingame, *Climate Action Plan*, June 2009, website: <http://www.burlingame.org/Modules/ShowDocument.aspx?documentid=5458>, accessed May 18, 2011.

as well as fuel used for transportation and decomposition of waste associated with building occupants. New development can also create GHG emissions in its construction and demolition phases in connection with the use of fuels in construction equipment, creation and decomposition of building materials, vegetation clearing, and other activities. However, it is noted that new development does not necessarily create entirely new GHG emissions. Occupants of new buildings are often relocating and shifting their operational-phase emissions from other locations.

## **Applicable Plans and Regulations**

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Global climate change is addressed through the efforts of various federal, State, regional, and local government agencies as well as national and international scientific and governmental conventions and programs. These agencies work jointly and individually to understand and regulate the effects of greenhouse gas emissions and resulting climate change through legislation, regulations, planning, policy-making, education, and a variety of programs. The significant agencies, conventions, and programs that focus on global climate change are discussed below.

### **International and Federal**

**International Protocols.** The United States participated in the United Nations Framework Convention on Climate Change (UNFCCC) (signed on March 21, 1994). The Kyoto Protocol was the first treaty made under UNFCCC and was the first international agreement to regulate GHG emissions. It has been estimated that if the commitments outlined in the Kyoto Protocol were met, global GHG emissions could have been reduced by an estimated 5 percent from 1990 levels during the first commitment period of 2008–2012. The United States has not ratified the Protocol and is not bound by the Protocol’s commitments.

Representatives from 170 countries met in Copenhagen in December 2009 to ratify an updated UNFCCC agreement (Copenhagen Accord). The Copenhagen Accord, a voluntary agreement between the United States, China, India, and Brazil, recognizes the need to keep global temperature rise to below 2°C and obligates signatories to establish measures to reduce GHG emissions and to provide help to poorer countries in adapting to Climate Change. The Copenhagen Accord is a non-binding agreement.

Representatives from 194 United Nations member states, including business leaders and non-government organizations, met in Cancun, Mexico in December 2010 to participate in the United Nations Climate Change Conference (COP-16). In all, approximately 25,000 participants met to work out the language and reduction targets of a new agreement. The result was the Cancun Agreements, a voluntary agreement similar to the Copenhagen Accord, but with broader UN member nation support. The Cancun Agreements set the stage for the next climate conference in Durban, South Africa, where the unresolved issues, including the future of the Kyoto Protocol and a binding agreement, will once again be on the table. The key elements of the Cancun Agreements are as follows:

- Countries agree to keep temperature rise below 2°C above pre-industrial levels and developed countries are urged to make more aggressive emission cut pledges.

- A 30 billion dollar package (“fast-start financing”) for 2012 to aid nations taking immediate action to adapt to global warming.
- The creation of a “Global Climate Fund” that will provide financing of 100 million dollars annually for longer-term adaptation and mitigation measures in developing countries (although where this aid will come from is still unresolved). The World Bank was designated as its interim trustee.
- The creation of the forestry program, Reducing Emissions from Deforestation and Forest Degradation, which provides compensation for the preservation of tropical forests in developing countries.
- Specific language and a formal system for monitoring and reporting emissions. This includes a process of “international consultations and analysis” for developing countries that is “non-intrusive, non-punitive, and respectful of national sovereignty,” incorporating analysis by technical experts and resulting in a summary report.

UNFCCC is scheduled to meet again in December 2011 in South Africa to continue deliberating on a treaty to replace the Kyoto Protocol, which ends in 2012.

**US Environmental Protection Agency.** EPA is responsible for implementing federal policy to address global climate change. The federal government administers a wide array of public-private partnerships to reduce GHG intensity generated by the United States. These programs focus on energy efficiency, renewable energy, methane and other non-CO<sub>2</sub> gases, agricultural practices, and implementation of technologies to achieve GHG reductions.

EPA issued a Final Rule for mandatory reporting of GHG emissions in October of 2009. This Final Rule applies to fossil fuel suppliers, industrial gas suppliers, direct GHG emitters, and manufactures of heavy-duty and off-road vehicles and vehicle engines, and requires annual reporting of emissions, with the first annual reports due in March 2011.

On May 13, 2010, EPA issued a Final Rule that took effect on January 2, 2011, setting a threshold of 75,000 MT CO<sub>2</sub>e per year for GHG emissions. New and existing industrial facilities that meet or exceed that threshold will now require a permit.

On November 10, 2010, EPA published the “PSD and Title V Permitting Guidance for Greenhouse Gases.” EPA’s new guidance document is directed at State agencies responsible for air pollution permits under the Federal Clean Air Act (CAA) to help them understand how to implement new greenhouse gas reduction requirements while mitigating costs for industry. Most states will use EPA’s new guidelines when processing new air pollution permits for power plants, oil refineries, cement manufacturing, and other big pollution point sources.

On January 2, 2011, EPA implemented the first phase of the Tailoring Rule for GHG emissions Title V Permitting. Under the first phase of the Tailoring Rule, all new sources of emissions are subject to GHG Title V permitting if they are otherwise subject to Title V for another air pollutant and they emit at least 75,000 MT CO<sub>2</sub>e per year. Under Phase 1, no sources are required to obtain a Title V permits

solely due to GHG emissions. Phase 2 of the Tailoring Rule went into effect July 1, 2011. New sources are now subject to GHG Title V permitting if the source emits 100,000 MT CO<sub>2</sub>e per year, or they are otherwise subject to Title V permitting for another pollutant and emit at least 75,000 MT CO<sub>2</sub>e per year.

## State

**California Air Resources Board.** The California ARB, a part of California EPA, is responsible for the coordination and administration of both federal and State air pollution control programs within California. In this capacity, ARB conducts research, sets State ambient air quality standards, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. ARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. ARB has primary responsibility for the development of California's State Implementation Plan (SIP), for which it works closely with the federal government and the local air districts.

**Executive Order S-3-05.** California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following GHG emission reduction targets:

- By 2010, California shall reduce GHG emissions to 2000 levels;
- By 2020, California shall reduce GHG emissions to 1990 levels; and
- By 2050, California shall reduce GHG emissions to 80 percent below 1990 levels.

**Assembly Bill (AB) 32, The California Global Warming Solutions Act of 2006.** In 2006, the California State Legislature adopted AB 32, the California Global Warming Solutions Act of 2006. AB 32 focuses on reducing GHGs in California. ARB has determined the statewide levels of GHG emissions in 1990 to be 427 MMT CO<sub>2</sub>e. ARB has adopted the Climate Change Scoping Plan, which outlines the State's strategy to achieve the 2020 GHG limit set by AB 32. This Scoping Plan proposes a comprehensive set of actions designed to reduce overall greenhouse gas emissions in California, improve the environment, reduce dependence on oil, diversify energy sources, save energy, create new jobs, and enhance public health.

Part of California's strategy for achieving GHG reductions under AB 32 are the early action GHG reduction measures, which include the following: a low carbon fuel standard; reduction of emissions from non-professional servicing of motor vehicle air conditioning systems; and improved landfill methane capture.<sup>14</sup>

**Senate Bill 97.** SB 97, enacted in 2007, amends the CEQA statute to clearly establish that GHG emissions and the effects of GHG emissions are appropriate subjects for CEQA analysis. In March

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<sup>14</sup> California Air Resources Board, *Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California Recommended for Board Consideration*, October 2007, pp. 11-12, website: [http://www.arb.ca.gov/cc/ccea/meetings/ea\\_final\\_report.pdf](http://www.arb.ca.gov/cc/ccea/meetings/ea_final_report.pdf), accessed May 19, 2011.

2010, the California Office of Administrative Law codified into law CEQA amendments that provide regulatory guidance with respect to the analysis and mitigation of the potential effects of GHG emissions, as found in CEQA Guidelines Section 15183.5. To streamline analysis, CEQA provides for analysis through compliance with a previously adopted plan or mitigation program under special circumstances.

**Executive Order S-13-08.** Executive Order S-13-08, the Climate Adaptation and Sea Level Rise Planning Directive, provides clear direction for how the State should plan for future climate impacts. The first result is the 2009 California Adaptation Strategy (CAS) report, which summarizes the best known science on climate change impacts in the State to assess vulnerability and outlines possible solutions that can be implemented within and across State agencies to promote resiliency.

**California Code of Regulations (CCR) Title 24.** CCR Title 24, Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24) were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to increase the baseline energy efficiency requirements. Although it was not originally intended to reduce GHG emissions, electricity production by fossil fuels results in GHG emissions and energy efficient buildings require less electricity. Therefore, increased energy efficiency results in decreased GHG emissions. The 2008 standards are the most recent version which went into effect in January 1, 2010.

CCR Title 24, Part 11: California's Green Building Standard Code (CALGreen) was adopted in 2010 and went into effect January 1, 2011. CALGreen is the first statewide mandatory green building code and significantly raises the minimum environmental standards for construction of new buildings in California. The Mandatory provisions in CALGreen will reduce the use of VOC emitting materials, strengthen water conservation, and require construction waste recycling.

## Local

**Bay Area Air Quality Management District.** BAAQMD is the primary agency responsible for the reduction in climate change emissions for the entire SFBAAB. BAAQMD has recently released updated "California Environmental Quality Act Air Quality Guidelines."<sup>15</sup> The thresholds of significance included in the CEQA Guidelines were developed to assist local jurisdictions and agencies in complying with the requirements of CEQA regarding potentially adverse impacts on the global climate. The updated May 2011 BAAQMD CEQA Guidelines state that a land use development project would be considered to have a less-than-significant impact if it would meet at least one of the following thresholds:

- Be consistent with the policies of a qualified Climate Action Plan;
- Produce emissions of no more than 4.6 MT CO<sub>2e</sub> per service population annually; or
- Produce emissions of no more than 1,100 MT CO<sub>2e</sub> annually.

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<sup>15</sup> Bay Area Air Quality Management District *California Environmental Quality Act, Air Quality Guidelines*, updated May 2011.

BAAQMD has not adopted a threshold with respect to construction emissions associated with plan-level or individual development projects. However, BAAQMD recommends that the Lead Agency quantify construction emissions and make a significance determination of these emissions in relation to meeting the AB 32 GHG reduction goals. Lead Agencies are encouraged to incorporate Best Management Practices (BMPs) to reduce GHG emissions during construction. BMPs may include, but are not limited to:

- Use of alternative-fueled (e.g., biodiesel, electric) construction vehicles/equipment of at least 15 percent of the fleet;
- Using local building materials of at least 10 percent; and
- Recycle at least 50 percent of construction waste or demolition materials.

**Bay Area Regional Agency Climate Protection Program.** The Joint Policy Committee (composed of the Association of Bay Area Governments [ABAG], BAAQMD, San Francisco Bay Conservation and Development Commission [BCDC], and Metropolitan Transportation Commission [MTC]) approved the Bay Area Regional Agency Climate Protection Program on May 4, 2007 (amended July 20, 2007) to reduce potential effects of climate change. This program includes strategies to:

- Establish management priorities based on impacts, benefits, ease of implementation, and cost-effectiveness;
- Increase public awareness and motivate action through workshops and grass-roots outreach;
- Provide assistance such as standardization of procedures for determining impacts, maintaining and distributing data, model codes and other tools, funding for demonstration projects, and others;
- Reduce driving and promote alternative modes of transportation through mechanisms such as road pricing, mode competitiveness, and regional development planning;
- Prepare to adapt, because regardless of regional reductions in potential causes contributing to global climate change, the region will be affected by changing environmental conditions; and
- Increase the importance of CEQA review of CO<sub>2</sub> emissions, conduct life-cycle costing of all capital projects, encourage energy-efficient development with sliding-scale permit fees, rebates and expedited permit review processes, and return the region's freeways to a maximum of 55 miles per hour.

**City of Burlingame Climate Action Plan.** The City's Climate Action Plan serves as a guiding document to identify methods that the City and community can implement to significantly reduce GHG emissions. It is an important first step toward meeting the requirements mandated by AB 32 (described above), which requires emissions to be reduced 15 percent below current levels (as measured in 2005) by the year 2020 and to be reduced by 80 percent by the year 2050. The Climate Action Plan establishes a framework of action that the City and community can implement and provides a statement of intent for priorities and policies for the short and long term. However, the plan is not binding on the City Council or the community. The Climate Action Plan was adopted by the City Council in

2009, and the individual recommendations within the plan are being developed by staff and/or consultants and many have been presented for the Council’s consideration and implementation. In order to maintain consistency with the AB 32 emission reduction targets, the City of Burlingame would have to reduce 2005 base year emissions (336,944 MT CO<sub>2e</sub>) by a minimum of 50,542<sup>16</sup> MT CO<sub>2e</sub> by 2020, and the needed reduction in tons could be as high as 122,378 MT if Burlingame consumption trends continue.

In January 2009 the City Council directed the Green Ribbon Task Force to develop a Climate Action Plan for Burlingame. The Task Force reviewed Burlingame’s Community Greenhouse Gas Inventory and evaluated the best GHG reduction strategies of similar communities that could result in significant emission reductions for Burlingame to meet the target of 15 percent below 2005 levels by 2020. To guide the program and policy recommendations, the Task Force focused on the following reduction strategies: energy efficiency and green building; transportation and land use; waste reduction and recycling; education and promotion; and municipal operations. The Task Force developed a phased approach for program and policy implementation. The first, *Phase 1: High-Impact GHG Reduction Programs for Implementation Prior to 2012*, provides the City with recommendations that are being implemented in the near term to begin the necessary reductions in emissions. The second phase, *Phase 2: GHG Reduction Programs for Implementation 2012 to 2020*, has been developed for implementation beyond 2012.

## **Impacts and Mitigation Measures**

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### **Methodology**

The impact analysis for the Project is based on the GHG emissions assessment presented in the Environmental Analysis, below. GHG emissions associated with the construction and operation of the Project were estimated using URBEMIS 2007 software in conjunction with BAAQMD’s Greenhouse Gas Model (BGM) and trip generation data from the Traffic Impact Analysis prepared for the Project (Appendix C). The analysis presented below is in compliance with the BAAQMD 2011 CEQA Air Quality Guidelines.

It is important to note that there are certain limitations in the BGM modeling software. Project-specific data is only reflected in the “Unmitigated Results” generated by BGM. “Mitigated Results” reflect model defaults that cannot be changed. Therefore, in order to account for the GHG emission reductions attributable to the Project-specific water use, BGM was run with both the worst case water demand scenario (unmitigated) and the best case water demand scenario (mitigated), although both results are reflected in the “Unmitigated Results” column of the BGM output files. The results of these model runs are included in Appendix F. Further, BGM does not take into account California’s Renewable Portfolio Standard (RPS), which requires utility providers to supply 20 percent of their electricity from renewable sources by 2010 and 33 percent by 2020. According to the Renewables Portfolio Standard Quarterly (2<sup>nd</sup> Quarter, 2011), large utilities providers reported an average of 17 percent renewable usage for 2010. Due to the failure to reach the 2010 goal of a 20 percent reduction, the percentage

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<sup>16</sup> This estimate assumes that emissions are not expected to increase beyond the 2005 baseline levels.

reduction anticipated by Project buildout in 2015 cannot be accurately accounted for. For this reason, the 17 percent reduction reached in 2010 is applied outside of BGM to calculate electrical emissions for the Project (included in Appendix F).

**Construction.** Construction activities can alter the carbon cycle in many different ways. Construction equipment typically utilizes fossil fuels, which generates GHGs such as CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O. CH<sub>4</sub> may also be emitted during the fueling of heavy equipment. The raw materials used to construct new buildings can sequester carbon; however, demolition of structures can result in the gradual release of the carbon stored in waste building materials as those materials decompose in landfills. Since the exact nature of the origin or make-up of the construction materials is unknown, construction-related emissions are typically based on the operation of vehicles and equipment during construction.

BAAQMD does not have an adopted Threshold of Significance for construction-related GHG emissions. However, BAAQMD suggests that construction-related GHG emissions be quantified and disclosed in order to make a determination on the significance of these construction-generated GHG emission impacts in relation to meeting AB 32 GHG reduction goals. BAAQMD recommends using URBEMIS for proposed land use development projects. Sources of construction-related GHGs include exhaust, for which the same detailed guidance as described for criteria air pollutants and precursors should be followed.<sup>17</sup>

**Operation.** In order to evaluate the generation of GHG emissions that would result from operation of the 300 Airport Boulevard Project, the BAAQMD's thresholds of significance for operational GHG emission were used. According to the BAAQMD 2011 CEQA Air Quality Guidelines, a project would have a significant effect on GHG emissions if it would directly and indirectly generate more than 4.6 MT CO<sub>2</sub>e/yr/service population (SP).<sup>18</sup> The following activities are typically associated with the operation of residential, retail, and commercial land uses that will contribute to the generation of GHG emissions:

- *Vehicular trips.* Vehicle trips generated by implementation of the Project would result in GHG emissions through combustion of fossil fuels. Carbon dioxide emissions were determined based on the trip rates provided in the traffic analysis and average trip lengths in the URBEMIS 2007 model. CH<sub>4</sub> and N<sub>2</sub>O emissions were estimated using the total vehicle miles traveled as determined by URBEMIS and EPA emission factors for on-road vehicles.
- *On-site use of natural gas and other fuels.* Natural gas would be used by the Project for operation of the onsite heating and air conditioning system, resulting in a direct release of GHGs. The use of landscaping equipment would also result in on-site GHG emissions. Estimated emissions from the combustion of natural gas and other fuels is based on the square

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<sup>17</sup> Bay Area Air Quality Management District, *California Environmental Quality Act Air Quality Guidelines*, updated May 2011, website: [http://www.baaqmd.gov/~ /media/Files/Planning%20and%20Research/CEQA/BAAQMD%20CEQA%20Guidelines\\_May%202011\\_5\\_3\\_11.ashx](http://www.baaqmd.gov/~ /media/Files/Planning%20and%20Research/CEQA/BAAQMD%20CEQA%20Guidelines_May%202011_5_3_11.ashx), accessed May 18, 2011.

<sup>18</sup> The service population is equal to the number of employees plus the number of residents that would occupy the project. For the 300 Airport Boulevard Project, service population represents employees only because there would be no residential uses.

footage of non-residential buildings and is estimated based on the default project consumption rates provided in the BGM model used to estimate operational GHG emissions.

- GHG emissions associated with building envelope energy use vary based on the size of structures, the type and extent of energy-efficiency measures incorporated into structural designs, and the type and size of equipment installed. Because Project-specific energy consumption data was not available, unmitigated energy consumption is based on default values provided by BGM. Project design features and mitigation measures that would reduce energy consumption and consequently reduced GHG emissions were applied to the default energy consumption values provided by BGM.
- *Electricity use.* Electricity is generated by a combination of methods, which include combustion of fossil fuels. By using electricity, new development on the Project Site would contribute to the indirect emissions associated with electricity production. Because Project-specific energy consumption data was not available, unmitigated energy consumption is based on default values provided by BGM. Project design features and mitigation measures that would reduce energy consumption and consequently reduce GHG emissions were applied to the default energy consumption values provided by BGM. Further, as described previously, the reductions in GHG emissions associated with California's RPS were calculated outside of BGM and included in Appendix F.
- *Water use and wastewater generation.* California's water conveyance system is energy-intensive, with electricity used to pump and treat water. Development in the Bayfront Specific Plan area would contribute to indirect emissions by consuming water and generating wastewater. Estimated emissions associated with water demand are derived from demand estimates provided by *BKF Engineers* (described further in Section 3.12, Utilities). Calculations and assumptions behind water-related emissions are described in detail in Appendix F.
- *Solid waste.* Disposal of organic waste in landfills can lead to the generation of CH<sub>4</sub>, a potent greenhouse gas. By generating solid wastes, proposed development would contribute to the emission of fugitive methane from landfills, as well as CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O from the operation of trash collection vehicles. Solid waste generated by the Project would be transported to the Ox Mountain Landfill (refer to the Initial Study in Appendix B for further detail), which utilizes an energy recovery system. The BGM model accounts for such an energy recovery system in its estimation of solid waste-related GHG emissions.

## Significance Criteria

The criteria for determining significant climate change impacts are based on Appendix F of the CEQA Guidelines. As such, the Project would result in a significant climate change impacts if it would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

## Environmental Analysis

For each potential impact associated with the Project, a level of significance is determined and is reported in the impact statement. Conclusions of significance are defined as follows: significant impact (S), potentially significant impact (PS), less-than-significant impact (LTS), or no impact (NI). For each impact identified as being significant (S) or potentially significant (PS), this EIR provides mitigation measures to reduce, eliminate, or avoid the adverse effect. If the mitigation measures would reduce the impact to a less-than-significant (LTS) level successfully, this is stated in this EIR. If the mitigation measures would not diminish significant or potentially significant impacts to a less-than-significant level, the impacts are classified as “significant unavoidable impacts (SU).” The impacts of the potential development of the 350 Airport Boulevard Site are evaluated in this EIR on a programmatic level. Following the submittal of a project-specific development proposal for the 350 Airport Boulevard Site, additional environmental analysis would be required. For this section, CC refers to Climate Change.

*CC-1 Generation of Greenhouse Gas Emissions. The Project would result in a significant impact from both direct and indirect generation of GHG emissions. (S)*

### Construction Emissions

#### 300 Airport Boulevard

BAAQMD does not have an adopted threshold of significance for construction-related GHG emissions. However, BAAQMD does recommend that lead agencies quantify and disclose GHG emissions from construction. Further, lead agencies are encouraged to incorporate BMPs to reduce GHG emissions during construction, as applicable. The 300 Airport Boulevard Project would generate GHG emissions during the construction period from operation of construction equipment. Construction of the 300 Airport Boulevard Project could be implemented as a single phase or as two separate phases. As shown in Table 3.6-1, the single phase construction scenario would generate less GHG emissions than the sum of the multi-phase construction scenario. However, the difference in GHG emissions is negligible.

**Table 3.6-1  
Comparison of Construction-Related GHG Emission**

Multi-Phase Construction Scenario		Single Phase Construction Scenario
Phase 1 GHG Emissions (MT CO2e/year)	Phase 2 GHG Emission (MT CO2e/year)	GHG Emission (MT CO2e/year)
1,538.64	2,393.63	4,774.63
<b>Totals</b>		<b>4,774.63</b>
<b>3,932.28</b>		

*Source:* Atkins, 2011 based on URBEMIS 2007, Version 9.2.4.

*Note:* Result has been converted from short tons (as presented in URBEMIS) to metric tons, refer to Appendix F for further detail.

To reduce construction-related GHG emissions, the Project Sponsor has committed to achieving a 75 percent or greater waste diversion factor, exceeding the 60 percent diversion factor mandated in the City's Construction and Demolition Recycling Requirements (Ordinance No. 1704). In addition, construction of the 300 Airport Boulevard Project would utilize regional, cradle-to-cradle building materials, recycled materials for the base buildings (e.g., aggregate, concrete and steel, etc.), and sustainably harvested wood products when available. The following Improvement Measure is recommended to further reduce construction-related GHG emissions.

IMPROVEMENT MEASURE. The Project should include alternative fueled vehicles in the construction fleet and building materials should come from local sources in order to reduce GHG emissions from construction activities.

- *Utilize Alternative Fueled Vehicles and Local Building Materials.* In accordance with BAAQMD BMPs, the Project Sponsor shall incorporate into the construction fleet a minimum of 15 percent of construction vehicles and equipment operated by alternative fuels. Further, the Project Sponsor shall ensure that a minimum of 10 percent of building materials are locally sourced, where feasible.

### **350 Airport Boulevard**

This programmatic analysis assumes that construction activities for the 350 Airport Boulevard Site would include site preparation, grading, placement of infrastructure, placement of foundations for structures, and construction of structures. Demolition, excavation, and construction activities would likely require the use of heavy trucks, excavating and grading equipment, concrete breakers, concrete mixers, and other mobile and stationary construction equipment. Based on these assumptions, it is estimated using URBEMIS modeling software that construction of the 350 Airport Boulevard Site would generate approximately 371.17 MT CO<sub>2</sub>e per year (refer to Appendix F for further detail). To reduce construction-related GHG emissions, the development of the 350 Airport Boulevard Site would also adhere to the City's Construction and Demolition Recycling Requirements (Ordinance No. 1704), which requires that at least 60 percent of construction materials be recycled or reused.

## **Operational Emissions**

### **300 Airport Boulevard**

The GHG emissions associated with operation of the 300 Airport Boulevard Project were calculated using BAAQMD's emissions calculation software, URBEMIS 2007, and the GHG Model referred to as BGM. As described in Section 2, Project Description, the 300 Airport Boulevard Project would implement a Traffic Demand Management (TDM) program in order to reduce the number of vehicle trips associated with the Project. The TDM program would reduce the daily trip rate by approximately 13 percent over the baseline condition (implementation of the Project without TDM measures). The reduction in vehicle trips associated with the TDM program was incorporated into the quantification of operational GHG

emissions that would result from the 300 Airport Boulevard Project. Measures included in the TDM program are described in Table 3.6-2.

**Table 3.6-2  
Summary of 300 Airport Boulevard Project TDM Program Measures**

TDM Measure	Description
Secure Bicycle Storage	Secure indoor bicycle storage would be provided in a lobby or garage level room within the four office buildings.
Showers and Changing Rooms	Shower facilities with changing rooms would be provided throughout the 300 Airport Boulevard Site, with access available to all employees.
Shuttle Service	Operation of a shuttle service during the peak period to nearby rail stations.
Preferential Parking for Carpoolers	Preferential parking spaces would be provided for carpools at each of the four office buildings.
Preferential Parking for Vanpoolers	Preferential parking spaces would be provided for vanpools at each of the four office buildings.
Commute Assistance Center	An on-site, one-stop center for transit and commute alternatives information would be provided. A TDM coordinator would be at the center part-time to assist building tenants with trip planning.
Employees' Surveys	Two surveys would be developed and administered every year to examine TDM program participation and best practices.
Video Conferencing Centers	One video conferencing center would be installed at each office building for use by the tenants of the facility.
On-Site Amenities/ Accommodations	Amenities would be provided at the 300 Airport Boulevard Site to encourage people to stay on site during the workday, including: banking, retail, delivery dry cleaning, exercise facilities, child care center, delivery pharmacy, and food service.
On-Site Bicycles for Employee	Bicycles would be provided at each office building. Employees would have access to bicycles during breaks for personal or business use.
Child Care Services	A child care center service would be provided on site.
Guaranteed Ride Home Program	Employees would be able to use the Alliance's guaranteed ride home (GRH) program for emergencies. The program provides vouchers for taxicabs or rental cars.
Combination of Ten TDM Strategies	Based on San Mateo City/County Association of Governments (C/CAG) guidelines, implementation of at least ten TDM measures would provide an additional credit of five peak hour trips, which is representative of a reduction of five peak-hour trips. C/CAG Guidelines require that the TDM program for the Project have the capacity to reduce fully the demand for new peak hour trips.
Transportation Action Plan	Tenants would participate with the Peninsula Traffic Congestion Relief Alliance <sup>19</sup> , which provides ongoing support for alternative commute programs. The TDM Coordinator would work with the Alliance to create a Transportation Action Plan that would be uniquely tailored for each tenant in order to further encourage the use of alternative modes of transportation.
Transportation Management Association	If the Project has multiple tenants, each tenant would provide a representative to form a Transportation Management Association and be the liaison to the TDM Coordinator.
Coordination of Transportation Demand Management Programs	The project would coordinate TDM programs with existing developments/employers in the area.

Source: Fehr & Peers, 2011.

<sup>19</sup> The Alliance is San Mateo County's Transportation Demand Management Agency, which collaborates with municipalities and employers to implement programs that reduce solo driving trips through the County.

The 300 Airport Boulevard Project would also seek certification as a Leadership in Energy and Environmental Design (LEED) Gold project or equivalent. In order to qualify for such a certification, the 300 Airport Boulevard Project would include energy conservation measures and sustainable design strategies. The 300 Airport Boulevard Project would incorporate water and wastewater conservation measures, such as low-flush toilets and drought tolerant landscaping. In addition, the 300 Airport Boulevard Project would design landscaping and irrigation to maximize the use of recycled water to the greatest extent feasible, and if possible, achieve a 100 percent reduction in the use of potable water for irrigation. Further, the Project would exceed energy efficiency beyond Title 24 requirements through design of a tight building envelope and energy-efficient mechanical and electrical systems. The 300 Airport Boulevard Project would be designed to meet a minimum 26 percent reduction in energy use below the mandatory Title 24 standards for energy use. The Project would also utilize “cool roof” material to help passively control the indoor climate to further reduce energy demands. It is anticipated that on-going recycling programs would reduce operational solid waste generation. As part of the LEED Gold certification requirements, the 300 Airport Boulevard Project would avoid the use of refrigerants completely, or at least minimize the emission of compounds such as CFCs and HFCs, known to have a high global warming potential. These energy conservation and sustainability measures were integrated into BGM.

Additional energy conservation measures included in the 300 Airport Boulevard Project that were not quantifiable using BGM include:

- Incorporation of Low-E Glazing on the exterior of the buildings;
- Incorporation of light shelves to provide natural day-lighting and reduce lighting load demand;
- Incorporation of operable windows to provide natural ventilation and cooling; and
- Use of LED fixtures for site lighting.

At this time, many of the project specific design features provided by the Project Applicant do not contain the level of detail necessary to estimate associated reductions in GHG emissions. Therefore, with the exception of the TDM program the 300 Airport Boulevard Project was modeled without incorporation of project specific design features. The project specific design features were integrated into the analysis of operational GHG emissions as mitigation measures, so that numeric values could be assigned to them, thus making associated reductions in GHG emissions quantifiable. Table 3.6-3 shows the GHG emissions associated with operation of the project without implementation of either the TDM program or mitigation measures as compared to the 300 Airport Boulevard Project with the TDM program and all mitigation measures. As shown in Table 3.6-3, the unmitigated 300 Airport Boulevard Project would result in the generation of approximately 18,028.79 MT CO<sub>2</sub>e per year. When considered on per service population basis, the 300 Airport Boulevard Project would generate approximately 7.28 MT CO<sub>2</sub>e per employee (based on a total of 2,475 employees under the office scenario, which, as discussed in Chapter 2, is the most conservative assumption for the

Project). Therefore, operation of the 300 Airport Boulevard Project would exceed the BAAQMD threshold for GHG emissions of 4.6 MT CO<sub>2</sub>e per service population, as described under “Methodology” above, and would result in a significant impact.

MITIGATION MEASURES. Implementation of Mitigation Measures CC-1.1 through CC-1.8 would reduce GHG emissions associated with operation of the 300 Airport Boulevard Project. Where sufficient information was available to quantify reductions in GHG emissions associated with implementation of the following mitigation measures, such reductions were either incorporated into BGM or were calculated outside of the model (refer to the assumptions worksheet in Appendix F). Although the 300 Airport Boulevard Project would implement the above described project design features to improve energy conservation and sustainability, in order to quantify the reductions attributed to these design features they were restated as mitigation measures with numeric provisions (see Mitigation Measures CC-1.3 through CC-1.8 below). Mitigated GHG emissions are compared to unmitigated GHG emissions in Table 3.6-3 below.

**Table 3.6-3  
Summary of Operational GHG Emission for the  
300 Airport Boulevard Site**

Source of Emissions	Unmitigated GHG Emission (MT CO <sub>2</sub> e/year)	Mitigated GHG Emissions (MT CO <sub>2</sub> e/year)
Transportation	10,858.2 <sup>a</sup>	9,484.31
Area Sources	1.14	1.14
Electricity	3,609.30	2,379.30
Natural Gas	1,097.20	812.0
Water and Wastewater	125.73	62.10
Solid Waste	2,337.22	2,103.50
Agriculture	0.00	0.00
Off-Road Equipment	0.00	0.00
Refrigerants	0.00	0.00
Sequestration	N/A	0.00
Emission Credits	N/A	0.00
<b>Totals</b>	<b>18,028.79</b>	<b>14,842.35</b>

*Source:* Atkins, 2011 based on BAAQMD Greenhouse Gas Model (BGM), Version 1.1.9 Beta.

*Note:*

- a. This value was derived by increasing the transportation sector GHG emissions by 13 percent to reflect operation of the 300 Airport Boulevard Project without the TDM program. This was done manually because, as described above, the inputs used in BGM to generate estimated operational GHG emissions incorporated the TDM program.

The nature of the 300 Airport Boulevard Project is such that mitigation cannot fully address the associated GHG emissions. Implementation of the recommended mitigation measures would reduce the operational climate change impacts from the 300 Airport Boulevard Project, but would not reduce GHG emissions below the BAAQMD threshold of 4.6 MT CO<sub>2</sub>e/SP. As

shown in Table 3.6-3, operation of the 300 Airport Boulevard Project with mitigation and the TDM program would result in approximately 6.00 MT CO<sub>2</sub>e per year. Therefore, the GHG emissions of the 300 Airport Boulevard Project, and the Project's contributions to global climate change, would remain significant and unavoidable. (SU)

- CC-1.1 Incorporate GHG Reduction Measures for Maintenance Activities.* The Project Sponsor shall provide infrastructure for the use of electric landscape equipment during landscaping activities, where feasible.
- CC-1.2 Incorporate Trees and Vegetation into Project Design.* Trees and other shade structures shall be incorporated into the Site Plan to maximize summer shade and to minimize winter shade.
- CC-1.3 Renewable Energy System.* The 300 Airport Boulevard Project shall offset 10 percent of project electricity demand through implementation of onsite renewable energy systems or through investment in offsite alternative energy systems.
- CC-1.4 Drought Tolerant Landscaping.* The 300 Airport Boulevard Project shall reduce irrigation-related water demand by a minimum of 10 percent through the implementation of drought tolerant landscaping.
- CC-1.5 Cool Roof Material.* The 300 Airport Boulevard Project shall incorporate cool-roof materials into project design to reduce electricity demand associated with building heating, ventilation, and air conditioning (HVAC) by a minimum of 7 percent.
- CC-1.6 Water Conservation Measures.* The 300 Airport Boulevard Project shall implement water conservation measures to reduce building water demand by 50 percent.
- CC-1.7 Energy Efficiency beyond Title 24 Standards.* The 300 Airport Boulevard Project shall reduce building energy demand beyond the 2008 Title 24 Standards by 26 percent.
- CC-1.8 Operation Solid Waste Reduction.* The 300 Airport Boulevard Project shall implement a solid waste reduction program to reduce operational solid waste by a minimum of 10 percent.

### **350 Airport Boulevard**

The 350 Airport Boulevard Site is currently unoccupied and consists of an abandoned one-story wooden structure and associated paved surfaces. At this time, a development proposal for 350 Airport Boulevard has not been submitted. Since the existing site is unoccupied, any future development would increase the number of employees who travel to the site and visitors who may use surrounding and potentially improved recreation facilities. However, for the purposes of this programmatic analysis, development of the 350 Airport Boulevard Site is assumed to be office uses at 1.0 FAR. This assumption represents a conservative scenario on the basis that office uses would accommodate a higher ratio of employees per square foot of floor area, compared to life-science uses, and therefore would have greater effects on transportation and related impacts.

An increase in employees traveling to and from the site would result in additional vehicle miles traveled and associated GHG emissions. As identified in Table 3.6-4, the transportation sector represents the largest source of GHG emissions related to operation of the 350 Airport Boulevard Project. The results of the BGM model used to quantify operation GHG emissions for the 350 Airport Boulevard Project assume that a TDM program similar to that proposed for the 300 Airport Boulevard Project (summarized in Table 3.6-2) would be included in the 350 Airport Boulevard Project.

As shown in Table 3.6-4, development of the 350 Airport Boulevard Site would result in the emission of approximately 7,638.65 MT CO<sub>2</sub>e. Implementation of Mitigation Measures CC-1.9 through CC-1.11 (described below) would reduce GHG emissions to approximately 6,160.44 MT CO<sub>2</sub>e or approximately 4.94 MT CO<sub>2</sub>e/SP (assuming 1,247 employees as described in Section 2, Project Description). When combined, the Project (with implementation of all mitigation measures) would result in the generation of approximately 21,002.79 MT CO<sub>2</sub>e. Based upon the maximum number of employees that could result from implementation of the Project (300 plus 350 Airport Boulevard Sites), operational GHG emissions would be 5.64 MT CO<sub>2</sub>e/SP. Therefore, development of the 350 Airport Boulevard Site with the increased FAR allowed by the planning and zoning changes proposed by the Project, both independently and when combined with the 300 Airport Boulevard Project, would exceed the BAAQMD threshold for operational GHG emissions.

**Table 3.6-4  
Summary of Operational GHG Emissions for the 350 Airport Boulevard Site**

Source of Emissions	Unmitigated GHG Emissions (MT CO <sub>2</sub> e/year)	Mitigated GHG Emissions (MT CO <sub>2</sub> e/year)
Transportation	3,798.44 <sup>a</sup>	3,304.64
Area Sources	0.23	0.23
Electricity	2,085.14	1,374.67
Natural Gas	462.06	342.24
Water and Wastewater	62.10	31.05
Solid Waste	1,230.68	1,107.61
Agriculture	0.00	0.00
Off-Road Equipment	0.00	0.00
Refrigerants	0.00	0.00
Sequestration	N/A	0.00
Emission Credits	N/A	0.00
<b>Totals</b>	<b>7,638.65</b>	<b>6,160.44</b>

*Source:* Atkins, 2011 based on Bay Area Air Quality District, GHG Model (BGM), May 3, 2010.

*Notes:*

- a. This value was derived by decreasing the transportation sector GHG emissions by 13 percent to reflect operation of the 350 Airport Boulevard Project with a TDM program similar to that described for the 300 Airport Boulevard Project. This was done manually because, as described above, the inputs used in BGM to generate estimated operational GHG emissions did not incorporate a TDM program.

MITIGATION MEASURES. Implementation of Mitigation Measures CC-1.9 through CC-1.11 would reduce GHG emissions from operational activities associated with development of the 350 Airport Boulevard Site with the increased FAR allowed by the planning and zoning changes proposed as a part of the Project. However, the nature of future development of the 350 Airport Boulevard Site is such that mitigation cannot fully address the GHG emissions associated with its operation. The implementation of the recommended mitigation measures would reduce the climate change impacts from the 350 Airport Boulevard Project (as shown in Table 3.6-4), but would not reduce GHG emissions below the BAAQMD significance threshold of 4.6 MT CO<sub>2</sub>e/SP/yr. Therefore, the GHG emissions of future development of the 350 Airport Boulevard Site, both independently and when combined with the 300 Airport Boulevard Project, would remain significant and unavoidable. (SU)

*CC-1.9 Incorporate Mitigation Measures CC-1.1 through CC-1.8 as described under 300 Airport Boulevard.* The Project Sponsor shall ensure that implementation of the 350 Airport Boulevard Project comply with Mitigation Measures CC-1.1 through CC-1.8 as described for the 300 Airport Boulevard Project, above.

*CC-1.10 Implement a TDM program.* The Project Sponsor shall ensure that future development of the 350 Airport Boulevard Site implement a TDM program similar to that described for the 300 Airport Boulevard Project, to reduce transportation-related GHG emissions.

*CC-1.11 Pursue LEED Certification.* Future development of the 350 Airport Boulevard Site shall seek LEED Gold certification or equivalent for development per the recommendations of City Resolution No. 2006-013. The Project Sponsor shall submit draft LEED or equivalent checklists to the City Sustainability Coordinator for review and consultation.

*CC-2 Conflict with Applicable Plans, Policies, or Regulations Regarding Reduction of GHG Emissions. The Project would conflict with applicable plans, policies, or regulations adopted for the purpose of reducing GHG emissions. The Project would have a significant impact on GHG reduction plans, policies, and regulations. (S)*

### **300 Airport Boulevard**

As described in Applicable Plans and Regulations, the City of Burlingame adopted a Climate Action Plan in 2009 in order to identify methods to reduce local GHG emissions. The Climate Action Plan is designed to meet the requirements mandated by AB 32, specifically, to reduce emissions by 15 percent below current levels (as measured in 2005) by 2020 and to achieve an 80 percent reduction by 2050. The Climate Action Plan identifies both near-term and long-term reduction strategies designed to guide future development and assist the City and the State in meeting the goals established by climate change policies and regulations such as AB 32 and SB 375. The 300 Airport Boulevard Project would comply with the following reduction measures and recommendations identified in the Climate Action Plan's Phase 1: High-Impact

GHG Reduction Programs for Implementation Prior to 2012. A complete list of the 300 Airport Boulevard Project's energy conservation strategies is provided under Impact CC-1 above.

- Energy efficiency and green building recommendations
  - Water conservation including but not limited to drought tolerant landscaping, recycled water use, and low-flow plumbing
  - LEED Gold certification or its equivalent
- Transportation and Land Use Recommendations
  - TDM program
- Waste reduction and recycling
  - On-going recycling program
  - Minimum construction-waste diversion rate of 75 percent

However, because the 300 Airport Boulevard Project would exceed BAAQMD's threshold for operational GHG emissions, even with implementation of the mitigation measures identified under CC-1 above. Therefore, it would inhibit the City in meeting the short-term and long-term GHG reduction goals established in the Climate Action Plan. Implementation of the 300 Airport Boulevard Project would result in a significant and unavoidable impact to State and local GHG reduction plans, policies, and regulations. (SU)

### **350 Airport Boulevard**

As described under Impact CC-1 above, at this time, a development proposal for the 350 Airport Boulevard Site has not been submitted. Without a development proposal, assumptions as to a future project's compliance with the City's Climate Action Plan would be speculative at best. However, based on the GHG estimates provided above, operation of potential development at the 350 Airport Boulevard Site, both independently and when combined with the 300 Airport Boulevard Project, would result in the generation of GHG emissions above the allowable BAAQMD threshold. As described under Impact CC-1 above, even with implementation of Mitigation Measures CC-1.9 through CC-1.11, the 350 Airport Boulevard Project would result in significant and unavoidable operational GHG emissions; and therefore, would have a significant and unavoidable impact on State and local GHG reduction plans, policies, and regulations. (SU)

## **Cumulative Analysis**

The analysis of the proposed project's climate change impact, discussed above, is an analysis of the Project's contribution to a cumulatively significant global impact through its emission of GHGs. The cumulative impacts of the Project, with respect to the issue of climate change, are therefore captured in the Project-level analysis, and no further cumulative analysis is necessary.

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## 3.7 NOISE

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### Introduction

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This section describes the ambient, or background, noise conditions in the vicinity of the Project Site and key noise sources that contribute to those ambient conditions. This section also evaluates the potential for noise and ground-borne vibration impacts resulting from construction and operation of the Project. More specifically, the evaluation addresses the potential for the Project to cause a substantial temporary and/or permanent increase in ambient noise levels in the vicinity of the Project Site or cause exposure of off-site residents or nearby businesses to noise levels or ground-borne vibration in excess of standards established in the City of Burlingame General Plan and Noise Ordinance, or any other applicable standards.

Data used to prepare this analysis were obtained from the Noise Element of the General Plan, the Burlingame Bayfront Specific Plan, the San Mateo County Comprehensive Airport Land Use Plan, the Federal Transit Administration's (FTA) Transit Noise and Vibration Impact Assessment methodology,<sup>1</sup> and by measuring and modeling existing and future noise levels within the Project Site and vicinity, as completed by Atkins. Traffic information contained in the Traffic Impact Analysis for this EIR (Appendix C of this document) was used to prepare the noise modeling for vehicular sources.<sup>2</sup> Issues identified in response letters to the Notice of Preparation (NOP) (Appendix A) and during the Planning Commission public scoping meetings for the Project were considered in preparing this analysis. However, no applicable issues that were identified pertain to the Project's effect on noise.

### Existing Conditions

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#### Acoustic Terminology and Definitions

Sound is created when vibrating objects produce pressure variations that move rapidly outward into the surrounding air. The main characteristics of these air pressure waves are amplitude, experienced as a sound's loudness, and frequency, experienced as a sound's pitch. The standard unit of sound amplitude is the decibel (dB), which is a measure of the physical magnitude of the pressure variations relative to the human threshold of perception. The human ear's sensitivity to sound amplitude is frequency-dependent and it is more sensitive to sounds in the mid-frequency range than to sounds with much lower or higher frequencies.

Most "real world" sounds (e.g., a dog barking, a car passing, etc.) are complex mixtures of many different frequency components, each having different amplitudes. When the average amplitude of such sounds is measured with a sound level meter, it is common for the instrument to apply adjustment factors to each of the measured sound's frequency components. These factors account for the

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<sup>1</sup> Federal Transit Administration: Office of Planning and Environment, *Transit Noise and Vibration Impact Assessment*, May 2006. [http://www.fta.dot.gov/documents/FTA\\_Noise\\_and\\_Vibration\\_Manual.pdf](http://www.fta.dot.gov/documents/FTA_Noise_and_Vibration_Manual.pdf). Accessed June 16, 2011.

<sup>2</sup> Hexagon Transportation Consultants, *Burlingame Point Traffic Impact Analysis*, July 15, 2011.

differences in perceived loudness of each of the sound's frequency components relative to those to which the human ear is most sensitive. Because the human ear is not equally sensitive to a given sound level at all frequencies, a special frequency-dependent rating scale is used to relate noise to human sensitivity. The A-weighted decibel scale (dBA) provides this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear. The unit of A-weighted sound amplitude is also the dB. In reporting measurements to which A-weighting has been applied, an "A" is appended to dB (dBA) for clarification. In some cases, however, it is useful to know the actual average sound amplitude without application of the A-weighting factors; this type of averaging is called C-weighting and its result is reported in C-weighted decibels (dBC). Finally, since environmental sound levels usually vary greatly over time, it is often useful to know the degree of variability at a particular location over any measurement period. This variability is specified in terms of statistical sound levels ( $L_n$ ), where n is the percentage of time these levels are exceeded during the measurement period. For example,  $L_{10}$ ,  $L_{50}$ , and  $L_{90}$  are descriptors that represent the sound level exceeded 10 percent of the time, 50 percent of the time, and 90 percent of the time, respectively, during a measurement, while  $L_{\min}$  and  $L_{\max}$  represent the minimum and maximum sound levels during the measurement period.

Noise is the term generally given to the intrusive, "unwanted" aspects of sound. Many factors influence how a sound is perceived and whether it is considered harmful or disruptive to an individual or a community. These factors include the primary physical characteristics of a sound (e.g., amplitude, frequency, duration, etc.), but also secondary acoustic and non-acoustic factors that can influence judgment regarding the degree to which it is intrusive and disruptive. Table 3.7-1 lists representative noise levels for the environment.

Sensitive uses from a noise perspective include places where there is a reasonable expectation that individuals could be sleeping, learning, worshipping, or recuperating. All quantitative descriptors used to measure environmental noise exposure recognize the strong correlation between the high acoustical energy content of a sound (i.e., its loudness and duration) and the disruptive effect it is likely to have as noise. Because environmental noise fluctuates over time, most such descriptors average the sound level over the time of exposure, and some add "penalties" during the times of day when intrusive sounds would be more disruptive to listeners. The rating scales of  $L_{\text{eq}}$ ,  $L_{\min}$ , and  $L_{\max}$  are measures of ambient noise, while the  $L_{\text{dn}}$  and Community Noise Equivalent Level (CNEL) are measures of community noise.  $L_{\text{eq}}$  is the average A-weighted sound level measured over a given time interval.  $L_{\text{eq}}$  can be measured over any time period, but is typically measured for 1-minute, 15-minute, 1-hour, or 24-hour periods.  $L_{\text{dn}}$  is another average A-weighted sound level measured over a 24-hour time period. However, this noise scale is adjusted to account for some individuals' increased sensitivity to noise levels during the evening and nighttime hours.  $L_{\text{eq}}$ ,  $L_{\min}$ , and  $L_{\max}$ , as well as  $L_{\text{dn}}$  and CNEL are all applicable to this analysis.

**Table 3.7-1  
Representative Environmental Noise Levels**

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	—110—	Rock Band
Jet Fly-over at 100 feet	—105—	
	—100—	
Gas Lawnmower at 3 feet	—95—	
	—90—	
	—85—	Food Blender at 3 feet
Diesel Truck going 50 mph at 50 feet	—80—	Garbage Disposal at 3 feet
Noisy Urban Area during Daytime	—75—	
Gas Lawnmower at 100 feet	—70—	Vacuum Cleaner at 10 feet
Commercial Area	—65—	Normal Speech at 3 feet
Heavy Traffic at 300 feet	—60—	
	—55—	Large Business Office
Quiet Urban Area during Daytime	—50—	Dishwasher in Next Room
	—45—	
Quiet Urban Area during Nighttime	—40—	Theater, Large Conference Room (background)
Quiet Suburban Area during Nighttime	—35—	
	—30—	Library
Quiet Rural Area during Nighttime	—25—	Bedroom at Night, Concert Hall (background)
	—20—	
	—15—	Broadcast/Recording Studio
	—10—	
	—5—	
Lowest Threshold of Human Hearing	—0—	Lowest Threshold of Human Hearing

Source: California Department of Transportation, Technical Noise Supplement, 1998.

The most commonly used noise descriptors for environmental exposures are:

- **L<sub>eq</sub>**, the equivalent-energy noise level, is the average acoustic energy<sup>3</sup> content of noise over any chosen exposure time. The L<sub>eq</sub> is the constant noise level that would deliver the same acoustic energy to the ear as the actual time-varying noise over the same exposure time. L<sub>eq</sub> does not depend on the time of day during which the noise occurs. L<sub>dn</sub>, the day-night average noise level, is a 24-hour average L<sub>eq</sub> with a 10 dBA “penalty” added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for increased nighttime noise sensitivity. Because of this penalty, the L<sub>dn</sub> would always be higher than its corresponding 24-hour L<sub>eq</sub> (e.g., a constant 60 dBA noise over 24 hours would have a 60 dB L<sub>eq</sub>, but a 66.4 dBA L<sub>dn</sub>).
- **L<sub>min</sub>**, Minimum Noise Level, is the lowest A/B/C weighted integrated noise level during a specific period of time.
- **L<sub>max</sub>**, Maximum Noise Level, is the highest A/B/C weighted integrated noise level occurring during a specific period of time.

<sup>3</sup> Averaging sound levels in decibels is not done by standard arithmetic averaging, but according to the following rule:  $L_{eq} = 10 \times \log( (1/n) \times (10^{L_1/10} + 10^{L_2/10} + \dots + 10^{L_n/10}) )$ ; where L<sub>1</sub>, L<sub>2</sub>, L<sub>n</sub> are n individual sound levels.

For example, the L<sub>eq</sub> of the sound levels L<sub>1</sub> = 60 dBA and L<sub>2</sub> = 70 dBA is 67.4 dBA, not 65 dBA as it would if standard arithmetic averaging were used. The larger individual sound levels contribute much more substantially to the L<sub>eq</sub> than they would to an average done in the standard way.

- **CNEL**, the Community Noise Equivalent Level, is a 24-hour average  $L_{eq}$  with a 5 dBA “weighting” during the hours of 7:00 p.m. to 10:00 p.m. and a 10 dBA “weighting” added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively. The logarithmic effect of these additions is that a 60 dBA-24 hour  $L_{eq}$  would result in a measurement of 66.7 dBA CNEL.
- **SEL**, the sound exposure level (also known as the single noise event level), is the constant noise level that would deliver the same acoustic energy to the ear of a listener during a one-second exposure as the actual time-varying noise would deliver over its entire time of occurrence.<sup>4</sup> SEL is typically used to characterize the effects of short-duration noise events (e.g., aircraft fly-overs or train pass-bys).

Noise levels from a particular source decline as distance to the receptor increases. Other factors, such as the weather and other reflecting or shielding factors, also help intensify or reduce the noise level at any given location. A commonly used rule of thumb for roadway noise is that for every doubling of distance from the source, the noise level is reduced by about 3 dBA at acoustically “hard” locations (i.e., where the area between the noise source and the receptor is nearly complete asphalt, concrete, hard-packed soil, or other solid materials) and 4.5 dBA at acoustically “soft” locations (i.e., where the area between the source and receptor is unpacked earth or has vegetation, including grass). Noise from stationary or point sources (such as commercial heating and ventilation units [HVAC] or construction equipment) is reduced by about 6 to 7.5 dBA for every doubling of distance at acoustically hard and soft locations, respectively. Generally, if a noise source is completely enclosed or completely shielded with a solid barrier located close to the source, an 8 dBA noise reduction can be expected; if the enclosure and/or barrier it is interrupted, noise would be reduced by only 5 dBA. The exterior-to-interior reduction of newer residential units and office buildings is generally 30 dBA or more.

## **Fundamentals of Environmental Groundborne Vibration**

Vibrating objects in contact with the ground radiate energy through the ground. If the object is massive enough and/or close enough to an observer, the ground vibrations are perceptible. Vibration magnitude is measured in vibration decibels (VdB) relative to a 1 micro-inch-per-second reference level. Background vibration levels in most inhabited areas are usually 50 VdB or lower, well below the threshold of perception (i.e., typically about 65 VdB). In most cases, when vibration is perceptible to people in their homes or workplaces, the source is within the same building (i.e., operation of HVAC equipment, movement of other occupants, slamming of doors, etc.). The outdoor sources most commonly responsible for producing perceptible vibration are heavy construction equipment, steel-wheeled trains, and motor vehicle traffic on rough roads (if the roadway is smooth, the vibration from traffic is rarely perceptible). At about 100 VdB, vibration levels are strong enough to begin to cause structural damage in fragile buildings.

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<sup>4</sup> For a sound lasting longer than one second, its SEL would be higher than that of the largest of the shorter-duration component sounds that make up the total. For example, if a sound with a ten-second-long duration made up of 10 one-second-long component sounds, each of 60 dBA amplitude, its SEL would be 70 dBA.

Vibration at high enough levels can result in human annoyance. Groundborne vibration can also potentially damage the foundations and exteriors of fragile structures if they are close enough to the construction activity. However, damage potential is typically limited to vibration generated by impact equipment, such as pile drivers.

### Health Effects of Environmental Noise

The World Health Organization (WHO) represents the most current source of knowledge regarding noise-related health impacts due to the fact that the European nations have continued to study noise and its health effects, while the US Environmental Protection Agency (EPA) all but eliminated its noise investigation and control program in the 1970s. According to WHO, sleep disturbance can occur when continuous indoor noise levels exceed 30 dBA or when intermittent interior noise levels reach 45 dBA, particularly if background noise is low. When a bedroom window is slightly open (a reduction from outside to inside of 15 dB), WHO criteria would suggest exterior continuous (ambient) nighttime noise levels should be 45 dBA or below, and short-term events should not generate noise in excess of 60 dBA. WHO also notes that maintaining noise levels within the recommended levels during the first part of the night is believed to be effective for the ability to fall asleep.<sup>5</sup>

Other potential health effects of noise identified by WHO include decreased performance on complex cognitive tasks, such as reading, attention, problem solving, and memorization; physiological effects such as hypertension and heart disease (after many years of constant exposure, often by workers, to high noise levels); and hearing impairment, which is generally after long-term occupational exposure, although shorter-term exposure to very high noise levels, for example, exposure several times a year to concert noise at 100 dBA. Noise can also disrupt speech intelligibility at relatively low levels; for example, in a classroom setting, a noise level as low as 35 dBA can disrupt clear understanding. Finally, noise can cause annoyance, and can trigger emotional reactions like anger, depression, and anxiety. WHO reports that, during daytime hours, few people are seriously annoyed by activities with noise levels below 55 dBA, or moderately annoyed with noise levels below 50 dBA.

The general human response to different levels of ground-borne vibration velocity levels is described in Table 3.7-2.

<b>Vibration Velocity Level</b>	<b>Human Reaction</b>
65 VdB	Approximate threshold of perception for many people.
75 VdB	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find that transportation-related vibration at this level is unacceptable.
85 VdB	Vibration acceptable only if there are an infrequent number of events per day.

*Source:* Federal Railroad Administration, High Speed Ground Transportation Noise and Vibration Impact Assessment, October 2005.

<sup>5</sup> World Health Organization, *Guidelines for Community Noise*. Geneva, 1999. Available at: <http://www.who.int/docstore/peh/noise/guidelines2.html>. Accessed June 1, 2011.

## Existing Noise Environment

The surrounding areas in the vicinity of the Project Site are currently used by various commercial businesses and office spaces. There are several light-industrial buildings located on the southern boundary of the Project Site and across Beach Road. In addition, office uses are located across the Sanchez Channel to the west. The Project Site is north of US 101, and is immediately adjacent to the Bay to the north and east and Sanchez Channel to the west. The 300 Airport Boulevard Site is currently accessible from Beach Road and is bounded by Airport Boulevard to the north, Airport Boulevard and the Bay to the east, light-industrial buildings along Beach Road to the south, and Sanchez Channel to the west. The 350 Airport Boulevard Site is bounded by the Bay to the north, Fisherman's Park to the east, Airport Boulevard to the south, and the outlet of Sanchez Channel to the west. Vehicular traffic is the primary source of noise in the vicinity of the Project.

Existing daytime noise levels were measured by Atkins on June 2, 2011 with a Larson Davis 820 Sound Level Meter (SLM) at four locations around and within the Project Site. These locations were selected to represent existing noise levels at the Project Site and existing sensitive receptors within the vicinity of the Project. These locations are identified in Figure 3.7-1. Each measurement location is described and the average, minimum, and maximum noise levels measured at each of these locations are presented in Table 3.7-3.

**Table 3.7-3  
Daytime Noise Levels Measurements at Selected Locations in/around the Project Area**

	Noise Measurement Location/Time <sup>a</sup>	Primary Noise Sources	Noise Level Statistics		
			L <sub>eq</sub> <sup>b</sup>	L <sub>min</sub> <sup>b</sup>	L <sub>max</sub> <sup>b</sup>
#1	Airport Boulevard, at Bayside Park; 6 feet from south bound lane of Airport Boulevard; start time: 2:45 PM.	Vehicular traffic on Airport Boulevard.	101.3 <sup>c</sup>	54.1	114.9
#2	Area at the intersection of Anza Boulevard and Airport Boulevard; 7 feet from Airport Boulevard; start time: 3:24 PM.	Vehicular traffic on Airport Boulevard and Anza Boulevard.	64.4	54.8	77.3
#3	Airport Boulevard at the Project Site; 130 feet from the Anza Pier; start time: 4:30 PM.	Vehicular traffic on Airport Boulevard (at the Project Site).	61.6	50.9	78.1
#4	Coyote Point Park, near the bike path, behind a concrete barrier, along Airport Boulevard; start time: 5:11 PM.	Vehicular traffic along Airport Boulevard.	60.1	55.6	70.2

Source: Atkins, 2011.

Notes:

- a. Measurements were taken on June 2, 2011. Each measurement was 15 minutes in duration.
- b. L<sub>eq</sub> is the average noise level over the measurement period, L<sub>min</sub> is the minimum instantaneous noise level measured during the 10-minute period, while L<sub>max</sub> is the maximum instantaneous noise level measured during the 15-minute period.
- c. This is an inaccurate reading based on high winds occurring during the monitoring time frame. FHWA modeled L<sub>eq</sub> of 64.2 will be used for analysis purposes.



## Existing Ground-borne Vibration Levels

As discussed above, the vibration threshold of perception for humans is approximately 65 VdB; at 75 VdB, vibrations become distinctly perceptible to many people; and at 100 VdB, minor damage can occur in fragile buildings. Aside from seismic events, the greatest regular sources of ground-borne vibration at the Project Site and the City of Burlingame are construction activities and roadway truck traffic. The City also experiences vibration from Caltrain along the right-of-way; however, due to distance, train vibration impacts are not perceptible at the Project Site.

## Applicable Plans and Regulations

### Federal

**Noise Control Act of 1972.** The federal *Noise Control Act of 1972* addressed the issue of noise as a threat to human health and welfare, particularly in urban areas. In response to the Act, the EPA published *Information of Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety* (EPA Levels). Table 3.7-4 summarizes EPA recommendations for noise-sensitive areas. Ideally, the yearly average  $L_{eq}$  should not exceed 70 dBA to prevent measurable hearing loss over a lifetime, and the  $L_{dn}$  should not exceed 55 dBA outdoors and 45 dBA indoors to prevent significant activity interference and annoyance in noise-sensitive areas. In addition to the identified noise levels to protect public health, the EPA Levels identify an increase of 5 dBA as an adequate margin of safety relative to a baseline noise exposure level of 55 dBA  $L_{dn}$  before a noticeable increase in adverse community reaction would be expected.

**Table 3.7-4**  
**Summary of Noise Levels Identified as Requisite to Protect**  
**Public Health and Welfare with an Adequate Margin of Safety**

Effect	Level	Area
Hearing Loss	$L_{eq}(24 \text{ hr}) < 70 \text{ dBA}^a$	All areas.
Outdoor activity interference and annoyance	$L_{dn} < 55 \text{ dBA}$	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.
Outdoor activity interference and annoyance	$L_{eq}(24 \text{ hr}) < 55 \text{ dBA}$	Outdoor areas where people spend limited amounts of time, such as school yards, playgrounds, etc.
Indoor activity interference and annoyance	$L_{dn} < 45 \text{ dBA}$	Indoor residential areas.
Indoor activity interference and annoyance	$L_{eq}(24 \text{ hr}) < 45 \text{ dBA}$	Other indoor areas with human activities such as schools, etc.

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

*Note:*

- a. Yearly average equivalent sound levels in decibels; the exposure period that results in hearing loss at the identified level is a period of forty years.

**Federal Transit Administration.** The FTA has developed criteria for judging the significance of vibration produced by transportation sources and construction activity, as shown in Table 3.7-5.<sup>6</sup> The FTA Guidelines provide screening distances for various transportation-related vibration sources.

**Table 3.7-5  
Groundborne Vibration Impact Criteria for General Assessment**

Land Use Category	Impact Levels (VdB; relative to 1 micro-inch/second)		
	Frequent Events <sup>a</sup>	Occasional Events <sup>b</sup>	Infrequent Events <sup>c</sup>
<b>Category 1:</b> Buildings where vibration would interfere with interior operations	65 <sup>d</sup>	65 <sup>d</sup>	65 <sup>d</sup>
<b>Category 2:</b> Residences and buildings where people normally sleep	72	75	80
<b>Category 3:</b> Institutional land uses with primarily daytime uses	75	78	83

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

*Notes:*

- a. “Frequent Events” is defined as more than 70 vibration events of the same source per day.
- b. “Occasional Events” is defined as between 30 and 70 vibration events of the same source per day.
- c. “Infrequent Events” is defined as fewer than 30 vibration events of the same source per day.
- d. This criterion limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration-sensitive manufacturing or research would require detailed evaluation to define the acceptable vibration levels.

## Local

**Burlingame Noise Ordinance.** Noise levels are regulated by the City of Burlingame’s Noise Ordinance (Chapter 10.40 of the Burlingame Municipal Code). Section 10.40.037 of the Noise Ordinance establishes that noise levels generated by construction are prohibited between the hours of 8:00 p.m. and 7:00 a.m. Monday through Saturday and between the hours of 6:00 p.m. and 10:00 a.m. Sundays and holidays.

Section 10.40.039 of the Noise Ordinance identifies time periods when loading and unloading activities are prohibited:

- between the hours of 10 p.m. on a Sunday, Monday, Tuesday, Wednesday, or Thursday and 7 a.m. of the following day;
- between the hours of 10 p.m. on a Friday and 8 a.m. on the following Saturday;
- between the hours of 10 p.m. on a Saturday and 8 a.m. on the following Sunday; and
- between the hours of 10 p.m. on a day before a holiday and 8 a.m. on the holiday.

<sup>6</sup> Federal Transit Administration: Office of Planning and Environment, *Transit Noise and Vibration Impact Assessment*, May 2006. Available at: [http://www.fta.dot.gov/documents/FTA\\_Noise\\_and\\_Vibration\\_Manual.pdf](http://www.fta.dot.gov/documents/FTA_Noise_and_Vibration_Manual.pdf). Accessed June 16, 2011.

**City of Burlingame General Plan – Noise Element.**<sup>7</sup> The City’s Noise Element contains noise and land use compatibility recommendations for evaluating the compatibility of new uses with the on-site noise environment. The suggested outdoor noise levels suitable to various land use categories are presented in Table 3.7-6. Outdoor noise levels with a CNEL of less than 65 dBA are considered satisfactory for commercial and office uses. Under conditionally acceptable or normally unacceptable conditions, new development should be undertaken only after a detailed analysis of noise reduction requirements is made and needed noise insulation features are included in the Project design. New construction or development containing residential and commercial land uses should not be undertaken in noise environments exceeding 80 dBA CNEL. Also, the General Plan states that a new project cannot cause an increase in the ambient noise level by more than 5 dBA at the property line.

**Table 3.7-6  
City of Burlingame – Outdoor Noise Level Planning Criteria**

<b>Land Use Categories</b>	<b>CNEL (dBA)</b>
<b>Public, Quasi-Public and Residential</b> Schools, Hospitals, Libraries, Auditoriums, Intensively Used Parks and Playgrounds, Public Buildings, Single Family Home, Multiple Family Apartments and Condominiums, Mobile Home Parks	60
<b>Passively-Used Open Space</b> Wilderness-Type Parks, Nature or Contemplation Areas of Public Parks	45
<b>Commercial</b> Shopping Centers, Self-Generative Business, Commercial Districts, Offices, Banks, Clinics, Hotels and Motels	65
<b>Industrial</b> Non-Manufacturing Industry, Transportation, Communications, Utilities, Manufacturing	75

*Source:* City of Burlingame, Burlingame General Plan, Noise Element, p. N-27, September 15, 1975.

The following policies identified in the City’s Noise Element would apply to the Project:

*Policy N(A):* Preserve peaceful noise conditions in the city where they do exist.

*Policy N(B):* Reduce annoying levels of noise for existing situations; aircraft, motor vehicle and domestic animal noise which were identified by a Noise Questionnaire to be the most annoying at present.

*Policy N(C):* Achieve a peaceful acoustic environment in portions of the City to be developed.

The City’s Noise Element also provides allowable limits for construction equipment as shown in Table 3.7-7.

<sup>7</sup> City of Burlingame, *Burlingame General Plan*, Noise Element, adopted by City Council Resolution 69-75, September 15, 1975.

**Table 3.7-7  
Maximum Allowable Noise Levels from Construction Equipment**

Equipment	Peak Noise Level in dBA at 50 feet
<b>Earthmoving</b>	
Front Loaders	75
Backhoes	75
Dozers	75
Tractors	75
Scrapers	80
Graders	75
Trucks	75
Pavers	80
<b>Materials Handling</b>	
Concrete Mixer	75
Concrete Pump	75
Crane	75
Derrick	75
<b>Stationary</b>	
Pumps	75
Generator	75
Compressors	75
<b>Impact</b>	
Pile Drivers	95
Jack Hammers	75
Rock drills	80
Pneumatic Tools	80
<b>Other</b>	
Saws	75
Vibrator	75

*Source:* City of Burlingame, Burlingame General Plan, Noise Element, p. N-33, September 15, 1975.

**Bayfront Specific Plan.** The Burlingame Bayfront Specific Plan area is located north of US 101 and southeast of San Francisco International Airport (SFO). Portions of the area are exposed to sounds originating from sources on or at these facilities (motor vehicles and aircraft). The area is also exposed to sounds that originate from other activities within the area (i.e., motor vehicles on arterial roadways, maintenance/construction activities, and other day to day activities).

The Bayfront Specific Plan contains the City's goals and development policies for growth and expansion in the Bayfront Area. The Bayfront Specific Plan also establishes community standards to be used as a basis for individual projects and site environmental analysis. The Bayfront Specific Plan was approved by the Burlingame City Council in April 2004 and amended in August 2006. It is important to note that the adoption of the Bayfront Specific Plan is an amendment to the Land Use Element of the City of Burlingame General Plan. By adopting the goals and policies of the Bayfront

Specific Plan, the plan is the overlaying statement of the City's development policy for the Bayfront Area.

*Policy B-1:* New development should be designed to respect the unique environmental characteristics of the Bayfront Area including wind, noise, and public safety.

## **Impacts and Mitigation Measures**

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### **Significance Criteria**

Analysis of the existing and future noise environment is based on noise level monitoring, noise prediction computer modeling, and empirical observations of receptor noise exposure characteristics. Existing noise levels were monitored at selected locations on and around the Project Site (see Table 3.7-3) using a Larson-Davis Model 820 SLM, which satisfies the American National Standards Institute (ANSI) for general environmental noise measurement instrumentation. Noise modeling procedures involved the use of the FHWA Highway Noise Prediction Model (FHWA-RD-77-108) to calculate existing and future vehicular noise levels at selected noise-sensitive uses in the vicinity of the Project Site. The model calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and vehicle mix. Traffic volumes used as data inputs in the noise prediction model were provided by the traffic analysis prepared for this EIR.

This analysis uses the General Plan's noise and land use compatibility guidelines to assess the noise exposure of land uses in the vicinity of the Project Site and FTA criteria to assess vibration impacts.

Based on Appendix G of the CEQA Guidelines, the Project would result in a significant noise impact if it would:

- Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
- Result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;
- Result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels; or
- For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels.

Based on the following quantitative significance thresholds specifically included in the General Plan or Noise Ordinance, the Project would result in a significant noise impact if it would:

- Generate construction noise between the hours of 7:00 p.m. and 7:00 a.m. that exceeds the ambient noise level by 5 dBA at the nearest property line (except in the case of urgent necessity in the interest of public health and safety, and then only with written approval from the building official).
- Cause an increase in noise (i.e., as produced by “any machine or device, music or entertainment or any combination of same”) greater than 5 dBA or 8 dBA above the local ambient (i.e., defined as the “lowest sound level repeating itself during a minimum 10-minute period as measured with a sound level meter, using slow response and A-weighting”) at any point outside the property plane of a residential, commercial/industrial or public land use, respectively, containing the noise source.

In the following cases where quantitative significance thresholds may not be included in the General Plan or Noise Ordinance, the Project would cause or be subject to a significant noise or vibration impact if it would:

- Cause outdoor traffic noise levels at existing or proposed residential and other noise-sensitive uses to increase by more than the General Plan criteria specified in Table 3.7-4.
- Expose persons to or generate groundborne vibrations from construction activities that exceed the FTA vibration impact thresholds for residential and other vibration-sensitive land uses as specified in Table 3.7-5.

## **Environmental Analysis**

Construction noise and vibration levels were quantified using equipment noise reference levels and modeling techniques developed by the FTA. The analysis of the existing and future noise environments is based on noise-level monitoring, noise-prediction computer modeling, and empirical observations of receptor noise exposure characteristics. As noted above, four short-term noise measurements were taken by Atkins in the vicinity of the Project Site on June 2, 2011. The results of these noise measurements are shown in Table 3.7-3; Figure 3.7-1, shows the locations of these measurements.

Traffic noise modeling procedures involved the calculation of existing and future vehicular noise levels at selected noise-sensitive uses in the plan area using the FHWA Highway Noise Prediction Model. The model calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, truck mix, and distance from roadway to receptor. Traffic volumes utilized as data inputs in the noise prediction model are based on those in the Traffic Impact Analysis prepared for this EIR (Appendix C of this document).<sup>8</sup> For purposes of analysis, the average peak-hour traffic volumes were extrapolated from the Project transportation study and input into the model

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<sup>8</sup> Hexagon Transportation Consultants, Inc., *Burlingame Point Transportation Impact Analysis*, July 15, 2011.

to estimate existing and future traffic noise levels on roadway segments in the vicinity of the Project Site where existing or proposed sensitive receptors are located.

For each potential impact associated with the Project, a level of significance is determined and is reported in the impact statement. Conclusions of significance are defined as follows: significant impact (S), potentially significant impact (PS), less-than-significant impact (LTS), or no impact (NI). For each impact identified as being significant (S) or potentially significant (PS), this EIR provides mitigation measures to reduce, eliminate, or avoid the adverse effect. If the mitigation measures would reduce the impact to a less-than-significant (LTS) level successfully, this is stated in this EIR. If the mitigation measures would not diminish significant or potentially significant impacts to a less-than-significant level, the impacts are classified as “significant unavoidable impacts (SU).” The impacts of the potential development of the 350 Airport Boulevard Site are evaluated in this EIR on a programmatic level. Following the submittal of a project-specific development proposal for the 350 Airport Boulevard Site, additional environmental analysis would be required. For this section, NO refers to Noise.

*NO-1 Permanent Increase in Ambient Noise Levels during Construction. Construction of the Project would not result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project. However, ambient noise levels may temporarily increase. This would be considered a potentially significant impact. (PS)*

### **300 Airport Boulevard and 350 Airport Boulevard**

The closest sensitive receptors to the Project Site include the intermittent users of the Bay Trail and Fisherman’s Park, which are approximately 400 feet from the Project Site. The City’s Noise Ordinance prohibits generation of construction noise between the hours of 8:00 p.m. and 7:00 a.m. Monday through Saturday and between the hours of 6:00 p.m. and 10:00 a.m. Sundays and holidays. No nighttime construction would be required for the 300 Airport Boulevard Project and this analysis assumes no nighttime construction would be required for the 350 Airport Boulevard Project; therefore, construction would comply with the Noise Ordinance.

However, the City Noise Element establishes allowable construction equipment noise levels for individual pieces of construction equipment. These allowable noise levels are presented in Table 3.7-7 and Table 3.7-8. As shown in Table 3.7-8, the City’s allowable construction noise levels could be achieved with implementation of feasible control measures such as installation of noise control devices (e.g., mufflers), selection of quieter machinery, and other noise control measures (e.g., surrounding stationary equipment with noise barriers), none of which would require major equipment redesign. Additionally, construction impacts would be temporary and would cease upon completion of construction.

However, without implementation of best management practices (BMPs) for construction equipment, operation of construction equipment would have the potential to generate noise levels that would exceed the General Plan standards for individual pieces of equipment. Development at 300 Airport Boulevard Site would likely be operating during construction of the 350 Airport

Boulevard Site. Therefore, construction at either site would not combine together to exceed noise standards. Temporary impacts during construction could result in a temporary increase in ambient noise levels in the Project vicinity, resulting in a potentially significant impact.

**Table 3.7-8  
Average Noise Levels of Construction Equipment with and without  
Controls (dBA)**

Equipment	Noise Level at 50 feet		
	Unabated	With Feasible Noise Control <sup>a</sup>	General Plan Allowable Noise Level
<b>Earthmoving</b>			
Front Loaders	79	75	75
Backhoes	85	75	75
Dozers	80	75	75
Tractors	80	75	75
Scrapers	88	80	80
Graders	85	75	75
Trucks	91	75	75
Pavers	89	80	80
<b>Materials Handling</b>			
Concrete Mixer	85	75	75
Concrete Pump	82	75	75
Crane	83	75	75
Derrick	88	75	75
<b>Stationary</b>			
Pumps	76	75	75
Generator	78	75	75
Compressors	81	75	75
<b>Impact</b>			
Pile Driver (Impact)	101	95	95
Jack Hammers	88	75	75
Pneumatic Tools	86	80	80
<b>Other</b>			
Saws	78	75	75
Soil Vibrators/Compactors	76	75	75

*Source:* U.S. Environmental Protection Agency, Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, December 1971.

*Note:*

- a. Feasible noise control methods include installation of noise control devices (e.g., mufflers), selection of quieter machinery from among available equipment and/or implementation of noise-control measures (e.g., surrounding stationary equipment with noise barriers), all of which require no major equipment redesign.

MITIGATION MEASURE. Implementation of the BMPs listed below in Mitigation Measure NO-1.1 would reduce temporary construction noise impacts to less-than-significant levels. (LTS)

*NO-1.1 Implement Best Management Practices to Reduce Construction Noise.* The following BMPs shall be incorporated into the construction documents to be implemented by the Project contractor.

- a. Maximize the physical separation between noise generators and noise receptors. Such separation includes, but is not limited to, the following measures:
  - i. Use heavy-duty mufflers for stationary equipment and barriers around particularly noisy areas of the site or around the entire site;
  - ii. Use shields, impervious fences, or other physical sound barriers to inhibit transmission of noise to sensitive receptors;
  - iii. Locate stationary equipment to minimize noise impacts on the community; and
  - iv. Minimize backing movements of equipment.
- b. Use quiet construction equipment whenever possible.
- c. Impact equipment (e.g., jack hammers and pavement breakers) shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically-powered tools. Compressed air exhaust silencers shall be used on other equipment. Other quieter procedures, such as drilling rather than using impact equipment, shall be used whenever feasible.
- d. Prohibit unnecessary idling of internal combustion engines.
- e. Select routes for movement of construction-related vehicles and equipment in conjunction with the Burlingame Planning Division so that noise-sensitive areas, including residences and schools, are avoided as much as possible.
- f. The project sponsor shall designate a “disturbance coordinator” for construction activities. The coordinator would be responsible for responding to any local complaints regarding construction noise and vibration. The coordinator would determine the cause of the noise or vibration complaint and would implement reasonable measures to correct the problem.

*NO-2 Exposure of Persons to Excessive Ground-Borne Vibration Levels during Construction.* Implementation of the Project may result in exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels. This would be considered a significant impact. (S)

### **300 Airport Boulevard**

Project construction activities would have the potential to generate low levels of ground-borne vibration (other than during pile driving). Construction-related vibration has three potential effects. First, vibration at high enough levels can disturb people trying to sleep. Thresholds for this vibration have been developed by the FTA, which has determined that any vibration over 80 VdB can be a significant impact at places where people sleep. Second, vibration at relatively low levels can disturb vibration-sensitive research and manufacturing equipment, such as electron microscopes and high resolution lithographic equipment. The FTA has developed a vibration threshold of 65 VdB, based on acceptable vibration for moderately vibration-sensitive equipment. Third, ground-borne vibration can potentially damage the foundations and exteriors of existing, older structures. Ground-borne vibration that can cause this kind of damage is typically limited to impact equipment, especially pile-drivers. The FTA damage thresholds indicate that, for buildings not extremely sensitive to vibration, a damage threshold of between 0.2 in/sec to 0.5 in/sec would apply depending on the type of building.

Table 3.7-9 provides the vibration velocity levels and peak particle velocity (PPV) for various pieces of equipment. Structural damage to existing buildings due to construction vibration would only be an issue during pile-driving. Pile-driving can produce PPV values of up to 1.518 at 25 feet, but potential impacts would be less than significant by 100 feet from the source. Impact pile drivers produce a high level of vibration for short periods (0.2 second) with sufficient time between impacts to allow a building's resonant effects to decay before the next vibration event.

**Table 3.7-9  
Vibration Source Levels for Construction Equipment**

Construction Equipment	At 25 feet		At 100 feet	
	Approximate VdB	Peak Particle Velocity (in/sec)	Approximate VdB	Peak Particle Velocity (in/sec)
Large Bulldozer	87	0.089	69	0.011
Truck	86	0.076	68	0.010
Jackhammer	79	0.035	61	0.004
Small Bulldozer	58	0.003	40	<0.001
Caisson Drilling	87	0.089	69	0.011
Pile Driver (impact, upper range)	112	1.518	94	0.190
Pile Driver (sonic, upper range)	105	0.734	87	0.092

*Source:* Federal Transit Administration, Transit Noise and Vibration Impact Assessment, Chapter 12 Noise and Vibration During Construction, May 2006.

Ground-borne vibration would occur during construction at 300 Airport Boulevard as a result of construction activities. Activities that typically cause the most substantial ground vibration, such as pile driving, are proposed for the 300 Airport Boulevard Project. Of the construction equipment likely to be used onsite, loaded trucks, pile driving equipment, and bulldozers are the most likely to produce perceptible vibration in areas close to where they would operate.

Sensitive noise receptors located within the vicinity of the Project Site include intermittent users of the Bay Trail and Fisherman's Park. However, these uses are not sensitive to vibration because they do not include structures where people are usually trying to sleep and do not contain vibration sensitive equipment or structures. There are no residential uses within the vicinity of the Project Site. The closest residential uses are located approximately 0.25 miles (1,320 feet) south of the Project Site, across US 101, and are located behind existing buildings and roadway infrastructure. Based on the information presented in Table 3.7-9, vibration levels from construction activities, including pile driving, would not exceed 80 VdB at a distance of 1,320 feet, and would not result in sleep disturbance. At this distance, construction vibration would not result in any building damage. Therefore, exposure of residential areas to or generation of excessive ground-borne vibration or ground-borne noise levels would be less than significant.

The closest land uses to the 300 Airport Boulevard Site include existing light-industrial buildings and warehouses to the south along Beach Road, and office buildings to the west across Sanchez Channel. Office buildings are generally not sensitive to vibration; however, industrial buildings may include vibration sensitive equipment that would be disturbed by vibration levels greater than 65 VdB. The nearest industrial uses are located adjacent to the southern border of the 300 Airport Boulevard Site. As shown in Table 3.7-9, construction equipment for general construction activities and pile driving would have the potential to exceed 65 VdB at 25 feet.

If pile driving resulted in vibration levels in excess of the FTA damage thresholds of 0.2 in/sec to 0.5 in/sec, the 300 Airport Boulevard Project could result in damage to the adjacent structures. As shown Table 3.7-9, pile driving would generate vibration levels above 0.5 in/sec at a distance of 25 feet, but peak vibration levels during pile driving would be below the FTA thresholds at a distance of 100 feet. Pile driving would only be required for building foundations; however, the closest off-site uses are located within 25 feet of the proposed parking structure. The existing buildings are assumed to have been constructed using modern building practices and would likely be able to withstand the limited duration of pile driving required for the parking structure. However, these structures are within the screening distance for potential structure damage; therefore, vibration from construction activities would have the potential to result in damage to existing buildings off-site.

### **350 Airport Boulevard**

Although no specific use is currently proposed for the 350 Airport Boulevard Site, ground-borne vibration would likely occur during construction. As discussed above, the Bay Trail and Fisherman's Park are not vibration-sensitive land uses. Residential homes are not located on or in the vicinity of the Project Site. Based on the information presented in Table 3.7-9, vibration levels from construction activities, including potential pile driving, would not exceed 80 VdB or 0.2 in/sec at a distance of 1,320 feet. Therefore, exposure of residential areas to or generation of excessive ground-borne vibration or ground-borne noise levels would be less than significant.

The closest buildings to the 350 Airport Boulevard Site during construction would likely be the 300 Airport Boulevard Project. If life science uses occupy the site, vibration-sensitive equipment may be located in laboratories in Building 1 or Building 3. These buildings are located approximately 150 feet from the boundary of the 350 Airport Boulevard Site. At this distance, the structures would not be at risk for structural damage and vibration levels from general construction activity would be reduced to approximately 64 VdB and would not exceed the 65 VdB threshold. However, vibration levels from pile driving activities may reach levels of 89 VdB at 150 feet. Additionally, the existing industrial uses are located approximately 800 feet south of the 350 Airport Boulevard Site. At this distance, pile driving may result in vibration levels of 67 VdB. Therefore, construction at 350 Airport Boulevard would have the potential to result in a significant vibration impact on the 300 Airport Boulevard Site, if vibration-sensitive uses are located on-site.

**MITIGATION MEASURES.** Mitigation Measure NO-2.1 would require the notification of nearby businesses of potential impacts to vibration-sensitive equipment, in order to identify any vibration-sensitive equipment in the Project vicinity, and implement BMPs, as described in Mitigation Measure NO-2.2, to help reduce impacts to any buildings identified with vibration-sensitive equipment. Mitigation Measure NO-2.3 would require the use alternative pile driving methods (e.g., drilled or steel piles) for piles driven within proximity of existing vibration receptors in order to reduce vibration levels at the receptors to meet significance thresholds. Implementation of these measures would reduce construction-related impacts to vibration-sensitive equipment to a less-than-significant level. (LTS)

*NO-2.1 Notify Nearby Businesses of Construction Activities that Could Affect Vibration-Sensitive Equipment.* The Project Sponsor shall provide notification to adjacent property owners and occupants, prior to the start of construction, informing them of the estimated start date and duration of vibration-generating construction activities during site preparation, grading, and pile driving, if required. This notification shall include information warning about the potential for impacts related to vibration-sensitive equipment. The Project Sponsor shall identify a phone number for the property owners and occupants to call if they have vibration-sensitive equipment on their site.

*NO-2.2 Implement Construction BMPs to Reduce Construction Vibration.* The Project Sponsor shall implement the following measures during construction of all Project components:

- To the extent feasible, construction activities that could generate high vibration levels at any identified vibration-sensitive locations shall be scheduled during times that would have the least impact on nearby land uses. This could include restricting construction activities in the areas of potential impact to the early and late hours of the work day, such as from 8:00 a.m. to 10:00 a.m. or 4:00 p.m. to 6:00 p.m. Monday to Friday.
- Stationary sources, such as construction staging areas and temporary generators, shall be located as far from nearby vibration-sensitive receptors as possible.
- Trucks shall be prohibited from idling along streets serving the construction site where vibration-sensitive equipment is located.
- Avoid pile driving when possible within 100 feet of an existing structure.

*NO-2.3 Implement Alternative Pile Driving Methods.* The Project Sponsor shall use alternative pile driving methods (e.g., drilled or steel piles) for piles driven in proximity to existing vibration receptors such that vibration levels at vibration-sensitive equipment shall not exceed 65 VdB.

*NO-3 Exposure of People to Excess Traffic Noise.* Implementation of the Project would not result in a substantial increase in the exposure of people to noise in excess of the General Plan criteria as a result of the increase in traffic. This would be considered less-than-significant impact. (LTS)

### **300 Airport Boulevard**

Areas along the main access routes to the Project Site would experience an increase in traffic noise levels associated with operation of the 300 Airport Boulevard Project. In addition, daily operation of new office uses would generate new stationary noise sources, such as from the operation of mechanical HVAC systems, vehicle noise from parking lots and structures, and delivery of supplies. These operational activities and systems would occur on a daily basis throughout the 300 Airport Boulevard Project Site once operational.

The Noise Element of the General Plan establishes 65 dBA CNEL as the maximum suggested outdoor noise level for land uses that include shopping centers, self-generative business, commercial districts, offices, banks, clinics, hotels, and motels (see Table 3.7-6, above). The General Plan acknowledges that suggested “levels are most probably unattainable in much of Burlingame.” New construction or development should not be undertaken in noise environments exceeding 80 dBA CNEL containing residential and commercial land uses. Also, the General Plan states that a new project cannot cause an increase in the ambient noise level

by more than 5 dBA at the property line.<sup>9</sup> According to the Bayfront Specific Plan, which contains the City's goals and development policies for growth and expansion in the Bayfront Area, the Community Standards for Noise Impacts states that land uses in the planning area shall not increase noise levels at the property line by more than 5 dBA. Under current conditions, the Project Site has an average daily noise environment of 65 dBA; therefore, an increase in noise level above 70 dBA would be considered a substantial increase.

General pick-up and deliveries would be conducted at the drop-off areas close to entries at all buildings, including the amenities center. Buildings B1, B2, B3, and B4 would have loading areas set away from Airport Boulevard. Trucks used for pick-up and deliveries would result in intermittent noise such as engines idling and beeping from backing warning signals. However, truck deliveries would be required to comply with the restrictions on hours of operations established in the City's Noise Ordinance. Compliance with the Noise Ordinance would reduce nuisance noise from truck pick-up and delivery to a less than significant level. In addition, the City of Burlingame's Noise Ordinance (Chapter 10.40 of the Burlingame Municipal Code) establishes time periods when truckloading and unloading activities are prohibited:

- between the hours of 10 p.m. on a Sunday, Monday, Tuesday, Wednesday, or Thursday and 7 a.m. of the following day;
- between the hours of 10 p.m. on a Friday and 8 a.m. on the following Saturday;
- between the hours of 10 p.m. on a Saturday and 8 a.m. on the following Sunday; and
- between the hours of 10 p.m. on a day before a holiday and 8 a.m. on the holiday.

Operation of the 300 Airport Boulevard Site would result in an increase in traffic volumes that would potentially increase ambient noise levels at noise-sensitive locations along the major vehicular access routes in the Bayfront Specific Plan. Table 3.7-10 identifies the changes in existing noise levels along the study area roadway segments where the greatest increase in traffic volumes would occur as a result of the 300 Airport Boulevard Site development.

Increases in ambient noise due to increases in plan-related traffic are based upon the General Plan criteria specified above. As shown in Table 3.7-10, development of the 300 Airport Boulevard Site would not have the potential to generate noise level increases that exceed the adopted threshold for a substantial permanent increase in traffic noise. Therefore, this impact would be less than significant.

### **350 Airport Boulevard**

As discussed above, areas along the main access routes to the Project Site would experience an increase in traffic noise levels associated with operation of the 350 Airport Boulevard Project. The projected increase in traffic noise attributable to development of the 350 Airport Boulevard Site in

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<sup>9</sup> City of Burlingame, *Burlingame General Plan*, Noise Element, adopted by City Council Resolution 69-75, September 15, 1975, p. 28.

combination with development of the 300 Airport Boulevard Site is shown in Table 3.7-11. As shown, the increase in traffic noise attributable to both Project Sites is less than significant.

**Table 3.7-10  
Modeled Traffic Noise Levels with 300 Airport Boulevard along Major Access Roads**

Location	Noise Level (dBA) <sup>a</sup>				
	Existing Noise Level (L <sub>dn</sub> ) <sup>b</sup>	Existing Plus 300 Airport	Project-Related Increase	Allowable Increase <sup>c</sup>	Significant Impact?
1. Airport Boulevard, at Bayside Park	63.1	65.3	2.2	5	No
2. Airport Boulevard at Anza Boulevard	62.3	62.5	0.2	5	No
3. Airport Boulevard at the Project Site	64.8	65.7	0.9	5	No
4. Coyote Point Park	59.8	60.1	0.3	5	No

Source: Atkins, 2011.

Notes:

- Noise levels modeled using FHWA Traffic Noise Model based on traffic data from the Traffic Impact Analysis.
- The existing noise levels may differ from the measured noise levels shown in Table 3.7-3, since these noise levels were based on the existing traffic volumes from the transportation study. However, the modeled noise levels for each location are within approximately 1 dB of the measured existing noise levels for each location.
- Based on General Plan criteria that a new project cannot cause an increase in the ambient noise level by more than 5 dBA at the property line.

**Table 3.7-11  
Modeled Traffic Noise Levels with 300 and 350 Airport Boulevard along Major Access Roads**

Location	Noise Level (dBA) <sup>a</sup>					
	Existing Noise Level (L <sub>dn</sub> ) <sup>b</sup>	Existing Plus 300 Airport Blvd	Existing Plus 300 Airport Blvd & 350 Airport Blvd	Increase Attributable to 350 Airport Blvd	Allowable Increase <sup>c</sup>	Significant Impact?
1. Airport Boulevard, at Bayside Park	63.1	65.3	65.3	0	5	No
2. Airport Boulevard at Anza Boulevard	62.3	62.5	62.5	0	5	No
3. Airport Boulevard at the Project Site	64.8	65.7	66.1	0.4	5	No
4. Coyote Point Park	59.8	60.1	60.3	0.2	5	No

Source: Atkins, 2011.

Notes:

- Noise levels modeled using FHWA Traffic Noise Model based on traffic data from the Traffic Impact Analysis.
- The existing noise levels may differ from the measured noise levels shown in Table 3.7-3, since these noise levels were based on the existing traffic volumes from the Transportation Impact Analysis. However, the modeled noise levels for each location are within approximately 1 dB of the measured existing noise levels for each location.
- Based on General Plan criteria that a new project cannot cause an increase in the ambient noise level by more than 5 dBA at the property line.

*NO-4 Increase in Ambient Noise Levels during Operation. Operation of the Project could result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project as a result of human activities and mechanical HVAC equipment. This would be considered a potentially significant impact. (PS)*

### **300 Airport Boulevard**

Activity associated with the daily operation of the 300 Airport Boulevard Project would generate noise levels that are comparable to a typical office park environment. Noise from human activity on 300 Airport Boulevard would vary throughout the day. Activity would be concentrated to common areas between buildings and would mostly occur during the beginning and end of the work day and during lunch hours. Activity and noise levels would be minimal during the typical work hours when most employees are inside working and during non-work hours such as nights and weekends. The typical noise level for commercial areas is approximately 65 dBA.<sup>10</sup> Human activity in a commercial area would be similar to an office park, including noise sources such as normal conversation and people walking to and from their cars. Therefore, activity on 300 Airport Boulevard would not exceed the 70 dBA and would not result in a substantial increase the ambient noise level.

However, the new buildings and parking structure would require new HVAC systems. Mechanical HVAC equipment located on the ground or on rooftops of new buildings have the potential to generate noise levels which average 72 dBA CNEL at a distance of 50 feet when equipment is operating continuously for 24 hours,<sup>11</sup> or 70 dBA CNEL at a distance of 60 feet. Therefore, HVAC systems would have a potential to exceed 70 dBA if they would be located within 60 feet of the 300 Airport Boulevard Site boundary. HVAC units would be located on the tops of buildings and in the basement of the parking structure. The closest structure to the site boundary would be the parking structure, which would be located approximately 20 feet from the southern site boundary. The amenities center would also be located within 60 feet of the site boundary. If HVAC systems on the office buildings or the amenities center would be located within 60 feet potential receptors on the site boundary, the 300 Airport Boulevard Project would have the potential to exceed 70 dBA at the site boundary and result in a 5 dBA increase over ambient conditions. However, as part of the 300 Airport Boulevard Project, all HVAC mechanical equipment shall be located more than 60 feet from the nearest property line. In addition, sound treatment, metal louver screens and integral GFRC exterior walls would be included in the Project as noise enclosures for mechanical equipment located on the roofs of the Project buildings to reduce ground-level noise levels to 70 dBA CNEL or less. As such, this impact would be less than significant.

Development on the 300 Airport Boulevard Site would include a parking structure in the southwestern corner of the site, underground parking under Buildings B1, B2, B3, and B4, and

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<sup>10</sup> California Department of Transportation (Caltrans), *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, October 1998.

<sup>11</sup> City of Santa Ana. 2010. City of Santa Ana Transit Zoning Code (SD 84A and SD 84B) Final Environmental Impact Report (SCH No. 2006071100). Prepared by Atkins. May 2010.

surface parking along Airport Boulevard. Noise sources from parking areas would include vehicle door slams, car starts, tire squeals, accidental car alarms, and other automotive noise. Quantification of parking area noise is difficult to predict due to many variables. Variation in sound levels depends on such factors, such as parking structure design and the number of vehicles moving through the structure at any given time. However, noise from parking areas is characterized as temporary and periodic noise. These temporary and periodic noise sources across the 300 Airport Boulevard Site would be different from each other in kind, time, duration, and location, so that the overall effects would be separate and in most cases would not affect the same receptors at the same time. Therefore, this type of noise associated with parking structures is considered a nuisance noise effect that would result in a less than significant impact.

As discussed in impact NO-3, general pick-up and deliveries would be conducted at drop-off areas close to entries at all buildings. Trucks used for pick-up and deliveries would result in intermittent noise such as engines idling and beeping from backing warning signals. However, truck deliveries would be required to comply with the restrictions on hours of operations established in the City's Noise Ordinance. Compliance with the Noise Ordinance would reduce nuisance noise from truck pick-up and delivery to a less than significant level.

As discussed above, daily operational activity, parking lot noise, and general deliveries would not exceed the noise standards established by the General Plan, Bayfront Specific Plan, or Municipal Code and these impacts would be less than significant. However, as part of the Project, all HVAC mechanical equipment shall be provided with sound treatment, metal louver screens, and integral GFRC exterior walls to reduce ground-level noise levels to 70 dBA CNEL or less. As such, this impact would be less than significant.

### **350 Airport Boulevard**

Similar to development on 300 Airport Boulevard, daily operation of office uses would be expected to generate noise from an increase in activity and new stationary noise sources, such as from the operation of mechanical HVAC systems, parking areas, and delivery of supplies. These operational activities and systems would occur on a daily basis throughout the 350 Airport Boulevard Site once operational. Noise from the increase in activity on-site would be similar to the 300 Airport Boulevard Project and would not increase noise levels at the property line by more than 5 dBA or exceed the Bayfront Specific Plan threshold. Parking area noise would result in intermittent noise and would not result in a significant impact. Truck deliveries would be required to comply with the Noise Ordinance, which would serve to avoid significant negative impacts. However, HVAC equipment, if located within 60 feet of a property boundary, would have the potential to cause an increase in the ambient noise level by more than 5 dBA at the property line and exceed the Bayfront Specific Plan threshold. Therefore, impacts from HVAC mechanical equipment would be potentially significant, while all other operations noise sources would be less than significant.

MITIGATION MEASURE. Mitigation measure NO-4.1 would reduce potential impacts related to HVAC systems at the 350 Airport Boulevard Site to a less than significant level. (LTS)

*NO-4.1 Placement or Screening of HVAC Mechanical Equipment.* All HVAC mechanical equipment shall be located more than 60 feet from the nearest property line. Alternatively, HVAC mechanical equipment may be installed in a noise enclosure sufficient to reduce ground-level noise levels at the nearest property boundary to 70 dBA CNEL or less.

*NO-5 Airport Noise.* The Project Site is located within an airport land use plan; however, the Project would not expose people residing or working in the Project area to excessive noise levels. The Project Site is not located within two miles of a private airstrip. This would result in no impact. (NI)

### **300 Airport Boulevard and 350 Airport Boulevard**

The Project Site is not located within the vicinity of a private airstrip, but located within the Airport Land Use Plan (ALUP) for the SFO and is exposed to both overflight and backblast noise from aviation traffic. However, the Project Site does not fall in the 65 dB CNEL or higher contours for noise generated by the aircraft landing or taking off from the airport, indicating that airport noise at the Project Site should be less than 65 dB.<sup>12</sup> The site is within the 60 dBA CNEL noise contour. According to San Mateo County's Comprehensive Airport Land Use Plan, which includes the noise contours for SFO, noise levels of less than 70 dBA are acceptable for office uses. The City of Burlingame General Plan considers noise levels up to 65 dBA to be compatible with office uses. According to the Bayfront Specific Plan Noise section, overflight and airport-generated noise is not a factor in the Anza Point subarea. Noise generated from traffic along US 101 is a greater concern than aircraft noise in the area. Additionally, according to the most recent data available from the airport, in the third quarter of 2007, the site was not located with the 55 dBA CNEL or higher noise contour.<sup>13</sup> Therefore, people working at the Project Site would not be exposed to excessive aircraft noise levels, resulting in a less-than-significant impact.

## **Cumulative Analysis**

The geographic context for the cumulative noise analysis from localized construction and stationary source noise includes areas immediately surrounding the Project Site. For cumulative vehicular noise impacts, the cumulative context is based on the cumulative context for the traffic analysis, which includes existing and future developments, including other current projects, probable future projects, and projected future growth within the City in through 2035.

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<sup>12</sup> San Mateo County, *Comprehensive Airport Land Use Plan*. December 1996.

<sup>13</sup> San Francisco International Airport, *Airport Mapping Tool, Noise Abatement Overlay, Quarterly Contours 3<sup>rd</sup> Quarter 2007*. Available at: <http://tx-sfo.airportnetwork.com/>. Accessed August 4, 2011.

*NO-6 Cumulative Construction Noise. Construction activities associated with Project-related development and other future development in the City would not expose sensitive receptors to a substantial temporary increase in ambient noise level. The Project's cumulative impact would be less than significant. (LTS)*

Noise levels from construction of other foreseeable development in the City would generally not combine to result in the exposure of people to a substantial temporary increase in ambient noise level during construction due to the localized nature of construction noise impacts and the fact that construction throughout the City would not occur at the same time. All of the cumulative projects are located more than a mile from the Project Site. At this distance, even unabated noise from pile driving activities would be reduced to below 55 dBA. Therefore, construction noise from the Project, in combination with the cumulative projects, would not combine to expose sensitive receptors to a substantial increase in ambient noise level. As such, a significant cumulative impact would not occur.

*NO-7 Cumulative Vibration Impacts. Construction activities associated with Project-related development and other future development in the City would not expose sensitive receptors to excessive ground-borne vibration. The Project's cumulative impact would be less than significant. (LTS)*

Vibration levels from construction of cumulative development in the City would generally not combine to result in the exposure of people to or the generation of excessive ground-borne vibration, due to the localized nature of vibration impacts and the fact that construction throughout the City would not occur at the same time. High ground-borne vibration at each of the construction sites would continue to be isolated and only affect receptors within close proximity to the individual pieces of construction equipment. All of the cumulative projects are located more than a mile from the Project Site. As such, the vibration impact of the Project, in conjunction with vibration from other cumulative development, would not result in a significant cumulative impact.

*NO-8 Cumulative Operational Noise. Cumulative development would result in a substantial increase in exposure of persons to noise in excess of the standards established by the General Plan for traffic noise. The Project's contribution would be less than significant. (LTS)*

The traffic model used to predict future traffic levels assumed approved development and City growth through the year 2035. Future noise levels in the year 2035 with and without the development of the 300 Airport Boulevard Project are shown in Table 3.7-12 while Table 3.7-13 shows noise levels with and without the 300 and 350 Airport Boulevard Project. As noted above, the significance of the Project's impacts are based on the Project's incremental increase. As shown in Table 3.7-12 and Table 3.7-13, cumulative development would not result in substantial increase in noise levels. Therefore, the Project's cumulative impact would be less than significant.

**Table 3.7-12  
300 Airport Boulevard Increment to Existing and Future Noise Levels (L<sub>dn</sub>)**

Segment	Existing Noise Level	Cumulative Traffic Noise without Project <sup>a</sup>	Cumulative Traffic Noise with 300 Airport Blvd	Cumulative Increase in Noise Level	Allowable Increase <sup>b</sup>	Significant Cumulative Impact?	Increase in Noise Level as a Result of 300 Airport Blvd	Cumulatively Considerable Contribution?
1. Airport Boulevard, at Bayside Park	63.1	64.8	66.3	3.2	5	No	1.5	No
2. Airport Boulevard at Anza Boulevard	62.3	65.0	65.1	2.8	5	No	0.1	No
3. Airport Boulevard at the Project Site	64.8	67.1	67.6	3.1	5	No	0.5	No
4. Coyote Point Park	59.8	61.1	61.4	1.6	5	No	0.3	No

Source: FHWA Highway Noise Prediction Model. See Appendix G for model output.

Notes:

- Traffic volumes for the Cumulative without Project scenario determined by subtracting Project generated trips from the Cumulative + 300 Airport Boulevard scenario. Project trip volumes determined by subtracting existing traffic volumes from the Existing + 300 Airport Boulevard scenario.
- Based on General Plan criteria that a new project cannot cause an increase in the ambient noise level by more than 5 dBA at the property line.

**Table 3.7-13  
300 and 350 Airport Boulevard Increment to Existing and Future Noise Levels (L<sub>dn</sub>)**

Segment	Existing Noise Level	Cumulative Traffic Noise without Project <sup>a</sup>	Cumulative Traffic Noise with 300 and 350 Airport Blvd	Cumulative Increase in Noise Level	Allowable Increase <sup>b</sup>	Significant Cumulative Impact?	Increase in Noise Level as a Result of 300 and 350 Airport Blvd	Cumulatively Considerable Contribution?
1. Airport Boulevard, at Bayside Park	63.1	64.8	66.4	3.2	5	No	1.6	No
2. Airport Boulevard at Anza Boulevard	62.3	65.0	65.1	2.8	5	No	0.1	No
3. Airport Boulevard at the Project Site	64.8	67.1	67.8	3	5	No	0.7	No
4. Coyote Point Park	59.8	61.1	61.5	1.7	5	No	0.4	No

Source: FHWA Highway Noise Prediction Model. See Appendix G for model output.

Notes:

- Traffic volumes for the Cumulative without Project scenario determined by subtracting Project generated trips from the Cumulative + 300 Airport Boulevard scenario. Project trip volumes determined by subtracting existing traffic volumes from the Existing + 300 Airport Boulevard scenario.
- Based on General Plan criteria that a new project cannot cause an increase in the ambient noise level by more than 5 dBA at the property line.

Operation of the cumulative projects would also have the potential to increase ambient noise levels. The cumulative projects consist of residential development, commercial and office development, and an animal shelter. Noise from residential projects is generally limited to intermittent nuisance noise such as a dog barking or loud music. Therefore, the residential projects would not contribute to an increase in ambient noise levels. The office, commercial, and animal shelter projects would result in similar operational noise sources as the Project, including increases human activity in the area, HVAC systems, parking areas, and truck deliveries, which would have the potential to permanently increase noise levels in the Project vicinity. The cumulative office, commercial, and animal shelter developments are located in existing commercial areas near major roadways. The noise level of increases in activity from these projects would not be expected to exceed existing ambient noise levels due to heavy traffic and existing similar uses. Noise from HVAC systems would be diminished to below existing noise levels at a short distance from the Project Site. Parking lot noise and truck deliveries would be intermittent throughout the City. Therefore, these noise sources would not combine to exceed noise standards. Therefore, significant cumulative impacts would not occur.

*NO-9 Cumulative Airport Noise. Operation of the Project, in combination with other foreseeable projects, would not result in the cumulative exposure of sensitive receptors to excessive airport noise. (NI)*

Impacts related to aircraft noise are generally site specific because development of one project would not affect whether or not another project would be within an airport noise contour. However, if the cumulative projects would allow for development of new sensitive receptors within incompatible airport noise level contours, a cumulative impact could occur. The cumulative projects are located farther from the SFO than the Project. The Project would not expose people to excessive airport noise. Therefore, a cumulative impact would not occur.

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## 3.8 BIOLOGICAL RESOURCES

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### Introduction

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This section identifies biological resources present within the Project Site including special status plant and animal species that could be affected by implementation of the Project. This section is based on a biological survey conducted on April 15, 2011 by Atkins and on database queries, as described in more detail below. The purpose of the survey and queries was to determine if the Project Site contains any wetlands and/or habitat that could support special-status species and to document any occurrences of those species. Also, included in the discussion is a summary of applicable laws and regulations related to biological resources and agencies responsible for their implementation.

Issues identified in response letters to the Notice of Preparation (NOP) (Appendix A) and during the Planning Commission public scoping meetings for the Project were considered in preparing this analysis. However, applicable issues were identified that pertain to biological resources.

### Existing Conditions

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**Biological Setting.** The Project Site was surveyed on April 15, 2011 by Atkins. The survey consisted of walking the perimeter followed by representative transects through the interior of the Project Site. Special attention was given to any potential wetland features or to vegetation communities that could provide potential habitat for special-status plant or wildlife species.

The 300 Airport Boulevard Site was formerly a drive-in theater, and was almost entirely paved. According to the geotechnical investigation report, approximately 63,000 cubic yards of soil from the Metropolitan Apartments complex was placed on the site, over the paved surfaces. In 2002, the theater screens and projector/snack bar were demolished.<sup>1</sup> Approximately 89 percent of the site is still under pavement and the existing land has since gone fallow. Remnant ornamental vegetation occurs primarily along the perimeter of the site, while ruderal vegetation has colonized the interior. Former landscaping or naturalized ornamental species observed during the survey include silver wattle (*Acacia dealbata*), blackwood acacia (*Acacia melanoxylon*), coyote brush (*Baccharis pilularis*), Pampas grass (*Cortaderia jubata*), Scotch broom (*Cytisus scoparius*), Pride of Madeira (*Echium fastuosum*), Algerian ivy (*Hedera canariensis*), Monterey cypress (*Hesperocyparis macrocarpa*), toyon (*Heteromeles arbutifolia*), Ngaio tree (*Myoporum laetum*), pine (*Pinus sp.*), Mexican fan palm (*Washingtonia robusta*), and Indian hawthorn (*Rhaphiolepis indica*).

Ruderal upland species observed during the survey included scarlet pimpernel (*Anagallis arvensis*), wild oat (*Avena fatua*), ripgut brome (*Bromus diandrus*), Italian thistle (*Carduus pycnocephalus*), field bindweed (*Convolvulus arvensis*), red-stem filaree (*Erodium cicutarium*), fennel (*Foeniculum vulgare*), cutleaf geranium (*Geranium dissectum*), foxtail barley (*Hordeum murinum ssp. leporinum*), bird's foot

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<sup>1</sup> Treadwell & Rollo Environmental and Geotechnical Consultants, Geotechnical Investigation Burlingame Point 300-333 Airport Boulevard, Burlingame, California, May 2, 2011.

trefoil (*Lotus corniculatus*), lupine (*Lupinus bicolor*), cheeseweed (*Malva parviflora*), bur clover (*Medicago polymorpha*), African woodsorrel (*Oxalis pes-caprae*), English plantain (*Plantago lanceolata*), common knotweed (*Polygonum arenastrum*), common nightshade (*Solanum americanum*), sow thistle (*Sonchus asper*), poison oak (*Toxicodendron diversilobum*), clover (*Trifolium sp.*), vetch (*Vicia sp.*), and rat-tail fescue (*Vulpia myuros*).

In addition to the ruderal uplands, there were a number of ruderal wetlands in the interior of the 300 Airport Boulevard Site. As the 300 Airport Boulevard Site was formerly paved for decades, and occurs on Bay fill, these features would not be considered natural in origin. The soil remaining after the pavement that was removed is likely compressed such that water from precipitation now perches on or near the surface for extended periods, and the uneven terrain allows for shallow basins and channels to form. Some of these features contained surface water at the time of the survey, while others showed evidence of wetland characteristics such as dried algae crust, sulfuric odor, and polygonal cracking. Plant species observed in these features included common, (mostly non-native) species typically associated with wetlands. Most common was brass buttons (*Cotula coronopifolia*) which is a non-native invasive wetland species, but other species such as umbrella sedge (*Cyperus eragrostis*), common spikerush (*Eleocharis macrostachya*), and common rush (*Juncus effusus*) were present as well. Other species associated with these features such as Italian rye grass (*Lolium multiflorum*), prickly oxtongue (*Picris echioides*), and curly dock (*Rumex crispus*) are not considered wetland obligates (i.e., plants that require wetland conditions to grow), but are often associated with seasonal or disturbed wetlands. Due to the history of the site and the presence of an active drainage system, it is not likely that these features would be considered jurisdictional, however since these features are situated on historic bay lands, the U.S. Army Corps of Engineers (Corps) may assert jurisdiction.

The 350 Airport Boulevard Site was also created by Bay fill. Current conditions consist of an abandoned one-story wooden structure and vacant paved surfaces, which are not considered natural in origin. The 350 Airport Boulevard Site is isolated from any grassland, chaparral, or woodland habitats by urban development, and does not contain any suitable habitat for any of the salt marsh species known to occur along the Bay. The shores adjacent to the Project Site are artificial and do not support salt marsh habitat; therefore it is very unlikely that any of the special-status species associated with that habitat type could wander into the Project Site.

The Project Site is bordered by the San Francisco Bay (Bay) to the north and east and by Sanchez Channel to the west. The shoreline along both of these waters is artificial, consisting of concrete blocks and rip-rap. It is not expected that any disturbance to the shoreline of the Bay or to Sanchez Channel would occur as a result of the Project.

Wildlife observed during the survey consisted of common, highly mobile and urban tolerant species including Anna's hummingbird (*Calypte anna*), killdeer (*Charadrius vociferus*), rock dove (*Columba livia*), American crow (*Corvus brachyrhynchos*), California gull (*Larus californicus*), house sparrow (*Passer domesticus*), raccoon (tracks) (*Procyon lotor*), Sierran tree frog (*Pseudacris sierra*), black phoebe (*Sayornis nigricans*), and European starling (*Sterna vulgaris*).

**Special-status Species.** Information on special-status plant and wildlife species that have the potential to occur in the vicinity of the Project Site was derived through queries of California Native Plant Society (CNPS), California Department of Fish and Game (CDFG) and US Fish and Wildlife Service (USFWS) species list databases for the San Mateo, Montara Mountain, Redwood Point, Hunters Point, San Francisco South, Half Moon Bay, Woodside, and Palo Alto USGS 7.5 minute quadrangles. The results of these queries are presented in Appendix G of this document. The determination of which, if any, of these species could occur in the Project Site was accomplished through a review of the habitat requirements of the special-status species in the above list, and compared to the habitats at the Project Site and surrounding region.

Based on the urban history of the Project Site, and the lack of suitable habitat, the Project Site would not support any of the special-status plant or wildlife species listed in the database query results. The land on which the Project Site lies was created by Bay fill, was developed as a drive-in theater, and was fully paved for several decades. It is isolated from any grassland, chaparral, or woodland habitats by urban development, and does not contain any suitable habitat for any of the salt marsh species known to occur along the Bay. The shores adjacent to the Project Site are artificial, and do not support salt marsh habitat; therefore it is very unlikely that any of the special-status species associated with that habitat type could be present at the Project Site.

## **Applicable Plans and Regulations**

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Biological resources are protected and regulated under federal, State, and local regulations. Endangered and threatened plants and animals are protected under State and federal laws that are enforced by State and federal agencies. Wetlands and other waters are also protected under State and federal laws that are enforced by State and federal agencies. Migratory birds are protected under federal law, while birds of prey are additionally protected under State law. A non-regulatory, private organization, the California Native Plant Society, has an interest in protecting rare plant species. All of these regulations are described in detail, below. To the extent that these regulations correlate with the CEQA Guidelines for impacts to biological resources, those relationships are defined, as appropriate.

### **Federal**

**Federal Endangered Species Act (FESA).** The federal Endangered Species Act was enacted in 1973. Under FESA, the Secretary of the Interior and the Secretary of Commerce, jointly have the authority to list a species as threatened or endangered (16 United States Code [USC] 1533[c]). FESA is administered by both the National Marine Fisheries Service (NMFS) and USFWS. NMFS is accountable for animals that spend most of their lives in marine waters, including marine fish, most marine mammals, and anadromous fish such as Pacific salmon. USFWS is accountable for all other federally-listed plants and animals.

Pursuant to the requirements of FESA, an agency reviewing a proposed project within its jurisdiction must determine whether any federally listed threatened or endangered species may be present in the Study Area and determine whether the project would have a potentially significant impact on such

species. In addition, the agency is required to determine whether the project is likely to jeopardize the continued existence of any species proposed to be listed under FESA or result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 USC 1536[3], [4]). Under CEQA Guidelines Section 15065(a)(1), Project-related impacts to these species or their habitats would be considered significant and would require mitigation.

The Sacramento Fish and Wildlife Office (U.S. Fish and Wildlife Service, Pacific Southwest Region) maintains a list of “species of concern” that receive special attention from federal agencies during environmental review, although they are not otherwise protected under FESA. Project-related impacts to such species would also be considered significant under CEQA Guidelines Section 15380 and would require mitigation.

Projects that would result in “take” of any federally-listed threatened or endangered species are required to obtain authorization from NMFS and/or USFWS through either Section 7 (interagency consultation) or Section 10(a) (incidental take permit) of FESA, depending on whether the federal government is involved in permitting or funding the Project. The Section 7 authorization process is used to determine if a project with a federal nexus would jeopardize the continued existence of a listed species and what mitigation measures would be required to avoid jeopardizing the species. The Section 10(a) process allows take of endangered species or their habitat in non-federal activities.

**Migratory Bird Treaty Act (MBTA).** The federal Migratory Bird Treaty Act (16 USC, 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. Migratory birds include geese, ducks, shorebirds, raptors, song birds, and many others. This act encompasses whole birds, parts of birds, and bird nests and eggs.

**Federal Clean Water Act.** The objective of the Clean Water Act (CWA) is to restore and maintain the chemical, physical, and biological integrity of the nation's waters.

*Section 404 of the CWA* prohibits the discharge of dredged or fill material into waters of the United States except as otherwise permitted. Under Section 404 of the CWA, the Corps has the primary authority to regulate activities that discharge fill or dredge material into waters of the United States through its Section 404 permitting program. The Corps; Section 404 permitting program implements a federal policy of "no net loss of wetlands by requiring compensatory mitigation of quantitative loss of acreage and qualitative loss of wetland functions and values from unavoidable fill to jurisdictional wetlands.

*Section 401 of the CWA* is administered by the State Water Resources Control Board (SWRCB). Section 401 requires that a sponsor for a Section 404 permit (to discharge dredged or fill material into waters of the United States) first obtain certification from the appropriate State agency stating that the fill is consistent with the State's water quality standards and criteria. In California, the authority to either grant certification or waive the requirement for permits is delegated by SWRCB to the nine regional boards. The San Francisco Bay Regional Water Quality Control Board (RWQCB) is the appointed authority for Section 401 compliance in the Project Area. A request for certification or

waiver is submitted to the regional board at the same time that an application is filed with the Corps. The regional board has 60 days to review the application and act on it. No Section 404 permit may be issued until “certified” by the State, pursuant to Section 401.

## State

**California Endangered Species Act (CESA).** The CESA was enacted in 1984. Under the CESA, the California Fish and Game Commission (CFG) has the responsibility for maintaining a list of threatened species and endangered species. CDFG also maintains lists of species of special concern which impacts would be considered significant under CEQA Guidelines Section 15380 and could require mitigation. Pursuant to the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any State-listed endangered or threatened species may be present in the Study Area and determine whether the Project would have a potentially significant impact on such species. In addition, CDFG encourages informal consultation on any proposed project which may impact a candidate species. CESA prohibits the take of California listed animals and plants in most cases, but CDFG may issue incidental take permits under special conditions.

**Fish and Game Code – Sections 3503, 3503.5, 3513.** Section 3503 generally prohibits needless destruction of the nest or eggs of any bird. Birds of prey are protected in California under the California Fish and Game Code Section 3503.5, which states that it is unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird, except as otherwise provided by this code or any regulation adopted pursuant thereto. Section 3503 reiterates protections under the MBT. Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered taking by CDFG.

**California Native Plant Society (CNPS).** The California Native Plant Society maintains an inventory of special-status plant species. CNPS maintains four species lists of varying rarity. Vascular plants listed as rare or endangered by the CNPS, but which have no designated status or protection under federal or State-endangered species legislation, are defined as follows:

- List 1A Plants Believed Extinct.
- List 1B Plants Rare, Threatened, or Endangered in California and elsewhere.
- List 2 Plants Rare, Threatened, or Endangered in California, but more numerous elsewhere.
- List 3 Plants About Which More Information is Needed - A Review List.
- List 4 Plants of Limited Distribution - A Watch List.

In general, plants appearing on CNPS List 1 or 2 are considered to meet CEQA Guidelines Section 15380 criteria and Project effects to these species may be considered significant.

**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 protected species may be considered rare or endangered if the species can be shown to meet certain criteria. These criteria have been modeled after the definition in FESA and the section of the California Fish and Game Code dealing with rare or endangered plants and animals, and allows a public agency to undertake a review to determine if a significant effect on species that have not yet been listed by either the USFWS or CDFG (i.e., species of concern) would occur. Whether a species is rare, threatened, or endangered can be legally significant because, under CEQA Guidelines Section 15065, an agency must find an impact to be significant if a project would “substantially reduce the number or restrict the range of an endangered, rare, or threatened species.” Thus, CEQA provides an 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.

## **Local**

**Bayfront Specific Plan.** The following policy from the Bayfront Specific Plan would be applicable to the Project with regard to biological resources:

*Policy B-2:* Enhance the role of Burlingame’s Bayfront and Shoreline, including all areas affected by tidal waters, in the San Francisco Bay ecosystem and consider the impact of future development on the viability of the Bay’s ecosystem and recreational use of the Bay.

**City of Burlingame General Plan.** The Conservation Element of the City’s General Plan contains policies and recommendations to preserve natural resources within the City.<sup>2</sup> The Conservation Element includes the following policies that would be applicable to the Project:

*Policy C(A):* To initiate, develop, and implement programs for the conservation of natural resources giving particular attention to critical resource conditions.

*Policy C(B):* To prevent or eliminate damage to the environment and stimulate the health and welfare of the citizens of Burlingame.

*Policy C(C):* To restore, where found to be feasible, natural features of vegetative cover, streams, marsh, and bay where areas have been unduly disturbed by man.

*Policy C(D):* To initiate, develop, and implement programs for the conservation of the built environment.

*Policy C(E):* To foster public educational programs on local conservation needs.

*Policy C(F):* To participate in regional conservation programs of direct concern to the City.

*Policy C(G):* To promote economic growth which is consistent with an improvement in the quality of the environment.

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<sup>2</sup> City of Burlingame, *City of Burlingame General Plan*, Conservation Element, adopted August 6, 1973.

**Burlingame Municipal Code Title 11.06.020 (“Urban Reforestation and Tree Protection Ordinance”).** This ordinance calls for the preservation of trees and vegetation, which are considered a vital part of the City’s character. The City defines a Protected Tree as:<sup>3</sup>

- Any tree with a circumference greater than 48 inches when measured 54 inches above natural grade;
- A tree or stand of trees so designated by the city council based upon findings that it is unique and of importance to the public due to its unusual appearance, location, historical significance, or other factor; or
- A stand of trees in which the Director of Parks and Recreation has determined each tree is dependent upon the others for survival.

The Municipal Code has provisions to allow for the removal of Protected Trees through the granting of a Protected Tree removal permit by the Director of the City’s Parks and Recreation Department. Permit conditions will likely require tree replacement or reforestation with the following guidelines:

- Replacement shall be three 15-gallon size, one 24-inch box size, or one 36-inch box size landscape tree(s) for each tree removed;
- Any tree removed without a valid permit shall be replaced by two 24-inch box size, or two 36-inch box size landscape trees for each tree removed;
- Replacement of a tree may be waived by the director if a sufficient number of trees exists on the property to meet all other requirements of the Urban Reforestation and Tree Protection Ordinance;
- Size and number of the replacement tree(s) shall be determined by the director and shall be based on the species, location and value of the tree(s) removed; and
- If replacement trees cannot be planted on the property, payment of equal value shall be made to the City. Such payments shall be deposited in the tree-planting fund to be drawn upon for public tree planting.

## **Impacts and Mitigation Measures**

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### **Significance Criteria**

Section 15382 of the CEQA Guidelines defines a significant effect on the environment as “...a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the Project...” Section 15065(a)(1) requires the preparation of an EIR where there is substantial evidence that a project would “substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or

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<sup>3</sup> City of Burlingame, City of Burlingame Municipal Code, “Title 11 – Trees and Vegetation,” website: <http://qcode.us/codes/burlingame/>, accessed May 12, 2011.

animal community; substantially reduce the number or restrict the range of an endangered, rare or threatened species... “Endangered, Rare, or Threatened Species” are further defined in Section 15380.

The Project would have a significant impact with regard 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 California Department of Fish and Game or U.S. Fish and Wildlife Service.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

## **Environmental Analysis**

For each potential impact associated with the Project, a level of significance is determined and is reported in the impact statement. Conclusions of significance are defined as follows: significant impact (S), potentially significant impact (PS), less-than-significant impact (LTS), or no impact (NI). For each impact identified as being significant (S) or potentially significant (PS), this EIR provides mitigation measures to reduce, eliminate, or avoid the adverse effect. If the mitigation measures would reduce the impact to a less-than-significant (LTS) level successfully, this is stated in this EIR. If the mitigation measures would not diminish significant or potentially significant impacts to a less-than-significant level, the impacts are classified as “significant unavoidable impacts (SU).” The impacts of the potential development of the 350 Airport Boulevard Site are evaluated in this EIR on a programmatic level. Following the submittal of a project-specific development proposal for the 350 Airport Boulevard Site, additional environmental analysis would be required. For this section, BR refers to Biological Resources.

*BR-1 Effects on Sensitive Natural Communities. The Project would have a less-than-significant impact (either directly or through habitat modifications) on any species identified as a candidate, sensitive, or special-status species or on any riparian habitat or other sensitive natural community in local or regional plans, policies, or regulations, or by CDFG or USFWS. (LTS)*

### **300 Airport Boulevard and 350 Airport Boulevard**

As discussed above, and presented in Appendix G of this document, information on special-status plant and wildlife species that have the potential to occur in the vicinity of the Project Site was derived through queries of CNPS, CDFG, and USFWS species list databases for the San Mateo, Montara Mountain, Redwood Point, Hunters Point, San Francisco South, Half Moon Bay, Woodside, and Palo Alto USGS 7.5 minute quadrangles. Based on the urban history of the Project Site, and the lack of suitable habitat, the Project Site would not support any of the special-status plant or wildlife species listed in the database query results. This determination was accomplished through a review of the habitat requirements of the special-status species in the above list, and compared to the habitats at the 300 Airport Boulevard Site and the surrounding area.

The 300 Airport Boulevard Site was created using Bay fill and then developed as a drive-in theater, which are not considered natural in origin. The 350 Airport Boulevard Site was also created by Bay fill; current conditions consist of an abandoned one-story wooden structure and vacant paved surfaces, which are not considered natural in origin. Both Sites are isolated from any grassland, chaparral or woodland habitats by urban development, and do not contain any suitable habitat for any of the salt marsh species known to occur along the Bay. The shores adjacent to the Project Site are artificial, and do not support salt marsh habitat; therefore it is very unlikely that any of the special-status species associated with that habitat type could wander into the Project Site. As such, the impacts would be less than significant.

*BR-2 Loss of Wetlands and Other Waters of the United States. The Project would have a potentially-significant impact on wetlands and other waters of the United States. (PS)*

### **300 Airport Boulevard**

As described in the setting section above, in the eastern and southern portion of the 300 Airport Boulevard Site there are a series of channels and depressions that retain surface water for extended periods, and as a result support a variety of ruderal wetland plant species. Due to the urban history of the 300 Airport Boulevard Site, it is likely that these features would not be considered subject to regulation under the Clean Water Act. If some or all of these features were determined to be subject to Clean Water Act regulation, then any fill activity associated with grading for the 300 Airport Boulevard Project would require a permit from the Corps and water quality certification from the RWQCB. Because it is unknown at this time whether the depressional features present on the 300 Airport Boulevard Site are subject to CWA regulation,

the loss of these features as a result of 300 Airport Boulevard Project construction would be a potentially significant impact.

**MITIGATION MEASURE.** Mitigation Measures BR-2.1 and BR-2.2, below, to be implemented by the Project Sponsor, would reduce the 300 Airport Boulevard Project's impact on any potential wetlands and other waters of the United States to a less-than-significant level. (LTS)

*BR-2.1 Conduct a Wetland Delineation.* The Project Sponsor shall retain a qualified biologist to conduct a wetland delineation of the Project Site. This delineation shall be submitted to the Corps for verification prior to the issuance of any grading permits for the Project. If the Corps determines that the features in the Project Site are not jurisdictional, then no further mitigation would be required.

*BR-2.2 Obtain Applicable Permits and Certifications.* If the Corps determines that these features are jurisdictional, then the Project Sponsor must obtain a CWA Section 404 permit from the Corps, and a CWA Section 401 Water Quality Certification from the RWQCB prior to issuance of any grading permits for the Project. A requirement of the permits will be compensation such that there is no net loss of wetlands. This compensation requirement can be satisfied through avoidance, onsite and/or offsite construction and preservation of wetlands or by purchase of mitigation credits at an approved mitigation bank. At certified mitigation banks, the Corps typically requires a minimum 1:1 ratio, but may require higher ratios for certain wetland types.

### **350 Airport Boulevard**

There was no distinct appearance of depressions, channels, or other wetland features at the 350 Airport Boulevard Site at the time of the site visit. Further assessment may need to be conducted when an application for development is submitted. Mitigation Measures BR-2.1 and BR-2.2, described above, would likely be implemented in the case that wetland features were observed. However, due to the urban history of the site, it is likely that these features would not be considered jurisdictional; though only the Corps has the authority to make this determination. The Corps has been known to claim jurisdiction on wetlands that develop on Bay fill lands on a case-by-case basis. If the Corps determines that some or all of these features are jurisdictional, then ground disturbance related to grading for proposed development would result in the loss of those wetlands. Wetlands and other waters of the U.S. are protected under Sections 401 and 404 of the CWA, which prohibits the fill of these features without a permit from the Corps and RWQCB. Therefore, the loss of wetlands or other waters of the U.S. as a result of 350 Airport Boulevard Project construction would be less than significant. (LTS)

*BR-3 Loss of Nesting Migratory Birds. The Project would have a potentially significant impact on nesting migratory birds. (PS)*

### **300 Airport Boulevard and 350 Airport Boulevard**

Shrubs and trees on the Project Site could potentially provide nesting habitat for raptors (i.e., birds of prey) and other migratory birds. Tree and shrub removal associated with development of the Project Site could result in “take” caused by the direct mortality of adult or young birds, nest destruction, or disturbance of nesting native bird species (including migratory birds and other special-status species) resulting in nest abandonment and/or the loss of reproductive effort. Bird species are protected by both State (CDFG Code Sections 3503 and 3513) and federal (Migratory Bird Treaty Act of 1918) laws. Disruption of nesting birds, resulting in the abandonment of active nests, or the loss of active nests through structure removal would be a potentially significant impact.

MITIGATION MEASURES. Mitigation Measures BR-3.1 and BR-3.2, below, to be implemented by the Project Sponsor(s), would reduce the Project’s impact on nesting migratory birds to a less-than-significant level. (LTS)

*BR-3.1 Bird Nest Pre-Construction Survey.* The Project Sponsor(s) shall retain a qualified biologist to conduct preconstruction breeding-season surveys (approximately March 15 through August 30) of the Project Site and immediate vicinity during the same calendar year that construction is planned to begin, in consultation with the CDFG.

If phased construction procedures are planned for the Project, the results of the above survey shall be valid only for the season when it is conducted.

A report shall be submitted to CDFG, following the completion of the bird nesting survey that includes, at a minimum, the following information:

- A description of methodology including dates of field visits, the names of survey personnel with resumes, and a list of references cited and persons contacted.
- A map showing the location(s) of any bird nests observed on the Project Site.

If the above survey does not identify any nesting bird species on the Project Site, no further mitigation would be required. However, should any active bird nests be located on the Project Site, the following mitigation measure shall be implemented.

*BR-3.2 Bird Nest Buffer Zone.* The Project Sponsor(s), in consultation with CDFG, shall delay construction in the vicinity of active bird nest sites located on or adjacent to the Project Site during the breeding season (approximately March 15 through August 30) while the nest is occupied with adults and/or young. If active nests are identified, construction activities should not occur within 500 ft of the nest. A qualified biologist, shall monitor the active nest until the young have fledged, until

the biologist determines that the nest is no longer active, or if it is reasonable that construction activities are not disturbing nesting behaviors. The buffer zone shall be delineated by highly visible temporary construction fencing.

*BR-4 Protection of Biological Resources. Construction of the Project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (LTS)*

### **300 Airport Boulevard and 350 Airport Boulevard**

Construction of the Project would not conflict with any local policies or ordinances protecting biological resources such as trees. As presented above under the Burlingame Municipal Code Title 11.06.020, this ordinance calls for the preservation of trees and vegetation, which are considered a vital part of the City's character.<sup>4</sup>

As discussed above, a site visit indicated that the 300 Airport Boulevard Site consists of remnant ornamental vegetation which occurs primarily along the perimeter of the site, while ruderal vegetation has colonized the interior. No trees protected under any tree preservation policy or ordinances were found on the 300 Airport Boulevard Site. Based on the urban history of the 300 Airport Boulevard Project Site and the relatively recent closure of the drive-in movie theater in 2001, the 300 Airport Boulevard Site does not provide an ample habitat for trees that would be defined as Protected by the City.

As determined by the site visit, remnant ornamental vegetation occurs primarily along the perimeter of the 350 Airport Boulevard Site, while ruderal vegetation has colonized the interior. Based on the urban history of this Site and the current conditions which consist of an abandoned one-story wooden structure and vacant paved surfaces, the 350 Airport Boulevard Site does not provide an adequate habitat for trees that would be defined as Protected by the City.

*BR-5 Habitat Conservation Plans. Construction of the Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. (NI)*

### **300 Airport Boulevard and 350 Airport Boulevard**

Development of either Project Site would not conflict with any known habitat conservation plans, natural community conservation plans, or other approved local or regional conservation plans because there are no approved plans that apply to either Project Site or their vicinity. As such, no impact would occur.

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<sup>4</sup> City of Burlingame, City of Burlingame Municipal Code, "Title 11 – Trees and Vegetation," website: <http://qcode.us/codes/burlingame/>, accessed May 12, 2011.

## Cumulative Analysis

The geographic context for the cumulative land use impacts includes the Bayfront Specific Plan area. No other foreseeable projects are proposed within the Bayfront Specific Plan. The Project would not conflict with any applicable habitat conservation plan and, therefore, would not result in a cumulative impact.

*BR-6 Cumulative Biological Resource Impacts. The Project, in combination with other foreseeable projects, would have a cumulatively considerable impact regarding sensitive natural communities, loss of wetlands, loss of nesting migratory birds. (S)*

Currently, 11 projects are proposed or are being developed within the City; however, these projects are all south and west of U.S. 101 and would not have biological resource impacts related to the Project Site. As such, there would be no cumulative impact related to biological resources and the Project would have no potential to contribute to cumulative impacts regarding this issues.

Construction activities that result in the removal of existing shrubs and trees could adversely affect nesting migratory birds, either by causing the loss of young birds or the abandonment of an active nest. With future development in the City, it is reasonable to expect there would be a loss of trees and other vegetation that provide nesting habitat. Disturbance to these habitats in combination with the potential loss of similar habitat in the Project Site would result in a potentially significant cumulative impact.

MITIGATION MEASURE. Implementation of Mitigation Measures BR-3.1 and BR-3.2, above, would mitigate the Project's contribution to this potentially significant cumulative impact to less than cumulatively considerable. Moreover, the same mitigation measure, or an equivalent measure, would likely be imposed on other development projects, since this measure is recommended as a means to comply with existing State and federal laws. Therefore, the cumulative impact on nesting birds and bats would be reduced to less than significant. (LTS)

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## 3.9 HYDROLOGY AND WATER QUALITY

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### Introduction

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This section of the EIR describes local and regional hydrology, drainage, flood hazards, water quality, and groundwater resources.

Issues identified during the Planning Commission public scoping meetings for the Project were considered in preparing this analysis. The one applicable issue identified during the City Council public scoping meeting pertains to the effects of sea-level rise on the Project. This issue is addressed in the section. No issues were raised regarding hydrology and water quality in response letters to the Notice of Preparation (NOP).

### Existing Conditions

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#### Project Location and Existing Land Use

The approximately 26.7-acre Project Site is located in the eastern shoreline of the San Francisco Peninsula, in the City of Burlingame (City) Bayfront Specific Plan area. It is bounded by water on three sides; San Francisco Bay (Bay) on the north and east, and Sanchez Channel on the west.

The Project Site and surrounding land was reclaimed from the San Francisco Bay in the 1960s by constructing perimeter barriers of concrete rubble. The Sanchez Channel was also created at the same time. The perimeter of the area was created by using pieces of the old San Mateo bridge structure, and additional fill and rubble were placed behind the pieces of the San Mateo Bridge structure. When the Project Site was created in the 1960s, the shoreline barriers were not properly engineered to prevent erosion.<sup>1</sup>

The 300 Airport Boulevard Site is currently vacant and consists of impervious surfaces and vegetation. Previously, the 300 Airport Boulevard Site was developed as the Burlingame Drive-In Theater. The cinema complex operated from 1965 to 2001 and was demolished in 2002. The 300 Airport Boulevard Site was then re-graded for future construction activities, but no development occurred. Currently, approximately 89 percent of the 300 Airport Boulevard Site is covered with impervious surfaces, and 11 percent is pervious.<sup>2</sup> The asphalt in the northern portion of the Project Site is in poor condition, and in some areas base rock or crushed rock overlies thin asphalt concrete. The 350 Airport Boulevard Site consists of an abandoned one-story wooden structure and vacant paved surfaces. The 350 Airport Boulevard Site was formerly occupied by a 41,000-square-foot concrete warehouse structure.

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<sup>1</sup> City of Burlingame Planning Department, Burlingame Bayfront Specific Plan, revised August 2006.

<sup>2</sup> DES Architects/Engineers, Burlingame Point, Response to Data Needs, January 11, 2011. Attachment 6.

## Climate

The Project Site is located along the western shore of the San Francisco Bay and has a climate characterized by cool, moist winters and warm, dry summers. The average rain fall for the Project Site is 20 inches per year, with approximately 80 percent of precipitation occurring between the months of December and March.

## Topography and Soils

The Project Site is relatively flat and ranges in elevation from 0.1 feet above mean sea level (msl) to 17.1 feet msl. The existing Airport Boulevard is at an average of 10 feet above sea level. The higher elevations are generally where the old drive-in theater screens were located and in areas where approximately 63,000 cubic yards of soil from an off-site and unrelated demolition project was placed in the northeastern part the Project Site, over the paved surfaces.

Geotechnical borings for the 300 Airport Boulevard Site indicate the fill placed in the 1960s extends to approximately 1 to 9 feet below ground surface. Below the fill material is approximately 9 feet of Bay Mud. Soils below the Bay Mud consist of interbedded layers of sand/gravelly clay and medium dense sand and clay up to approximately 100 feet below ground surface.<sup>3</sup> Similar subsurface conditions are expected at the 350 Airport Boulevard Site. Project Site surface soils have high surface runoff (hydrologic group<sup>4</sup> D), which consists of soil textures with the highest runoff potential and lowest infiltration rates when saturated.

## Surface Hydrology, Drainage, and Flooding

**Hydrology.** The Project Site is within the Sanchez Creek Watershed, and the on-site drainage system drains into Sanchez Channel, the downstream terminus of the Sanchez Creek Watershed. Sanchez Creek originates on the east-facing slopes of the ridge above Burlingame. It is approximately 4 miles long and drains urbanized areas in the City. The upper portion of the creek flows in a natural channel, but the lower portions are in channels or underground culverts. The creek flows east and enters Burlingame Lagoon at the west end of the lagoon. Burlingame Lagoon is a tidal lagoon between US 101 and Airport Boulevard, the majority of which is open water at low tide with scattered mudflat areas, and is a tributary to the Bay. The constructed Sanchez Channel that adjoins the Project Site is at the east end of the lagoon and connects the lagoon to the Bay.

**Drainage.** Precipitation that falls at the 300 Airport Boulevard Site flows into existing on-site storm drain systems. Some water ponds locally in low spots. The existing, onsite, gravity-based storm drain system is the remnant system constructed to drain the drive-in theater previously on the 300 Airport Boulevard. The storm drain system captures and channels surface flows to the onsite pump station,

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<sup>3</sup> Treadwell + Rollo, Geotechnical Investigation Burlingame Point 300 – 333 Airport Boulevard Burlingame, California, May 2011.

<sup>4</sup> Hydrologic Group is used to identify soil runoff potential and is classified as A, B, C, or D, based on soil texture, which affects potential infiltration rates, Hydrologic Group A consists of soil textures with the lowest runoff potential and high infiltration rate when saturated, and Hydrologic Group D consists of soil textures with the highest runoff potential and lowest infiltration rates when saturated.

both through surface flows and through grated inlets leading to underground drainage channels. The stormwater pump station at the southwest side of the 300 Airport Boulevard Site pumps accumulated storm water into Sanchez Channel. The existing Airport Boulevard includes a storm drain in the public right of way that discharges to Sanchez Channel through an existing outfall adjacent to the bridge. The storm drain system along Airport Boulevard is owned by the City, but is not part of the extensive storm drain system that drains the majority of the City west of US 101.

The Project Site storm drain system is not connected to the City's storm drain system. The 300 Airport Boulevard Site storm drain system has an independent outfall to San Francisco Bay at Sanchez Channel, where water is pumped to the higher elevation of the channel banks, and multiple outfalls along the existing Airport Boulevard segment adjacent to the Bay. Locations that front the Bay (e.g., 350 Airport Boulevard) drain directly into the Bay.

The Citywide Storm Drain Master Plan Study recommends that regular inspections and ongoing repairs be made to the concrete channels that line creeks and that the pump facilities be regularly tested and maintained. There is also an ongoing program to prevent the creek channels from building up silt as they enter the San Francisco Bay.<sup>5</sup>

**100-Year Flood Hazard.** The Federal Emergency Management Agency (FEMA) prepares flood maps identifying areas that are subject to flooding (Special Flood Hazard Areas). The Special Flood Hazard Areas are rated by FEMA according to risk of flooding and depth of flooding. FEMA applies flood zone designations according to varying levels of flood risk.

There are no 100-year floodplains within the developable portions of the Project Site. Most of the 300 Airport Boulevard Site is within Zone 0.2 percent (500-year flood zone). As defined by FEMA, the 500-year flood zone is indicative of an area that has 1 percent chance of flooding annually with an average depth of less than 1 foot or with drainage areas less than 1 square mile (and areas protected by levees from the 1 percent annual chance flood). The 350 Airport Boulevard Site is a combination of Zone X, a designation applied to areas outside of Zone 0.2 percent, and the Zone 0.2 percent designation. Sanchez Channel, bordering the 300 Airport and 350 Airport Sites on the west is Zone AE. Zone AE is a 100-year floodplain with base flood elevations determined. There is a 100-foot shoreline band which is subject to the jurisdiction of the Bay Conservation and Development Commission (BCDC).

**High Tides.** The maximum high tide water elevation varies and is about + 6.4 feet above mean sea level (msl), and the 100-year flood elevation in this area is about +7 feet msl. The long fetch and duration of the prevailing northwesterly winds typically generates waves that are about 2 feet high in the area, resulting in a maximum wave height of up to 8.4 to 9 feet high during high tides and 100-year tides. Waves of this height could potentially flood the Project Site, as it is currently configured. The City of Burlingame requires the height of the shoreline protection structure and building entrances to be at least +10 feet msl.<sup>6</sup>

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<sup>5</sup> Kleinfelder, Inc., *Citywide Storm Drainage Master Plan Study*, April 2000.

<sup>6</sup> City of Burlingame Planning Department, *Burlingame Bayfront Specific Plan*, revised August 2006 (citing requirements of the Burlingame General Plan Seismic Safety Element).

**Dam Failure Inundation.** The Project Site is located in the far end of the dam failure inundation zone for Crystal Springs Reservoir. Flooding this distance from the dam would only occur with catastrophic failure and is expected to be relatively shallow.

**Tsunami and Seiche.** Tsunamis<sup>7</sup> and seiches<sup>8</sup> can result in wave damage and flooding of low-lying coastal areas along the shores of oceans, lakes, reservoirs, or bays. The amount of damage caused by tsunamis and seiches in the San Francisco Bay Area in historic times has been small, and there is little reliable data for local pre-historic events, but the potential for damage exists along all of the Bay's waterfronts. Based on emergency planning information, the shoreline surrounding the Project Site is mapped as the edge of tsunami inundation line. Sanchez Channel and Burlingame Lagoon are within a potential tsunami inundation area, but the developable portions of the Project Site are not located in an area vulnerable to tsunami hazard.<sup>9</sup>

Tidal records for the Bay have been maintained for over 100 years, and during this period, a damaging seiche has not occurred. A seiche of approximately 4 inches occurred during the 1906 earthquake, an event of magnitude 8.3 on the Richter scale. It is probable an earthquake similar to the 1906 event would be the largest experienced in the Bay Area; consequently, a seiche larger than 4 inches is considered unlikely to occur.<sup>10</sup>

**Mudflow.** The Project Site is not at risk of mudflow.

**Sea Level Rise.** Measurements taken in the Bay indicate that the current rate of sea level rise is about 3.5 inches per century at Alameda and 8.4 inches per century at San Francisco.<sup>11</sup> Climate change effects on sea levels could lead to even higher rates of sea level rise (accelerated sea level rise). Different scenarios and models used to predict sea level rise result in different estimates of the magnitude of sea level rise.

Although the Project Site is relatively low in elevation, it is generally protected from 100-year flood hazards by sea walls and levees along Sanchez Channel of about 7 to 9 feet in elevation.<sup>12</sup> The tidal

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<sup>7</sup> A tsunami is a series of several long sea waves generated by a sudden displacement of a large volume of water. A tsunami can be triggered by earthquake activity that affects ocean waves, but also can be triggered by other large-scale, short-duration phenomena, such as submarine landslides or volcanic eruptions.

<sup>8</sup> A seiche is a similarly generated oscillation wave occurring in a confined or mostly confined body of water, such as a lake, reservoir, or bay.

<sup>9</sup> California Emergency Management Agency, California Geological Survey, and University of Southern California. Tsunami Inundation Map for Emergency Planning, San Mateo Quadrangle, June 15, 2009. [http://www.conservation.ca.gov/cgs/geologic\\_hazards/Tsunami/Inundation\\_Maps/SanMateo/Documents/Tsunami\\_Inundation\\_SanMateo\\_Quad\\_SanMateo.pdf](http://www.conservation.ca.gov/cgs/geologic_hazards/Tsunami/Inundation_Maps/SanMateo/Documents/Tsunami_Inundation_SanMateo_Quad_SanMateo.pdf)

<sup>10</sup> San Francisco Redevelopment Agency, Candlestick Point-Hunters Point Shipyard Phase II Development Plan EIR, November 2009. Section III.M (Hydrology and Water Quality).

<sup>11</sup> Floyd, M., M. Anderson, M. Roos, R. Peterson, M. Perrone, and D. Todd. 2006. Chapter 2: Potential Impacts of Climate Change on California's Water Resources, Table 2-6 Relative Sea Level Trends for Eight Tide Gauges Along the Coast of California with 50 Years or More of Record. p. 2-43. *In*: California Department of Water Resources, Progress on Incorporating Climate Change into Planning and Management of California's Water Resources Technical Memorandum Report, prepared July 2006.

<sup>12</sup> DES Architects/Engineers. 2010. Burlingame Point, 300-333 Airport Blvd., Burlingame, CA., Preliminary Grading and Drainage Plan. Revise December 3, 2010.

flood elevation is listed as 7 feet and does not include wave run-up.<sup>13</sup> However, the majority of the central portion is subject to shallow flooding from the 500-year flood.

The California Climate Change Center predicts that accelerated sea level rise could result in a sea level rise in California of 4.3 to 27.6 inches above the existing msl by 2099.<sup>14</sup> The California Climate Action Team projects that sea levels could rise to 16 inches at mid-century and to between 20 and 55 inches by the year 2099.<sup>15</sup> Figure 3.9-1 shows the area of the existing Project Site that would be inundated with 55 inches of sea level rise by 2099.

The current mean higher high tide near the Project Site is about 3.5 feet above the current msl.<sup>16</sup> An increase in sea level rise of 1 foot would result commensurate increase in the mean higher high tide level. When combined with astronomical tides, a 1-foot increase in msl would result in the 100-year event high tide peak occurring at the 10-year event frequency.<sup>17</sup> In other words, the frequency of a current 100-year high tide (about 5.54 feet above current msl at the San Francisco Presidio station<sup>18</sup>) could occur 10 times more often when sea levels increase to 1 foot above the current msl. As a result of these conditions, lesser storms and tides may be sufficient to result in more frequent and severe flooding, erosion, and structural stresses compared to existing conditions. Such changes are predicted regardless of whether the Project is implemented. Some erosion and damage to levees and channel banks have already occurred along the waterfront in Burlingame, so sea level rise could exacerbate the problem.

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<sup>13</sup> Federal Emergency Management Agency. 1981. Flood Insurance Study, City of Burlingame California, San Mateo County. Prepared March 16, 1981.

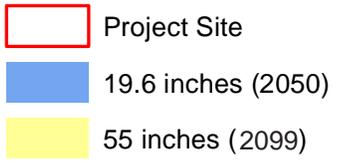
<sup>14</sup> Cayan, D., P. Bromirski, K. Hayhoe, M. Tyree, M. Dettinger, and R. Flick. 2006. Projecting Future Sea Level: Table 3 Projected global sea level rise (SLR) (cm) for the SRES A1fi, A2, and B1 greenhouse gas emission scenarios. SLR for A2 and B1 scenarios is estimated by combining output recent global climate change model simulations with MAGICC projections for the ice melt component. SLR estimates for A1fi estimated from MAGICC based on A2 temperature changes scaled according to those in A1fi. A Report From the California Climate Change Center CEC-500-2005-2002-SF. p. 19.

<sup>15</sup> San Francisco Bay Conservation and Development Commission, Climate Change, 2007, [www.bcdc.ca.gov/planning/climate\\_change/climate\\_change.shtml](http://www.bcdc.ca.gov/planning/climate_change/climate_change.shtml).

<sup>16</sup> Federal Emergency Management Agency. 1981. Flood Insurance Study, City of Burlingame, California, San Mateo County. Prepared March 16, 1981.

<sup>17</sup> Floyd, M., M. Anderson, M. Roos, R. Peterson, M. Perrone, and D. Todd. 2006. Chapter 2: Potential Impacts of Climate Change on California's Water Resources, Figure 2.32 Impact of One Foot Sea Level rise on the Relative Effect of Astronomical tides in the Delta. p. 2-53. In Medelin, J., J. Harou, M. Olivares, J. Lund, R. Howitt, S. Tanaka, M. Jenkins, K. Madani, and T. Zhu (Eds), Climate Warming and Water Supply Management In California: White Paper. A Report From Climate Change Center CEC-500-2005-195-SF.

<sup>18</sup> National Oceanic and Atmospheric Agency. San Francisco, CA: Data Inventory Station ID: 9414290, Extremes. Available at: [http://tidesandcurrents.noaa.gov/data\\_menu.shtml?extremetype=station&bdate=19100601&edate=20110601&unit=1&format=Apply+Change&stn=9414290+San+Francisco%2C+CA&type=Extremes](http://tidesandcurrents.noaa.gov/data_menu.shtml?extremetype=station&bdate=19100601&edate=20110601&unit=1&format=Apply+Change&stn=9414290+San+Francisco%2C+CA&type=Extremes). Accessed June 1, 2011.



**FIGURE 3.9-1**  
**100 Year Recurrence Sea Level Rise**

Source: USGS, 2010.

Water surface elevation gradients (slopes) are primary drivers of flow conveyance within streams and storm drains. The higher the gradient, the faster water can flow. If the downstream outlet of a stream or storm drain is controlled by the water surface elevation of the Bay or Ocean, rising sea levels can affect the flow within those drainages; a higher water surface elevation at the outlet reduces the gradient and slows down flow. This could result in reduced storm flow conveyance capacity and cause or contribute to backwater flooding effects.

Higher sea levels could also reduce the available coastal floodplain storage volumes. However, because the Project Site is protected by levees and sea walls, there is currently relatively little coastal floodplain storage that could be affected.

## **Groundwater Hydrology**

The Project Site is underlain by the San Mateo groundwater subbasin, which is part of the greater Santa Clara groundwater basin. The San Mateo subbasin is composed of alluvial fan deposits formed by tributaries to the Bay that drain the basin. It is bounded by the Bay to the east, the Santa Cruz Mountains to the west, the Westside basin to the north, and San Francisquito Creek to the south. Recharge of the subbasin occurs through infiltration into stream beds and through infiltration of precipitation on the valley floor. A relatively shallow water table aquifer overlies confined and semi-confined aquifers near the margins of the Bay, with most wells drawing from the deeper deposits. Soil borings drilled during a previous geotechnical investigation at the 300 Airport Boulevard Site identified stable groundwater at depths of about 2 feet below the ground surface. The groundwater in this area is brackish due to the proximity to the Bay. The direction of groundwater flow is generally to the north. Similar conditions are expected at the 350 Airport Boulevard Project Site.

Groundwater is not a source of supply at the Project Site. Municipal water supplies in the area are obtained exclusively from the City and County of San Francisco Public Utilities Commission (SFPUC) (see Section 3.12, Utilities).

## **Water Quality**

**Surface Water Quality.** Water quality reflects the land uses in the watershed. Pollutants and their concentrations in runoff water vary according to land cover, land use, topography, and the amount of impervious cover, as well as the intensity and frequency of irrigation or rainfall. Land uses surrounding the waterways to which the study area discharges includes open space, urban/industrial, and agricultural uses. Runoff in developed areas may typically contain oil, grease, and metals accumulated in streets, driveways, parking lots, and rooftops, as well as pesticides, herbicides, particulate matter, nutrients, animal waste, and other oxygen-demanding substances from landscaped areas; agricultural land uses typically contribute sediment, pesticides, nutrients, and bacteria; and open space lands typically contribute bacteria, sediment from steep areas, and landscaping materials if landscaped.

The nearshore sediments of the Bay have received significant inputs of chemicals from historic and existing urban uses. Elevated levels of lead and copper have been found in many sediment samples, and other heavy metals and organic compounds (industrial chemicals, pesticides, and petroleum products)

also have been detected in bay sediments and indicate that urban and industrial activities have reduced the quality of soil, groundwater, and surface waters along the margins of the Bay.

Surface water and sediment testing at the 300 Airport Boulevard Site was performed in 2008 to evaluate the potential impact of the placement of soil from an off-site and unrelated demolition project after the drive-in theater ceased operations. The results of the testing, which are an indicator of the types and levels of chemical pollutants that would likely be present in stormwater runoff under existing (baseline) conditions, show that chlorinated pesticides are not present in detectable levels. Some total lead was detected, but not at levels that exceed ecotoxicity screening levels. The investigation also showed that the residual chemicals from soils placed on the 300 Airport Boulevard Site have not leached into surface water or into the storm drains.<sup>19</sup> Under existing conditions, trace amounts of minerals from soil and fill and fecal coliforms and nitrate from animal activity are also expected to be in stormwater runoff. For both the 300 Airport Boulevard and 350 Airport Boulevard Sites, sediment from exposed soils is also to be expected as component of stormwater runoff.

**Groundwater Quality.** Groundwater in the vicinity of the Project Site is shallow and brackish. Shallow groundwater in the vicinity of Bay is generally not a drinking water source. There are no known groundwater impairments associated with historic uses at the Project Site or in the vicinity (see Appendix B, Initial Study, Item H, Hazards and Hazardous Materials). If groundwater dewatering is necessary during construction, the discharge of small amounts of water from construction dewatering would be permitted under the Statewide Construction General Permit.

## **Applicable Plans and Regulations**

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### **Federal**

**Clean Water Act (33 U.S.C. Section 1251 et seq.).** The purpose of the federal Clean Water Act (CWA) is restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters through prevention and elimination of pollution. The CWA applies to discharges of pollutants into waters of the United States. The State Water Resources Control Board (SWRCB) is the State agency with primary responsibility for implementation of State and federally established regulations relating to hydrology and water quality issues. Typically, all regulatory requirements are implemented by the SWRCB, through the nine different Regional Water Quality Control Boards (RWQCBs) established throughout the State. The CWA operates on the principle that any discharge of pollutants into the nation's waters is prohibited unless specifically authorized by a permit; permit review is the CWA's primary regulatory tool. The following CWA sections are most relevant to this analysis.

*Section 303 Total Maximum Daily Load Program.* The State adopts water quality standards to protect beneficial uses of state waters as required by the CWA, Section 303, and the state's Porter-Cologne Water Quality Control Act of 1969. Section 303 of the CWA establishes the Total Maximum Daily Load (TMDL) process to guide the application of state water quality standards. The TMDL is the

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<sup>19</sup> Treadwell & Rollo. Surface Water Investigation Report, 350 Beach Road, Burlingame, California. February 22, 2008.

maximum amount of pollution (both point and non-point sources) that a water body can assimilate without violating state water quality standards.

Sanchez Channel is not included in SWRCB's list of waterways that do not meet water quality standards, known as the CWA Section 303(d) List of Water Quality Limited Segments, or the 303(d) List (refer to Applicable Plans and Regulations, below). However, the lower San Francisco Bay, which receives water from Sanchez Channel and which adjoins the Project Site on the north and east, is listed as impaired by chlordane, dichlorodiphenyltrichloroethane (DDT), dieldrin, and mercury from nonpoint sources; by dioxin compounds, furan compounds, and mercury from atmospheric deposition; by exotic species from ballast water; and by polychlorinated biphenyls (PCBs) and dioxin-like PCBs from unknown nonpoint sources. Industrial and municipal point sources, resource extraction, and natural sources are also considered to contribute to mercury degradation of the lower San Francisco Bay.

*Section 402 NPDES Program.* Section 402 of the CWA regulates discharges to surface waters through the National Pollution Discharge Elimination System (NPDES) program, administered by the US Environmental Protection Agency (EPA). The NPDES permit system was established in the CWA to regulate point source and certain types of diffuse source discharges. Point sources include a municipal or industrial discharge at a specific location or pipe. Urban stormwater runoff and construction site runoff are diffuse-sources of pollutants, similar to nonpoint sources, but they are regulated under the NPDES permit program because they are conveyed in a discrete conveyance system and discharge at a specific location.

For regulated diffuse source discharges, the NPDES program establishes a comprehensive stormwater quality program to manage urban stormwater and minimize pollution of the environment to the maximum extent practicable. To meet the goals of the NPDES permit, each local stormwater program and each permittee within a program establishes a Stormwater Management Plan. These plans provide specific local requirements targeted to meet the environmental needs of each watershed, as well as to reflect the political consensus of each community.

In California, SWRCB is authorized by EPA to oversee the NPDES program through RWQCBs. The NPDES program provides for both general permits (those that cover a number of similar or related activities) and individual permits.

*Section 404 of the CWA.* Section 404 regulates the discharge of dredged and fill materials into waters of the United States, which include oceans, bays, rivers, streams, lakes, ponds, and wetlands. The Section 404 permit is issued by the U.S. Army Corps of Engineers (Corps). Refer to Section 3.8, Biological Resources, for further discussion. Project mitigation measures that could involve shoreline improvements or modifications to accommodate drainage would be subject to Section 404 permitting.

## State

**Porter-Cologne Water Quality Act (Water Code Section 13000 et seq.).** The Porter-Cologne Water Quality Control Act was passed in 1969. It established SWRCB and divided the State into nine regions, each overseen by a RWQCB. SWRCB is the primary State agency responsible for protecting

the quality of the State's surface and groundwater supplies, but much of its daily implementation authority is delegated to the nine RWQCBs, which are responsible for implementing CWA, Sections 401, 402, and 303. In general, SWRCB manages both water rights and statewide regulation of water quality, while the RWQCBs focus exclusively on water quality within their regions.

**NPDES Program (CWA).** The following statewide permit program implemented under the CWA and administered by SWRCB and RWQCB is applicable to the Project.

*NPDES Construction General Permit.* Pursuant to the CWA Section 402(p) and as related to the goals of the Porter-Cologne Water Quality Control Act, SWRCB has issued a statewide NPDES General Permit for Storm Water Discharges Associated with Construction Activity (Construction General Permit) (Order No. 2009-0009-DWQ, NPDES No. CAR000002), adopted September 2, 2009. Every construction project that disturbs 1 or more acres of land surface or that are part of a common plan of development or sale that disturbs more than 1 acre of land surface would require coverage under the Construction General Permit. Construction activities subject to the Construction General Permit include clearing, grading, and disturbances to the ground, such as stockpiling or excavation. The Project would be required to implement the construction permit requirements.

To obtain coverage under the Construction General Permit, the landowner or other applicable entity must file Permit Registration Documents (PRDs) prior to the commencement of construction activity, which include a Notice of Intent (NOI), Storm Water Pollution Prevention Plan (SWPPP), and other documents required by the Construction General Permit.

The Construction General Permit requires specific minimum Best Management Practices (BMPs), depending upon the project sediment risk (Risk Level 1 through 3). Risk Level 1 projects are subject to minimum BMP and visual monitoring requirements; Risk Level 2 projects are subject to numeric actions levels (NALs) and some additional monitoring requirements; and Risk Level 3 projects are subject to numeric effluent limitations (NELs) and more rigorous monitoring requirements, such as receiving water monitoring and, in some cases, bioassessment. The risk is a calculated value that is determined when the SWPPP is prepared. The SWPPP will identify the appropriate risk level and related BMPs and other requirements. The results of monitoring and corrective actions, if any, must be reported annually to SWRCB. This permit also specifies minimum qualifications for SWPPP developers and construction site inspectors.

At a minimum, the SWPPP must address the following, and the Project construction contractor(s) would be required to implement these activities:

- Stormwater Management
  - Good site management practices
    - Conduct an inventory of the products used and/or expected to be used and the end products that are produced and/or expected to be produced.
    - Cover and berm loose stockpiled construction materials that are not actively being used (i.e. soil, spoils, aggregate, fly ash, stucco, hydrated lime, etc.).

- Store chemicals in watertight containers or in a storage shed (completely enclosed), with appropriate secondary containment to prevent any spillage or leakage.
  - Minimize exposure of construction materials with precipitation.
  - Implement BMPs to prevent the off-site tracking of loose construction and landscape materials.
- Good housekeeping measures for waste management, which, at a minimum, shall consist of the following:
- Prevent disposal of any rinse or wash waters or materials on impervious or pervious site surfaces or into the storm drain system.
  - Ensure the containment of sanitation facilities (e.g., portable toilets) to prevent discharges of pollutants to the stormwater drainage system or receiving water.
  - Clean or replace sanitation facilities and inspecting them regularly for leaks and spills.
  - Cover waste disposal containers at the end of every business day and during a rain event.
  - Prevent discharges from waste disposal containers to the stormwater drainage system or receiving water.
  - Contain and securely protect stockpiled waste material from wind and rain at all times unless actively being used.
  - Implement procedures that effectively address hazardous and nonhazardous spills.
  - Develop a spill response and implementation element of the SWPPP prior to commencement of construction activities.
- Good housekeeping for vehicle storage and maintenance, which, at a minimum, shall consist of the following:
- Prevent oil, grease, or fuel to leak in to the ground, storm drains, or surface waters.
  - Place all equipment or vehicles, which are to be fueled, maintained, and stored in a designated area fitted with appropriate BMPs.
  - Clean leaks immediately and disposing of leaked materials properly.
- Good housekeeping for landscape materials, which, at a minimum, shall consist of the following:
- Contain stockpiled materials such as mulches and topsoil when they are not actively being used.
  - Contain all fertilizers and other landscape materials when they are not actively being used.
  - Discontinue the application of any erodible landscape material within 2 days before a forecasted rain event or during periods of precipitation.

- Apply erodible landscape material at quantities and application rates according to manufacture recommendations or based on written specifications by knowledgeable and experienced field personnel.
  - Stack erodible landscape material on pallets and covering or storing such materials when not being used or applied.
- Conduct an assessment and create a list of potential pollutant sources and identify any areas of the site where additional BMPs are necessary to reduce or prevent pollutants in stormwater discharges and authorized non-stormwater discharges. This potential pollutant list shall be kept with the SWPPP and shall identify all non-visible pollutants which are known, or should be known, to occur on the construction site.
- Control the air deposition of site materials and from site operations. Such particulates can include, but are not limited to, sediment, nutrients, trash, metals, bacteria, oil and grease and organics.
- Non-Stormwater Management
  - Implement measures to control all non-stormwater discharges during construction.
  - Wash vehicles in such a manner as to prevent non-stormwater discharges to surface waters or municipal separate storm sewer (MS4) systems.
  - Clean streets in such a manner as to prevent non-stormwater discharges from reaching surface water or MS4 sewer systems.
- Erosion Control
  - Implement effective wind erosion control.
  - Provide effective soil cover for inactive areas and all finished slopes, open space, utility backfill, and completed lots and shall limit the use of plastic materials when more sustainable, environmentally friendly alternatives exist. Where plastic materials are deemed necessary, the discharger shall consider the use of plastic materials resistant to solar degradation.
- Sediment Controls
  - Establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from the Project Site.
  - If a sediment basin is used, design sediment basins according to the method provided in Appendix 2 of the Construction General Permit.
  - Additional requirements apply if Risk Level 2.
- Run-on and Run-off Controls
 

Evaluate the quantity and quality of run-on and runoff through observation and sampling, and effectively manage all run-on, all runoff within the Project Site, and all runoff that discharges off the Project Site. Run-on from off-site shall be directed away from all disturbed areas or

shall collectively be in compliance with the effluent limitations in the Construction General Permit.

- Inspection, Maintenance, and Repair
  - Ensure that all inspection, maintenance repair and sampling activities at the project location shall be performed or supervised by a Qualified SWPPP Practitioner (QSP) representing the discharger.
  - Perform weekly inspections and observations, and at least once each 24-hour period during extended storm events, to identify BMPs that need maintenance to operate effectively, that have failed, or that could fail to operate as intended. Upon identifying failures or other shortcomings, as directed by the QSP, implement repairs or design changes to BMPs within 72 hours of identification and complete the changes as soon as possible.
  - For each inspection required, complete an inspection checklist, including minimum required for inspection items. The checklists shall remain onsite with the SWPPP.
- Rain Event Action Plan (if required)
  - Dischargers shall develop a Rain Event Action Plan (REAP) 48 hours prior to any likely precipitation event as specified in the Construction General Permit. The discharger shall begin implementation and make the REAP available onsite no later than 24 hours prior to the likely precipitation event. If Risk Level 2, ensure that all REAPs be prepared and certified by a QSP. A paper copy of each REAP shall be kept onsite.
  - If Risk Level 2, develop the REAPs for all phases of construction (i.e., Grading and Land Development, Streets and Utilities, Vertical Construction, Post-Construction and include specific minimum site and construction phase information.
  - If Risk Level 2, develop additional REAPs for Project Sites where construction activities are indefinitely halted or postponed (Inactive Construction). At a minimum, Inactive Construction REAPs must include specific minimum information on the Project Site and project phase.
- Monitoring and Reporting Requirements
  - Construction Site Monitoring Program Requirements
    - Pursuant to Water Code Sections 13383 and 13267, all dischargers subject to the Construction General Permit shall develop and implement a written site specific Construction Site Monitoring Program (CSMP) in accordance with the requirements of this Section. The CSMP shall include all monitoring procedures and instructions, location maps, forms, and checklists as required in this section. The CSMP shall be developed prior to the commencement of construction activities, and revised as necessary to reflect project revisions. The CSMP shall be a part of the SWPPP, included as an appendix or separate SWPPP chapter.

- When a change of ownership occurs for all or any portion of the construction site prior to completion or final stabilization, the new discharger(s) [responsible party(ies)] shall comply with these requirements as of the date the ownership change occurs.
  - Objectives
- The CSMP shall be developed and implemented to address the following objectives:
- To demonstrate that the Project Site is in compliance with the Discharge Prohibitions, including applicable NALs/NELs of the General Permit (Risk Level 2);
  - To determine whether non-visible pollutants are present at the construction site and are causing or contributing to exceedances of water quality objectives;
  - To determine whether immediate corrective actions, additional BMP implementation, or SWPPP revisions are necessary to reduce pollutants in stormwater discharges and authorized non-stormwater discharges; and
  - To determine whether BMPs included in the SWPPP/REAP are effective in preventing or reducing pollutants in stormwater discharges and authorized non-stormwater discharges.
- Specific monitoring (inspection) requirements for qualifying rain events are identified in the Construction General Permit.

Perform and record visual observation locations, visual observation procedures, and visual observation follow-up and tracking procedures in the CSMP.

If Risk Level 2, perform quantitative water quality sampling and analysis. Specific sampling times, minimum number of samples, sample methods, and sample collection and handling are required. Samples must represent construction activity discharge from the entire Project Site disturbed areas. Exceptions to sampling including dangerous weather conditions and sampling outside of scheduled business hours. Samples must be analyzed for pH and turbidity and any additional parameters for which monitoring is required by the Regional Water Board.

## Regional

**San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan).** The Porter-Cologne Act provides for the development and periodic review of Basin Plans that designate beneficial uses of California's water resources and establish narrative and numerical water quality objectives for those waters that are necessary to support the designated beneficial uses. Beneficial uses represent the services and qualities of a water body (i.e., the reasons why the water body is considered valuable). Water quality objectives and designated beneficial uses, together, comprise the relevant water quality standards. Basin plans are primarily implemented by using the NPDES permitting system to regulate waste discharges so that water quality objectives are met. The study area is located within the jurisdiction of the San Francisco Bay Basin (Region 2) Regional Water Quality Control Board (San Francisco Bay RWQCB).

The Basin Plan, as amended January 18, 2007, is the master policy document for control of surface water and groundwater quality in the San Francisco Bay Area.<sup>20</sup> The Basin Plan establishes beneficial uses of surface water and groundwater, water quality objectives to protect beneficial uses, and strategies and time schedules for achieving the water quality standards. The Project is required to comply with the water quality standards as identified in the Basin Plan and pertinent existing NPDES permits.

**Municipal Regional Permit (MRP).** The San Mateo Countywide Water Pollution Prevention Program (SMCWPPP) is an association of 20 cities and towns in the county, together with the San Mateo County Flood Control District and San Mateo County. The San Mateo County Permittees, along with the Contra Costa Permittees, Santa Clara Permittees, Alameda Permittees, Fairfield-Suisun Permittees, and Vallejo Permittees are all permitted under Phase I for municipal stormwater and urban runoff discharges under NPDES Permit No. CAS612008, Order No. Order R2-2009-0074, adopted October 14, 2009.

One of the primary objectives of the regulations for pollutant dischargers under the NPDES program is the reduction of pollutants in urban stormwater through the use of structural and nonstructural BMPs. The MRP requires the Permittees, including the City of Burlingame, to address eight general control measures associated with construction and operational activities, including (1) public education and outreach; (2) public participation/involvement; (3) illicit discharge detection and elimination; (4) construction site stormwater runoff control for sites greater than 1 acre; (5) post-construction stormwater management in new development and redevelopment; and (6) pollution prevention/good housekeeping for municipal operations, (7) water quality monitoring; and (8) implementation of controls to meet TMDLs. These control measures are implemented through the use of BMPs.

Provision C.3 of the MRP is directly applicable to the Project. This provision allows the Permittees to use their planning authorities to include appropriate source control, site design, and stormwater treatment measures in new development and redevelopment projects to address both soluble and insoluble stormwater runoff pollutant discharges and prevent increases in runoff flows from new development and redevelopment projects. This goal is to be accomplished primarily through the implementation of Low Impact Development (LID) techniques.

Regulated Projects, as defined in the Municipal Regional Permit (Provision C.3.b.), are required to implement LID source control BMPs, site design BMPs, and stormwater treatment BMPs, onsite or at a joint stormwater treatment facility in accordance with Provisions C.3.c and C.3.d, unless the Provision C.3.e alternate compliance options are invoked. Regulated Projects must provide permanent/post-construction treatment controls for stormwater according to specific calculations.

Thresholds for determining whether Provision C.3 applies to a project are based on the amount of impervious surface created and/or replaced by a project. Regulated Projects include development or redevelopment projects, such as public projects, that create or replace 10,000 square feet and greater of impervious surfaces. If redevelopment results in an alteration of more than 50 percent of the existing

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<sup>20</sup> San Francisco Regional Water Quality Control Board, San Francisco Bay Basin Water Quality Control Plan (Basin Plan), as amended, January 18, 2007.

impervious surfaces, permanent BMPs must be implemented to treat runoff from the entire Project Site. The Project would create or replace more than 10,000 square feet of impervious surfaces and likely alter more than 50 percent of the existing impervious surfaces.<sup>21</sup> Therefore, the Project would be a Regulated Project. The following presents the specific requirements of the C.3 provision.

- **Low Impact Development (LID) (C.3.c).** The goal of LID is to reduce runoff and mimic a site's predevelopment hydrology by minimizing disturbed areas and impervious cover and then infiltrating, storing, detaining, evapotranspiring, and/or biotreating stormwater runoff close to its source. LID employs principles such as preserving and recreating natural landscape features and minimizing imperviousness to create functional and appealing site drainage that treats stormwater as a resource, rather than a waste product. All Regulated Projects must comply with minimum LID requirements.

In accordance with the Municipal Regional Permit Provision C.3.c.i. LID, as a Regulated Project, the Project will have to comply with the following minimum LID requirements, unless all discretionary permits have been obtained by December 1, 2011:

1. Source Control Requirements. All Regulated Projects must implement source control measures onsite that at a minimum, shall include the following:
  - a. Minimization of stormwater pollutants of concern in urban runoff through measures that may include plumbing of the following discharges to the sanitary sewer, subject to the local sanitary sewer agency's authority and standards:
    - Discharges from indoor floor mat/equipment/hood filter wash racks or covered outdoor wash racks for restaurants;
    - Dumpster drips from covered trash, food waste and compactor enclosures;
    - Discharges from covered outdoor wash areas for vehicles, equipment, and accessories;
    - Swimming pool water, if discharge to onsite vegetated areas is not a feasible option; and
    - Fire sprinkler test water, if discharge to onsite vegetated areas is not a feasible option;
  - b. Properly designed covers, drains, and storage precautions for outdoor material storage areas, loading docks, repair/maintenance bays, and fueling areas;
  - c. Properly designed trash storage areas;
  - d. Landscaping that minimizes irrigation and runoff, promotes surface infiltration, minimizes the use of pesticides and fertilizers, and incorporates other appropriate sustainable landscaping practices and programs such as Bay-Friendly Landscaping;
  - e. Efficient irrigation systems; and

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<sup>21</sup> Beginning December 1, 2011, the threshold for requirement stormwater treatment will drop from 10,000 to 5,000 square feet or more for certain project categories: uncovered parking areas (stand-alone or part of another use), restaurants, auto service facilities, and retail gasoline outlets.

- f. Storm drain system stenciling or signage.
2. Site Design and Stormwater Treatment Requirements.
- a. Each Regulated Project shall be required to implement at least the following design strategies onsite:
- (i) Limit disturbance of natural water bodies and drainage systems; minimize compaction of highly permeable soils; protect slopes and channels; and minimize impacts from stormwater and urban runoff on the biological integrity of natural drainage systems and water bodies;
  - (ii) Conserve natural areas, including existing trees, other vegetation, and soils;
  - (iii) Minimize impervious surfaces;
  - (iv) Minimize disturbances to natural drainages; and
  - (v) Minimize stormwater runoff by implementing one or more of the following site design measures:
    - Direct roof runoff into cisterns or rain barrels for reuse.
    - Direct roof runoff onto vegetated areas.
    - Direct runoff from sidewalks, walkways, and/or patios onto vegetated areas.
    - Direct runoff from driveways and/or uncovered parking lots onto vegetated areas.
    - Construct sidewalks, walkways, and/or patios with permeable surfaces.
    - Construct driveways, bike lanes, and/or uncovered parking lots with permeable surfaces.
- b. Each Regulated Project must treat 100 percent of the amount of runoff identified in Provision C.3.d for the Regulated Project's drainage area with LID treatment measures onsite or with LID treatment measures at a joint stormwater treatment facility.
- (i) LID treatment measures are harvesting and re-use, infiltration, evapotranspiration, or biotreatment.
  - (ii) A properly engineered and maintained biotreatment system may be considered only if it is infeasible to implement harvesting and re-use, infiltration, or evapotranspiration at a Project Site.
  - (iii) Infeasibility to implement harvesting and re-use, infiltration, or evapotranspiration at a Project Site may result from conditions including the following:
    - Locations where seasonal high groundwater would be within 10 feet of the base of the LID treatment measure.
    - Locations within 100 feet of a groundwater well used for drinking water.

- Development sites where pollutant mobilization in the soil or groundwater is a documented concern.
  - Locations with potential geotechnical hazards.
  - Smart growth and infill or redevelopment sites where the density and/or nature of the project would create significant difficulty for compliance with the onsite volume retention requirement.
  - Locations with tight clay soils that significantly limit the infiltration of stormwater.
- (vi) Biotreatment systems shall 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.
- (vii) Green roofs may be considered biotreatment systems that treat roof runoff only if they meet certain minimum specifications submitted by the Permittees and approved by the RWQCB.
- **Numeric Sizing Criteria for Stormwater Treatment Systems (C.3.d).** Stormwater treatment measures must be numerically sized in accordance with criteria identified under Provision C.3.d. The permittees must also verify that infiltration devices are designed and installed such that they would not cause or contribute to the degradation of groundwater quality at Project Sites. An infiltration device is any structure that is deeper than wide and designed to infiltrate stormwater into the subsurface and, as designed, bypass the natural groundwater protection afforded by surface soil. Specific requirements are specified in Provision C.3.d.iv.(2).
  - **Hydromodification Management (C.3.g).** A Hydromodification Management (HM) Project is a Regulated Project that creates and/or replaces 1 acre or more of impervious surface and is not specifically excluded within the requirements of Attachments B–F of the Municipal Regional Permit. The Project Site is located within an HM exempt area, so these requirements would not apply, but the Project would still be required to implement all applicable remaining standards.

Additionally, the MRP incorporates requirements for TMDLs and other pollutant source load reductions within the San Francisco Bay Region including: Pesticides Toxicity Control (C.9.), Trash Load Reduction (C.10.), Mercury Controls (C.11.), PCBs Controls (C.12.), Copper Controls (C.13.), Polybrominated Diphenyl Ethers (PBDE), Legacy Pesticides and Selenium (C.14.).

The MRP requires municipalities to report on monitoring compliance with the MRP. The City of Burlingame submitted its latest report in January 2010.

*C.3 Stormwater Technical Guidance.* While not a regulation, the SMCWPPP provides additional direction to developers, builders, and Project Sponsors to design and build LID projects to ensure compliance with the various C.3 requirements. The *C.3 Stormwater Technical Guidance*, Version 2.0 was published October 2010, and is available at [www.flowstobay.org](http://www.flowstobay.org). Chapter 4 identifies how

various site design measures should be developed. Chapters 5 and 6 provide general and specific technical guidance for treatment measures. Commonly used treatment measures can include such things as:

- Bioretention areas/rain gardens, including bioretention swales
- Flow-through planter boxes
- Tree well filters
- Vegetated buffer strips
- Infiltration trenches
- Extended detention basins
- Green roofs
- Pervious paving, turf block and permeable joint paving
- Media filters

To implement the C.3 requirements, the City of Burlingame must adopt conditions of approval for the Project that require appropriate site design, source control measures, and, as applicable, treatment measures. To comply with C.3, Project Sponsor(s) must determine the appropriate sizes and locations of BMPs and have the option of selecting the appropriate treatment method(s). When the detailed on-site storm drain system design is prepared for the final construction documents, the designs must include the specific LID and related BMP features that will be used for the Project. The City of Burlingame will be responsible for ensuring the Project complies with applicable narrative and numeric design requirements to meet the SMCWPPP requirements prior to issuing grading and/or building permits for the Project.

**Waste Discharge Requirements or Individual NPDES Permit.** No general permit is in effect for construction or operational groundwater dewatering in Region 2, unless groundwater dewatering is permanent, requires treatment, and is in excess of 10,000 gallons per day (see below). Therefore, if substantial construction or operational dewatering is required, a permit, from RWQCB, to discharge waste may be required. If the discharge is directly to a surface water resource, a completed federal NPDES permit application form must be filed with RWQCB. For other types of discharges, such as those affecting groundwater or in a diffused manner (e.g., erosion from soil disturbance or waste discharges to land), a Report of Waste Discharge (ROWD) must be filed with RWQCB in order to obtain Waste Discharge Requirements (WDRs). Discharge of small amounts of water from construction dewatering is permitted under the Statewide Construction General Permit.

**Permanent Treated Groundwater Dewatering General Waste Discharge Requirement (Treated Groundwater Dewatering Waste Discharge Requirements).** If implementation of the project would result in more than 10,000 gallons per day of permanent groundwater dewatering and the groundwater must be treated prior to discharge, discharges would require coverage under the General Waste Discharge Requirements for Discharge or Reuse of Extracted Brackish Groundwater and Reverse

Osmosis Concentrate Resulting from Treatment of Groundwater by Reverse Osmosis and Discharge or Reuse of Extracted and Treated Groundwater Resulting from Structural Dewatering (Order No. R2-2007-0033, NPDES No. CAG912004). This permit also includes reclamation and land discharge specifications, receiving water limitations, groundwater limitations, and monitoring and reporting requirements. To obtain coverage under this General Permit, the discharger must submit an NOI application package documenting the proposed treatment system and associated operation, maintenance, and monitoring plans. The NOI must include analytical results for influent as identified in this General Permit and documentation supporting selection of proposed treatment system(s) effectiveness at meeting effluent and receiving water limitations.

**San Francisco Bay Conservation and Development Commission.** The San Francisco Bay Conservation and Development Commission (BCDC) is a California state agency which was established to accomplish two primary goals: to prevent the unnecessary filling of the Bay, and to increase public access to and along the Bay shoreline. It is responsible for the regulation of construction activities in close proximity to the Bay, including, but not limited to: regulating all filling and dredging in the Bay, regulating all new development within the first 100 feet inland for the Bay shoreline, ensuring that public access to the shoreline is provided, and protecting the Bay for water-related industries, water-oriented sports, airports, and wildlife refuges. Approval from BCDC would be required for infrastructure, landscaping, and revetment repair activities within the 100-foot shoreline band along the Project Site.

BCDC completed and adopted the Bay Plan in 1968. The McAteer-Petris Act and the Bay Plan and subsequent amendments to these documents, prescribes a set of rules for non-maritime shoreline development along the San Francisco Bay Waterfront.

Several Policies of the Bay Plan are aimed at protecting the Bay's water quality. The applicable policies are:

#### *Water Quality*

- Policy 2:* Water quality in all parts of the Bay should be maintained at a level that will support and promote the beneficial uses of the Bay as identified in the Basin Plan. The policies, recommendations, decisions, advice and authority of the SWRCB and the San Francisco Bay RWQCB should be the basis for carrying out BCDC's water quality responsibilities.
- Policy 3:* Shoreline projects should be designed and constructed in a manner that reduces soil erosion and protects the Bay from increased sedimentation through the use of appropriate erosion control practices.
- Policy 4:* Polluted runoff from projects should be controlled by the use of best management practices in order to protect the water quality and beneficial uses of the Bay, especially where water dispersion is poor and near shellfish beds and other significant biotic resources. Whenever possible, runoff discharge points should be located where the discharge will have the least impacts. Approval of projects involving shoreline areas

polluted with hazardous substances should be conditioned so that they will not cause harm to the public or the beneficial uses of the Bay.

Because the Project Site is within the jurisdiction of BCDC, the design of any shoreline protection must comply with BCDC regulations. BCDC regulations require that the work be done within the existing toe of the slope on the Bay side and with minimum impact to the Bay and the existing shoreline. Any Bay fill is discouraged by BCDC. Construction activity should not cause disturbance to the Bay environment.

## **Local**

**County of San Mateo.** Ordinance 3633 and Section 4.100 of the County Code establish the requirements for stormwater discharges and reducing pollutants in stormwater.

*Sediment and Erosion Control (Construction BMPs).* BMPs for sediment and erosion control would need to be employed during project construction to meet local sediment and erosion control policies. These BMPs would need to meet the County's Watershed Protection Maintenance Standards, generally set out in the Ordinance 3633. Under this ordinance, the County may establish controls on the volume and rate of storm water runoff from new developments and redevelopments as may be appropriate to minimize the discharge and transport of pollutants.

**City of Burlingame General Plan.** Applicable objectives contained with the City's General Plan, Conservation Element, include those related to the maintenance and improvement of water quality in the Bay and streams flowing through the City. In addition, other applicable objectives include those related to conservation of the City's resources. The applicable programs actions are listed below.

- Water Quality Program Actions:
  - Prohibit any discharge into Bay Water from any manufacturing or retail enterprise without proper treatment of the discharge.
  - Cooperate with regional agencies with responsibility for maintaining water quality.
- Erosion Program Actions:
  - Regulate new development to reduce erosion problems.

**City of Burlingame Municipal Code.** Chapter 15.14 – Storm Water Management and Discharge Control of the City's Municipal Code generally addresses the measures and BMPs to prevent stormwater pollution. In addition, Chapter 15.10 – Sanitary Sewer Use Regulations, includes measures to control industrial wastewater, and Chapter 18.20- Grading and Excavation, contains regulations and requirement to minimize potential on-site flooding, erosion, and sediment transport. Chapter 26.16.090 – Storm Drain System establishes the requirements for on-site storm drainage systems.

**Bayfront Specific Plan.** The Bayfront Specific Plan<sup>22</sup> includes the following community standards that are applicable to hydrology:

- The first floor for any proposed building shall be built at an elevation of 10 feet above mean sea level (+10' MSL), with no occupied areas below elevation 10' MSL to address the possibility of flooding.
- For properties adjacent to the Bay shoreline, the site shall be evaluated to determine if slope stabilization or other erosion control measures should be done to prevent future erosion of the Bay edge.
- In order to ensure that the public access areas adjacent to the Bay edge are not subject to tidal flooding, the height of the shoreline protection structure shall be at least +8 feet MSL or as determined necessary to deter tidal flooding by the City Engineer.

## **Impacts and Mitigation Measures**

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### **Standards of Significance**

This EIR identifies significance criteria based on the CEQA Guidelines Appendix G. Significant hydrology or water quality impacts would arise if the Project would:

- Violate any water quality standards or waste discharge requirements;
- Create or contribute runoff that would be an additional source of water quality degradation or result in substantial erosion or sedimentation on- or off-site;
- Create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems and/or increase upstream or downstream flooding and require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Substantially degrade or deplete groundwater supplies, including impacts to wells, or interfere substantially with groundwater recharge such that there would be a significant net deficit in aquifer volume or a lowering of the local groundwater table level;
- Place structures within a 100-year special flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, or otherwise expose people or structures to a substantial risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam; or
- Expose people or structures to a substantial risk of inundation by seiche, tsunami, extreme high tides, sea level rise, and/or mudflow.

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<sup>22</sup> City of Burlingame Planning Department, *Burlingame Bayfront Specific Plan*, revised August 2006.

## Methodology

The primary sources of information on which the analysis in this section is based include site observations, pertinent data on hydrology and water quality previously compiled for other hydrologic studies in the project vicinity, and information from FEMA, BCDC, the City of Burlingame, San Mateo County, and the San Francisco Bay RWQCB. The analysis of Project impacts is qualitative and is based on conceptual grading and design information developed by the Project Sponsor for the 300 Airport Boulevard Site. The analysis of the 350 Airport Boulevard Project is programmatic because no application has been filed. However, for purposes of the analysis, the hydrology and water quality baseline conditions and the magnitude of potential impacts at the 350 Airport Boulevard Site are assumed to be similar because the two sites are adjacent.

## Environmental Analysis

For each potential impact associated with the Project, a level of significance is determined and is reported in the impact statement. Conclusions of significance are defined as follows: significant impact (S), potentially significant impact (PS), less-than-significant impact (LTS), or no impact (NI). For each impact identified as being significant (S) or potentially significant (PS), this EIR provides mitigation measures to reduce, eliminate, or avoid the adverse effect. If the mitigation measures would reduce the impact to a less-than-significant (LTS) level successfully, this is stated in this EIR. If the mitigation measures would not diminish significant or potentially significant impacts to a less-than-significant level, the impacts are classified as “significant unavoidable impacts (SU).” The impacts of the potential development of the 350 Airport Boulevard Site are evaluated in this EIR on a programmatic level. Following the submittal of a project-specific development proposal for the 350 Airport Boulevard Site, additional environmental analysis would be required. For this section, HY refers to Hydrology and Water Quality.

*HY-1 Violation of Water Quality Standards or Waste Discharge Requirements. Construction of the Project would not violate any water quality standards or waste discharge requirements resulting in a less-than-significant impact. (LTS)*

The applicable water quality standards are listed in the Basin Plan. The applicable waste discharge requirements are those found in the NPDES Construction General Permit (General Permit for Discharges of Storm Water Associated with Construction Activity Order No. 2009-0009-DWQ, NPDES No. CAR000002), and the Region 2 Municipal Regional Permit (NPDES Permit No. CAS612008, Order No. Order R2-2009-0074). The permits are intended to implement the requirements of the Basin Plan for water quality objectives. If substantial groundwater dewatering is required during or after construction, an individual NPDES Permit and associated WDRs may be required.

The following describes elements of the Project that would ensure compliance with these regulations such that water quality standards and waste discharge requirements would not be violated, resulting in a less-than-significant impact.

### **300 Airport Boulevard and 350 Airport Boulevard**

**Construction.** Construction activities have the potential to cause water quality standards to be violated if controls are not in place to minimize sediment and pollutants in construction site stormwater runoff. All construction activities, including installation and realignment of the modified roadway alignment and utilities, would be required to comply with existing regulatory requirements for construction (General Permit for Discharges of Storm Water Associated with Construction Activity Order No. 2009-0009-DWQ, NPDES No. CAR000002). The NPDES Construction General Permit requires the development and implementation of a SWPPP, which will identify the appropriate BMPs and other controls as determined by the Project's calculated risk level, as described in the Regulatory Setting. The SWRCB has identified compliance with the Construction General Permit requirements as protective of water quality during construction activities.

The City's Municipal Code (Chapter 15.14 - Storm Water Management and Discharge Control, and Chapter 18.20 - Grading and Excavation) and permit review process would require preparation and approval of a SWPPP. The key elements of this process under the City's authority would include:

- Reviewing of the erosion control plan for consistency with local requirements, appropriateness and adequacy of proposed BMPs for each Project Site before issuance of grading permits for projects;
- Verifying that sites disturbing one acre or more of land have filed a NOI for coverage under the Construction General Permit;
- Conducting of inspections to determine compliance with local ordinances (grading and stormwater) and determine the effectiveness of the BMPs in the categories listed in C.6.c.i.;
- Requiring timely corrections of all actual and threatened violations of local ordinances observed.

Minor construction dewatering would be covered under the Construction General Permit. If substantial construction dewatering is required and disposal would be to land or surface water, an individual WDR must be obtained from RWQCB. The WDR will specify the specific treatment (e.g., desedimentation, filtration, flocculation, and others) and discharge (e.g., maximum rate and volume of discharge) requirements, if any, necessary to ensure discharges do not cause or contribute to water quality degradation. The WDR would require testing to make sure that discharged waters do not pose a substantial risk to water quality. Additionally, approval from the San Francisco Bay RWQCB is required for all discharges of water from construction dewatering activities. Revetment repairs would require a permit from BCDC.

The construction-related regulatory process described above would apply to both the 300 and 350 Airport Boulevard Sites. Compliance with those requirements and standards would be the responsibility of the City of Burlingame to monitor and enforce in conjunction with the

issuance of a grading permit. Given these controls, construction impacts would be less than significant.

**Operation.** Amendments to the Bayfront Specific Plan and zoning regulations would provide for the operation of a variety of office, retail, commercial, and possible life science campus research uses in multi-story buildings with parking, roadways, landscaping, and associated amenities. All wastewater generated by Project uses would be discharged directly to the City's sanitary sewer system and would, therefore, be required to comply with the standards and water quality protection measures imposed under the MRP. There would be no industrial or process water discharges to Sanchez Channel or San Francisco Bay, and there are no water quality objectives or WDRs specific to the types of proposed uses. Thus, there would be no point source discharges that would violate the water quality standards in the Basin Plan. For those reasons, there would be no impact associated with point source discharges.

Pollutants in stormwater runoff from urban development such as the Project have the potential to violate water quality standards if the types and amounts of pollutants are not adequately reduced. Stormwater runoff from the types of urban uses that would be facilitated by Project approvals is regulated under the Region 2 Municipal Regional Permit (NPDES Permit No. CAS612008, Order No. Order R2-2009-0074). The Project Sponsor would be required to submit the SMCWPPP checklist to the City to show compliance with the NPDES Regional Permit requirements. BMPs included in site designs and plans for the proposed project would be reviewed by City of Burlingame engineering staff to assure appropriateness and adequate design capacity, prior to permit issuance. Dischargers must provide annual reports to RWQCB to demonstrate compliance with the requirements of Provision C.3.

San Francisco Bay RWQCB has incorporated requirements in the Municipal Stormwater NPDES Permit to be protective of water quality and approved the SMCWPPP as being in compliance with the Municipal Stormwater NPDES Permit. The City review and permitting process would ensure that the Municipal Stormwater NPDES Permit WDR is not violated for the Project.

For those reasons, the Project would not violate water quality standards or WDRs during operation, and impacts would be less than significant.

*HY-2 Construction-related Water Quality Degradation, Erosion, and Sedimentation. Construction of the Project would not create or contribute runoff that would be an additional source of water quality degradation or result in substantial erosion or sedimentation on- or off-site. Impacts would be less than significant. (LTS)*

### **300 Airport Boulevard and 350 Airport Boulevard**

Construction of the Project would include activities such as clearing and grubbing, pavement removal and replacement, excavation and trenching for foundations and utilities, soil compaction, cut and fill activities, and grading; all of which would temporarily disturb soils. Typical equipment that would be used during Project construction would include large

earthwork machinery, one to two pile-driver rigs, large concrete pumps, concrete trucks, large cranes for steel and exterior façade installation, and typical delivery and small-use trucks. Potential construction lay-down and staging areas would be at the property to the east of the 300 Airport Boulevard Site, across the existing roadway along the waterfront.

Disturbed soils are susceptible to high rates of erosion from wind and rain, resulting in sediment transport. Erosion and sedimentation can affect water quality through interference with photosynthesis, oxygen exchange, and the respiration, growth, and reproduction of aquatic species. Other pollutants, such as nutrients, trace metals, and hydrocarbons, can attach to sediment and be transported with sediment. Sediment-associated pollutants could also cause or contribute to degradation of water quality.

The delivery, handling, and storage of construction materials and wastes, as well as the use of construction equipment, could also introduce a risk for stormwater contamination that could impact water quality in Sanchez Channel or the Bay. Spills or leaks from heavy equipment and machinery can result in oil and grease contamination, and some hydrocarbon compound pollution associated with oil and grease can be toxic to aquatic organisms at low concentrations. Staging areas or building sites can be sources of pollution because of the use of paints, solvents, cleaning agents, and metals during construction. Impacts associated with metals in stormwater include toxicity to aquatic organisms, such as bioaccumulation, and the potential contamination of drinking supplies. Pesticide use (including herbicides, fungicides) associated with site preparation work (as opposed to pesticide use for landscaping) is another potential construction activities source of stormwater contamination. Pesticide impacts to water quality include toxicity to aquatic species and bioaccumulation in larger species. Larger pollutants, such as trash, debris, and organic matter, are additional pollutants that could be associated with construction activities. Impacts include health hazards and aquatic ecosystem damage associated with bacteria, viruses, and vectors and physical changes to the aquatic ecosystem.

To minimize the potential for adverse effects associated with erosion and sedimentation during construction, and from chemical contaminants from construction equipment and materials, the Project would be required to comply with NPDES Construction General Permit, as described in Impact HY-1, and the City's Municipal Code sections for construction and stormwater management (Chapter 15.14 - Storm Water Management and Discharge Control, and Chapter 18.20 - Grading and Excavation) including incorporation of erosion and sediment controls during construction. Such compliance would reduce erosion and sediment transport during project construction to the extent required by existing regulations, and, therefore, impacts would be less than significant.

*HY-3 Operational Water Quality Degradation, Erosion, and Sedimentation. Operation of the Project would not create or contribute runoff that would be an additional source of water quality degradation or result in substantial erosion or sedimentation on- or off-site. Impacts would be considered less than significant. (LTS)*

### **300 Airport Boulevard**

The 300 Airport Boulevard Site is currently vacant and consists of approximately 17 acres of impervious surface and approximately 2 acres of pervious surface (vegetation). The asphalt in the northern portion of the 300 Airport Boulevard Site is in poor condition, and in some areas base rock or crushed rock overlies thin asphalt concrete. Stormwater runoff from the 300 Airport Boulevard Site in its present condition is expected to include sediment. Pesticide residuals have not been detected in surface water or sediment. Some lead may be present, but not at levels of concern.<sup>23</sup> Trace amounts of minerals from soil and fill and fecal coliforms and nitrate from animal activity are also expected to be in runoff.

The 300 Airport Boulevard Site would provide a variety of office, retail, commercial, and possible life science campus research uses in multi-story buildings with parking, roadways, landscaping, and associated amenities. After completion, the East and West Campus of the 300 Airport Boulevard Site, including realigned Airport Boulevard, would total approximately 15 acres of impervious surfaces. Even though there would be a reduction in stormwater peak flow runoff associated with a decrease in impervious surfaces, the change in land use from a primarily vacant and underutilized area to an area with roadways, parking areas, rooftops, and landscaping would change the types and amounts of urban pollutants in stormwater runoff, compared to existing conditions. Urban pollutants likely to be present in stormwater runoff from the site would include oil, grease, and metals accumulated in roadways, driveways, parking lots, and on rooftops (from atmospheric dispersion), as well as pesticides, herbicides, particulate matter, nutrients, animal waste, and other oxygen-demanding substances from landscaped areas. Increased pollutant loads in stormwater could cause receiving water quality degradation if measures are not in place to minimize the types and amounts of pollutants in the runoff. Sedimentation and erosion would not be a substantial component of post-construction runoff because soils exposed during construction would be covered with impervious surfaces (buildings, parking areas, hardscaping) or landscaped. Additionally, all runoff would be routed through new and existing on-site storm drainage systems to existing off-site storm drains/channels, so that off-site overland erosion would not occur.

The 300 Airport Boulevard Project would be required to comply with the MRP SMCWPPP Provision C.3 Stormwater Technical Guidance, which was designed to help developers and project sponsors include post-construction stormwater controls to help reduce long term impacts on stormwater quality and receiving waters. Use of structural and non-structural BMPs, which are required under the SMCWPPP, are also necessary to reduce the

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<sup>23</sup> Treadwell & Rollo. Surface Water Investigation Report, 350 Beach Road, Burlingame, California. February 22, 2008.

concentrations of pollutants reaching surface water bodies and groundwater. Structural BMPs would remove these substances from runoff, while non-structural BMPs, such as integrated pesticide management practices, would assist with source reduction.

BMPs that have been identified to be incorporated into the Project includes stormwater retention and treatment areas, which would also serve as landscape elements. The largest would be located along the site perimeter on the Bay side and along Sanchez Channel, and smaller ones would be spaced along the realigned Airport Boulevard through the site interior. The stormwater treatment areas are planned as “bioretention areas” (rain gardens).<sup>24</sup> A stormwater retention zone would also be used to store and treat stormwater runoff from sidewalks and other areas. As project design is refined, additional BMPs will be incorporated into the Project to ensure compliance with Regional Permit Provision 3c, particularly with respect to LID measures, as explained in Impact HY-1.

Therefore, operation of the 300 Airport Boulevard Site would not create or contribute runoff that would be an additional source of water quality degradation or result in substantial erosion or sedimentation on- or off-site. Impacts would be less than significant.

It should be noted that the effectiveness of any stormwater quality/quantity BMPs designed for infiltration, biofiltration, or below-ground-surface treatment could be compromised with increases in shallow groundwater tables due to sea level rise. This impact, along with recommended mitigation, is evaluated separately under Impact HY-7.

### **350 Airport Boulevard**

The 350 Airport Boulevard Site consists of an abandoned one-story wooden structure and vacant paved surfaces. The 350 Airport Boulevard Site was formerly occupied by a 41,000-square-foot concrete warehouse structure. Stormwater runoff from the 350 Airport Boulevard Site would be expected to contain sediment from exposed soil, chemical pollutants from old paved surfaces, and nutrients.

A development application has not been submitted for the 350 Airport Boulevard Site, but the proposed amendments to the Bayfront Specific Plan would provide for office and commercial land uses, along with associated parking lots, roadway access, and landscaping. Because there would be no change in the amount of impervious surface compared to existing conditions, there would be no increase in stormwater peak flow rates and volumes. However, the intensified land use would increase the types and amounts of urban pollutants in stormwater runoff. As described for 300 Airport Boulevard, an increase in urban pollutants has the potential to degrade receiving water quality.

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<sup>24</sup> These types of features function as soil and plant-based filtration devices to remove pollutants through a variety of physical, biological, and chemical treatment processes. (San Mateo County, San Mateo Countywide Water Pollution Prevention Program, Chapter 6.1, page 68.)

Sedimentation and erosion would not be a substantial component of post-construction runoff because soils exposed during construction would be covered with impervious surfaces (buildings, parking areas, hardscaping) or landscaped. Additionally, all runoff would need to be routed through new and existing on-site storm drainage systems to existing off-site storm drains/channels, so that off-site overland erosion would not occur.

The Burlingame Bayfront Specific Plan requires that projects include post-construction BMPs. As applicable to the 350 Airport Boulevard Site, the project sponsor(s) would be required to submit the SMCWPPP checklist to the City to show compliance with the NPDES Regional Permit requirements, specifically MRP Provision C.3. BMPs included in site designs and plans for development at 350 Airport Boulevard would be reviewed by City engineering staff to assure appropriateness and adequate design, prior to issuance of a grading permit. Therefore, operation of the 350 Airport Boulevard Site would not create or contribute runoff that would be an additional source of water quality degradation or result in substantial erosion or sedimentation on- or off-site. Impacts would be less than significant.

*HY-4 Drainage Systems. The Project would not create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. There would be less-than-significant impacts to stormwater drainage systems. (LTS)*

### **300 Airport Boulevard**

Under existing conditions, stormwater from the 300 Airport Boulevard Site is not conveyed to the City's piped drainage system, but is conveyed by pump to Sanchez Channel, which flows into the Bay. Approximately 89 percent of the 300 Airport Boulevard Site is covered with impervious surfaces. After completion, impervious surfaces at the East and West Campus would comprise approximately 78 percent of the site, an 11 percent reduction. The reduction in impervious surfaces would reduce the stormwater peak flow runoff generated by 300 Airport Boulevard compared to existing conditions. A reduction in peak flows would reduce the demand on the stormwater pump station at the southwest side of the 300 Airport Boulevard Site. The 300 Airport Boulevard Project would realign the roadway storm drain system to follow the realigned Airport Boulevard, which would remain a City storm drain system. This system will drain Airport Boulevard, as well as the podium surface and vertical portions of the buildings, either directly or through a connected storm drain stub, and would drain to Sanchez Channel through existing outfalls. The lower levels of the podium may include drains for incidental water such as wash down, which would pump to the sanitary sewer. The existing outfall from the private storm drain pump described above, may be maintained to drain portions of the open space and podium areas in proximity to it. As described in Impact HY-2, a reduction in peak flows combined with incorporation of required BMPs for water quality protection would ensure capacity would not be exceeded and there would not be additional sources of polluted runoff. Impacts would be less than significant.

### **350 Airport Boulevard**

A development application has not been submitted for the 350 Airport Boulevard Site, but the proposed amendments to the Bayfront Specific Plan would provide for office and commercial land uses, along with associated parking lots, roadway access, and landscaping. Because there would be no increase in the amount of impervious surface compared to existing conditions, there would be no increase stormwater peak flow rates and volumes. Further, because the 350 Airport Boulevard Site primarily fronts the Bay and is at the downstream end of Sanchez Channel where it discharges to the Bay, the potential for drainage capacity to be exceeded is not considered substantial. In addition, prior to issuance of a grading permit, as described in Impact HY-2, the City of Burlingame will require that stormwater BMPs are included in project design. Impacts would be less than significant.

*HY-5 Groundwater Supplies. Construction of the Project could involve dewatering, but there would be no long-term demand on groundwater supplies because Project water demand would be met through existing SFPUC entitlements and deliveries. There would be a less-than-significant impact on groundwater. (LTS)*

### **300 Airport Boulevard and 350 Airport Boulevard**

Project excavation depth would vary from zero to 7.5 feet from the finish floor of the basement garage. As such, the maximum excavation would be at an elevation of 5.5 feet below sea level. Because Project Site groundwater is shallow and excavation would likely intercept groundwater, some dewatering is anticipated during construction of subgrade features. This would be a short-term less-than-significant impact because groundwater is not a source of supply or recharge, and dewatering would not have a substantial adverse effect on surface water-groundwater interactions. This would not adversely affect groundwater supplies because the City of Burlingame's sole source of potable water is the SFPUC Regional Water System (RWS), which obtains approximately 85 percent of its water supply from the Hetch Hetchy Reservoir. There would be no long-term groundwater impacts.

Sea level rise does have the potential to alter groundwater flow characteristics that could affect groundwater-surface water interactions, which is discussed under Impact HY-6, below.

*HY-6 100-Year Flood Hazard. The Project would not place structures in areas subject to 100-year flood hazard and no impact would occur. (NI)*

### **300 Airport Boulevard and 350 Airport Boulevard**

The only 100-year flood hazard zone at the Project Site is confined to Sanchez Channel. The Project proposes a 100-foot setback between the Channel and the developed portions of the Project Site. Some Bay Trail and open space improvements are proposed along Sanchez Channel, but they would not place permanent structures in the channel or modify the channel. Because neither the floodway nor floodplain would be affected, nor would housing be placed within a 100-year flood hazard area, there would be no impact.

*HY-7 Sea Level Rise. The Project would be subject to potentially significant flooding risks resulting from sea level rise. (PS)*

### **300 Airport Boulevard**

Currently, the 300 Airport Boulevard Site is protected from flooding by a shoreline barrier, but the barrier has experienced some erosion since it was constructed in the 1960s. As explained above, sea levels are predicted to rise, and this could increase the frequency of flood events, reduce storm flow conveyance capacities, result in over-topping of the existing barriers, contribute to shallow groundwater rise flood effects, increase high tide elevations, and create more stress on the shoreline and flood protection features. Such changes are expected to occur regardless of whether the Project is implemented.

Overall, the 300 Airport Boulevard Project is not expected to result in substantial flood risks to people and above-ground structures because the site elevation and finished floors would be about 4 feet above the expected 100-year peak tide elevation. However, underground structures could be subject to flooding from increases in the shallow groundwater table, the storm drain system may be subject to backwater effects and reduced conveyance capacity, structures and embankments may not be designed to adequately protect against higher dynamic loads associated with higher tides. These would be potentially significant impacts, which are further described below.

Figure 3.9-1 shows that in the existing condition most of the 300 Airport Boulevard Site would be inundated during the 100-year flood event if sea levels in the Bay rise by 55-inches. In addition, as noted in the Environmental Setting, a 55-inch sea level rise would result in inundation of a majority of the Project Site, with a potential 100-year flood elevation of about 11.6 feet above msl (existing tidal base flood elevation plus 55-inch sea level rise). Because the Project Site is not subject to tsunami inundation, it can be expected that the tsunami run-up elevation is not greater than the 100-year tidal elevation of 7 feet.

According to the grading plan, the majority of the 300 Airport Boulevard Site would be graded to over 10 feet above msl and the finished floor elevation of all buildings would be constructed to 14.5 feet (i.e., 2.9 feet above the 11.6-foot potential flood elevation). The reconfigured Airport Boulevard would be raised to about 14.5 feet running through the Project Site.<sup>25</sup> Additionally, the City would require that adequate drainage and pump facilities be installed to prevent ponding above 10 inches in the parking area. All structures at the 300 Airport Boulevard Site would be set back from Sanchez Channel and the Bay by at least 100 feet. The elevation at the east and west setback lines would be about 14.0 feet, and over 13.0 feet along the northern boundary, separating the built-up area from shoreline flooding. As such, even in the event of sea level rise, the majority of the 300 Airport Boulevard Site and Project surface features would be above the 100-year flood elevation, and the potential for inundation during the 100-year flood event in would not be substantial.

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<sup>25</sup> DES Architects and Engineers, Burlingame Point Preliminary Grading and Drainage Plan Update, December 3, 2010.

Grading and fill for the higher overall site elevation would result in the majority of the site about 5 feet above potential shallow groundwater (msl of 0.56 feet plus sea level rise of 4.6 feet), even if shallow groundwater rises by the 4.6 feet of potential sea level rise. As such, the potential surface flooding effects by shallow groundwater would not be expected to be substantial in the event of a 55-inch sea level rise. However, any underground structures may still be subject to shallow groundwater tables, depending upon the structure depth. Additionally, the effectiveness of any stormwater quality/quantity BMP designed for infiltration, biofiltration, or below-ground-surface treatment could be compromised with increases in shallow groundwater tables. This would be a potentially significant impact.

Higher water surface elevations in the Bay could also cause higher water surface elevations in Sanchez Channel and backing-up of the storm drain system, increasing the chance of both on- and off-site flooding. Such effects would occur regardless of whether the Project is implemented. The City would require the Project Sponsor to install tide gates within the on-site storm drain system to prevent back flow of tidal waters. However, if the storm drain system is not designed to anticipate higher water surface elevation at the outlet (because of increases in either msl or higher tide levels), the storm drain system may not have adequate conveyance capacity in the event of sea level rise because the tide gates would remain closed or the water surface elevation gradient would be flattened and slow down flow conveyance. Development of the 300 Airport Boulevard Site would not directly cause flooding, but an inadequate storm drain system could flood the Project. This would be a potentially significant impact.

Furthermore, the shoreline and features located adjacent to the shoreline would be subject to higher tides. As noted in the Setting, the mean higher high tide near the Project Site is about 3.5 feet above the current msl. A 4.6-foot increase in sea level would result in a mean higher high tide of at least 8.1 feet above current msl. As noted above, the 300 Airport Boulevard Project would include a 100-foot setback from shoreline areas, which would reduce the potential for flood risks for the majority of the 300 Airport Boulevard Site. However, the perimeter barriers along the shoreline have experienced erosion and are not designed and/or protected to withstand the higher dynamic forces associated with the higher tides could fail under the sea level rise scenario and expose people and structures at the 300 Airport Boulevard Site to increased risk from flooding and erosion. This would be a potentially significant impact.

**MITIGATION MEASURES.** Implementation of Mitigation Measure HY-7.1 would ensure that potential underground structures are adequately protected to reduce risks from 100-year or tsunami flooding in combination with sea level rise. Mitigation Measure HY-7.2 would ensure that the storm drainage system has adequate conveyance capacity and surface discharges to off-site properties do not occur. Mitigation Measure HY-7.3 would ensure that embankments, sea walls, levees, and shoreline features are adequately protected from higher tide conditions. Implemented together, these measures would reduce impacts to a less-than-significant level for the 300 Airport Boulevard Site. (LTS)

Implementation of Mitigation Measures HY-7.1 and 7.2 are not anticipated to result in any additional or secondary environmental impacts because the focus of the mitigation is on project design. Construction of flood-proofed structures would generally be encompassed within the range of environmental effects identified elsewhere in this EIR where construction-related impacts are evaluated (e.g., air emissions). However, implementation of Mitigation Measure HY-7.3 would involve construction activities such as reconstructing the revetments. These activities have the potential to result in water quality impacts as well affect aquatic resources. Generally, construction activities that have the potential to affect water quality and/or aquatic resources would require necessary permits. For example, approval from BCDC would be required for any revetment repair activities within the 100-foot shoreline band along the Project Site. Mitigation activities in the Bay or the Sanchez Channel would be subject to Corps regulations.

*HY-7.1 Provide Flood Protection up to the 100-Year Flood Event plus Sea Level Rise for Underground Structures.* To protect underground structures from sea level rise flood risks, prior to approving grading and/or building permits the City shall ensure that the project design incorporates its floodplain development requirements into all applicable project features using a flood elevation of at least 11.6 feet. All below-ground structures, including storm drains, sewers, equipment facilities, and others, shall be flood proofed and designed to withstand hydrostatic forces and buoyancy from water surface elevations up to 11.6 feet in elevation. Certain portions of the shoreline open space may not be protected at the ultimate level of flooding, given proposed heights. However, developed areas of the Project would be protected. For the shoreline areas, an adaptive strategy would be implemented to address end-of-century conditions.

*HY-7.2 Provide Adequate Storm Flow Conveyance Capacity for Sea Level Rise Conditions.* To ensure that the storm drain system conveyance capacity is not constricted by sea level rise at the outlets, the Project Sponsor shall design the storm drain system to adequately convey stormwater runoff at outlet water surface elevations equivalent to the 100-year flood event base elevation plus sea level rise of 55 inches (water surface elevation of 11.6 feet at the outlet). Prior to receiving a grading permit, the City shall review project designs and studies for adequacy of storm flow conveyance with an outlet surface water elevation of 11.6 feet and in accordance with City design standards. The City shall prepare Conditions of Approval, where necessary, to ensure that the design criteria are met. The Project Sponsor shall incorporate applicable City Conditions of Approval into project designs, prior to receiving a grading permit.

*HY-7.3 Provide Protection of Shoreline and Flood Protection Features from Hydrodynamic Forces from Sea Level Rise Conditions.* Prior to receiving a grading permit, in order to ensure that the shoreline and flood protection features associated with the proposed project provide protection under sea level rise hydrodynamic and/or hydrostatic conditions, the Project Sponsor shall prepare engineering studies to

identify expected hydrodynamic forces for under storm surge conditions (at least 2 percent wave run-up) and a base flood elevation of at least 11.6 feet and hydrostatic forces from a water surface elevation of 8.1 feet (mean higher high water plus 55-inch sea level rise). For the shoreline areas, an adaptive strategy would be implemented to address end-of-century conditions.

The Project Sponsor shall design shoreline and flood protection features that could accommodate hydrodynamic forces from sea level rise conditions along wherever flood protection features are identified under Mitigation Measure HY-7.1 and at shoreline protection features for stability and integrity under storm surge conditions (at least 2 percent wave run-up) and a base flood elevation of at least 11.6 feet. The Project Sponsor shall also design flood protection features for protection against hydrostatic forces from a water surface elevation of 8.1 feet (mean higher high water plus 55-inch sea level rise). The City shall review designs and associated studies for conformance with City requirements and adequacy of design measures to withstand hydrodynamic and hydrostatic forces associated with the design criteria.

The Project Sponsor shall also design erosion protection along the shoreline set-back area for protection under storm surge conditions (at least 2 percent wave run-up) and a base flood elevation of at least 11.6 feet. The City shall review designs and associated studies for adequacy in protecting the shoreline set-back area under these conditions.

The City shall prepare Conditions of Approval, where necessary, to ensure that the design criteria are met. Prior to receiving a grading permit, the Project Sponsor shall incorporate applicable City and BCDC Conditions of Approval into project designs.

### **350 Airport Boulevard**

Identical to the 300 Airport Boulevard Site, the 350 Airport Boulevard Site would be at risk of flooding from sea level rise. However, because a development plan has not been submitted to the City for this location, no preliminary grading plan has been prepared that identifies how the 350 Airport Boulevard Site would be protected from sea level rise. This is potentially significant impact.

MITIGATION MEASURES. It is reasonable to assume that the assumptions for increasing the final elevation and shoreline protection identified for 300 Airport Boulevard would apply to 350 Airport Boulevard. These requirements are identified in Mitigation Measure HY-7.4. In addition, implementation of Mitigation Measures HY-7.1, HY-7.2, and HY-7.3 for the 350 Airport Boulevard Site, would reduce the impacts associated with underground structures, storm flow conveyance capacity, and shoreline protection, as described for the 300 Airport Boulevard Site. Implementation of Mitigation Measure HY-7.4 could result in a minor increase

in the magnitude of environmental effects identified elsewhere in this EIR. Secondary effects from implementation of Mitigation Measures HY-7.1, 7.2, and 7.3 would be as described for 300 Airport Boulevard. Implementation of the mitigation measures described below would reduce potentially-significant impacts related to sea level rise to a less-than-significant level. (LTS)

*HY-7.4 Provide Flood Protection up to the 100-Year Flood Event plus Sea Level Rise for Above-Ground Structures.* To protect structures and people from sea level rise risks at the 350 Airport Boulevard Site, prior to approving grading permits, the City shall ensure project design incorporates its floodplain development requirements for a flood depth of the identified 100-year flood hazard water surface elevation plus a 4.6-foot (55-inch) rise in sea level. At a minimum, the Project Site shall be graded to over 10 feet above msl and the finished floor elevation of all building finished floors shall be constructed to 14.5 feet (i.e., 2.9 feet above the 11.6-foot potential flood elevation), or as otherwise determined as grading plans are developed.

*HY-8 Tidal and Wave Action Flooding. Prevailing winds combined with high tides or 100-year tides could flood the Project Site. This would result in potentially-significant impacts to the 300 Airport Boulevard Site and the 350 Airport Boulevard Site. (PS)*

### **300 Airport Boulevard**

When the 300 Airport Boulevard Site was filled in the 1960s, the shoreline barriers were not properly engineered to prevent erosion. Maximum wave heights of up to 8.4 to 9 feet during high tides and 100-year tides have the potential to flood the Project Site.

The City of Burlingame requires the height of the shoreline protection structure and building entrances to be at least +10 feet msl. According to the 300 Airport Boulevard grading plan, the majority of site would be graded to over 10 feet above msl, and the finished floor elevation of all buildings would be constructed to 14.5 feet (i.e., 2.9 feet above the 11.6-foot potential flood elevation). The reconfigured Airport Boulevard would be raised to about 14.5 feet running through the Project Site.<sup>26</sup> However, the perimeter barriers along the shoreline have experienced erosion and are not designed and/or protected to withstand the higher dynamic forces associated with the higher tides could fail under the sea level rise scenario and expose people and structures at the 300 Airport Boulevard Site to increased risk from flooding and erosion. This would be a potentially significant impact.

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<sup>26</sup> DES Architects and Engineers, Burlingame Point Preliminary Grading and Drainage Plan Update, December 3, 2010.

### **350 Airport Boulevard**

Development plans have not been submitted for the 350 Airport Boulevard Site. If finished floor elevations of buildings are not at least +10 feet msl and shoreline improvements are not implemented, high tides could affect development at 350 Airport Boulevard. This would be a potentially significant impact.

MITIGATION MEASURES. Implementation of Mitigation Measures HY-7.1, HY-7.2, HY-7.3, and HY-7.4 would reduce this impact to a less-than-significant level by ensuring the elevation of the Project Site and shoreline protection are adequate to protect against flooding associated with wave action. (LTS)

### **Cumulative Impacts**

The cumulative context for the analysis of hydrology and water quality impacts is a function of the type of impact and geographic considerations. Some cumulative impacts may have a broad, regional context, while others may be limited by site-specific conditions or location. The cumulative context regarding flooding and drainage, water quality, and groundwater resources is described at the beginning of each analysis, below.

*HY-9 Cumulative Drainage Systems. The Project, in combination with other reasonably foreseeable development, would not create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, resulting in less-than-significant cumulative impacts. (LTS)*

The cumulative context for storm drainage impacts is Sanchez Creek watershed and the Bay, which is described in the Environmental Setting in this section. Stormwater from the Project would flow directly to Sanchez Channel or to the Bay and would not be conveyed through the City of Burlingame's storm drainage system. While Sanchez Channel does receive flows from upstream locations in the City, the Project's contribution would not be cumulatively considerable, and cumulative impacts related to drainage and potential indirect effects on localized flooding would be less than significant.

*HY-10 Cumulative Flood Hazards. The Project, in combination with other reasonably foreseeable development, would not place structures in areas subject to 100-year flood hazards, resulting in less-than-significant cumulative impacts. (LTS)*

The cumulative context for flood hazards is the corporate boundary of City of Burlingame, which participates in the NFIP and provides emergency response services for flood events. There are no 100-year flood zones in the Project, so the Project would not combine with projects elsewhere to produce a cumulative effect. The project's contribution would not be cumulatively considerable, and cumulative impacts would be less than significant.

*HY-11 Cumulative Sea Level Rise and Tides. The Project, in combination with other reasonably foreseeable development, would be subject to potentially significant cumulative flooding risks resulting from sea level rise. (PS)*

The cumulative context for sea level rise and tidal impacts is land contiguous to the Bay where sea level rise is predicted to inundate low-lying areas and where high tides caused by storm surges or wave action could cause flooding. Such changes are predicted regardless of whether the Project is implemented. In combination with other development along the Bay waterfront that could be exposed to sea level rise or tidal flooding risk, the Project would cumulatively increase the number of structures and occupants that could be affected. While the Project would place structures in areas that could be flooded by anticipated increases in water surface elevations due to climate change and tidal action, site designs will account for these change for above-grade structures. In addition, mitigation measures have been identified (Mitigation Measures HY-7.1, HY-7.2, HY-7.3, and HY-7.4) to protect subgrade features that could be affected through groundwater/surface water interactions. For those reasons, the Project's contribution to placing structures and people in locations subject to sea level rise and tidal flooding impacts would not be cumulatively considerable, and this would be a less-than-significant cumulative impact.

*HY-12 Cumulative Tsunami/Seiche Impacts. The Project, in combination with other reasonably foreseeable development, would not result in direct changes in tsunami and/or seiche risk, resulting in a less-than-significant cumulative impact. (LTS)*

The Project would not result in direct changes in tsunami and seiche risk. Other portions of the Bay shoreline have been identified as being within potential wave run-up areas, and cumulative development would increase the number of structures and people that could be exposed to tsunami or seiche risk. However, ABAG mapping does not indicate the property where occupied structures would be developed as part of the Project as vulnerable to this risk. Therefore, the Project would not contribute to this cumulative impact, and the impact would be less than significant.

*HY-13 Cumulative Water Quality Impacts. The Project, in combination with other reasonably foreseeable development, would not result in significant cumulative water quality impacts. (LTS)*

The cumulative context for water quality is existing and reasonably foreseeable development in the Sanchez Creek watershed and the geographic area covered by the San Mateo County. TMDLs have been adopted for the Bay. With respect to construction, all development within the Bay Area is required to conform to applicable WDRs. Cumulative development projects in incorporated cities and unincorporated areas would be required to implement construction BMPs. Both the City of Burlingame and San Mateo County are required to impose these requirements. Stormwater runoff from cumulative development in San Mateo County, including development that could be facilitated by Project, could contribute to water quality impairments if measures are not implemented to minimize pollutant levels in runoff. As

required by the Municipal Regional Permit, all foreseeable development projects would be required to implement operational BMPs to control release of pollutants in stormwater runoff. Requirements of the Regional Permit are enforced through the City of Burlingame's plan approval and permit process, and all new development projects are subject to City inspection. Therefore, the project's contribution to known water quality impairments would not be cumulatively considerable, and cumulative water quality impacts would be less than significant.

*HY-14 Cumulative Groundwater Impacts. The Project, in combination with other reasonably foreseeable development, would have no cumulative long-term demand on groundwater supplies since water demand would be met through existing SFPUC entitlements and deliveries, resulting in a less-than-significant cumulative impact. (LTS)*

The cumulative context for groundwater resources impacts is the San Mateo Subbasin. The Project could involve temporary dewatering during construction. No long-term use of groundwater would be required because the Project would be served by SFPUC, and no wells would need to be constructed. There would be no cumulatively considerable contribution, and impacts would be less than significant.

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## 3.10 POPULATION AND HOUSING

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### Introduction

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This section provides background information on existing and projected population, employment, and housing conditions in the City of Burlingame (City) and estimates the changes that the Project could create. The purpose of this section is to characterize the Project-induced population, housing, and employment changes that may trigger physical environmental effects, which are examined in other sections of this Environmental Impact Report (EIR). As discussed in the Initial Study (Appendix B), no impacts would result from the displacement of existing housing or people requiring the construction of replacement housing elsewhere. Therefore, these topics are not discussed in this section.

Issues identified in response letters to the Notice of Preparation (NOP) (Appendix A) and during the City Council public scoping meetings for the Project were considered in preparing this analysis. No applicable issues that were identified pertain to population and housing.

### Existing Conditions

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**Population.** San Mateo County is characterized by its large number of cities, most of which are medium to large in population. The City is bordered to the north by San Francisco International Airport (SFO) and Millbrae; the San Francisco Bay (Bay) to the east; Hillsborough and San Mateo to the south and west; and I-280 to the west.

The City encompasses an area of about 12 square miles. As of January 2010, there were approximately 29,342 people living in the City.<sup>1</sup> Although the City is considered to be built-out, the household population is expected to increase to 30,600 by 2015 and to 33,600 by 2025.<sup>2</sup> According to the City of Burlingame 2009 - 2014 Housing Element, Burlingame's resident population only started to grow recently. With the recent turn toward growth, aspects of the City's resident population have changed since 1990. For example, the population has become more diverse, the percentage of children under the age of 18 has increased, there has been a notable increase in the number of residents over 60, and the City population is older than that of San Mateo County as a whole.<sup>3</sup>

Table 3.10-1 presents population estimates from the 2009 Association of Bay Area Governments (ABAG) Projections for 2010 through 2025 for Burlingame, San Mateo County, and the San Francisco Bay Area. The table data indicates that the population growth rate in Burlingame (about 15 percent)

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<sup>1</sup> Department of Finance, Statewide Responsibilities, Demographic Research, Reports and Research Papers, "E-5 Population and Housing Estimates for Cities, Counties and the State, 2001 - 2010 with 2000 Benchmark," website: <http://www.dof.ca.gov/research/demographic/reports/estimates/e-5/2001-10/view.php>, accessed March 22, 2011.

<sup>2</sup> Association of Bay Area Governments, *Projections 2009: Forecasts for the San Francisco Bay Area to the Year 2035*, Based on the Burlingame 'subregional study area,' August 2009, San Mateo County p. S1.

<sup>3</sup> City of Burlingame, *City of Burlingame General Plan*, Housing Element, adopted March 1, 2010.

would be more than the population growth of San Mateo County and the San Francisco Bay Area as a whole (around 14 percent).

**Table 3.10-1  
Population Trends, 2010-2025**

	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>Growth 2010-2025</b>
City of Burlingame (sphere of influence)	29,700	31,200	33,000	34,200	4,500 (15.2%)
San Mateo County	733,300	766,900	801,300	832,400	99,100 (13.5%)
San Francisco Bay Area	7,341,700	7,677,500	8,018,000	8,364,900	1,023,200 (13.9%)

*Source:* Association of Bay Area Governments, Projections 2009: *Forecasts for the San Francisco Bay Area to the Year 2035*, August 2009, Region p. 1 and San Mateo County p. S1.

## Employment

Employment statistics for an area is an indication an area’s economic viability and the present and future demand for employees. The largest single employer in the City is Mills Peninsula Health Services, followed by many of the major hotels that serve SFO. Represented among the major employers are also several manufacturing firms in the Rollins Road industrial area.<sup>4</sup> In 2010, Health, Education, and Recreational jobs accounted for the largest share of total jobs within the City at 36.7 percent, followed by Financial and Professional Service jobs at 25.5 percent.<sup>5</sup>

Table 3.10-2 presents employment data for the City, San Mateo County, and the San Francisco Bay Area. The projections from 2010 to 2025 show a steady increase in the level of employment in the Bay Area (about 26 percent area-wide). San Mateo County shows a higher rate of employment growth (about 27 percent) than Burlingame and the rest of the Bay Area. In 2010, there were about 23,400 total jobs in the City. The number of total jobs provided in Burlingame is expected to increase to 25,230 in 2015 and to 29,580 in 2025 for a total increase of 6,180 jobs. Financial and professional service jobs are projected to make up 6,490 of the total jobs in Burlingame in 2015 and 7,850 in 2025. By 2015, 8,600 of the total jobs in Burlingame are expected to be in the health, education, and recreational service sector, rising to 10,760 by 2025.<sup>6</sup>

Table 3.10-3 presents a comparison of the total jobs available in the City’s sphere of influence to the number of employed residents. As shown, the number of employed residents is lower than the number of jobs available, indicating that there is a large worker group commuting into the City from neighboring jurisdictions.

<sup>4</sup> City of Burlingame, *City of Burlingame General Plan*, Housing Element, adopted March 1, 2010.

<sup>5</sup> Association of Bay Area Governments, *Projections 2009: Forecasts for the San Francisco Bay Area to the Year 2035*, Based on the Burlingame ‘subregional study area,’ August 2009, San Mateo County pp. S10-S11.

<sup>6</sup> Association of Bay Area Governments, *Projections 2009: Forecasts for the San Francisco Bay Area to the Year 2035*, Based on the Burlingame ‘subregional study area,’ August 2009, San Mateo County pp. S10-S11.

**Table 3.10-2  
Employment Trends (Total Number of Jobs)**

	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>Growth (2010-2025)</b>
City of Burlingame	23,400	25,230	27,250	29,580	6,180 (26.4%)
San Mateo County	346,320	373,370	404,400	439,850	93,530 (27%)
San Francisco Bay Area	3,475,840	3,734,590	4,040,690	4,379,900	904,060 (26%)

Source: Association of Bay Area Governments, *Projections 2009: Forecasts for the San Francisco Bay Area to the Year 2035*, August 2009, Region p. 6 and San Mateo County p. S6.

**Table 3.10-3  
Comparison of Number of Jobs to Employed Residents in the City of Burlingame**

	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>
Jobs	23,400	25,230	27,250	29,580
Employed Residents	14,300	15,070	16,970	18,570
Percent of Employed Residents to Total Number of Jobs	61.1%	59.7%	62.3%	62.3%

Source: Association of Bay Area Governments, *Projections 2009: Forecasts for the San Francisco Bay Area to the Year 2035*, Based on the Burlingame 'subregional study area,' August 2009, San Mateo County pp. S5- S6.

## Housing

Since Burlingame is a built-out community, the total number of housing units has remained fairly stable. Compared to the region, Burlingame's average household size is small (2.2 persons per household). The average for San Mateo County and for the Bay Area region is 2.8 persons per household and 2.7 persons per household, respectively. However, in Burlingame, where more than half of the City's dwelling units are in multiple family buildings, the average household size of renters is 1.87 persons.<sup>7</sup>

According to the California Department of Finance, the number of households in the City as of January 1, 2010 was 12,981, with an average household size of 2.2 persons, and a vacancy rate of 2.2 percent.<sup>8</sup> Table 3.10-4 presents the 2009 ABAG Projections for households for years 2010 through 2025, as well as the household rate of growth for that time period. The table illustrates that Burlingame's household rate of growth would be about 4.7 percent during the 2010 to 2015 period (13,110 households in 2010 to 13,730 households in 2015). The rate of growth would increase to about 4.7 percent during the 2015 to 2020 period (13,730 households in 2015 to 14,370 households in 2020). The household

<sup>7</sup> City of Burlingame, *City of Burlingame General Plan*, Housing Element, adopted March 1, 2010.

<sup>8</sup> Department of Finance, Statewide Responsibilities, Demographic Research, Reports and Research Papers, "E-5 Population and Housing Estimates for Cities, Counties and the State, 2001 – 2010 with 2000 Benchmark," website: <http://www.dof.ca.gov/research/demographic/reports/estimates/e-5/2001-10/view.php>, accessed March 23, 2011.

growth rate for Burlingame is expected to be relatively similar to the overall household growth rate for the San Francisco Bay Area.

**Table 3.10-4  
Housing Trends (Households)**

	2010	2015	2020	2025	Growth (2005-2025)
Burlingame	13,110	13,730	14,370	15,020	1,910 (14.6%)
San Mateo County	264,400	275,680	287,350	299,220	34,820 (13.2%)
San Francisco Bay Area	2,667,340	2,784,690	2,911,000	3,039,910	372,570 (14%)

*Source:* Association of Bay Area Governments, Projections 2009: *Forecasts for the San Francisco Bay Area to the Year 2035*, August 2009, Regional p.3, and San Mateo County p. S3.

## **Applicable Plans and Regulations**

### **City of Burlingame General Plan**

**Adopted Burlingame 2009-2014 Housing Element.** The City’s General Plan, which provides a blueprint for future development in the City, identifies the location and intensity for future land uses in the City. The General Plan also identifies the type and intensity of development that would be considered appropriate for the land use designations defined by the General Plan. However, the General Plan does not include policies about a desired rate of growth. Thus, the relevant growth projections for purposes of this EIR are those produced by ABAG and presented earlier in Table 3.10-1, Table 3.10-2, and Table 3.10-4.

The Housing Element is a statement of community housing goals and policies and outlines the strategies to be pursued in order to implement the community’s housing objectives during the planning period. A key component of a housing element for any jurisdiction in the Bay Area is to respond to a regional housing allocation assigned by ABAG, which is intended to ensure that local jurisdictions provide for their fair share of the regional housing needs. ABAG has five established housing affordability categories that are based on the area’s median income level, take into account households ranging from one to six people, and incorporate data from multiple income sources. The five household affordability categories are:

- Very Low                      0 to 50 percent of the area median income
- Low                              50 to 80 percent of the area median income
- Moderate                      80 to 120 percent of the area median income
- Above Moderate              120 to 150 percent of the area median income
- Upper                            Over 150 percent of the area median income

ABAG adopted the final allocation for the period from 2007 to 2014 on May 15, 2008, which incorporates the results of the sub-regional allocation that was implemented in San Mateo County. Burlingame was allocated 650 units, of which 22.8 percent are intended for the “Very Low” income tier, 16.5 percent for “Low,” 19.2 percent for “Moderate,” and 41.5 percent for “Above Moderate” income tiers. This allocation was required to be incorporated into the updated Housing Element.<sup>9</sup>

## **Impacts and Mitigation Measures**

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### **Significance Criteria**

Based on Appendix G of the CEQA Guidelines, the Project would result in a significant population and housing impact if it would:

- Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).

In addition, the Project would have a significant impact if it would displace substantial numbers of people and/or existing housing. However, as stated in the Initial Study (Appendix B), the 300 Airport Boulevard and the 350 Airport Boulevard Sites are currently vacant. As such, the Project would not displace existing residents or employees. Therefore, no displacement of residents or employees would occur with Project development and these topics are not discussed further in this section.

### **Environmental Analysis**

For each potential impact associated with the Project, a level of significance is determined and is reported in the impact statement. Conclusions of significance are defined as follows: significant impact (S), potentially significant impact (PS), less-than-significant impact (LTS), or no impact (NI). For each impact identified as being significant (S) or potentially significant (PS), this EIR provides mitigation measures to reduce, eliminate, or avoid the adverse effect. If the mitigation measures would reduce the impact to a less-than-significant (LTS) level successfully, this is stated in this EIR. If the mitigation measures would not diminish significant or potentially significant impacts to a less-than-significant level, the impacts are classified as “significant unavoidable impacts (SU).” The impacts of the potential development of the 350 Airport Boulevard Site are evaluated in this EIR on a programmatic level. Following the submittal of a project-specific development proposal for the 350 Airport Boulevard Site, additional environmental analysis would be required. For this section, PH refers to Population and Housing.

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<sup>9</sup> Association of Bay Area Governments, “Final Regional Housing Needs Allocation, Adopted May 15, 2008,” website: [http://www.abag.ca.gov/planning/housingneeds/pdfs/Final\\_RHNA.pdf](http://www.abag.ca.gov/planning/housingneeds/pdfs/Final_RHNA.pdf), accessed April 26, 2011.

*PH-1 Population Growth. The increase in on-site employment due to the Project could have secondary growth effects that could increase employment, population, and housing demand in the City or the region. However, these secondary growth effects would be less than significant. (LTS)*

### **300 Airport Boulevard**

The effect of the 300 Airport Boulevard Project on population growth within the City would not result in a direct impact due to new homes, as no residential development is proposed. However, the 300 Airport Boulevard Project would generate employment opportunities, which could induce population growth in the area. The 300 Airport Boulevard Project could include either office uses or a life science campus. In addition, the Project could potentially include up to 19,230 sf of retail and up to 24,560 sf of food services. If the Project only includes office uses in Buildings B1, B2, B3, and B4, it is estimated that the office uses would provide jobs for approximately 2,433 office employees.<sup>10</sup> In addition, the amenities center could employ up to 42 individuals,<sup>11</sup> for a total of 2,475 employees under the office scenario of the 300 Airport Boulevard Project. If the Project would include only life science uses in Buildings B1, B2, B3, and B4, approximately 1,825 life science jobs would be created.<sup>12</sup> In addition to the 42 employees at the amenities center, the life science scenario of the 300 Airport Boulevard Project would provide jobs for approximately 1,867 people.

As stated above, the Project could also potentially include office/life science uses (689,810 sf), retail uses (19,230 sf), food service venues (24,560 sf), and amenities center components (33,400 sf). If this site plan is implemented with office uses plus food and retail, then approximately 2,434 employees would be generated.<sup>13</sup> If the Project would include a life science campus instead, with retail and food services, 1,860 jobs would be created.<sup>14</sup> Table 3.10-5 shows the amount of employees that would be generated under the different scenarios by use.

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<sup>10</sup> DES Architects + Engineers, Memo from Tom Gilman and Kenny Hung to Maureen Brooks, City of Burlingame Planning Manager, March 3, 2011. This estimate assumes 300 sf per employee based on similar office density rates on the San Francisco Peninsula.  $730,000 \text{ sf of office} / 300 \text{ sf} = \sim 2,433 \text{ employees}$ .

<sup>11</sup> Association of Bay Area Governments, *1987 Input-Output Model and Economic Multipliers for the San Francisco Bay Region*, March 1995. Multiplier for "Amusement and Recreational Services" averages 870 sf per employee. As such  $37,000 \text{ sf of proposed amenities center} / 870 \text{ sf} = \sim 42 \text{ employees}$ .

<sup>12</sup> DES Architects + Engineers, Memo from Tom Gilman and Kenny Hung to Maureen Brooks, City of Burlingame Planning Manager, March 3, 2011. This estimate assumes 400 sf per employee based on similar life science density rates on the San Francisco Peninsula.  $730,000 \text{ sf of office} / 400 \text{ sf} = \sim 1,825 \text{ employees}$ .

<sup>13</sup> Association of Bay Area Governments, *1987 Input-Output Model and Economic Multipliers for the San Francisco Bay Region*, March 1995. Multiplier for "Retail Trade" averages 450 sf per employee. As such,  $43,790 \text{ sf of proposed retail and food service} / 450 \text{ sf} = \sim 97 \text{ employees}$ . Office Use =  $689,810 \text{ sf} / 300 \text{ sf} = \sim 2,299 \text{ employees}$ . Amenities center uses =  $33,400 \text{ sf} / 870 \text{ sf} = \sim 38 \text{ employees}$ .  $97 + 2,299 + 38 = \sim 2,434 \text{ total employees}$ .

<sup>14</sup>  $43,790 \text{ sf of proposed retail and food service} / 450 \text{ sf} = \sim 97 \text{ employees}$ . Life science uses =  $689,810 \text{ sf} / 400 \text{ sf} = \sim 1,725 \text{ employees}$ . Amenities center uses =  $33,400 \text{ sf} / 870 \text{ sf} = \sim 38 \text{ employees}$ .  $97 + 1,725 + 38 = \sim 1,860 \text{ total employees}$ .

In terms of employment growth at the 300 Airport Boulevard Site, office uses would generate the need for the most employees, over life science, retail, food, and amenities center uses. The administrative areas of a life science company would have a density similar to a corporate office; however, the research and laboratory uses and pilot manufacturing-type areas would have lower densities. In addition, the retail and food service uses would not generate as many employees as would be generated under an office-only scenario in Buildings B1, B2, B3, and B4. As such, this document applies and analyzes the most conservative scenario of approximately 2,475 office and amenities center employees at the 300 Airport Boulevard Site.

**Table 3.10-5  
Employment at 300 Airport Boulevard Site by Scenario**

Scenario	Office/ Life Science	Retail	Food Service	Amenities (Childcare and Other)	Total
Office Use + Amenities Center	2,433	-- <sup>a</sup>	-- <sup>b</sup>	42	<b>2,475</b>
Life Science + Amenities Center	1,825	-- <sup>a</sup>	-- <sup>b</sup>	42	<b>1,867</b>
Office + Retail + Food + Amenities Center	2,299	42	55	38	<b>2,434</b>
Life Science + Retail + Food + Amenities Center	1,725	42	55	38	<b>1,860</b>

*Source:* DES Architects + Engineers, 2010; ABAG, 1995; Atkins, 2011.

*Notes:*

- a. Approximately 1,200 sf of retail would be provided in the amenities center. However, this would not significantly change the amount of employees; therefore, the retail employees are included in the total “Amenities” calculation.
- b. Approximately 2,400 sf of food services would be provided in the amenities center. However, this would not significantly change the amount of employees; therefore, the food service employees are included in the total “Amenities” calculation.

This increase in employment would not directly result in an adverse environmental impact; however, an increase in employment could consequently result in physical impacts related to traffic generation, air quality, noise, and an increase in demand on public services and utilities. The associated impacts are discussed in Section 3.4, Transportation; Section 3.5, Air Quality; Section 3.7, Noise; and Section 3.12, Utilities.

There is no housing component proposed under the 300 Airport Boulevard Project; however, the new employment generated by the 300 Airport Boulevard Project may increase housing demand in the City and the region. Therefore, indirect population growth may be induced by the 300 Airport Boulevard Project. Indirect, or secondary, population and housing impacts are those which are caused by a project and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect or secondary effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate and related effects on air, water, and other natural systems (CEQA Guidelines, Section 15358). Specifically, growth-inducing effects include ways in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly. Included in this are projects that would remove obstacles to

population growth (CEQA Guidelines, Section 15126.2(d)). The proposed realignment of Airport Boulevard would not indirectly induce population growth in the area by creating new transportation access to a previously inaccessible area; therefore, the indirect increase in population from employment would not result in adverse physical impacts and would be considered less than significant.

Construction of the 300 Airport Boulevard Project, including the preceding phases of site remediation and building demolition, would directly, but temporarily, increase construction employment. Given the relatively common nature of the construction anticipated, the demand for construction employment would likely be met within the existing and future labor market in the City and in San Mateo County. The size of the construction workforce would vary during the different stages of construction. During the beginning and final months of each phase, a lower number of workers would be needed, approximately 40 to 80 construction staff per day. However, the middle period of each phase would involve structure installation and would require a higher number of workers, approximately 100 to 250 construction staff per day. A substantial quantity of workers from outside the City or County would not be expected to be induced to relocate temporarily or to commute long distances.

Operation of the 300 Airport Boulevard Project (under the office scenario) would generate approximately 2,475 new employees. If all of these employees currently live outside of Burlingame and move to the City, which is an unlikely scenario, the 300 Airport Boulevard Project would increase the population by approximately 2,475 individuals. Burlingame had 29,700 residents in 2010 and the population is projected to increase to approximately 34,200 people in 2025, according to the 2009 ABAG Projections. This represents a 15-year population increase of approximately 4,500 residents.

The 2009 ABAG Projections include the employment growth estimated for the Bayfront Specific Plan. For development at the Project Site, ABAG based the projections on the current zoning of a 0.6 floor area ratio (FAR). Under existing zoning, the 300 Airport Boulevard Site could result in up to 1,529 workers. However, the proposed development of the 300 Airport Boulevard Site would require amendments to the zoning regulations to allow for a greater height and a maximum of 1.0 FAR. This would result in an onsite capacity of up to 2,475 workers, which is an increase of approximately 946 employees over ABAG's estimates. Although this zoning increase was not considered by ABAG projections, the increase of 2,475 residents under the 300 Airport Boulevard Project would represent about 55 percent of the anticipated population growth by 2025. The net increase of the 946 employees unaccounted for in the 2009 ABAG Projections would represent approximately 21 percent of the growth by 2025.

Under the conservative scenario, if all 2,475 new employees came from outside of Burlingame, the 300 Airport Boulevard Project would create additional demand for approximately 1,115 housing units (at the current ratio of 2.22 persons per household). In 2010, Burlingame contained 13,110 households, which is projected to increase to 15,020 in 2025, according to the 2009 ABAG Projections. The addition of 1,115 households would represent a 5.8 percent

increase in the number of households anticipated by 2025. These additional residents could result in substantial population growth within the City.

However, it is important to note that the increase of 2,475 new residents is considered the maximum potential that would be generated by the 300 Airport Boulevard Project at buildout, and assumes no job vacancies, which is unlikely. Therefore, actual employment generation would likely be lower than indicated, depending on the rate of project buildout and regional business and economic conditions. The actual employment is due purely to economic conditions and could be substantially less. In addition, this estimate is extremely conservative because it assumes that none of the new employment opportunities associated with the 300 Airport Boulevard Project would be filled by existing City and area residents. It also assumes that all new employees generated under the 300 Airport Boulevard Project would choose to move to the City rather than commute from surrounding communities. As such, the population increases induced by the 300 Airport Boulevard Project would most likely be substantially less. These additional residents are accounted for in the ABAG projections and would not result in substantial City growth. Therefore, the 300 Airport Boulevard Project would result in less-than-significant impacts to population and housing growth.

### **350 Airport Boulevard**

There is currently no existing employment at the 350 Airport Boulevard Site, and no specific development plans or projects are proposed at the 350 Airport Boulevard Site at this time. However, for the purposes of programmatic analysis, development of the 350 Airport Boulevard Site is assumed to be office uses at 1.0 FAR. This assumption represents a conservative scenario (on the basis that office uses would accommodate a higher ratio of employees per square foot of floor area, compared to life-science uses, and therefore would have greater effects on transportation and related impacts). As the building program would occupy 1.0 FAR, it is assumed that buildings at the 8.58-acre 350 Airport Boulevard Site would consist of approximately 374,000 sf and about 1,247 employees.<sup>15</sup>

The new employment in Burlingame accommodated by the 350 Airport Boulevard Project may increase housing demand in the City or the region. Therefore, indirect population growth may be induced by the 350 Airport Boulevard Project. If all of the potential employees currently live outside of Burlingame and move to the City (which is an unlikely scenario), the 350 Airport Boulevard Project would increase the City's population by approximately 1,247 individuals. Burlingame had 29,700 residents in 2010 and the population is projected to increase to approximately 34,200 people in 2025, according to the 2009 ABAG Projections. This represents a 15-year population increase of approximately 4,500 residents.

The 2009 ABAG Projections include the employment growth estimated for the Bayfront Specific Plan. For development at the 350 Airport Boulevard Site, ABAG based the projections on the current zoning of a 0.6 floor area ratio (FAR). Under existing zoning, the

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<sup>15</sup> Based on an employee generation rate of one employee per 300 sf.

350 Airport Boulevard Site could result in up to 748 workers. However, the proposed development of the 350 Airport Boulevard Site would require amendments to the zoning regulations to allow for a greater height and a maximum of 1.0 FAR. This would result in an onsite capacity of up to 1,247 workers, which is an increase of approximately 499 employees over ABAG's estimates. Although this zoning increase was not considered by ABAG projections, the increase of potentially up to 1,247 residents under the 350 Airport Boulevard Project would represent about 28 percent of the anticipated population growth by 2025. The net increase of the 946 employees unaccounted for in the 2009 ABAG Projections would represent approximately 11 percent of the growth by 2025.

Under the conservative scenario, if all 1,247 new employees came from outside of Burlingame, then the 350 Airport Boulevard Project would create additional demand for approximately 561 housing units (at the current ratio of 2.22 persons per household). In 2010, Burlingame contained 13,110 households, which is projected to increase to 15,020 in 2025, according to the 2009 ABAG Projections. The addition of 561 households would represent an approximate 3.7 percent increase in the number of households anticipated by 2025. These additional residents could result in substantial population growth within the City.

However, it is important to note, that the increase of 1,247 new residents is considered the maximum potential that would be generated by the 350 Airport Boulevard Project at buildout, and assumes no job vacancies, which is unlikely. Therefore, actual employment generation would likely be somewhat lower than indicated, depending on the rate of project buildout and regional business and economic conditions. The actual employment is due purely to economic conditions and could be substantially less. In addition, this estimate is extremely conservative because it assumes that none of the new employment opportunities associated with the 350 Airport Boulevard Project would be filled by existing City residents. It also assumes that all new employees generated by the Project would choose to move to the City and not commute from surrounding communities. As such, the population increases induced by the 350 Airport Boulevard Project would most likely be substantially less. These additional residents are accounted for in the ABAG Projections and would not result in substantial City growth. Therefore, the 350 Airport Boulevard Project would result in less-than-significant impacts to population and housing growth.

When combined, development of the 300 and 350 Airport Boulevard Sites would result in a total increase of 3,722 employees. However, as previously described, according to the 2009 ABAG Projections, the total projected population growth for the City from 2010 to 2025 is 4,500 residents. Under the worst case scenario, if the increase of 3,722 employees at the Project Site were to result in an equal increase in residents, an increase of 3,722 residents would still be within ABAG's projected population growth for the City.

The increase in employment would result in a demand for new housing units and an indirect increase in the residential population. However, the percentage of regional housing demand resulting new employment at the 300 and 350 Airport Boulevard Sites would be relatively small in comparison with projected housing growth in the region, as described above. Therefore,

combined impacts of the 300 and 350 Airport Boulevard Sites would be less than significant, as with the each individual Project. (LTS)

## **Cumulative Analysis**

The context for the analysis of cumulative population and housing impacts is the City, including all cumulative growth therein. Cumulative development projects within Burlingame may result in cumulative effects on population growth and housing demand. The potential cumulative effects are discussed below.

*PH-2 Cumulative Population and Housing Impacts. Cumulative development in the City would increase employment in the City, but the projected growth from the Project, in combination with surrounding projects, would not result in adverse impacts to the physical environment. Therefore, this cumulative impact would be less than significant. (LTS)*

The Project, in combination with other projected growth in the City, would increase population, employment, and housing in the City. Cumulative development projects within the City, considered together with the Project, would include commercial, residential, office, an animal shelter. As shown in Table 3.10-2 and Table 3.10-4, the forecasted growth would result in a 26.4 percent increase in employment opportunities and a 14.6 percent increase in households within the City by 2025. The Project would represent approximately 40.5 percent of the anticipated increase in employment. As shown in Table 3.10-3, the ratio of jobs to employed residents would remain relatively stable, ranging from approximately 1.59 to 1.67 jobs per employed resident. As noted above, population or employment growth would not be considered a physical impact to the environment for purposes of CEQA. The extent to which the cumulative increase in employment growth generated by the Project could contribute to physical environmental effects is addressed in Sections 3.4, Transportation; 3.5, Air Quality; and 3.7, Noise. The Project's contribution to any cumulative increase in employment would not result in direct adverse physical impacts beyond those identified in the technical sections of this EIR. Therefore, this cumulative increase in employment would be less than significant.

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## 3.11 PARKS AND WIND EFFECTS ON RECREATION

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### Introduction

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This section of the EIR summarizes the recreational uses and facilities in the vicinity of the Project Site and evaluates potential recreation impacts associated with implementation of the Project. The Project Site is located adjacent to a section of the San Francisco Bay (Bay) that is frequented by windsurfers. Using detailed wind tunnel models as the basis for analysis, this section will focus on the potential for the Project to affect wind conditions in the section of the Bay adjacent to the Project Site, in addition to general effects on recreation.

Issues identified in response letters to the Notice of Preparation (NOP) (see Appendix A) and during the Planning Commission public scoping meetings for the Project were considered in preparing this analysis. Applicable issues that were identified pertain to the Project's effect on windsurfing opportunities in the Bay, the Project's consistency with the most recent San Francisco Bay Conservation and Development Commission (BCDC) Bay Plan, the Project's effect on all water-based recreation activities at Coyote Point Recreation Area, and the transparency of the wind tunnel analysis. In addition, comments on the NOP identified the provision of a robust set of alternatives that minimize adverse wind shadow effects as an important provision. These issues are addressed in the section.

### Existing Conditions

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**Local Wind Conditions.** The Project Site is located on artificial fill that projects into the Bay. The Project Site and surrounding area are exposed to the strong winds driven by the Pacific Ocean marine layer that flows onshore, over the hills and down toward the Bay. Such winds frequently reach speeds in excess of 15 miles per hour (mph) and during the peak wind season, often reach speeds of 20 mph or more. The higher speed winds generally come from the northwest to the west directions. These strong winds offer both use opportunities and development constraints for the area.<sup>1</sup>

As is common in this area of the Peninsula, the highest average wind speeds occur in the mid-afternoon and the lowest in the early morning. Westerly to northwesterly winds are the most frequent and strongest winds during all seasons. The wind directions that have the greatest frequency and are also the strongest in the area are the northwest, west-northwest, west, and west-southwest winds. According to data presented in the City of Burlingame's Bayfront Specific Plan, during daylight hours, about 73.3 percent of the wind at the Project Site and surrounding area blows from five directions as summarized in Table 3.11-1 below.

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<sup>1</sup> City of Burlingame, Planning Department, *Bayfront Specific Plan Initial Study*, December 8, 2003.

**Table 3.11-1**  
**Wind Direction – 6:00 a.m. to 7:00 p.m.**

NW	Northwest	19.0%
WNW	West-Northwest	27.6%
W	West	15.9%
WSW	West-Southwest	6.7%
SW	Southwest	4.0%

*Source:* Don Ballanti, Technical Memorandum, July 28, 2011.

**Coyote Point Recreation Area Shoreline and Bay.** The Coyote Point County Recreation Area consists of 727 acres along the Bay shoreline east of the Project Site. The west portion of the recreation area is closest to the Project Site; this portion consists of a beach with windsurfing launch and landing areas and to the east, an adjacent swim area. Wood piles, approximately 300 feet apart and extending approximately 600 feet offshore, separate the windsurf and swim areas.

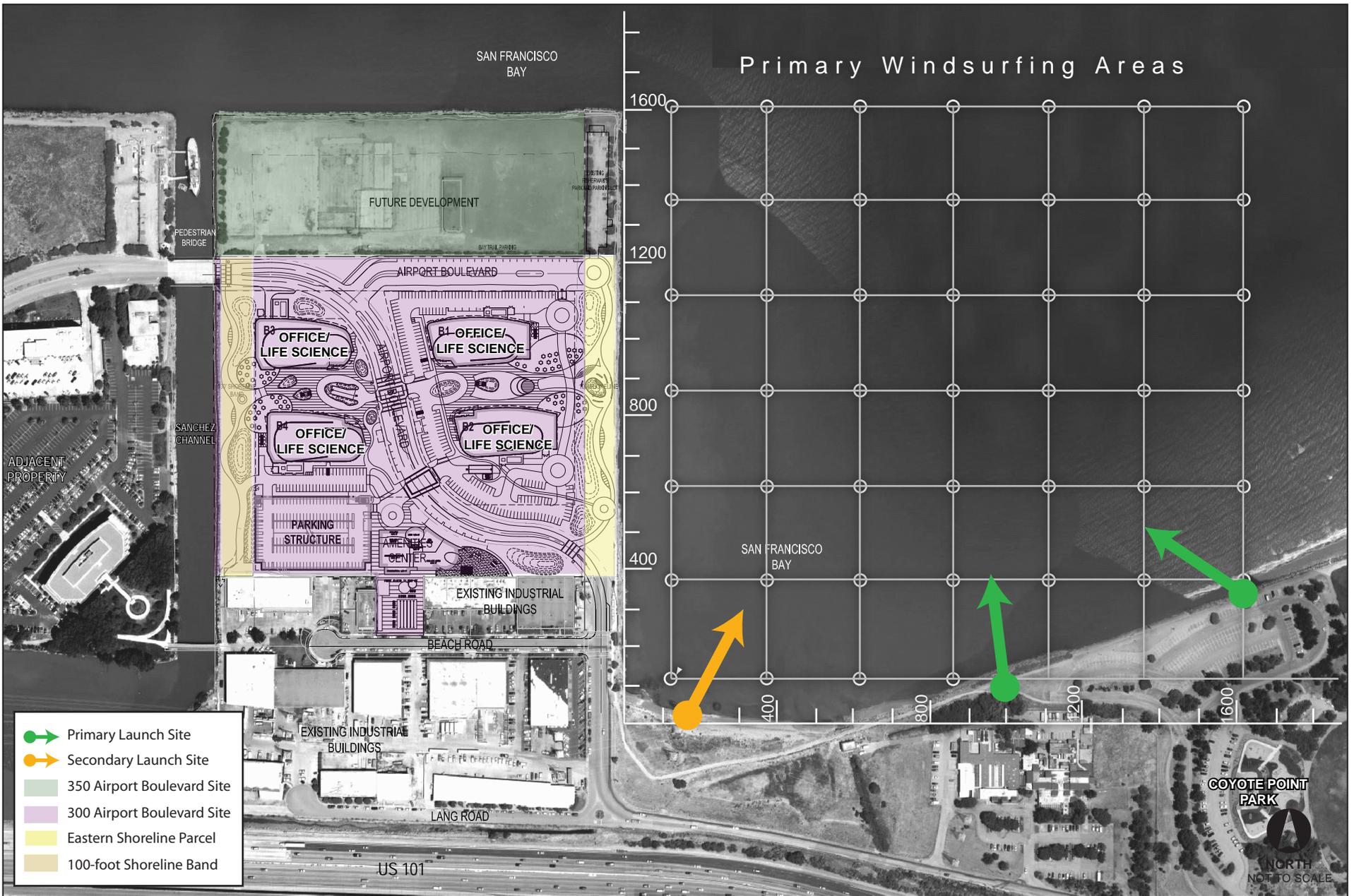
Popular for its moderate to strong westerly winds and swells, the number of windsurfers attracted to Coyote Point County Recreation Area has increased over the years, while the number of swimmers has declined. In response to this shift in use of the windsurf and swim areas, and to minimize potential conflicts between windsurfers and swimmers, the San Mateo County Parks and Recreation Department expanded the windsurfing launch area to the east, moving piles to increase the size of the windsurf launch area, and decrease the size of the swim area.

Wind speed effects on land- and water-related uses of the Coyote Point Recreation Area shoreline and adjacent areas of the Bay vary with the specific use. Swimmers may or may not appreciate the wind, and require some added effort in swimming against the wind.

Windsurfing, however, requires the wind, and the more proficient the board sailor, the more wind is preferred. Because the best windsurfing areas for advanced windsurfers and kite boarders are well over a mile from shore, wind is required to reach the area and to return safely. Under existing conditions, the known near-shore “wind-shadow” is viewed as an annoyance by the windsurfers, because it hinders launching and landing of boards and slows transit to the primary off-shore sailing area. According to the Coyote Point Recreation Area Master Plan, there are three windsurfing launch areas at the park.<sup>2</sup> There are two primary windsurfing launch areas located north and northwest of the parking lot at Coyote Point Recreation Area (see Figure 3.11-1). Once launched, windsurfers proceed out to the north, avoiding the pilings used to delineate the swimming area, and then move into the Bay. However, less experienced windsurfers and kite boarders remain closer to shore in order to take advantage of lower wind speeds that provide less challenging conditions. The concessionaire at Coyote Point conducts windsurfing and kite boarding lessons in the near-shore area surrounding the primary launching zone.<sup>3</sup> This near-shore zone is roughly delineated by the Coyote Point shoreline to the south, Airport Boulevard to the west, the end of Airport Boulevard (Fisherman’s Park) to the north, and the Coyote Point parking lot to the east.

<sup>2</sup> County of San Mateo, Parks Department, *Coyote Point Recreation Area Final Master Plan*, February 26, 2008.

<sup>3</sup> Personal communication with Rebecca Geffert, Boardsports School and Shop, October 13, 2011.



**FIGURE 3.11-1**  
**Windsurfing Launch Sites at Coyote Point Recreation Area**

Source: Hellmuth, Obata & Kassabaum, DES Architects, and Atkins, 2011.

The beach area near the Airport Boulevard bulkhead, at the far west end of Coyote Point Recreation Area serves as a secondary launching site for windsurfers and kite boarders. This secondary launch area is not ideal and is rarely used, typically by kite boarders.<sup>4</sup> However, the primary kite boarding launch site for this section of the Bay is from the 3<sup>rd</sup> Avenue launch area in San Mateo. Boards launched from this western end of the beach move to the northeast, to avoid the wind shadow from the bulkhead structure, and then would move northward into the Bay. The relationship of the windsurfing launching and landing areas to the primary windsurfing areas that lie offshore to the north also are shown in Figure 3.11-1.

**Recreation Facilities.** The City of Burlingame Parks and Recreation Department operates 16 recreation sites that comprise a total of approximately 57 acres. This equates to a ratio of approximately 1.9 acres of parkland per 1,000 residents. In addition, the City also maintains the 34.5-acre Mills Canyon Wildlife Refuge and the 2-acre Shorebird Sanctuary.<sup>5</sup> Two of the community park facilities run by the Parks and Recreation Department, as described in more detail below, are in the vicinity of the Project Site: Bayside Park, which is within the Bayfront area, and Victoria Park, in a residential neighborhood across US 101. Several recreational facilities that are operated by State, regional, and county agencies are also within the vicinity of the Project Site, including Coyote Point Recreation Area, Fisherman’s Park, Robert E. Woolley State Park, and the Bay Trail.

- *Bayside Park.* The 12-acre Bayside Park is west of the Project Site in the Anza area and is bound by Airport Boulevard to the north and west, US 101 to the south, and Anza Boulevard to the east. Bayside Park provides the largest collection of formal athletic facilities in Burlingame, including lighted fields for soccer, baseball, and softball as well as a dog park. In addition, several miles of trails are available for walkers, runners, and cyclists. These trails connect with the existing Bay Trail system.<sup>6</sup>
- *Burlingame Golf Center and Murray Field.* The Burlingame Golf Center and Murray Field are located on 10 acres west of the project site adjacent to Bayside Park. Facilities include a golf driving range and soccer facilities.
- *Victoria Park.* Victoria Park is a 0.9-acre neighborhood park located south of US 101 and the Project Site. The park has a playground for young children and a basketball court.<sup>7</sup>
- *Coyote Point Recreation Area.* The 670-acre Coyote Point Recreation Area, which is operated by San Mateo County, is located along the Bay, east of the Project Site. Coyote Point is a regional recreation area that provides a variety of recreational opportunities including picnicking, swimming, windsurfing, bicycling, jogging, fishing, boating, and sailing. The

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<sup>4</sup> Personal communication with Rebecca Geffert, Boardsports School and Shop, October 13, 2011.

<sup>5</sup> City of Burlingame, *Parks and Recreation Department, Parks & Playgrounds Facilities Guide*, website: <http://www.burlingame.org/Index.aspx?page=419>, accessed October 12, 2011.

<sup>6</sup> City of Burlingame, *Parks and Recreation Department, Parks & Playgrounds Facilities Guide*, “Bayside Park,” website: <http://www.burlingame.org/Index.aspx?page=421>, accessed October 12, 2011.

<sup>7</sup> City of Burlingame, *Parks and Recreation Department, Parks & Playgrounds Facilities Guide*, website: <http://www.burlingame.org/Index.aspx?page=419>, accessed October 12, 2011.

park also includes a playground, natural history exhibits, a marina, a beach, and natural habitats.<sup>8</sup>

- *Fisherman's Park.* Fisherman's Park is located at the northeast corner of the Anza Point North area and includes several picnic tables and Bay access for fishing. The Bay Trail, which runs along the Bay from Fisherman's Park, southward, includes a pedestrian pathway and several benches. San Mateo County maintains and operates Fisherman's Park.<sup>9</sup>
- *Robert E. Woolley State Park.* Robert E. Woolley State Park is located west of the Project Site in the Anza Area. This 5-acre park is on State-owned land and contains passive open space, picnic areas, a fishing pier area, and a fish cleaning station.
- *Bay Trail.* The Bay Trail is a series of existing and planned regional hiking and bicycle trails that will eventually connect continuously around the perimeter of the San Francisco and San Pablo Bays. The Bay Trail, which is administered by the Association of Bay Area Governments (ABAG), provides easily accessible recreational opportunities for hikers, joggers, bicyclists, and skaters. It also offers a setting for wildlife viewing and environmental education. The Bay Trail offers access to commercial, industrial, and residential neighborhoods; points of historic, natural, and cultural interest; recreational areas like beaches, marinas, fishing piers, boat launches; and over 130 parks and wildlife preserves totaling 57,000 acres of open space.<sup>10</sup> Several existing segments of the Bay Trail are adjacent to the 300 Airport Boulevard Site.

## **Applicable Plans and Regulations**

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### **State**

**San Francisco Bay Plan.** The San Francisco Bay Plan was completed and adopted by the BCDC in 1968 and submitted to the California Legislature and Governor in January 1969. The Bay Plan was prepared by the BCDC over a three-year period pursuant to the McAteer - Petris Act of 1965 which established the BCDC as a temporary agency to prepare an enforceable plan to guide the future protection and use of San Francisco Bay and its shoreline. In 1969, the Legislature acted upon the BCDC's recommendations in the Bay Plan and revised the McAteer - Petris Act by designating the BCDC as the agency responsible for maintaining and carrying out the provisions of the Act and the Bay Plan for the protection of the Bay and its natural resources and the development of the Bay and shoreline to their highest potential with a minimum of Bay fill.

BCDC has jurisdictional authority over the Bay, the 100-foot-wide shoreline band surrounding the Bay, salt ponds, managed wetlands, and certain waterways as defined in the San Francisco Bay Plan.

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<sup>8</sup> County of San Mateo, Division of Parks, "Coyote Point Recreation Area," website: <http://www.co.sanmateo.ca.us/portal/site/parks/menuitem.f13bead76123ee4482439054d17332a0/?vgnnextoid=563bc8909231e110VgnVCM1000001d37230aRCRD&cpsexcurrchannel=1>, accessed October 12, 2011.

<sup>9</sup> City of Burlingame, Planning Department, *Bayfront Specific Plan*, approved April 5, 2004 and amended August 21, 2006.

<sup>10</sup> Association of Bay Area Governments, "San Francisco Bay Trail - Overview," website: <http://www.baytrail.org/overview.html>, accessed <http://www.baytrail.org/overview.html>, accessed October 12, 2011.

BCDC has permitting authority for development within the 100-foot shoreline band and is also responsible for issuing Bay filling and dredging permits. The grounds on which development applications are approved or denied are outlined in the San Francisco Bay Plan.

According to the “Major Conclusions and Policies” of the Bay Plan, shoreline areas suitable for water-related recreation exist only in a limited amount and should be reserved for such purposes. In order to ensure that the Bay and shoreline are developed to their highest potential, any public agency or private owner proposing to develop shoreline lands within the BCDC's jurisdiction must obtain a permit from the BCDC before proceeding. Permits may be granted or denied only after public hearings (except for emergency or minor repairs or minor improvements which may be granted by the Executive Director) and after the process for review and comment by the city or county has been completed. When deciding on permit approval, the BCDC evaluates the proposed project's compliance with various standards set out in the Bay Plan associated with use of the shoreline, including water-oriented recreational uses, provision of public access, and advisory review of appearance. New shoreline development that is under the jurisdiction of the BCDC must provide maximum feasible public access to the Bay and shoreline, as established by Bay Plan policies, including policies on water-oriented recreation. "Water-oriented recreation" is defined as a "Priority Use" by the BCDC Bay Plan.

**BCDC Public Access Design Guidelines for the San Francisco Bay.** The purpose of the BCDC Public Access Design Guidelines for the San Francisco Bay is to provide the San Francisco Bay region with a design resource for development projects along the shoreline of the San Francisco Bay within the BCDC jurisdiction. These guidelines provide suggestions for site planning, as well as recommendations for designing and developing attractive and usable public access areas. The guidelines are not legally enforceable standards, but are an advisory set of design principles aimed at enhancing shoreline access while providing for the protection of Bay resources, regional livability, and local economic prosperity.

The guidelines are general in scope due to the varied conditions of the shoreline and the numerous uses that occur along the Bay. They are applicable to all development projects within the BCDC's jurisdiction and are intended to complement the guidelines and design standards of the local municipalities within the region. Although the Public Access Design Guidelines are advisory, they have been adopted by the Commission and are based on San Francisco Bay Plan policies. The guidelines also reflect past recommendations of the BCDC's Design Review Board and formal decisions of the BCDC.<sup>11</sup>

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<sup>11</sup> San Francisco Bay Conservation and Development Commission, *Shoreline Spaces: Public Access Design Guidelines for the San Francisco Bay*, April 2005.

## Local

**City of Burlingame General Plan.** The Open Space Element of the General Plan provides policies to protect and enhance existing and future open space areas. The Open Space Element does not include goals or standards for park acreage per resident ratios.

- *Policy OS(A):* Preserve existing open space and open space lands to the fullest extent practicable, with spaces ranging in size from regional scale to small open spaces on individual lots.
- *Policy OS(D):* Provide open space for recreational needs and for the preservation of sites of historical and cultural significance.

**City of Burlingame Bayfront Specific Plan.** The Bayfront Specific Plan contains the City's goals and development policies for growth and expansion in the Bayfront Area. The plan also establishes community standards to be used as a basis for individual projects and site environmental analysis. The Bayfront Specific Plan was first adopted in 1981. An updated Bayfront Specific Plan was approved by the Burlingame City Council in April 2004 and amended in August 2006.

*Parks and Recreation.* Future development of sites with bay or tributary frontage would be required to install segments of the Bay Trail and provide ongoing maintenance of the trail, as well as keep the trail segments open to the public, and to provide public trail access parking.

*Wind Effects.* In order to preserve the wind resource for recreational windsurfers and to improve the wind environment [MB1] on the Bay Trail, pedestrian pathways and in useable open spaces and parking lots near large buildings, standards should be applied to evaluate changes in wind speed caused by new construction. The following standards shall be considered for all new development in the portions of the Bayfront Planning Area described below.

### All Areas:

- The community standard to be achieved by wind evaluations required below shall be that the wind reduction caused by a structure shall reduce the wind speeds compared to existing conditions by no more than 10 percent at irreplaceable windsurfing launching and landing sites, or reduce wind speed by no more than 10 percent over large portions of the windsurfing transit routes or primary board sailing areas.
- In the evaluation of wind impacts as they relate to hazardous wind conditions in the pedestrian and open space environment, the structures shall result in an increase in wind speed and turbulence in areas adjacent to the buildings of no more than 10 percent compared to existing conditions.
- On properties along the shoreline, types of landscaping that can materially affect wind speeds should be discouraged.
- In order to have a minimal impact on wind in the nearby Bay, planting of trees along the Bay trails should be minimized in areas adjacent to recreational uses and key visual access.

- Within parks and open space areas located away from the water, small structures and landscaping should be used to reduce winds and provide protected areas.

**Anza Point Area:**

- For buildings 50 feet tall or higher, a wind analysis should be prepared to evaluate the potential wind effects to bay recreation.
- The wind analysis should also include evaluation of wind impacts as they relate to hazardous wind conditions in the pedestrian and open space environment adjacent to these buildings.
- Because the area is surrounded by water on three sides, wind considerations should take precedence over bay views in placing of buildings. Buildings should be low rise and clustered to minimize the impacts on wind speed.
- Development should provide some sheltered passive public open spaces visually connected to the Bay Trail.

**ABAG Bay Trail Plan and Design Guidelines.** The Bay Trail Plan proposes development of a regional hiking and bicycling trail around the perimeter of the San Francisco and San Pablo Bays. The Plan mandates that the Bay Trail provide connections to existing park and recreation facilities, create links to existing and proposed transportation facilities, and be planned in a way to avoid adverse effects on environmentally sensitive areas. The Bay Trail policies and design guidelines are intended to complement, rather than supplant, the adopted regulations and guidelines of local managing agencies. Implementation of the Bay Trail relies on the continued cooperation among shoreline property owners, and federal, State, and local agencies with jurisdictions over the trail alignment.<sup>12</sup>

The Bay Trail currently runs along the eastern border of the 300 Airport Boulevard Site, but ends at Fisherman’s Park. However, Beach Road, to the south of the 300 Airport Boulevard Site, is designated as an on-street, unimproved Bay Trail by the Bay Trail Map.<sup>13</sup> This segment serves to connect the Bay Trail to the east of the 300 Airport Boulevard Site with the Bay Trail that runs north-south on the western bank of Sanchez Channel and along the northern bank of Sanchez Lagoon. A bicycle/pedestrian bridge spans over Sanchez Channel to the south of the Project Site to connect portions of a Bay Spur Trail along Sanchez Lagoon to other portions of the Bay Trail. In addition, the Bay Trail Map designates the northern and western boundaries of the 350 Airport Boulevard Site as a “Planned Bay Trail,” which is a future trail not yet developed. The 300 Airport Boulevard Project would include improvements to the existing Bay Trail system and therefore would need to adhere to the Bay Trail Plan and its Design Guidelines.

**Coyote Point Recreation Area Master Plan.** The Coyote Point Recreation Area Master Plan (Master Plan) was prepared for the County of San Mateo and approved on February 26, 2008. Development and management of park facilities have been guided by the 1971 Master Plan, with few park

<sup>12</sup> Association of Bay Area Governments, *Bay Trail Plan*, June 30, 1999, website: <http://www.baytrail.org/baytrailplan.html>, accessed on April 22, 2011.

<sup>13</sup> Association of Bay Area Governments, “San Francisco Bay Trail: San Francisco Peninsula,” 2011, website: [http://www.baytrail.org/Maps/SF\\_Peninsula.pdf](http://www.baytrail.org/Maps/SF_Peninsula.pdf), accessed on April 22, 2011.

improvements since the 1970s. Within the last few years there have been several requests for new programs and facilities, and expansion of existing programs. The planning process that led to the preparation of the Master Plan was developed to provide an opportunity to receive community input, assess what elements need improvement, and develop a vision for the future.<sup>14</sup>

## **Impacts and Mitigation Measures**

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### **Methodology**

To determine the effects of the project on windsurfing, wind tunnel tests were performed to study the wind conditions at the windsurfing launch sites at Coyote Point Recreation Area and in the sailing area in the Bay to the north of the launch site. A 1-inch to 50-foot scale model of the Project Site and surrounding vicinity, as well as a substantial downwind reach into the Bay was constructed in order to simulate the 300 Airport Boulevard Project and its existing context. The model was sized to contain a 1,800-foot by 1,800-foot portion of the Bay and shoreline.

Wind-tunnel tests were conducted for three scenarios: existing conditions, development of the 300 Airport Boulevard Project, and development of the 300 and 350 Airport Boulevard Project. For each development scenario the wind-tunnel test analyzed impacts on northwest (NW), west-northwest (WNW), and west (W) wind directions.

### **Significance Criteria**

There are no established criteria to define the level of reduction in wind speed that would constitute a “significant adverse impact” under CEQA for windsurfing at Coyote Point Recreation Area shoreline or in the Bay. However, the City considered recreational windsurfing needs in creating community wind standards established in the Bayfront Specific Plan. These community wind standards act as a guideline for land use development in the area to avoid surpassing specified wind-speed reductions that would result in unacceptable impacts to recreational windsurfing needs. The following standard of significance was adapted from the Bayfront Specific Plan. In addition, the criteria for determining significant recreation impacts are based on Appendix G of the CEQA Guidelines. As such, the Project would result in a significant wind and recreation impacts if it would:

- A project could physically degrade a windsurfing or kite boarding recreational resource if it were to reduce wind speeds to the point where the reductions would substantially impair windsurfing in prime windsurfing areas or substantially impair access to or from those areas from existing launch sites.
- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or
- Include recreational facilities or require the construction or expansion of facilities which might have an adverse physical effect on the environment.

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<sup>14</sup> County of San Mateo Parks Department, *Coyote Point Recreation Area Final Master Plan*, February 26, 2008.

## Environmental Analysis

For each potential impact associated with the Project, a level of significance is determined and is reported in the impact statement. Conclusions of significance are defined as follows: significant impact (S), potentially significant impact (PS), less than significant (LTS), or no impact (NI). If the mitigation measures would not diminish significant or potentially significant impacts to a less-than-significant level, the impacts are classified as “significant unavoidable impacts (SU).” For this section, RW refers to parks and wind effects on recreation.

*RW-1 Effects on Windsurfing and Kiteboarding Recreational Resources. The 300 Airport Boulevard Project would have a less-than-significant impact on windsurfing and kiteboarding recreational resources. However, there is currently no project application for development of the 350 Airport Boulevard Site; therefore, future development of the 350 Airport Boulevard Site could not be accurately modeled. As such, wind impacts as a result of the 350 Airport Boulevard Project could be potentially significant due to a reduction in wind speed. (PS)*

### **300 Airport Boulevard**

Wind speed effects on water-related recreational uses of the Coyote Point shoreline and Bay vary with the specific use. Sailing requires wind, but there are no specific criteria for minimum wind speeds to support “good” sailing. However, wind speeds of 13 mph or more are usually considered desirable for wind-powered activities, such as paragliding and hang-gliding, and apply to windsurfing as well. Wind is necessary to launch and land, but if winds at the launch site are too strong, beginning- and intermediate-level windsurfers could find it difficult to do either. Wind direction is also important to windsurfing, in that an adverse wind direction can make it more difficult to launch the board, to reach a desirable sailing area, or to return safely to the launch site. At Coyote Point, the NW wind direction is the ideal wind direction for traveling from the shoreline to the open waters of the Bay and for windsurfing and kite boarding within the near-shore zone.

From the perspective of windsurfers, the presence of existing landforms, vegetation, and buildings that already lie upwind of windsurfing areas represent “surface roughness” that reduces the speed and increases the turbulence of the winds that reach the Coyote Point launch site and windsurfing area. Under existing conditions, the 300 Airport Boulevard Site and areas of the Bay adjacent to the site are characterized by relatively strong winds because the surrounding area is generally open. However, wind speeds are depressed within 200 to 300 feet of the bulkhead along the eastern edge of the 300 Airport Boulevard Site because of existing terrain, vegetation, and scattered buildings. Hence, this area is undesirable and rarely used as a launch site by windsurfers. Wind speeds increase farther east of the bulkhead.

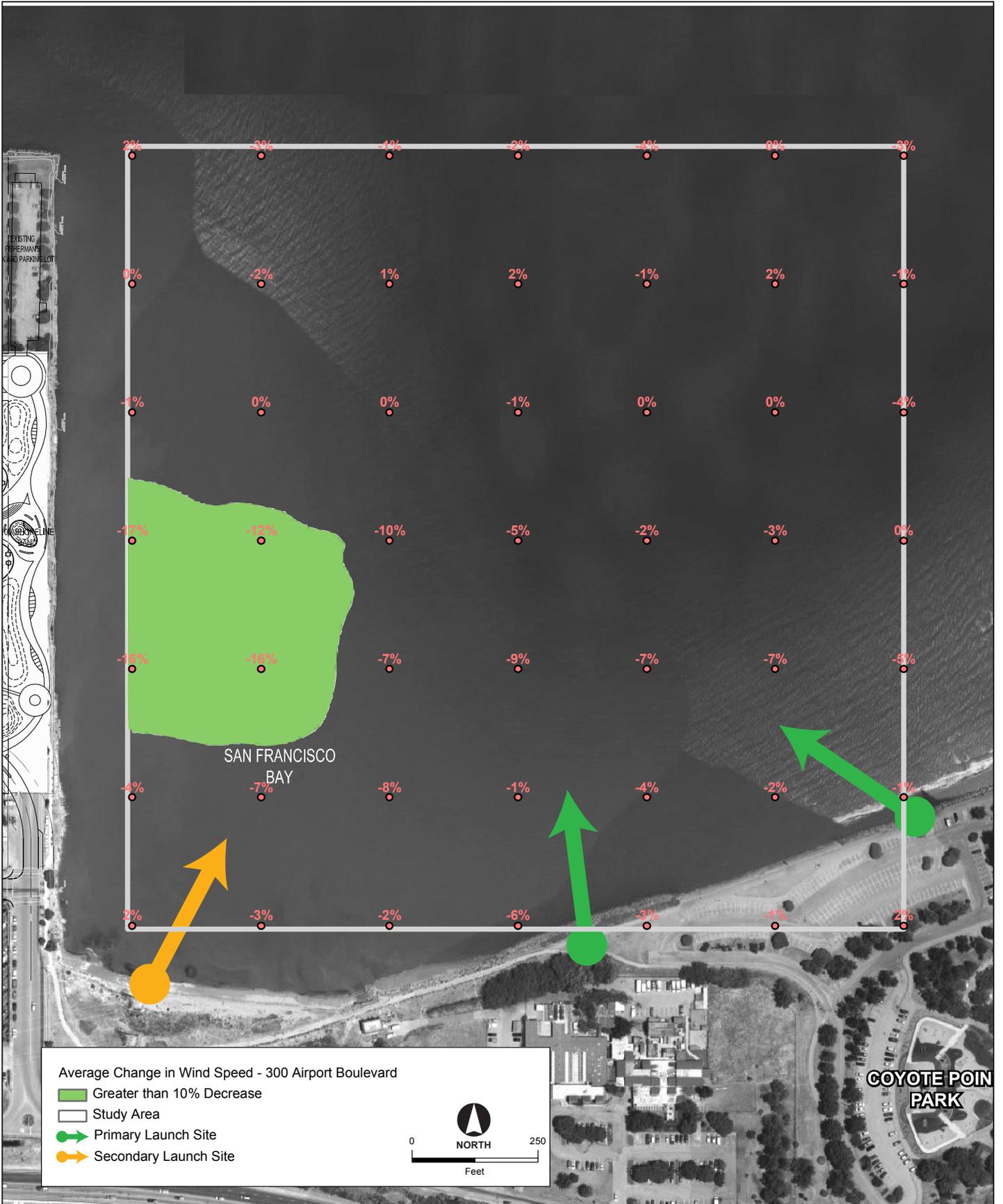
According to the wind study conducted for the Project, development of the 300 Airport Boulevard Site would result in a 10 percent or greater reduction in wind speeds in a confined area extending approximately 400 feet east of the Airport Boulevard bulkhead. In the north-south direction this wind shadow would begin approximately 400 feet north of the Coyote Point

shoreline and extend approximately 400 feet from that point to a point approximately 800 feet from the shoreline (see Figure 3.11-2). As shown, the wind shadow caused by construction of the 300 Airport Boulevard Project would not substantially affect the primary windsurfing launch sites, transit lanes, or near-shore windsurfing and kite boarding area at the Coyote Point Recreation Area. Most of the area affected by the 300 Airport Boulevard Site sits in the existing wind shadow resulting from the bulkhead. As described previously, this area is rarely used as a launching or transit area. After implementation of the Project windsurfers and kite boarders would still be able to launch from the secondary launch area and transition to the open waters of the Bay, although the transit route would be slightly modified. Therefore, the Project would not substantially impair prime windsurfing and kite boarding areas or substantially impair access to or from those areas, and would not result in a significant impact to recreational windsurfing and kite boarding uses in the area. Further, because implementation of the 300 Airport Boulevard Project would not result in a greater than 10 percent reduction in wind speeds at irreplaceable launching and landing sites, or over large portions of transit routes or primary windsurfing and kite boarding areas, the 300 Airport Boulevard Project would be consistent with the Bayfront Specific Plan.

### **350 Airport Boulevard**

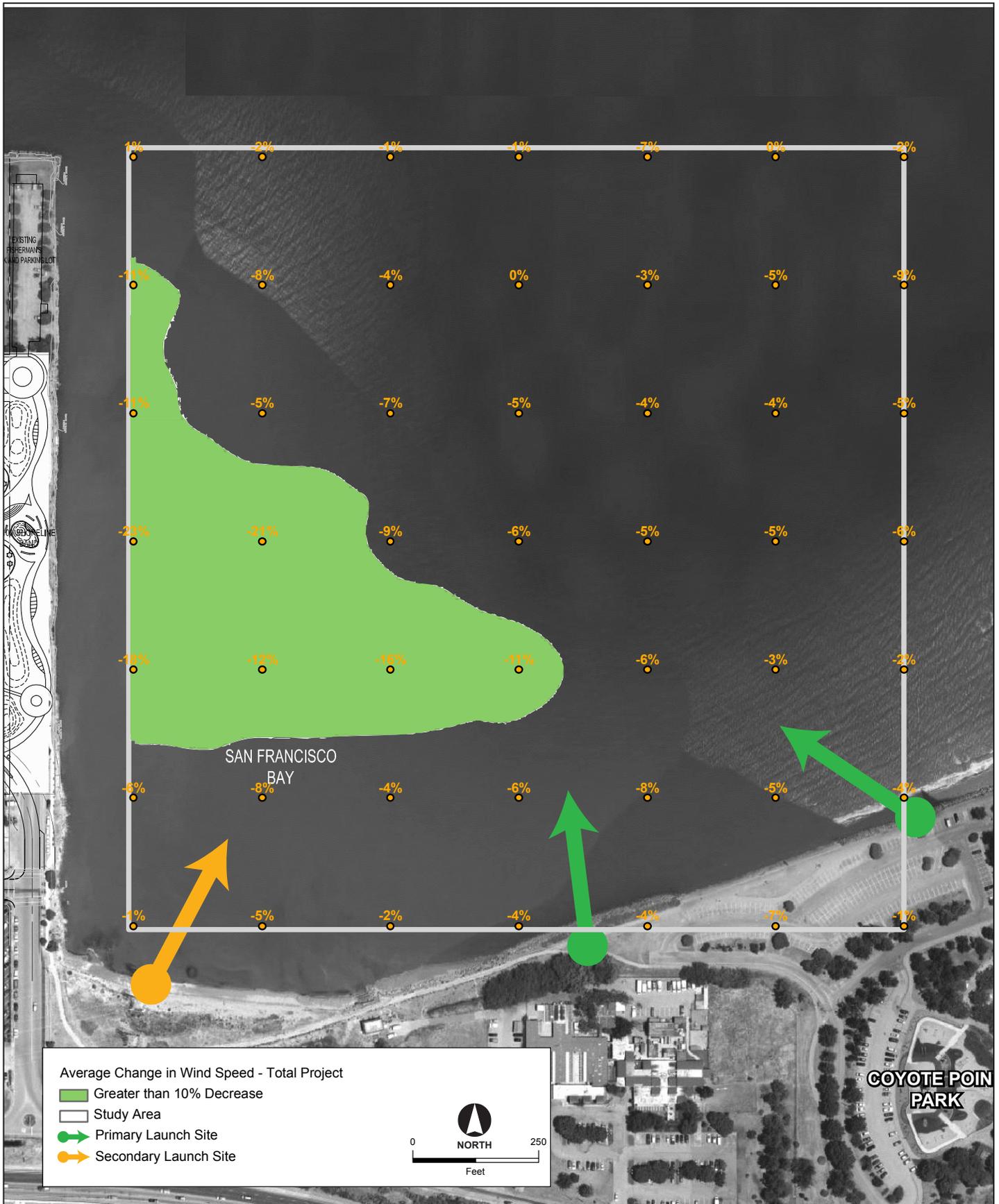
Because there is currently no project application for development of the 350 Airport Boulevard Site, the 350 Airport Boulevard Site was modeled based on a potential for development consistent with the revised Bayfront Specific Plan and zoning designations proposed for the Project. The wind study prepared for the Project included a program level analysis of the potential wind effects associated with development of the 350 Airport Boulevard Site. As shown in Figure 3.11-3, the wind shadow that would result from development of both the 350 Airport Boulevard Site would extend farther north and east into the Bay compared to the wind shadow associated with the 300 Airport Boulevard Project. However, because there is no a project application for the 350 Airport Boulevard Site the configuration, height, and bulk of building on the site is speculative, and the associated wind shadow effect could change depending on the ultimate development proposal. Therefore, the 350 Airport Boulevard Project could result in a potentially significant impact to windsurfing recreation resources at Coyote Point Recreation Area.

**MITIGATION MEASURE.** Implementation of Mitigation Measure RW-1.1 would require future development of the 350 Airport Boulevard Site undergo wind tunnel analysis to ensure that site design minimize wind shadow effects at the surrounding windsurfing recreation areas. Implementation of Mitigation Measure RW-1.1 would ensure that future development at 350 Airport Boulevard would not substantially impair windsurfing in prime windsurfing areas and would not substantially hinder access to or from the windsurfing launch sites at Coyote Point Recreation Area. Development of the 350 Airport Boulevard Project would therefore result in a less-than-significant impact on windsurfing recreational resources. (LTS)



Source: City of Burlingame, 2011.

**FIGURE 3.11-2**  
**Average Change in Wind Speed for the Northwest, West-North-West, and West Directions - 300 Airport Boulevard**



**FIGURE 3.11-3**  
**Average Change in Wind Speed for the Northwest, West-North-West, and West Directions - Cumulative with Future Development of 350 Airport Boulevard Site**

Source: City of Burlingame, 2011.

*RW-1.1 Future Wind Tunnel Analysis.* To reduce potential impacts associated with future development of the 350 Airport Boulevard Site, a wind tunnel analysis shall be conducted in order to ensure that future development of the Site is designed in a way to minimize wind shadow effects at surrounding windsurfing areas.

*RW-2 Existing Recreational Facilities.* Implementation of the Project would not result in substantial physical deterioration of existing recreational facilities as a result of increased use, nor would the Project require expansion of existing facilities which could have adverse environmental effects. The Project would have a less-than-significant impact on recreational facilities and the environment. (LTS)

### **300 Airport Boulevard**

As described in Section 3.10, Population and Housing, it is estimated that implementation of the 300 Airport Boulevard Project (under the office land use scenario) would provide jobs for approximately 2,433 office employees. In addition, the amenities center could employ up to 42 individuals,<sup>15</sup> for a total of 2,475 employees. In order to provide a conservative analysis, it is assumed that all 2,475 new employees would also become residents of the City of Burlingame. In anticipating future growth in the City, ABAG Projections 2009 include the employment growth estimated for the Bayfront Specific Plan area under existing zoning. Because the 300 Airport Boulevard Project would seek an amendment to the Zoning Code to increase the allowable floor area ratio (FAR), implementation of the Project would result in employment of approximately 946 more employees than under existing zoning regulations. The net increase of 946 employees (and consequently new residents) unaccounted for in ABAG Projections 2009 constitutes approximately 3 percent of the City's total population in 2010. This is a negligible increase when considered in the context of the existing population and would not result in a substantial increase in demand for or use of recreation facilities.

Further, the 300 Airport Boulevard Project would include open space corridors between buildings and plazas throughout the site as an amenity. In addition, the 300 Airport Boulevard Project would provide gathering spaces for employees and visitors, which would offset any potential impacts to surrounding recreational areas or demand for new recreational facilities. The 300 Airport Boulevard Project would also include connections to the Bay Trail via the east-west pedestrian promenade, smaller open space and landscaped areas, and improvements to the offsite Eastern Shoreline open space and Bay Trail along the Bay. Along the eastern shoreline, the Bay Trail would be extended north and south within the 100-foot shoreline band. A Bay Trail plaza and waterfront overlook would be located midway along this stretch of Bay shoreline. Improvements to the Bay Trail would include new amenities such as benches and seating areas. In addition, the 300 Airport Boulevard Project would include similar improvements to the Bay Spur Trail located along the Sanchez Channel on the west side of the Project Site. Improvements to recreation facilities in the Project area would be subject to City

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<sup>15</sup> Association of Bay Area Governments, *1987 Input-Output Model and Economic Multipliers for the San Francisco Bay Region*, March 1995. Multiplier for "Amusement and Recreational Services" averages 870 sf per employee. As such 37,000 sf of proposed amenities center/870 sf = ~42 employees.

and BCDC permitting authority. Specifically, improvements within the 100-foot shoreline band would comply with regulations outlined in the San Francisco Bay Plan and modification of the Bay Trail would adhere to the ABAG Bay Trail Plan and Design Guidelines.

Improvements to surrounding recreation areas and inclusion of on-site open space would further reduce the Project's impact on existing recreation facilities. Based on the population growth estimates described above, and compliance with the applicable design guidelines for recreation improvements, implementation of the 300 Airport Boulevard Project would have a less-than-significant impact on existing recreation facilities.

### **350 Airport Boulevard**

The 350 Airport Boulevard Site is currently vacant and consists of an abandoned one-story wooden structure and associated paved surfaces. At this time, a development proposal for 350 Airport Boulevard has not been submitted. The proposed amendments to the Bayfront Specific Plan and Anza Point North Zoning Regulations would apply to the 350 Airport Boulevard Site as well as the 300 Airport Boulevard Site. The proposed amendments would allow for a greater FAR and would decrease the required setback from the Bay shoreline for buildings that are greater than 100 feet from the shoreline. These changes would result in the potential for increased density at the 350 Airport Boulevard Site, which could result in a higher number of employees than under current zoning conditions. Based on the area of the 350 Airport Boulevard Site (8.58 acres) and the proposed 1.0 FAR it is assumed that the maximum development potential of the site is approximately 374,000 sf and 1,247 employees.<sup>16</sup> If all of the potential employees currently live outside of Burlingame and move to the City (which is an unlikely scenario), the 350 Airport Boulevard Project would increase the City's population by approximately 1,247 individuals. In anticipating future growth in the City, ABAG Projections 2009 include the employment growth estimated for the Bayfront Specific Plan area under existing zoning. Because the 350 Airport Boulevard Project would seek an amendment to the Zoning Code to increase the allowable FAR, implementation of the Project would result in employment of approximately 499 more employees than under existing zoning regulations. The net increase of 499 employees (and consequently new residents) unaccounted for in ABAG Projections 2009 constitutes approximately 2 percent of the City's total population in 2010. The population growth that could result from development of the 350 Airport Boulevard Site individually and when combined with the 300 Airport Boulevard Site would be minor in comparison to the total population of the City.

Further, the analysis in this EIR assumes connectivity between the 300 and 350 Airport Boulevard Sites, such that the open spaces, amenities center, and recreation improvements included in the 300 Airport Boulevard Project would also serve future development at the 350 Airport Boulevard Site. In addition, the area north of the site is designated as a "Planned Bay Trail" by the Bay Trail Map. Since this area is not currently developed as part of the Bay Trail system, it is not considered to be part of the system for the purposes of this environmental

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<sup>16</sup> Based on an employee generation rate of one employee per 300 sf.

review. Nonetheless, it is likely that, similar to the 300 Airport Boulevard Project, BCDC would require that the 350 Airport Boulevard Project include improvements to the 100-foot shoreline including public access amenities and expansion of the Bay Trail to this area. As such, the 350 Airport Boulevard has the potential to further enhance and expand the existing Bay Trail, which would help to accommodate the increase in employees as a result of future development.

Because the 350 Airport Boulevard Site is adjacent to the Bay and the Sanchez Channel, both under the jurisdiction of the BCDC, future development would be required to comply with provisions included in BCDC's Bay Plan and Public Access Design Guidelines for the San Francisco Bay. If the 350 Airport Boulevard Project were to include modification of the Bay Trail or Bay Spur Trail, such alterations would be required to comply with the ABAG Bay Trail Plan and Design Guidelines described above. Compliance with these regulations would ensure that expansion of recreation facilities would not result in adverse environmental effects. Based on the estimated increase in population that could result from implementation of the 350 Airport Boulevard Project and the design and permitting requirements governing recreation facility improvements, it is unlikely that development of the 350 Airport Boulevard Site would adversely affect existing recreation facilities or the environment. This impact would be less than significant. However, because a development proposal for the 350 Airport Boulevard Site has not been submitted, analysis of a future project's impact on surrounding recreation facilities is speculative and a future project-level environmental review would be required.

## **Cumulative Analysis**

The geographic context for the analysis of cumulative wind impacts is the Bayfront Specific Plan area and the adjacent Bay and shoreline area and the geographic context cumulative recreation impacts is the City of Burlingame. Cumulative development projects within the Bayfront Specific Plan area may result in cumulative effects on recreation resources. However, as identified in Section 3.1, Environmental Analysis, no other development, besides 300 and 350 Airport Boulevard is proposed in the Bayfront Specific Plan area. The potential cumulative effects are discussed below.

*RW-3 Cumulative Effects on Windsurfing Recreational Resources and Recreational Facilities. The Project, in combination with other foreseeable development, would not result in significant recreation or wind impacts. (LTS)*

Because there is no other development planned for the Bayfront Specific Plan area, there would be no cumulative impact on windsurfing recreational resources at Coyote Point Recreation Area. As described under Impact RW-2 above, due to the inclusion of onsite open spaces, improvements to the offsite Eastern Shoreline open space and Bay Trail, the Project would have a less-than-significant impact with regard to the physical deterioration of existing recreation facilities as a result of increased use. In addition, all improvements to public open spaces that would result as part of the Project would adhere to the respective jurisdiction's design requirements to ensure that these improvements would have less-than-significant environmental effects. When considered in the context of cumulative development within the

City, the Project would not result in cumulatively considerable adverse effects to recreation facilities or the environment. Cumulative recreation impacts would be less than significant.

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## 3.12 UTILITIES AND SERVICE SYSTEMS

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### Introduction

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This section summarizes the existing capacity and level of service of basic utilities in the City of Burlingame (City) and evaluates the change in demand for basic utilities as a result of implementation of the Project. The infrastructure facilities addressed below include water supply, storage, and distribution; and wastewater collection, transmission, and treatments. Information on water supply in this section is based on the *Draft Water Supply Assessment for the 300 Airport Boulevard Project*.<sup>1</sup> This Water Supply Assessment (WSA) can be found in Appendix J of this document.

Issues identified in response letters to the Notice of Preparation (NOP) and during the City Council public scoping meetings for the Project were considered in preparing this analysis. Applicable issues that were identified pertain to the availability of sufficient water and wastewater infrastructure capacity; compliance with applicable local requirements for sewer, stormwater discharges, sanitation, and water supply safety; the need for a sewer study and water demand study; integration of shower facilities within buildings; and support for water and energy conservation through sustainable design. These issues are addressed in the section.

### Existing Conditions

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**Water Supply.** The City's sole source of potable water is the San Francisco Public Utilities Commission (SFPUC) Regional Water System (RWS), which obtains approximately 85 percent of its water supply from the Hetch Hetchy Reservoir. The balance (approximately 15 percent) comes from runoff in the Alameda Creek watershed (stored in the Calaveras and San Antonio reservoirs) and runoff from the San Francisco Peninsula (stored in the Crystal Springs, San Andreas, and Pilarcitos reservoirs, which also provide storage for water delivered from the Hetch Hetchy Project and its delivery system). SFPUC currently delivers an annual average of approximately 265 million gallons per day (mgd) to retail and wholesale customers primarily within the San Francisco Bay Area. The City also uses well water and recycled water for supplying non-potable water. The supply sources and quantities are shown in Table 3.12-1.

SFPUC supplies water to the City through six service connections on SFPUC's Sunset Supply Pipeline and Crystal Springs Pipelines #2 and #3.<sup>2</sup> Crystal Springs Pipeline #2 runs along El Camino Real through the City. The Crystal Springs Pipeline #2 Replacement Project began construction in spring 2011 in order to repair, replace and seismically upgrade this critical water main.<sup>3</sup> In addition to serving the City, these large diameter (60-inch) pipes supply water to the Peninsula communities of San

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<sup>1</sup> Atkins, *Draft Water Supply Assessment for the 300 Airport Boulevard Project*, June 2011.

<sup>2</sup> City of Burlingame, *2000 Urban Water Management Plan*, November 2000.

<sup>3</sup> City of Burlingame, *City News: Crystal Springs Pipeline Replacement Coming to Burlingame*, website: <http://www.burlingame.org/Index.aspx?page=8&recordid=2690&returnURL=%2fIndex.aspx%3fpage%3d1598>, accessed May 2, 2011.

Mateo, Hillsborough, Millbrae, San Bruno, South San Francisco, Daly City, and Brisbane, as well as to San Francisco and the San Francisco International Airport (SFO). The pipelines and easements are administered and maintained by SFWD.

**Table 3.12-1  
Supply Sources and System-Wide Reductions**

SFPUC Water Sources	Normal Year Supply Source		Approximate Multiple Dry-Year Supply Source (20% System-wide Reduction)		
	Origin/System	mgd	Approximate % of Supply	mgd	Approximate % of Supply
Local Source	Alameda System <sup>a</sup>	39.75	15	14.84	7
	Peninsula System <sup>b</sup>				
Imported Source	Hetch Hetchy System <sup>c</sup>	225.25	85	197.16	93
<b>Total</b>		<b>265.00</b>	<b>100</b>	<b>212.00</b>	<b>100</b>

*Sources:* Draft Water Supply Assessment for the 300 Airport Boulevard Project, Atkins, April 2011. Appendix J. San Francisco Public Utilities Commission. 2005. Urban Water Management Plan. p. 11.

*Notes:*

- a. Calaveras Reservoir, San Antonio Reservoir.
- b. Crystal Springs Reservoirs, San Andreas Reservoir, Pilarcitos Reservoir.
- c. Hetch Hetchy Reservoir, Lake Lloyd, Lake Eleanor, New Don Pedro Reservoir, Tuolumne River System.

**Water Contracts and Agreements.** In 1984, SFPUC executed the Settlement Agreement and Master Water Sales Contract with the 27 member agencies of the Bay Area Water Supply and Conservation Agency (BAWSCA). BAWSCA members purchase approximately two-thirds of the water delivered by the SFPUC system and the balance is delivered to the City and County of San Francisco and its retail customers. The Settlement Agreement and Master Water Sales Contract primarily addresses the rate-making methodology used by SFPUC in setting wholesale water rates for its wholesale customers, in addition to addressing water supply and water shortages within the RWS. The Settlement Agreement and Master Water Sales Contract provides 184 mgd as an annual average of “Supply Assurance” to all BAWSCA wholesale customers, but is subject to reductions in the event of droughts, water shortages, earthquakes, other acts of God, or system maintenance and rehabilitation.<sup>4</sup> Each member holds an individual water supply contract and the Settlement Agreement and Master Water Sales Contract governs the contract. The original twenty-five year contract ended on June 30, 2009.

SFPUC approved the new twenty-five year contract, now known as the Water Supply Agreement, in June 2009 and the BAWSCA agencies completed their approval of the Water Supply Agreement in October 2009. This new Water Supply Agreement expires on June 30, 2034. Section 7.01 of the 1984 Settlement Agreement and Master Water Sales Contract states “Supply Assurance continues in effect indefinitely, even after expiration of the Master Water Sales in 2009” and this is still the case in the

<sup>4</sup> San Francisco Public Utilities Commission. April 2000. Water Supply Master Plan. p. 23.

new Water Supply Agreement. The condition is a reflection of case law, which holds that a municipal utility acts in a trust capacity with respect to water supplied to outside communities (*Durant v. City of Beverly Hills*, 39 Cal. App. 2d 133, 102 P.2d 759 (1940); and *Hansen v. City of San Buenaventura*, 42 Cal. 3d 1172 (1986)). In other words, entire communities have developed a reliance on these water supplies. Consequently, the Supply Assurance of up to 184 mgd will survive the termination of the Water Supply Agreement and the Individual Contracts.

The Water Supply Agreement now includes an Individual Supply Guarantee (ISG) for most wholesale customers. The ISG establishes the minimum quantity of water SFPUC will supply to each wholesale customer during times of normal supply. The Water Supply Agreement does not guarantee that SFPUC will meet peak or hourly demands if the individual wholesaler’s annual usage exceeds the ISG. The ISG helps the wholesaler plan for future demands and growth within their service area; for that reason, the ISG transcends the Water Supply Agreement expiration and continues indefinitely, as discussed previously. The ISG for the City secures 5.23 mgd for normal year deliveries.<sup>5</sup> Table 3.12-2 shows historical and current water use for the City.

**Table 3.12-2**  
**Historical and Current Water Use (mgd)<sup>a</sup>**

	2005-06	2006-07	2007-08	2008-09	2009-10
Potable Water Demand <sup>b</sup>	4.35	4.53	4.50	4.28	3.94
<b>Total Water Demand<sup>c</sup></b>	4.65	4.83	4.80	4.58	4.24

Source: City of Burlingame, 2010 UWMP.

Notes:

- a. Values are reported in millions of gallons per day (mgd) for the fiscal years 2005 through 2010. For breakdown of potable use see Table 8 in the City’s 2010 UWMP.
- b. Quantity of water purchased from SFPUC, as recorded in the City's Salesmaster Reports.
- c. Gross water use includes 0.30 mgd of recycled water that is only used within the City's wastewater treatment plant for irrigation and in-plant process purposes.

**Water Supply Reliability.** In terms of water supply reliability, the SFPUC’s Urban Water Management Plan (UWMP) assumes “firm” delivery “as amount the system can be expected to deliver during historically experienced drought periods.”<sup>6</sup> The 1987 to 1992 drought is the basis for this plan, plus an additional period of limited water availability.<sup>7</sup> SFPUC plans its water deliveries assuming that the worst drought experience is likely to reoccur and then adds an additional period of limited water availability. An 8.5-year drought scenario is referred to as the “design drought” and is ultimately, the

<sup>5</sup> Bay Area Water Supply and Conservation Agency. March 2007. Annual Survey: FY 2005-06. p. 15.

<sup>6</sup> San Francisco Public Utilities Commission, 2010 Urban Water Management Plan for the City and County of San Francisco, June 2011, website: <http://216.119.104.145/Modules/ShowDocument.aspx?documentID=1055>, accessed August 8, 2011.

<sup>7</sup> San Francisco Public Utilities Commission, 2010 Urban Water Management Plan for the City and County of San Francisco, June 2011, website: <http://216.119.104.145/Modules/ShowDocument.aspx?documentID=1055>, accessed August 8, 2011.

basis for SFPUC water resource planning and modeling. The “design drought” is based on the 1986-1992 drought plus 2.5 years of “prospective drought”, which includes six months of recovery period.<sup>8</sup>

In 2000, the SFPUC Water Supply Master Plan identified a 239 mgd annual average delivery over a hydrologic period equivalent to that experienced from 1921 to 1999 with no deficiencies.<sup>9</sup> Currently, under existing operations, the SFPUC system has a firm delivery capability of 219 mgd.<sup>10</sup> This firm delivery decrease is due to the 2001 California Department of Safety of Dams operational restrictions on Calaveras Dam. Actual annual deliveries greatly exceed 219 mgd, with approximately 257.8 mgd delivered in 2007-2008 by SFPUC.

The Final Environmental Impact Report for the Calaveras Dam Replacement Project was approved on January 27, 2011, and project construction began on August 1, 2011. SFPUC estimates that the Calaveras Dam Replacement Project will be complete in July of 2015. Other repairs and improvements at Calaveras Reservoir have been completed or will be in the near future. The Sunol Valley Water Treatment Plant, located at Calaveras Reservoir, is scheduled for expansion and storage capacity improvements. As of late June 2011, construction for the overall Sunol Valley Water Treatment Plant expansion project was approximately 32 percent complete and SFPUC estimates that final construction will be complete in June 2013. Once the Sunol Valley Water Treatment Plan is fully operational, the treatment plant will be able to sustainably produce and deliver 160 mgd, which further improves SFPUC’s ability to deliver firm supplies to retail and wholesale customers. Furthermore, ongoing improvements are being made to the Harry Tracy Water Treatment Plant (HTWTP) in order to expand its treatment capacity from 120 mgd to 180 mgd. Long-Term Improvements at the HTWTP are scheduled to be completed in November 2015.<sup>11</sup> In addition, SFPUC initiated construction of the Tesla WTP in Tracy, California, which is scheduled for completion in June 2012. The Tesla WTP will be the nation’s largest ultraviolet disinfection treatment plant and will be capable of producing 315 mgd. After 2011, SFPUC can deliver up to 655 mgd.

According to the SFPUC’s 2005 UWMP, there is sufficient water to meet all expected future demand in normal and wet hydrologic periods; however, the Water Supply Agreement allows the SFPUC to curtail deliveries during droughts, emergencies, and scheduled maintenance activities.<sup>12</sup> SFPUC system operations are designed to allow sufficient water remaining in SFPUC reservoirs after six years of drought to provide some ability to continue delivering water, although at significantly reduced levels.<sup>13</sup> This differs from the “design drought,” which is a water supply planning tool and as previously stated is based on the 1986-1992 drought plus 2.5 years of “prospective drought,” which includes six months

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<sup>8</sup> San Francisco Public Utilities Commission. April 2000. *Water Supply Master Plan*. p. 22.

<sup>9</sup> San Francisco Public Utilities Commission. April 2000. *Water Supply Master Plan*. p. 22.

<sup>10</sup> City and County of San Francisco: San Francisco Planning Department. June 2007. *Draft Program Environmental Impact Report for the San Francisco Public Utilities Commission Water System Improvement Program*. p. 5.1-12.

<sup>11</sup> San Francisco Public Utilities Commission, Water System Improvement Program Regional Quarterly Report, FY2010-2011, website: [http://sfwater.org/detail.cfm/MC\\_ID\35\MSC\\_ID\395\MTO\\_ID\651\C\\_ID\5384](http://sfwater.org/detail.cfm/MC_ID\35\MSC_ID\395\MTO_ID\651\C_ID\5384), accessed May 2, 2011.

<sup>12</sup> San Francisco Public Utilities Commission. 2005. *Urban Water Management Plan*. p. 15.

<sup>13</sup> San Francisco Public Utilities Commission. April 2000. *Water Supply Master Plan*. p. 20.

of recovery period.<sup>14</sup> In order to meet current demand in the San Francisco Bay Area, SFPUC is currently delivering an annual average of 265 mgd,<sup>15, 16</sup> which is about 46 mgd above firm delivery capabilities. Consequently, if SFPUC declares a shortage, rationing would be necessary. Rationing is voluntary for up to a 10-percent system-wide reduction, but mandatory at greater than a 10-percent reduction. SFPUC used the historical hydrologic record from 1920 to 2002 (83 years) to assess the availability of water supplies in the future. This methodology assumes that climatic history will repeat itself and similar hydrologic conditions will be experienced. Under 2005 conditions (year of available data), there is a 7.3 percent probability of a 10 percent system wide shortage and a 9.8 percent probability of a 20 percent system wide shortage.<sup>17</sup> However, water supply reliability is expected to increase following the Crystal Springs and Calaveras Reservoir improvements that are expected to be completed by 2012.<sup>18</sup> These improvements would allow surface water storage of an additional 58,700 acre feet (AF) at Calaveras Reservoir and 11,100 AF at Crystal Springs, essentially adding 69,800 AF of stored water.

SFPUC and the wholesale members developed a long-term strategy to accommodate or rectify the potential of future water shortages throughout its wholesale and retail operations.<sup>19</sup> The methodology for determining water supply reliability during drought years is the Water Shortage Allocation Plan. The Master Water Supply Agreement allocates water between SFPUC retail customers and BAWSCA (Tier 1) and allows BAWSCA to develop a formula to allocate water among its members (Tier 2) for system-wide shortages up to 20 percent. In 2010, BAWSCA members agreed on a Tier 2 allocation formula that will remain in effect until 2018. In 2018, BAWSCA members could extend the current formula or modify it if need be. If BAWSCA members are unable to agree unanimously on a Tier 2 allocation formula, the BAWSCA Board will set the formula.

Prior to 2018, SFPUC will re-assess its regional supply capacities in order to evaluate the RWS's reliability; at that point, SFPUC, in its efforts to provide water supply projections to the BAWSCA agencies, is likely to present new water supply planning data out to 2030 or 2035. Because water use efficiency and conservation efforts are needed to accommodate new growth throughout the Bay Area, and it is unknown how or if new supplies would be available in the RWS, the WSA for the Project assumes holding the wholesale supplies at 184.0 mgd and Burlingame's ISG to 5.23 mgd. This is consistent with the City's 2010 UWMP.

**Wastewater Collection, Transmission, and Treatment.** Burlingame's sanitary sewer system consists of approximately 88 miles of gravity sewers, nine siphons, eight pump stations, and 15,800 linear feet (LF) of force mains. The City owns, operates, and maintains the local sanitary sewer collection facilities within the City. The existing 300 Airport Boulevard Site is served by a series of 12-inch

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<sup>14</sup> San Francisco Public Utilities Commission. April 2000. *Water Supply Master Plan*. p. 22.

<sup>15</sup> San Francisco Public Utilities Commission. 2005. *Urban Water Management Plan*. p. 11.

<sup>16</sup> San Francisco Public Utilities Commission. 2005. *Urban Water Management Plan*. p. 11.

<sup>17</sup> City and County of San Francisco: San Francisco Planning Department. June 2007. *Draft Program Environmental Impact Report for the San Francisco Public Utilities Commission Water System Improvement Program*. p. 9-13.

<sup>18</sup> San Francisco Public Utilities Commission. 2005. *Urban Water Management Plan*. p. 27.

<sup>19</sup> San Francisco Public Utilities Commission. 2005. *Urban Water Management Plan*. p. 22.

asbestos cement (ACP) wastewater pipes that run from Fisherman Park west to the Sanchez Channel where the 12-inch wastewater line makes a 90 degree turn to the south and runs parallel to the Sanchez Channel. The wastewater line crosses under US 101 and flows into the 399 Rollins Road Pump Station (RRPS). The 399 RRPS also receives flows from several lots on Rollins Road and the residential area to the southeast of the pump station. Downstream of the 399 RRPS, wastewater flows are conveyed to the 1079 Rollins Road Pump Station by approximately 1,275 LF of 10-inch force main, which discharges into a series of gravity wastewater mains ranging in size from 15 inches to 27 inches. Sewage is then pumped under US 101 to the City's Waste Water Treatment Plant (WWTP) through a 30-inch reinforced concrete pipe (RCP) force main.<sup>20</sup>

The 399 RRPS was constructed in 2001 and contains two pumps that operate independently during dry weather flows and jointly during wet weather flows. According to the *City of Burlingame Wastewater Collection System Master Plan* (SMP), dated October 2010, and information gathered during consecutive storm events in March 2011, the 399 RRPS is at pumping capacity during wet weather events under existing conditions.<sup>21</sup>

The WWTP at 1103 Airport Boulevard is operated by Veolia West Operating Services, Inc. The WWTP has a design capacity to treat 5.5 million mgd of wastewater during dry weather conditions. WWTP processes wastewater from Burlingame, unincorporated Burlingame hills, and the Town of Hillsborough. Once treated, the City's effluent, along with wastewater from the City of Millbrae, is sent through a joint conveyance system to South San Francisco for disposal. Prior to discharge into the San Francisco Bay through the South San Francisco Outfall, Burlingame-Millbrae wastewater and wastewater effluent from South San Francisco and San Bruno undergo dechlorination.

Although the City contains a separate sewer and stormwater conveyance system, peak wet weather wastewater flows can be significantly higher than dry weather flows. The difference between dry and wet weather flows is a result of inflow and infiltration during wet weather. Inflow includes water that enters the wastewater system through illicit connections such as downspouts, and water that enters the wastewater system through openings to the wastewater system, such as the holes in wastewater manhole rims. Infiltration is groundwater that enters wastewater systems through cracks in the wastewater pipes and manholes. Infiltration flows take longer than inflow to enter the wastewater system, but can increase total flows long after a storm event concludes.

Based on information provided in the SMP, the WWTP has sufficient capacity to treat 13 mgd. Above 13 mgd, the WWTP experiences blending events, where the flows above 13 mgd only receive primary treatment before being mixed with the discharge from the secondary treatment and released. The WWTP release rate is contractually limited to 16 mgd of flow. During dry weather conditions, the peak dry weather flow to the WWTP is 6.53 mgd. The 10-year, 24-hour storm event modeled in the SMP, the peak wet weather flow (PWWF) to the WWTP is 34.47 mgd, well above the WWTP's treatment capacity and release rate. In addition, the SMP identifies numerous pipes within the City's sewer system that are operating at or above capacity. Ultimately, the SMP recommends a capital

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<sup>20</sup> BKF, *Burlingame Point Wastewater Study*, June 14, 2011.

<sup>21</sup> BKF, *Burlingame Point Wastewater Study*, June 14, 2011.

improvement program to eliminate capacity constraints and reduce inflow and infiltration within the City's collection system in order to reduce the number of overflow incidents throughout the City and at the WWTP.

The WWTP contains facilities to recycle a portion of the treated wastewater for use within the WWTP. The Burlingame WWTP uses approximately 300,000 gallons per day (gpd) of treated wastewater for internal use within the plant. According to the City's 2010 UWMP, the average dry weather flow (ADWF) of wastewater treated at the City's WWTP has remained fairly constant at approximately 3.0 to 3.5 mgd.<sup>22</sup> The WWTP is permitted to treat ADWF of up to 5.5 mgd, but the flow is not expected to increase significantly in the foreseeable future. Table 3.12-3 shows projected future wastewater treatment flows at the WWTP.

**Table 3.12-3  
Projected Wastewater Flows (mgd) to the Wastewater Treatment Facility**

	2000	2005	2010	2015	2020
Average Dry Weather Flow (ADWF)	3.7	3.9	4.1	4.2	4.4
Percent of Permitted Wastewater Treatment Plant ADWF Capacity	67.3	70.9	74.6	76.4	80.0

*Source:* City of Burlingame and US Filter, Draft Wastewater Treatment Facility Study, February 2000.

**Stormwater Conveyance.** The Project Site has multiple independent stormwater outfalls that discharge water to the Bay at the Sanchez Channel and along the existing segment of Airport Boulevard adjacent to the Bay. The existing Project Site does not convey stormwater to the City's storm drain system. According to the Citywide Storm Drain Master Plan Study<sup>23</sup> prepared in 2000, the existing capacity of the storm drain system serving the entire Bayfront Specific Planning area appears to be adequate for a 30-year flood event. The report recommends that regular inspections and ongoing repairs be made to the concrete channels which line the creeks and that the pump facilities be regularly tested and maintained. There is also an ongoing program to prevent the creek channels from building up silt as they enter the San Francisco Bay. The Public Works Department is undertaking several projects to improve the capacity of the storm drain system so that it will ultimately meet the needs of a 100-year storm event.

## Applicable Plans and Regulations

### State

**SB 610.** Senate Bill (SB) 610 and its companion legislation, SB 221, were passed into law in 2001, and reflect a growing awareness of the need to incorporate water supply-and-demand analyses at the earliest possible stage in the land use planning process. As a result of the enactment of SB 610, WSA reports must be furnished to local governments for inclusion in any environmental documentation for projects meeting the specified requirements under Section 10912 (a) of the Water Code and subject to

<sup>22</sup> City of Burlingame, Urban Water Management Plan: Public Review Draft, April 2011, website: <http://www.burlingame.org/Modules/ShowDocument.aspx?documentid=7564>, accessed August 8, 2011.

<sup>23</sup> Kleinfelder, Inc., *Citywide Storm Drainage Master Plan Study*, prepared by Kleinfelder, Inc., April 2000.

CEQA. SB 221 requires preparation of WSA verification reports for Tentative Map approvals of residential projects with 500 or more units.

Because the Project would include a total of approximately 767,000 square feet (sf) of floor area, a WSA is required and, pursuant to SB 610, must be prepared prior to completion of this EIR. Specifically, the Project meets the following criteria:

- A shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.
- An office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
- Industrial uses planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.

According to Water Code Section 10910 (g)(1): “The governing body of each public water system, or the city or county if either is required to comply with this act ... shall approve the assessment prepared pursuant to this section at a regular or special meeting.” In this case, the City Council will need to approve the WSA prior to inclusion in this EIR.

**Water Conservation Act of 2009.**<sup>24</sup> Senate Bill x7-7 was enacted in November 2009, requiring all water suppliers to increase water use efficiency. The legislation sets an overall goal of reducing per capita urban water use by 20 percent by December 31, 2020. The state shall make incremental progress towards this goal by reducing per capita water use by at least 10 percent by December 31, 2015.

- Each urban retail water supplier shall develop water use targets and an interim water use target by July 1, 2011.
- An urban retail water supplier shall include in its water management plan due July 2011 the baseline daily per capita water use, water use target, interim water use target, and compliance daily per capita water use. The Department of Water resources, through a public process and in consultation with the California Urban Water Conservation Council, shall develop technical methodologies and criteria for the consistent implementation of this part of the regulation.
- The Department of Water Resources shall adopt regulations for implementation of the provisions relating to process water.
- A Commercial, Institutional, Industrial (CII) task force is to be established that will develop and implement urban best management practices for statewide water savings.
- Effective 2016, urban retail water suppliers who do not meet the water conservation requirements established by this bill are not eligible for state water grants or loans.

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<sup>24</sup> California Department of Water Resources, The Water Conservation Act of 2009, website: <http://www.water.ca.gov/wateruseefficiency/sb7/>, accessed April 20, 2011.

**Urban Water Management Planning Act.** The Urban Water Management Planning Act (California Water Code, Section 10610 et seq.) was originally enacted in 1983 with the passage of AB 797 (Chapter 1009, Statutes of 1983) and subsequently amended. This law applies to urban water suppliers that serve 3,000 or more customers or provide more than 3,000 acre-feet of water annually (AFA). The Urban Water Management Planning Act states that such water suppliers should endeavor to ensure that their water service is reliable enough to meet the needs of their various categories of customers during normal, dry, and multiple dry years. The law also describes how urban water suppliers should adopt and implement urban water management plans.

## Local

**2010 Urban Water Management Plan.** Section 5 of the City’s 2010 UWMP describes the City’s dry year shortage contingency plan that allows Burlingame to reduce water deliveries to customers and implement demand reductions during periods of water shortage. To overcome the potential supply deficit expected to occur when SFPUC reduces its deliveries by 20 percent during specific critical dry years or over multiple dry years, the City would follow its adopted water shortage contingency plans to implement drought-planning sequences and associated operating procedures that subsequently initiate different levels of demand management relative to regional water supply rationing imposed by SFPUC, as shown in Table 3.12-4. The plan includes voluntary and mandatory stages.<sup>25</sup>

**Table 3.12-4  
Water Shortage Contingency Plan - Stages of Action**

Stage of Action	Customer Demand Reduction	Percent Reduction
I (Watch)	Voluntary (Indoor 5%; Outdoor 5%)	10%
II (Alert)	Voluntary or Mandatory (Indoor 5%; Outdoor 25%)	10%
III (Warning)	Mandatory (Indoor 10%; Outdoor 50%)	20%
IV (Crisis)	Mandatory (Indoor 15%; Outdoor 75%)	30%
V (Emergency)	Mandatory (Indoor 35 %; Outdoor 100%)	50%

*Source:* City of Burlingame, 2010 UWMP, Table 15.

**Water System Improvement Program.** The SFPUC Water System Improvement Program (WSIP) is a multi-billion dollar, multi-year, capital program to upgrade the RWS. The program will deliver improvements that enhance SFPUC’s ability to continue to provide reliable, affordable, high quality drinking water to its 27 wholesale customers and regional retail customers in Alameda, Santa Clara, and San Mateo counties, and to 800,000 retail customers in San Francisco, in an environmentally sustainable manner.

Upon implementation, the WSIP would improve the regional system with respect to water quality, seismic response, water delivery, and water supply to meet water delivery needs in the service area through the year 2030 and would establish level of service goals and system performance objectives.

<sup>25</sup> City of Burlingame, Urban Water Management Plan: Public Review Draft, April 2011, website: <http://www.burlingame.org/Modules/ShowDocument.aspx?documentid=7564>, accessed August 8, 2011.

The WSIP would implement a proposed water supply option, modify system operations, and construct a series of facility improvement projects. The proposed program area spans seven counties: Tuolumne, Stanislaus, San Joaquin, Alameda, Santa Clara, San Mateo, and San Francisco.

As required under CEQA, the San Francisco Planning Department prepared a Program Environmental Impact Report (PEIR) for the WSIP. The PEIR evaluated the potential environmental impacts of the proposed WSIP and identified potential mitigations to those impacts. The PEIR also evaluated several alternatives to meet the SFPUC service area's projected increase in water demand to 300 mgd between now and 2030. The water supply improvement options investigated included 10 alternatives using various water supply combinations from the local watersheds; the Tuolumne and Lower Tuolumne; ocean desalination; and additional recycled water, groundwater, and conservation. The PEIR was certified by SFPUC on October 30, 2008.

**City of Burlingame Amendments to the 2010 California Building Code.** According to Section 1503.4.5, amendment to the California Building Code, no stormwater runoff draining from any lot, building, or paved area shall be allowed to drain to adjacent properties nor shall this water be connected to the City's sanitary sewer system. Regardless of the slope of the source property, such water shall drain to either artificial or natural storm drainage facilities by gravity or pumping. Furthermore, stormwater drainage to the public storm drain is contingent on the approval of the City engineer or other public authority having jurisdiction over public streets and public storm drains.<sup>26</sup>

## **Impacts and Mitigation Measures**

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### **Water Supply Analysis Methodology**

**Water Supply and Infrastructure.** The analysis in this section focuses on the nature and magnitude of the change in levels of water use compared with existing and projected water use in the vicinity of the project area. To determine potential impacts, future water consumption was estimated from demand projection calculations and quantitative evaluation of data for existing land uses, approved projects, and proposed development, including that proposed for the project area. The primary resources used for this analysis include the WSA for the 300 Airport Boulevard Project, prepared by Atkins; City of Burlingame 2010 UWMP, adopted March 2011; the SFPUC UWMP, adopted December 2005; and the 2007 SFPUC WSIP and its PEIR.

**Demand Analysis.** The expected water use of the Project was determined by analyzing similar land uses and assigning a demand factor for each use. This analysis evaluates the net demand at the project-level. For conservative water supply planning purposes water demand at the Project Site is assumed to occur immediately and is added to existing demand to present the quantitative data needed to analyze current and future demand within the City's service area. The WSA independently evaluated development of the Project as both a life-sciences campus and as an office park. For the life-sciences campus, the projected water demand was analyzed under three scenarios of varying water efficiency.

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<sup>26</sup> City of Burlingame, Building Department, *Local Amendments to the 2010 CBC – Ordinance 1856-2010*, website: <http://www.burlingame.org/Modules/ShowDocument.aspx?documentid=7262>, accessed April 28, 2011.

Scenario A represents the worst case scenario from a water efficiency perspective; Scenario B includes implementation of water efficiency hardware, fixtures, and landscapes; and Scenario C would result in optimized water use efficiencies including but not limited to dual plumbing and recycled water for irrigation and toilet flushing.

**Wastewater.** Wastewater discharge for the Project was estimated using a 1:1 ratio between water demand and sanitary sewer demand. As such, wastewater discharge varies depending on the corresponding water conservation scenario. In order to determine the impact of the Project on the existing wastewater system, BKF Engineers created a wastewater model of the existing site conditions based on the model results presented in the City's SMP. The SMP used a dynamic modeling program known as InforWorks CS, in which storm events are added to average dry weather flows to yield PWWF. BKF Engineers incorporated the results of the SMP model into StormCAD, a static modeling program, to generate data regarding the proposed project's impact on the City's wastewater conveyance and treatment system. Both models use City Geographic Information System (GIS) files to determine the pipe lengths and many of the pipe diameters.

## Significance Criteria

Based on Appendix G of the CEQA Guidelines, the Project would result in a significant utilities impact if it would:

- Have insufficient water supplies available to serve the project from existing entitlements and resources, requiring the need for new or expanded entitlements;
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

The Project would also have a significant impact if it would be served by a landfill with insufficient permitted capacity to accommodate the Project's solid waste disposal needs and/or fail to comply with federal, State, and local statutes and regulation related to solid waste. However, as analyzed in the Initial Study (IS) (Appendix B), implementation of the Project would result in no impact to the City's solid waste management system. As described in the IS, the Project would be served by a permitted transfer station and solid waste land fill, both of which have adequate capacity to serve the projected solid waste generation rates of the Project. Additionally, the Project would comply with all applicable solid waste regulations including but not limited to the City's Construction and Demolition Waste

Recycling Requirement and the requirements contained in AB 939. Therefore, these topics are not discussed further.

## **Environmental Analysis**

For each potential impact associated with the Project, a level of significance is determined and is reported in the impact statement. Conclusions of significance are defined as follows: significant impact (S), potentially significant impact (PS), less-than-significant impact (LTS), or no impact (NI). For each impact identified as being significant (S) or potentially significant (PS), this EIR provides mitigation measures to reduce, eliminate, or avoid the adverse effect. If the mitigation measures would reduce the impact to a less-than-significant (LTS) level successfully, this is stated in this EIR. If the mitigation measures would not diminish significant or potentially significant impacts to a less-than-significant level, the impacts are classified as “significant unavoidable impacts (SU).” The impacts of the potential development of the 350 Airport Boulevard Site are evaluated in this EIR on a programmatic level. Following the submittal of a project-specific development proposal for the 350 Airport Boulevard Site, additional environmental analysis would be required. For this section, UT refers to Utilities and Service Systems.

*UT-1 Water Supply and Facilities. The Project would not have a significant impact on available water supplies and would not require new or expanded water entitlements, resulting in a less-than-significant impact on water supplies. (LTS)*

### **300 Airport Boulevard**

The 300 Airport Boulevard Project would increase the building density in the Project area over existing conditions. Implementation of the Project would result in the construction of 767,000 sf of new floor area at the currently undeveloped 300 Airport Boulevard Site, and would provide employment for a projected 1,867 employees.

Table 3.12-5 shows estimated annual average water demand for the development of the 300 Airport Boulevard Site, under the life-sciences land use plan, across three water conservation scenarios. Depending on the extent of water efficiency practices, hardware, and fixtures implemented at the site, the 300 Airport Boulevard Project could create an estimated net increase in water demand of up to 206 AFA or an average demand of 180,750 gpd (0.181 mgd) under the worst-case scenario.

According to the WSA prepared for the Project, the City’s potable water demand for fiscal year 2009-2010 was 3.94 mgd. However, water demand has remained at or near 4.30 mgd over the last five years, and the current depression in total potable water demand is thought to be attributed to a multi-year drought and the current economy. It is anticipated that water demands will likely increase in the future.

**Table 3.12-5  
Estimated Annual Average Water Demand – Life Science Use**

Land Use		Scenario A <sup>a</sup> (Max Demand)		Scenario B <sup>b</sup>		Scenario C <sup>c</sup>	
		Water Demand Factor (gpd/sf)	Total Average Daily Water Demand (gpd)	Water Demand Factor (gpd/sf)	Total Average Daily Water Demand (gpd)	Water Demand Factor (gpd/sf)	Total Average Daily Water Demand (gpd)
<b>Life-Sciences Campus</b>	<b>Area (sf)</b>						
Building B1	146,000	0.24	35,040	0.18	26,280	0.14	20,440
Building B2	146,00	0.24	35,040	0.18	26,280	0.14	20,440
Building B3	204,400	0.24	49,056	0.18	36,792	0.14	28,616
Building B4	233,600	0.24	56,064	0.18	42,048	0.14	32,704
Amenities Center	37,000	0.15	5,550	0.15	5,550	0.14	5,180
Total	767,000		180,750		136,950		82,525
<b>Land Use Scenario Water Demand</b>			<b>0.181 mgd 203 AFY</b>		<b>0.137 mgd 152 AFY</b>		<b>0.083 mgd 92 AFY</b>

*Sources:* 300 Airport Boulevard Proposed Sewer Demands with Domestic Water Generation Rates, BKF Engineers, July 2009. Demand incorporated into 2010 UWMP for Citywide Water Demand and Purchase Amounts from SFPUC assumes all on-site demands are accounted for and estimated.

*Notes:*

- Based on City standard generation rates which represent current, conservative industry standards.
- Incorporates state of practice water conservation, such as 0.5 gal/flush urinals, landscape requirements, etc.
- Incorporates aggressive water conservation, such as dual plumbing, recycled water for irrigation and flushing toilets/urinals, etc.

Under existing conditions, the City uses approximately 75.3 percent of its ISG of 5.23 mgd. The 300 Airport Boulevard Project would require approximately 0.181 mgd or about 14 percent of the currently unused 1.29 mgd of potable water that City has from its SFPUC contract.<sup>27</sup> The WSA concluded that implementation of the 300 Airport Boulevard Project in combination with existing and planned future uses would result in net increases in the average daily water demand within the City service area from 2011 to 2035. However, in years of normal supply, based on the analysis in the WSA and consistent with the City’s Draft 2010 UWMP, the City would have sufficient available water supply to serve the 300 Airport Boulevard Project between 2011 and 2035. Table 3.12-6 summarizes the City’s normal year supply and demand characteristics over the next 25 years.

<sup>27</sup> Under the maximum water demand scenario.

**Table 3.12-6  
City of Burlingame Supply and Demand Comparison (Normal Years)**

	2014-18	2019-20	2024-25	2029-30	2034-35
SFPUC Supplies (ISG) <sup>a</sup>	5.23 <sup>b</sup>	5.23	5.23	5.23	5.23
Total Estimated Gross Water Use Demand (mgd)	4.88	4.95	5.05	5.17	5.20
Difference [Surplus/(Deficit)]	0.09	0.28	0.18	0.06	0.03

*Notes:*

- a. ISG is only effective until 2018 and then the City’s supply reverts to its ISG of 5.23. Both supply amounts are shown here for comparison purposes.
- b. Burlingame’s ISG for these years is in fact 5.23. However, if total RWS demand exceeds 265 mgd, and if Burlingame use in excess of its [interim water supply allocation] 4.97 mgd, then the City would pay a surcharge for use above this [4.97 mgd] amount.

During specific critical dry years and over multiple dry year events, SFPUC could curtail system-wide treated water deliveries by 20 percent. In most low-precipitation situations, SFPUC typically requests voluntary 10 percent demand reductions. In the event that SFPUC reduces its deliveries by 20 percent (or 10 percent in critical dry years), Burlingame would have insufficient water supplies to meet the projected water demand including existing and planned future uses within its service area. Under a 20 percent system-wide reduction throughout the SFPUC’s service area, the even without implementation of new projects, including the 300 Airport Boulevard Project, SFPUC is incapable of meeting local and regional demands under these specific dry year conditions. However, as identified in the Applicable Plans and Regulations above, adherence to Section 5 of the City 2010 UWMP during dry year events would ensure that Burlingame impose supply curtailments and subsequent stages of demand reductions would balance demand (including the Project) against curtailed supplies. Additionally, compliance with SB x7-7 would reduce per capita water demand by 10 percent in 2015 and 20 percent by 2020.<sup>28</sup>

Furthermore, as described in the WSA, BAWSCA is actively planning and investigating numerous ways to improve supply reliability and reduce demand within its service areas. Although these efforts are in the early planning stages of the Long-Term Reliable Water Supply Strategy, based on the projects and programs presented in the Strategy document, it appears that even modest success in these efforts would improve water supply reliability on the San Francisco Bay Peninsula. Based on information and analysis provided by the WSA consistent with the City 2010 UWMP, the City would have adequate supplies to serve the demand generated by development of the 300 Airport Boulevard Site in all years, and the increased demand would have a less-than-significant impact on water supply and the associated infrastructure and facilities.

Installation of the water distribution system associated with the Project would include permanent water distribution lines and appurtenances corresponding to the development of the site. The piping system within the Project area would be sized to accommodate development of

<sup>28</sup> *Draft Water Supply Assessment for the 300 Airport Boulevard Project*, Atkins, April 2011

the entire Project Site; additional on-site water delivery system would consist of water distribution lines within the local street rights-of-way. Water supply design specifications would comply with the City's standards regarding requirements for design and operation of water distribution facilities. Final approvals by the City would be necessary prior to delivery of water to the project area.

### **350 Airport Boulevard**

Although the WSA did not include future development of the 350 Airport Boulevard Site explicitly in its analysis of the 300 Airport Boulevard Project, the WSA does summarize findings of the City's 2010 UWMP. In developing projected water use estimates for the City of Burlingame, the 2010 UWMP assumed daily demand generated by the 300 Airport Boulevard Project plus additional development at 350 Airport Boulevard could be up to 0.22 mgd or 246 AFA (Table 9 in the City's 2010 UWMP). This figure was derived by calculating total water demand generated by the proposed mix of uses. Notably, 0.22 mgd represents the worst-case, build-out scenario of the Project Site (the 300 Airport Boulevard Project and the future development at 350 Airport Boulevard) while incorporating all necessary water savings measures to help the City meet its City-wide conservation target as outlined in SB x7-7.<sup>29</sup> Table 3.12-7 summarizes the projected water demand by water use sector for the City of Burlingame. As described above, the water demand projected for the Project assumes development of both 300 Airport Boulevard and 350 Airport Boulevard.

As shown in Table 3.12-7, with implementation of the 350 Airport Boulevard Project in addition to development of the 300 Airport Boulevard Site, the City would have an overall water demand of 5.20 mgd in 2035. Further, as shown in Table 3.12-6, the City's ISG under normal conditions in 2035 would be 5.23 mgd. Therefore, the City of Burlingame would have sufficient water supplies to accommodate future development of the 350 Airport Boulevard Site in addition to the 300 Airport Boulevard Site during normal year conditions. During single and multiple dry year events, the City would rely on the supply curtailments and subsequent stages of demand reductions as identified under in the Applicable Plans and Regulations above, to balance demand with supply curtailments. As a result, this impact would be less than significant.

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<sup>29</sup> *Draft Water Supply Assessment for the 300 Airport Boulevard Project*, Atkins, April 2011

**Table 3.12-7  
Service Area Projected Water Demand by Water Use Sector<sup>a</sup>**

<b>Customer Sectors</b>	<b>2014-15</b>	<b>2019-20</b>	<b>2024-25</b>	<b>2029-30</b>	<b>2034-35</b>
<b>Residential</b>					
Residential Single-Family	1.92	1.88	1.84	1.81	1.78
Residential Multi-Family <sup>b</sup>	0.89	0.87	0.86	0.85	0.84
Future Low Income Single-Family <sup>c</sup>	0.04	0.08	0.12	0.16	0.20
Future Low Income Multi-Family <sup>c</sup>	0.01	0.02	0.03	0.04	0.05
<i>Subtotal Residential</i>	<i>2.86</i>	<i>2.85</i>	<i>2.85</i>	<i>2.86</i>	<i>2.87</i>
<b>Commercial, Institutional, Industrial</b>					
Commercial <sup>d</sup>	0.71	0.72	0.75	0.77	0.78
General Commercial	0.51	0.52	0.55	0.57	0.58
<b>300 Airport Boulevard (Project Site)<sup>e</sup></b>	<b>0.22</b>	<b>0.22</b>	<b>0.22</b>	<b>0.22</b>	<b>0.22</b>
Industrial	0.57	0.62	0.67	0.73	0.74
Institutional	0.17	0.18	0.19	0.19	0.19
<i>Subtotal CII</i>	<i>1.45</i>	<i>1.52</i>	<i>1.60</i>	<i>1.69</i>	<i>1.71</i>
<b>Other</b>					
Irrigation	0.21	0.22	0.22	0.23	0.23
Temporary, Firelines <sup>f</sup>	0.004	0.004	0.004	0.004	0.004
<i>Subtotal Other</i>	<i>0.21</i>	<i>0.22</i>	<i>0.22</i>	<i>0.23</i>	<i>0.23</i>
<i>Subtotal Metered</i>	<i>4.52</i>	<i>4.59</i>	<i>4.68</i>	<i>4.78</i>	<i>4.81</i>
Unmetered <sup>f</sup>	0.02	0.02	0.02	0.02	0.02
Unaccounted for Water <sup>g</sup>	0.34	0.35	0.35	0.36	0.36
<b>Estimated Active Conservation Savings</b>	<b>0.08</b>	<b>0.09</b>	<b>0.10</b>	<b>0.11</b>	<b>0.12</b>
<b>Total Estimated Gross Water Use (mgd)</b>	<b>4.88</b>	<b>4.95</b>	<b>5.05</b>	<b>5.17</b>	<b>5.20</b>

Source: City of Burlingame 2010 UWMP, Table 9.

Notes:

- Water use values are reported in millions of gallons per day for FY 2014-15 through 2034-35. Water use projections are based on the use Management Decision Support System Model (BAWSCA, 2009) with some modifications (see report text for more details regarding modifications to the DSS Model). These projections incorporate plumbing code impacts on water use and assumptions about the effectiveness of water conservation measures on reducing total potable water use.
- Residential Multi-Family includes residential water use from the Downtown Specific Plan.
- Future low income water use was calculated by multiplying the projected very low income housing units from Reference 1 by 2.24 people per dwelling unit from Reference 2 by the 2007-08 per capita water use of 153 gpcd. This amount was expected to occur every five years. Does not include use from existing low-income units. Water use was split between single-family and multi-family by the average percentage of each type of use from 2005-06 through 2009-10.
- Commercial includes estimates for the currently planned development located at 350 Beach Boulevard Burlingame, CA. Additionally, the commercial use includes those associated with the increased commercial use associated with the Downtown Specific Plan.
- Assumes demand generated by at buildout of land uses at both 300 and 350 Airport Boulevard development.
- Unmetered water use is assumed to remain constant for the planning period.
- Unaccounted for water assumed to be 7 percent per the DSS model.

*UT-2 Water Treatment Facilities. The Project would not require or result in the construction of new water treatment facilities or the expansion of existing facilities, which could cause significant environmental effects. Therefore, the Project would have a less-than-significant impact on water supply facilities. (LTS)*

### **300 Airport Boulevard**

As described above, the City, through the Water Supply Agreement, is contractually obligated to receive an ISG of 5.23 mgd from the SFPUC. Implementation of the 300 Airport Boulevard Project would create an estimated net increase in water demand of up to 213.4 AFA or an average demand of 190,250 gpd (0.190 mgd), including irrigation demands of 9,500 gpd. Currently, the City utilizes approximately 75.3 percent of its ISG. As such, the net increase in water demand attributed to the 300 Airport Boulevard Project would be sufficiently accommodated by the unused 24.7 percent of the City's ISG.

Because SFPUC has planned for improvements to the water treatment system to improve system reliability and accommodate projected growth in its regional service area, the 300 Airport Boulevard Project, under any of the water conservation scenarios, would not prompt a need to expand treatment facilities in order to meet its demands. SFPUC's water treatment plants (WTPs) currently have a maximum combined treatment capacity of 340 mgd, if operated continuously. After 2011 with the addition of the Tesla WTP (315 mgd), SFPUC can reliably deliver 655 mgd, which is well in excess of the demands within Burlingame's service area, now and over the next 20 years.

In order to ensure proper distribution, SFPUC also manages the regional conveyance system used to transport potable water supplies to the wholesale water agencies. In addition, SFPUC manages and maintains all the WTPs; any improvements or expansions are the responsibility of SFPUC and would not adversely affect the City or any of the development scenarios proposed.

Therefore, as a result of the 300 Airport Boulevard Project, no new or expanded water treatment facilities or storage would be required. Consequently this impact is considered less than significant.

### **350 Airport Boulevard**

As described under Impact UT-1 above, the 2010 UWMP estimated that development of the 350 Airport Boulevard Site in addition to the 300 Airport Boulevard Site would result in a water demand of up to 0.22 mgd. However, there is sufficient capacity in the City's ISG to accommodate the combined water demand of the 300 Airport Boulevard and 350 Airport Boulevard Projects. Furthermore, the SFPUC is in the process of expanding its water treatment capabilities and once the Tesla WTP is operational the SFPUC will be able to reliably deliver up to 655 mgd. Because construction of the 350 Airport Boulevard Site, in addition to the 300 Airport Boulevard Site, would not require the City to exceed its ISG, and would not require the SFPUC to deliver more than the system-wide goal of 265 mgd of potable

water, no new or expanded water treatment plants (beyond current projects contained in the WSIP) would be required. Therefore, this impact would be less than significant.

*UT-3 Wastewater Treatment Facilities. The Project would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board or require or result in the construction of new wastewater treatment facilities. However, the Project would require the expansion and rehabilitation of existing wastewater infrastructure. Therefore, this impact would potentially significant. (PS)*

**300 Airport Boulevard and 350 Airport Boulevard**

Wastewater flows associated with the 300 Airport Boulevard Project are estimated in terms of three distinct water conservation scenarios for both the office land use plan and the life sciences land use plan. Table 3.12-8 shows the estimated wastewater flows associated with both the office and life sciences campus land use plans, across all three water conservation scenarios. Table 3.12-8 also considers wastewater flows that would result from development of the 350 Airport Boulevard Site (based on maximum allowable square footage), and therefore, provides total wastewater flow estimates for both sites. Wastewater generation rates for Scenario A are based on the City’s standard generation rates, which represent current, conservative industry standards for water use and discharge. Scenario B incorporates moderate conservation measures such as low-flow plumbing fixtures, and meets with the California Green Building Code standards for 20 percent reduced fixture flows rates and Scenario C represents the most aggressive suite of water conservation measures. Additionally, the 2010 California Plumbing Code requires the water conservation measures identified in Scenario B for fixtures installed after July 1, 2011. Since the Project would be developed after July 2011, the Project would include water conservation measures consistent with Scenario B at a minimum in order to comply with the plumbing code. Scenario A flows exceed the allowed fixture flow rates and are included for informational purposes only. In order to provide a conservative analysis, it is assumed that the both the 300 and 350 Airport Boulevard Project Sites would be developed for use as life sciences campuses under Scenario B. This would result in an average dry weather flow of 204,450 gpd (0.20 mgd) and a peak wet weather flow (PWWF) of 419,872 gpd (0.42 mgd).

**Table 3.12-8  
Combined 300 and 350 Airport Boulevard Project Estimated Wastewater Flows**

Land Use	Scenario A		Scenario B		Scenario C	
	Average Dry Weather Flow (gpd)	Peak Wet Weather Flow (gpd)	Average Dry Weather Flow (gpd)	Peak Wet Weather Flow (gpd)	Average Dry Weather Flow (gpd)	Peak Wet Weather Flow (gpd)
Office	88,425	187,822	71,850	154,672	49,380	109,732
Life-Sciences	270,750	552,472	204,450	419,872	159,880	330,732

Source: BKF, Burlingame Point Wastewater Study, June 14, 2011.

As described above, the WWTP currently operates at an ADWF of approximately 3.5 to 4.0 mgd or 64 to 73 percent of the WWTP's tertiary treatment capacity. The WWTP and Burlingame's wastewater infrastructure are currently operating below capacity in dry weather conditions, and although the Project would slightly increase contribution to existing wastewater volumes, the increase would be incremental. Implementation of the Project would result in an increase in ADWF at the WWTP of approximately 0.20 mgd or 13 percent of the WWTP's remaining tertiary treatment capacity. Thus, the available capacity at the WWTP of approximately 1.5 to 2.0 mgd would be sufficient to accommodate the projected wastewater generated by the Project under dry weather conditions.

However, as described in the Burlingame Point Wastewater Study, the 399 RRPS is near capacity during the PWWF of the 10-year design storm according to the SMP, and the pump station was at capacity during consecutive storm events from March 23 through March 26, 2011. As such, any proposed increase in PWWF to the pump station would require mitigation to increase capacity and reduce potential impacts to the pump station. It is anticipated that only the pumps and controller would need to be upgraded to increase PWWF capacity, and that no improvements would need to be made to the pump station itself. As a result of improvements to the 399 RRPS, wastewater flows would be increased.

In order to balance increased flows entering the WWTP, a reduction in wet-weather related inflow and infiltration would need to occur within the wastewater system that discharges to the WWTP. According to the SMP, there are several areas within the City that receive large amounts of inflow and infiltration during wet weather. Basins 2 and 6 were selected for implementation of a mitigation measure to be implemented by the Project Sponsor, as outlined below. These basins were selected because they both have a high increase in flow due to inflow and infiltration and therefore, improvements to Basin 2 and 6 would have proportionately higher beneficial effects. In addition, Basins 2 and 6 were selected because they both are completely within the jurisdiction of the City, and the permitting process for repairs would only need to be coordinated with the City.

The Project would only rehabilitate the length of the existing wastewater system necessary to accommodate the additional flow from the Project Site, and not the entire basin. The pipe rehabilitation would be phased to match the Project buildout of the Project. The pump station upgrades would be completed with the first phase of construction of the 300 Airport Boulevard Site.

*Basin 2.* The existing wastewater system in Basin 2 contains approximately 19,000 feet of 6-inch, 8-inch, and 10-inch mains that were installed in the 1940s. Rehabilitation of the mains, manholes, and lower laterals within all of Basin 2 would reduce the PWWF to the WWTP by 0.57 mgd. As shown on Table 3.12-9, this would allow for complete buildout of the 300 Airport Boulevard Site with 100 percent office use and 100 percent life sciences use under all three water use scenarios.

**Table 3.12-9  
Available Capacity for Project Buildout with Rehabilitation of Basin 2**

	<b>100 percent Office PWWF (mgd)</b>	<b>Capacity Available</b>	<b>100 Percent Life- Sciences PWWF (mgd)</b>	<b>Capacity Available</b>
Scenario A	0.18	Yes	0.55	Yes
Scenario B	0.15	Yes	0.42	Yes
Scenario C	0.10	Yes	0.33	Yes

*Source:* BKF, Burlingame Point Wastewater Study, June 14, 2011.

*Basin 6.* The existing wastewater system in Basin 6 contains approximately 20,000 feet of pipe, including 15,000 feet of 6-inch and 8-inch mains and less than 1,000 feet each of 12-inch and 15-inch mains. The majority of these pipes were installed in the 1920s and 1930s. Approximately 3,000 feet of pipe within Basin 6 has already been rehabilitated. Rehabilitation of the remaining 17,000 feet of mains, manholes, and lower laterals within all of Basin 6 would reduce the PWWF to the WWTP by 0.83 mgd. As shown in Table 3.12-9, above, this would allow for complete buildout with 100 percent office use and 100 percent life sciences use in any water use scenario. These measures would only correct existing inflow and infiltration that discharges to the WWTP, and would not increase flows to the WWTP.

Additionally, the WWTP is currently over capacity during some wet weather events. The WWTP is permitted to treat up to 16 mgd and has sufficient capacity to treat 13 mgd before the WWTP experiences blending events in which flows above 13 mgd only receive primary treatment before being released. The 10-year, 24-hour storm event modeled in the SMP resulted in a PWWF of 34.47 mgd, well above the WWTP's treatment capacity and release rate. An increase in PWWF to the treatment plant would add to the existing insufficient treatment capacity at the WWTP, under wet weather conditions. Therefore, the Project would result in a potentially significant impact to the City's wastewater system.

**MITIGATION MEASURE.** In order to reduce significant impacts to the City's wastewater conveyance and treatment system associated with the Project, the Burlingame Point Wastewater Study provides recommendations for mitigation measures. Adherence to the mitigation measure identified below would reduce potential wastewater impacts associated with the Project to a less-than-significant level. (LTS)

*UT-3.1 Upgrade Pump Capacity at the Existing 399 Rollins Road Pump Station and Reduce Inflow and Infiltration within the Wastewater System.* The Project Sponsor(s) shall contribute fair-share funds toward the upgrade of the 399 RRPS capacity to accommodate the increased PWWF that would result from implementation of the Project. Additionally, the Project Sponsor(s) shall rehabilitate the existing wastewater system, where necessary, to reduce inflow and infiltration that contributes to PWWFs at the WWTP in an amount concomitant with increases in flows contributed by the 300 Airport Boulevard Project.

*UT-4 Stormwater Drainage Facilities. The Project would not require the construction of new public stormwater drainage facilities or expansion of existing City facilities; no impact would result. (NI)*

### **300 Airport Boulevard**

Implementation of the 300 Airport Boulevard Project would result in a reduction of impervious surface cover from the existing 17.75 acres to 15.52 acres. Consequently, stormwater runoff generated at the 300 Airport Boulevard Site would decrease as compared to existing conditions. Additionally, the 300 Airport Boulevard Site would be designed to control stormwater runoff through the use of surface landscaping and on-site stormwater treatment facilities, such as rain gardens and bio-retention areas that would both treat stormwater and reduce peak flow rates. As described in the Bayfront Specific Plan, properties with Bay frontage, such as the 300 Airport Boulevard Site, convey stormwater runoff directly into the Bay. The 300 Airport Boulevard Site contains multiple independent stormwater outfalls that discharge water to the Bay at the Sanchez Channel and along the existing segment of Airport Boulevard adjacent to the Bay. The existing 300 Airport Boulevard Site does not convey stormwater to the City's storm drain system. Therefore, the 300 Airport Boulevard Site would have no impact on the City's stormwater drainage facilities. Further detail regarding the management of construction-related and operational stormwater runoff can be found in Section 3.9, Hydrology.

### **350 Airport Boulevard**

Similar to the 300 Airport Boulevard Project evaluated above, the 350 Airport Boulevard Site would convey stormwater runoff directly into the Bay. Therefore, stormwater runoff from development of the 350 Airport Boulevard Site would have no affect on the City's stormwater drainage facilities. There would be no impact on storm drainage facilities associated with the 350 Airport Boulevard Project.

## **Cumulative Analysis**

The context for the analysis of cumulative utilities impacts is the service area of the utility provider, including all cumulative growth therein. Cumulative development projects within Burlingame may result in cumulative effects on water supply, water treatment facilities, or wastewater treatment facilities. The potential cumulative effects are discussed below. The Project would result in no impact

to drainage facilities and would not cumulate with other foreseeable projects; therefore, this impact is not discussed further.

*UT-5 Cumulative Water Supply Impacts. The Project, in combination with other foreseeable development, would have sufficient water supplies available to serve the Project from existing entitlements under normal water supply years. Therefore, this cumulative impact is less than significant. (LTS)*

### **300 Airport Boulevard**

The 2010 UWMP utilized the results of the Demand Side Management Least Cost Planning Decision Support System (DSS Model) to assess future water demand in the City. The City identified a total of 11 existing and planned cumulative projects including residential, commercial, and institutional uses. These cumulative projects, as well as the 350 Airport Boulevard Project, were considered in the DSS Model used to estimate future water demand within City's service area. According to the DSS Model, the projected average daily potable water demand for Burlingame's service area in 2035 is 5.20 mgd, which represents an increase of 0.32 mgd between 2014 and 2035. It is anticipated that the supply of potable water will remain at 5.23 mgd as determined by the City's ISG, providing sufficient supply during years of average and above-average precipitation to meet future demands.

As described in Impact UT-1 above, SFPUC is incapable of sufficiently meeting the demands within City's service area now and over the next 20 years during dry and multiple dry years. In fact, under dry year conditions, even without implementation of new projects, SFPUC is incapable of meeting local and regional demands. However, as identified in the Applicable Plans and Regulations above, the City has a water shortage contingency plan (California Water Code Section 10632) by which demand for potable water would be reduced to balance demand against curtailed supply. Furthermore, the City has agreed to implement the Demand Management Measures (DMM) developed under the Urban Water Management Planning Act, and track its conservation progress through these measures. Burlingame and the other members of BAWSCA have partnered with SFPUC and other Bay Area water suppliers to implement numerous water conservation incentives and educational programs. Adherence to these water conservation measures would aid the City in its effort to reduce water demand, in order to balance demand with supply during specific critical dry years and over multiple dry year events. Therefore, according to the WSA consistent with the City's 2010 UWMP, the City would have adequate supplies to meet customer demand in all years including the demand of the 300 Airport Boulevard Project combined with existing and planned future uses. Implementation of the Project would not be cumulatively considerable and the impact would be less than significant.

### **350 Airport Boulevard**

With planning and zoning amendments proposed by the Project, the 350 Airport Boulevard Site would be permitted to develop up to 374,000 sf of office space or life sciences space.

However, there is currently no development proposal for the 350 Airport Boulevard Site and therefore the analysis included in this EIR is programmatic in nature for that site. As identified above, according to the WSA consistent with the City's Draft 2010 UWMP, Burlingame would have adequate supplies to meet customer demand in all years including the demand of the Project combined with existing and planned future uses. Therefore, the development of the 350 Airport Boulevard Site would result in a less-than-significant cumulative impact on water supplies. Additionally, when a project-level environmental assessment is conducted for the 350 Airport Boulevard Site, a WSA will be prepared to ensure that there are sufficient water supplies to meet the demand of 350 Airport Boulevard Site development.

*UT-6 Cumulative Water Treatment Facilities. The Project, in combination with other development within the City of Burlingame, would not require or result in the construction of new water treatment facilities or the expansion of existing facilities, which could cause significant environmental effects. Therefore, this impact would be less than significant. (LTS)*

### **300 Airport Boulevard**

The City receives 100 percent of its purchased treated water from the SFPUC RWS. By utilizing the storage and conveyance systems within the RWS, SFPUC serves all its retail and wholesale water demands with an integrated operation of imported water from Hetch Hetchy and/or locally produced Bay Area water. SFPUC is currently engaged in a variety of water treatment and distribution system improvements projects that comprise its WSIP, which evolved out of the SFPUC Water System Master Plan (2000). The WSIP consists of 85 projects, 26 of which are specifically for water supply reliability needed to accommodate projected growth, meet water quality standards, and add system redundancy in the event of an interruption due to seismic activity. As of April 2011, construction for the Sunol Valley Water Treatment Plant (SVWTP) Expansion and Treated Water Reservoir Project is 25 percent complete, and construction is scheduled to be completed in summer 2013.<sup>30</sup> Once completed, the Sunol Valley WTP will have capacity to treat up to 160 mgd. The SVWTP expansion project will also include other new connections and facilities that will enable the plant to treat enough water to meet basic customer demands alone for up to 60 days after a major earthquake. The Harry Tracy Water Treatment Plant (HTWTP) currently treats 120 mgd but will be expanded and upgraded to sustainably treat 180 mgd. Long-Term Improvements at the HTWTP are scheduled to be completed in November 2015.<sup>31</sup> When both of these WTPs are operating at capacity, SFPUC will be capable of producing up to 340 mgd. In addition, after completion of the Tesla WTP in 2011, the SFPUC will be capable of delivering up to 655 mgd.

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<sup>30</sup> San Francisco Public Utilities Commission, *Water System Improvement Program: Sunol Valley Water Treatment Plant (SVWTP) Expansion and Treated Water Reservoir*, website: [http://sfwater.org/Project.cfm/MC\\_ID/35/MSC\\_ID/393/MTO\\_ID/649/PRJ\\_ID/244](http://sfwater.org/Project.cfm/MC_ID/35/MSC_ID/393/MTO_ID/649/PRJ_ID/244), accessed May 2, 2011.

<sup>31</sup> San Francisco Public Utilities Commission, *Water System Improvement Program Regional Quarterly Report, FY2010-2011*, website: [http://sfwater.org/detail.cfm/MC\\_ID/35/MSC\\_ID/395/MTO\\_ID/651/C\\_ID/5384](http://sfwater.org/detail.cfm/MC_ID/35/MSC_ID/395/MTO_ID/651/C_ID/5384), accessed May 2, 2011.

SFPUC has sufficient water treatment capacity within its existing and planned facilities; consequently, it is not necessary for the City to operate a proprietary water treatment plant. Because SFPUC has planned for improvements to the water treatment system to improve system reliability and accommodate projected growth in its regional service area, there would be no cumulative impact. As stated above, after 2011, SFPUC's WTP's will be capable of producing 655 mgd if operated continuously, which is well in excess of the demands within Burlingame's service area over the next 20 years.

In order to ensure proper distribution, SFPUC also manages the regional conveyance system used to transport potable water supplies to the wholesale water agencies. In addition, SFPUC manages and maintains all the WTPs; any improvements or expansions are the responsibility of SFPUC and would not adversely affect the City or development of the 300 Airport Boulevard Site. Therefore, as a result of anticipated cumulative growth in water demands within Burlingame's service area, no new or expanded water treatment facilities or storage would be required. Therefore, the Project's contribution to this impact would be less than significant.

### **350 Airport Boulevard**

As described above, the City receives 100 percent of its treated potable water from the RWS, operated by the SFPUC. The SFPUC is full responsible to maintaining and improving its water conveyance and treatment system when necessary. Currently, the SFPUC is engaged in a number of water treatment and distribution system improvements identified in the WSIP. These improvements are targeted at improving system reliability, increasing capacity, and ensuring system redundancy in case of a major earthquake. After full implementation of the WSIP, the SFPUC's WTP's will be capable of producing 655 mgd of fully treated water, which is well in excess of the demands within Burlingame's service area over the next 20 years, including the 350 Airport Boulevard Site with the planning and zoning amendments proposed by the Project and cumulative project's identified by the City. Because a development proposal has not been submitted for the 350 Airport Boulevard Site at this time, this analysis is limited to the programmatic level. A detailed project-level environmental assessment would be required before construction activities begin at the site. However, based on the anticipated size of the future development at the 350 Airport Boulevard Site (374,000) it is not expected that this project would be cumulatively considerable. This impact would be less-than-cumulatively significant.

*UT-7 Cumulative Wastewater Treatment Facility Impacts. The Project, in combination with other development within the service area, would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board, require or result in the construction of new wastewater treatment facilities or the expansion of existing facilities, nor result in a determination by the wastewater treatment provider that serves the project area that it has inadequate capacity to serve the project's expected demand in addition to the provider's existing entitlements. Therefore this impact would be less than significant. (LTS)*

### **300 Airport Boulevard and 350 Airport Boulevard**

Burlingame's WWTP currently uses approximately 64 to 73 percent of its tertiary treatment capacity for dry weather flow, with a remaining unused allocation of approximately 1.5 to 2.0 mgd of ADWF. The Project is projected to generate an average daily dry weather demand of approximately 0.020 mgd of wastewater, which represents approximately 13 percent of the WWTP's remaining tertiary treatment capacity. The WWTP is currently experiences no major constraints. As identified in Table 3.12-3 above, ADWF is projected to increase to 4.4 mgd by 2020 at which point the wastewater treatment plant would be operating at 80 percent of its permitted ADWF tertiary treatment capacity.<sup>32</sup> The project wastewater flows identified in Table 3.12-3 projections include planned residential and commercial development in the City. Since the amount of wastewater generated by 300 Airport Boulevard Project is not expected to change from buildout of the site to 2020, the wastewater treatment plant would still have sufficient remaining capacity in 2020 to accommodate wastewater flows from the Project and other projected growth in the service area. As such, implementation of the Project combined with existing and planned future uses Project in combination with other future development in the City service area would not be cumulatively considerable. Therefore, cumulative impacts to the City's WWTP would be less than significant.

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<sup>32</sup> City of Burlingame and Veolia, *Draft Wastewater Treatment Facility Study*, February 2000.

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# Section 4

## Other CEQA Considerations

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### 4.1 SIGNIFICANT UNAVOIDABLE ENVIRONMENTAL IMPACTS

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Section 21100(b)(2)(A) of the California Environmental Quality Act (CEQA) requires that an Environmental Impact Report (EIR) identify any significant environmental effects that cannot be avoided if the Project is implemented. As described in Section 3, Environmental Analysis, most impacts identified for the Project would either be less than significant or could be mitigated to less-than-significant levels. However, the Project would result in some significant impacts that cannot be mitigated to less-than-significant levels. The Project would have significant and unavoidable project and cumulative impacts related to:

- Generation of greenhouse gas (GHG) emissions from operation of the 300 Airport Boulevard Project above the allowable threshold established by the Bay Area Air Quality Management District (BAAQMD);
- Non-compliance with the 2010 Climate Action Plan;
- Exceedance of criteria air pollutants and ozone precursor emissions during construction;
- Exceedance of criteria air pollutants and ozone precursor emissions during operation;
- Significant impacts to one study intersection; and
- Significant impacts to freeway segments during peak periods.

In addition, the future development of the 350 Airport Boulevard Site in accordance with the planning and zoning changes proposed by the Project would have significant and unavoidable project and cumulative impacts related to:

- Generation of greenhouse gas (GHG) emissions from operation of the 350 Airport Boulevard Project above the allowable threshold established by the Bay Area Air Quality Management District (BAAQMD);
- Non-compliance with the 2010 Climate Action Plan;
- Exceedance of criteria air pollutants and ozone precursor emissions during construction;
- Exceedance of criteria air pollutants and ozone precursor emissions during operation;
- Significant impacts to one study intersection; and
- Significant impacts to freeway segments during peak periods.

Due to these significant unavoidable environmental effects, approval of the Project would require the adoption of a Statement of Overriding Considerations, indicating that the City of Burlingame is aware

of the significant environmental consequences and believes that the benefits of approving the Project outweigh its unavoidable significant environmental impacts.

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## **4.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES**

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Section 21100(b)(2)(B) of CEQA requires that an EIR identify any significant effect on the environment that would be irreversible if the Project were implemented. Section 15126.2(c) of the CEQA Guidelines identifies irreversible environmental changes as those involving a large commitment of nonrenewable resources or irreversible damage resulting from environmental accidents.

### **300 Airport Boulevard**

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The Project would result in approximately 767,000 sf of new office/life science development, associated amenities center, and potentially retail and food service space at the 300 Airport Boulevard Site. During construction, the 300 Airport Boulevard Project would involve a commitment of nonrenewable resources, including building materials and fossil fuels. Also, due to the large increase in floor space at the 300 Airport Boulevard Site, it can be reasonably foreseen that post-construction commitment of nonrenewable resources would increase from current levels, although the amount and rate of consumption of these resources would not result in the unnecessary, inefficient, or wasteful use of resources. It is also possible that new technologies or systems would emerge, or would become more cost-effective to further reduce the reliance upon nonrenewable natural resources. Sustainable measures that are included in the design of the 300 Airport Boulevard Project are listed under Subsection 2.5, Proposed Changes to the Project Site, in Section 2, Project Description.

Accidents, such as the release of hazardous materials, may trigger irreversible environmental damage. Potential hazardous materials to be used at the 300 Airport Boulevard Site could include cleaning products used for facility maintenance, mixed oil, and other organic solids. As such, exposure of site occupants to hazardous materials could occur in the following manner: improper handling or use of hazardous materials or hazardous wastes during occupancy of the 300 Airport Boulevard Project, transportation accident, environmentally unsound disposal methods, and/or emergencies such as fires and explosions. The less-than-significant hazardous materials impacts that would occur at 300 Airport Boulevard with the Project are discussed in the Initial Study, Appendix B of this document.

### **350 Airport Boulevard**

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Development of the 350 Airport Boulevard Site, in accordance with planning and zoning changes proposed under the Project, would result in up to 374,000 sf of new office development. During construction, the future development of the 350 Airport Boulevard Site would involve a commitment of nonrenewable resources, including building materials and fossil fuels. Also, due to the large increase in floor space at the 350 Airport Boulevard Site, it can be reasonably foreseen that post-construction commitment of nonrenewable resources would increase from current levels, although the amount and rate of consumption of these resources would not result in the unnecessary, inefficient, or wasteful use of resources.

Accidents, such as the release of hazardous materials, may trigger irreversible environmental damage. Potential hazardous materials to be used at the 350 Airport Boulevard Site could include standard office materials and result in exposure similar to the 300 Airport Boulevard Site. The less-than-significant hazardous materials impacts that would potentially occur as a result of the future development of the 350 Airport Boulevard Site are discussed in the Initial Study (Appendix B).

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### **4.3 GROWTH-INDUCING IMPACTS**

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Section 15126.2(d) of the CEQA Guidelines states that an EIR should discuss “...the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment.” Growth can be induced in a number of ways, including through the elimination of obstacles to growth, through the stimulation of economic activity within the region, or through precedent-setting action. CEQA requires a discussion of how a project could foster population, employment, or housing growth in the areas surrounding the project, as well as an analysis of how any such induced growth could tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. This section of the EIR discusses the manner in which the Project could affect growth in the City of Burlingame and the larger Bay Area.

In accordance with the CEQA Guidelines, Section 15126.2, this discussion of growth inducement is not intended to characterize growth induced by the Project as necessarily beneficial, detrimental, or of little significance to the environment. The growth inducement discussion is provided for informational purposes so that the public and local decision-makers have an appreciation of the potential long-term growth implications of the Project.

In discussing growth inducement, it is useful to distinguish between direct and indirect growth. Direct population and housing growth occurs on a project site as a result of new facilities (buildings) being constructed, or an increase in developed space. Indirect employment growth occurs beyond a project site but is stimulated by the project’s direct growth. Indirect growth is tied to increased direct and indirect investment and spending associated with the new direct growth. Further, a project may indirectly induce construction of housing in the surrounding community if existing and planned regional housing supplies are not sufficient to accommodate direct growth in employment associated with the project. When CEQA refers to induced growth, CEQA means all growth—direct, indirect, or otherwise defined. For clarity, the discussion below distinguishes between direct growth from the construction and use of project facilities, and all secondary (or indirect) growth.

#### **300 Airport Boulevard**

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##### **Direct and Indirect Housing Growth**

Section 3.10, Population and Housing, states that development of the 300 Airport Boulevard Site as proposed by the Project would not directly increase population by adding homes or displace housing or residents. However, it would indirectly induce growth by providing additional jobs.

As discussed in Section 3.10, Population and Housing, the 300 Airport Boulevard Project would increase on-site employment by up to 2,475.<sup>1</sup> The increased employment could indirectly result in the need for additional housing in the City and other jurisdictions within commuting distance. A regional demand for approximately 1,115 new households could result from the 300 Airport Boulevard Project employment. As discussed in Section 3.10, the secondary housing growth associated with the 300 Airport Boulevard Project would be 0.04 percent of the projected household growth in the Bay Area region by 2025, 0.4 percent of household growth in San Mateo County, and 7.4 percent of the projected household growth within the City of Burlingame. Therefore, the 300 Airport Boulevard Project would not significantly impact the 2025 forecasted household growth within the City and other jurisdictions within the region, and the demand for housing as a result of the 300 Airport Boulevard Project would be less than significant.

### **Direct and Indirect Job Growth**

Direct job increases are expected as a result of the 300 Airport Boulevard Project, as described above. The 300 Airport Boulevard Project would also result in indirect job growth. The direct spending associated with construction activities would stimulate production of associated products and services in the economy during construction. This indirect job growth would not be substantial in terms of the local or Bay Area economy, due to its temporary nature.

Construction of the 300 Airport Boulevard Project would directly, but temporarily, increase construction employment. As described in Section 3.10, the maximum number of on-site construction workers at one time would be up to 250 workers. Given the limited duration and standard nature of the construction anticipated, the demand for construction employment would likely be met within the existing and future labor market in the City of Burlingame, in San Mateo County, or within the Bay Area. Neither a substantial quantity of specialized labor nor construction workers from outside the region would be expected to be induced to relocate temporarily or to commute extraordinarily long distances.

Indirect growth could also be generated through the expenditure patterns of employees associated with the 300 Airport Boulevard Project. For example, future workers would spend money in the local economy, and the expenditure of that money would result in additional jobs.

To estimate this potential “multiplier effect” associated with 300 Airport Boulevard Project-related jobs, ABAG has developed local (Type I) and regional (Type II) economic multipliers for the San Francisco Bay Region based on an input-output model.<sup>2</sup> The economic multipliers measure the direct, indirect, and induced employment caused by a project. The jobs that would be generated by the 300 Airport Boulevard Project would be classified as “Management, Admin” (office uses) and “Arts, Recreation” (amenities center uses). For “Management, Admin,” the Type I multiplier would be 1.15 and the Type II multiplier would be 1.52. This means that for every office job created, there would be

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<sup>1</sup> Depending on which scenario, the 300 Airport Boulevard Project could result in less employment. However, for the purposes of this analysis, the most conservative scenario of office uses plus amenities center is used.

<sup>2</sup> ABAG, Center for Analysis and Information Services, *2001 Input-Output Model and Economic Multipliers for the San Francisco Bay Region*, Table 5, 1987 Bay Area Employment Multipliers, p. 20, March 2004.

0.15 indirect and induced jobs created locally and 0.52 jobs created regionally. For “Arts, Recreation,” the Type I multiplier would be 1.12 and the Type II multiplier would be 1.27.

As shown in Table 4-1, below, applying the local and regional economic multipliers to the 2,475 new jobs directly resulting from the 300 Airport Boulevard Project, the 300 Airport Boulevard Project would result in about 370 local and 1,276 regional indirect and induced jobs. Therefore, the combined total local employment growth (direct and indirect employment) with the 300 Airport Boulevard Project would be about 2,845 new jobs, and the combined regional employment growth would be about 3,751 new jobs. This increase in regional employment represents 0.09 percent of the projected 4,379,900 total jobs within the San Francisco Bay Region by 2025.<sup>3</sup>

**Table 4-1  
Direct, Indirect, and Induced Jobs**

<b>Job Sector</b>	<b>Direct Jobs</b>	<b>Type I Multiplier<sup>a</sup></b>	<b>Type II Multiplier<sup>b</sup></b>	<b>Direct and Indirect Jobs</b>	<b>Direct, Indirect, and Induced Jobs</b>
Office Uses	2,433	1.15	1.52	365	1,265
Amenities Center	42	1.12	1.27	5	11
Total	2,475	--	--	370	1,276

Source: ABAG, 2004; Atkins, 2011.

Notes:

- a. The Type I multiplier measures the direct and indirect jobs created.
- b. The Type II multiplier measures the direct, indirect, and induced jobs created.

## Infrastructure and Public Services

Growth in a geographic area may be induced by removing infrastructure barriers through the provision of new infrastructure (roads, sewers, water supply, storm drainage, energy) and/or improving transportation and circulation systems. Accordingly, the growth-inducing potential of the Project would be significant if the Project's infrastructure improvements substantially exceeded the capacity to accommodate the project above and beyond the level of development as currently proposed either on or off the 300 Airport Boulevard Site.

The Project would include the realignment of Airport Boulevard to bisect the 300 Airport Boulevard Site, but does not require the extension or construction of new roadways into an area that was not already served by a street system. In addition, new utility systems would not be expanded into undeveloped areas that would stimulate development in those areas. The 300 Airport Boulevard Site is in an urbanized area and would be served by the existing roadways and utilities already provided. On-site utility infrastructure improvements would be required to serve the increased use on the 300 Airport Boulevard Site, and the road system in the Project vicinity would need to be altered to accommodate the 300 Airport Boulevard Project. However, these changes would be minimal and would result in a less-than-significant impact.

<sup>3</sup> ABAG, *Projections 2009*.

To the extent that the 300 Airport Boulevard Project would increase the employee and resident population, there would be an increase in the demand for the provision of public services. This includes an increased demand for police protection, fire protection and emergency services, school facilities, and recreational areas proportional to the population increase of the 300 Airport Boulevard Project. As discussed in the Initial Study (Appendix B of this document) and Section 3.11, Parks and Wind Effects on Recreation, there would be no significant impacts on public services as a result of the Project. In this regard, the 300 Airport Boulevard Project would not in and of itself indicate a substantial growth inducing potential so as to inhibit the reasonable provision of public services. An increase in the demand for new public service facilities could lead to potential significant environmental impacts only if expanding or constructing new facilities were required that adversely affected the physical environment under the impact criteria established. Since the 300 Airport Boulevard Project would not trigger the need for expanded or new public services facilities, no significant impact would occur.

Planning for the future expansion of utility, transportation, and public service facilities would take into account the 300 Airport Boulevard population levels. The increase in utility and public service personnel and equipment required to serve the Project would not be implemented beyond what is required to accommodate the 300 Airport Boulevard Project and there would be no significant growth inducements as a result.

## **350 Airport Boulevard**

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### **Direct and Indirect Housing Growth**

Section 3.10, Population and Housing, states that future development of the 350 Airport Boulevard Site in accordance with planning and zoning changes proposed by the Project would not directly increase population by adding homes or displace housing or residents. However, it would indirectly induce growth by providing additional jobs.

As discussed in Section 3.10, Population and Housing, future development of the 350 Airport Boulevard Site would increase on-site employment by up to 1,247.<sup>4</sup> The increased employment could indirectly result in the need for additional housing in the City and other jurisdictions within commuting distance. A regional demand for approximately 561 new households could result from employment at the 350 Airport Boulevard Site. As such, the secondary housing growth associated with future development of the 350 Airport Boulevard Site would be 0.02 percent of the projected household growth in the Bay Area region by 2025, 0.2 percent of household growth in San Mateo County, and 3.7 percent of the projected household growth within the City of Burlingame. Therefore, future development of the 350 Airport Boulevard Site would not significantly impact the 2025 forecasted household growth within the City and other jurisdictions within the region, and the demand for housing as a result of developing the 350 Airport Boulevard Site would be less than significant.

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<sup>4</sup> Based on the assumption that office uses would be constructed at this site (most conservative scenario) and calculated using build-out at the maximum allowable FAR.

## Direct and Indirect Job Growth

Direct job increases are expected as a result of future development of the 350 Airport Boulevard Site, as described above. Development of the 350 Airport Boulevard Site would also result in indirect job growth. The direct spending associated with construction activities would stimulate production of associated products and services in the economy during construction. This indirect job growth would not be substantial in terms of the local or Bay Area economy, due to its temporary nature.

Construction of the future development at the 350 Airport Boulevard Site would directly, but temporarily, increase construction employment. At this time, the exact number of construction workers is unknown; however, given the limited duration and standard nature of the construction anticipated, the demand for construction employment would likely be met within the existing and future labor market in the City of Burlingame, in San Mateo County, or within the Bay Area. Neither a substantial quantity of specialized labor nor construction workers from outside the region would be expected to be induced to relocate temporarily or to commute extraordinarily long distances.

Indirect growth could also be generated through the expenditure patterns of employees associated with future development of the 350 Airport Boulevard Site. For example, future workers would spend money in the local economy, and the expenditure of that money would result in additional jobs. The jobs that would be generated by post-construction operations at the 350 Airport Boulevard Site would be classified as “Management, Admin” (office uses).<sup>5</sup> For “Management, Admin,” the Type I multiplier would be 1.15 and the Type II multiplier would be 1.52.

Applying the local and regional economic multipliers to the 1,247 new jobs directly resulting from future development of the 350 Airport Boulevard Site would result in about 187 local and 648 regional indirect and induced jobs. Therefore, the combined total local employment growth (direct and indirect employment) with a 350 Airport Boulevard development would be about 1,434 new jobs, and the combined regional employment growth would be about 1,895 new jobs. This increase in regional employment represents 0.04 percent of the projected 4,379,900 total jobs within the San Francisco Bay Region by 2025.<sup>6</sup>

## Infrastructure and Public Services

Future development of the 350 Airport Boulevard Site would not require the extension or construction of new roadways. In addition, new utility systems would not be expanded into undeveloped areas that would stimulate development in those areas. The 350 Airport Boulevard Site is in an urbanized area and would be served by the existing roadways and utilities already provided. On-site utility infrastructure improvements would be required to serve the increased use on the 350 Airport Boulevard Site. However, these changes would be minimal and would result in a less-than-significant impact.

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<sup>5</sup> ABAG, Center for Analysis and Information Services, *2001 Input-Output Model and Economic Multipliers for the San Francisco Bay Region*, Table 5, 1987 Bay Area Employment Multipliers, p. 20, March 2004.

<sup>6</sup> ABAG, *Projections 2009*.

To the extent that development of the 350 Airport Boulevard Site would increase the employee and resident population, there would be an increase in the demand for the provision of public services. As discussed in the Initial Study (Appendix B of this document) and Section 3.11, Parks and Wind Effects on Recreation, there would be no significant impacts on public services as a result of the Project. In this regard, future development of the 350 Airport Boulevard Site would not in and of itself indicate a substantial growth inducing potential so as to inhibit the reasonable provision of public services. Since 350 Airport Boulevard development would not trigger the need for expanded or new public services facilities, no significant impact would occur.

Planning for the future expansion of utility, transportation, and public service facilities would take into account population levels at the 350 Airport Boulevard Site. The increase in utility and public service personnel and equipment required to serve the Project would not be implemented beyond what is required to accommodate future development of the 350 Airport Boulevard Site and there would be no significant growth inducements as a result.

**Summary.** Growth and the rate of growth shape both the physical and social structure of communities. As indicated above, the Project would not facilitate or contribute to unanticipated growth in Burlingame or San Mateo County. The Project would, however, result in indirect housing demand, and direct and indirect employment growth, but not in excess of current regional ABAG projections. This growth in the number of jobs in Burlingame and San Mateo County would not result in indirect population growth over ABAG regional population projections.

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#### **4.4 CUMULATIVE IMPACTS**

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CEQA Guidelines Section 15355 defines cumulative impacts as “...two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” The combination of the Project with other reasonably foreseeable probable future projects in the vicinity or region affected by the Project, defines the cumulative scenario. Cumulative impacts and the Project’s contribution to the cumulative impacts are addressed in Sections 3.2 through 3.12 of this Draft EIR. These sections identify feasible mitigation measures that would reduce the Project’s cumulatively considerable contributions to cumulative impacts to less-than-cumulatively-considerable levels. These sections also identify those contributions to cumulative impacts that would be cumulatively considerable even with the implementation of feasible mitigation measures. Please refer to those sections of the EIR for a discussion of cumulative impacts.

# Section 5

## Alternatives

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### 5.1 INTRODUCTION

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The California Environmental Quality Act (Public Resources Code, Section 21000 et seq.; CEQA) and the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000 et seq.) require that an Environmental Impact Report (EIR) “describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives” (CEQA Guidelines Section 15126.6(a)). If mitigation measures or a feasible project alternative that would meet most of the basic project objectives would substantially lessen the significant environmental effects of a proposed project, then the lead agency should not approve the proposed project unless it determines that specific technological, economic, social, or other considerations make the mitigation measures and the project alternative infeasible (PRC Section 21002, CEQA Guidelines Section 15091(a)(3)). The EIR must also identify alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and should briefly explain the reasons underlying the lead agency’s determination (CEQA Guidelines Section 15126.6(c)).

One of the alternatives that must be analyzed is the “No Project” Alternative. The “No Project” analysis must discuss the existing conditions at the time the Notice of Preparation (NOP) is published, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved and development continued to occur in accordance with existing plans and consistent with available infrastructure and community services (CEQA Guidelines Section 15126.6(e)(2)). Therefore, pursuant with the CEQA Guidelines, this section discusses and analyzes a No Project Alternative.

In addition to the No Project Alternative, this section provides a set of alternatives to the 300 Airport Boulevard Project and analyzes the impacts of each alternative, including an Existing Zoning Alternative and an Office/Hotel Alternative. This section later provides a description of all alternatives and compares the significant impacts of the alternatives to the significant environmental impacts of the 300 Airport Boulevard Project as proposed.

Two alternatives are provided for the 350 Airport Boulevard Project Site: the No Project Alternative and the Existing Zoning Alternative. However, since there is no proposed site plan for the 350 Airport Boulevard Site at this time, this section does not consider additional alternatives to the 350 Airport Boulevard Site. If and when subsequent project-level environmental review occurs for the 350 Airport Boulevard Project Site, a separate alternatives analysis will be conducted for the proposed site plan.

## 5.2 DESCRIPTION OF ALTERNATIVES CONSIDERED

**300 Airport Boulevard.** The objectives for the 300 Airport Boulevard Project are listed in Section 2, Project Description. As stated above, the alternatives to a proposed project are meant to feasibly attain most of the basic project objectives while avoiding or substantially lessening its significant impacts. Significant and unavoidable Project-specific and cumulative impacts from the 300 Airport Boulevard Project include:

- Generation of greenhouse gas (GHG) emissions from operation of the 300 Airport Boulevard Project above the allowable threshold established by the Bay Area Air Quality Management District (BAAQMD);
- Non-compliance with the 2010 Climate Action Plan;
- Exceedance of criteria air pollutants and ozone precursor emissions during construction;
- Exceedance of criteria air pollutants and ozone precursor emissions during operation;
- Significant impacts to one study intersection; and
- Significant impacts to freeway segments during peak periods.

Based on the goal of reducing these significant and unavoidable impacts, the No Project Alternative, Existing Zoning Alternative, and Office/Hotel Alternative have been developed for the 300 Airport Boulevard Project for evaluation in this EIR. Table 5-1, below, provide a summary of key features of the 300 Airport Boulevard Project and each alternative. Further details regarding each alternative are provided below.

**Table 5-1  
Comparative Description of 300 Airport Boulevard Project and Alternatives**

	<b>300 Airport Boulevard Project</b>	<b>No Project Alternative</b>	<b>Existing Zoning Alternative</b>	<b>Office/Hotel Alternative</b>
Office/Life Science (sf)	689,810	0	450,725	428,330
Amenities Center (sf)	33,400	0	23,000	37,000 <sup>a</sup>
Retail (sf)	19,230	0	0	7,470
Food Services (sf)	24,560	0	0	11,200
Hotel (sf/rooms)	--	0	--	226,338 (425 rooms)
<i>Total (sf)</i>	<i>767,000</i>	<i>0</i>	<i>473,725</i>	<i>710,338</i>
Employees	2,475	0	1,529	1,786
Parking (spaces)	2,318	0	1,618	1,965

Source: Atkins, 2011.

Notes:

- a. Some retail and food services would be included in the 37,000-sf amenities center, but this amount would be insignificant for purposes of this analysis and therefore are included in the total square footage for the amenities center.

**350 Airport Boulevard.** The future development of the 350 Airport Boulevard Site in accordance with the planning and zoning changes proposed by the Project would have significant and unavoidable project and cumulative impacts related to:

- Generation of greenhouse gas (GHG) emissions from operation of the 350 Airport Boulevard Project above the allowable threshold established by the Bay Area Air Quality Management District (BAAQMD);
- Non-compliance with the 2010 Climate Action Plan;
- Exceedance of criteria air pollutants and ozone precursor emissions during construction;
- Exceedance of criteria air pollutants and ozone precursor emissions during operation;
- Significant impacts to one study intersection; and
- Significant impacts to freeway segments during peak periods.

Based on the goal of reducing these significant and unavoidable impacts, the No Project Alternative and Existing Zoning Alternative have been developed for the 350 Airport Boulevard Project Site for evaluation in this EIR. Table 5-2, below, provides a summary of key features of the 350 Airport Boulevard Project and both alternatives.

	<b>350 Airport Boulevard Project</b>	<b>No Project Alternative</b>	<b>Existing Zoning Alternative</b>
Office	374,000	0	224,250
Employees	1,247	0	748

*Source:* Atkins, 2011.

### **No Project Alternative**

**300 Airport Boulevard.** Under the No Project Alternative, the existing 18.12-acre 300 Airport Boulevard Site would remain as-is and no project components would be constructed. The entire site would continue to be vacant, unused land. The office/life science buildings, the amenities center, and the parking structure would not be constructed and landscaping and other site facilities would not be added. In addition, on-site roadway and circulation improvements would not be included. Airport Boulevard would not be realigned to bisect the 300 Airport Boulevard Site and the Bay Trail would not be extended and rehabilitated. No new land uses, Bayfront Specific Plan amendments, or rezoning would occur under this alternative. The 0.4-acre Rezone Parcel would remain as part of Anza Point South (APS).

**350 Airport Boulevard.** Under the No Project Alternative, the existing 8.58-acre 350 Airport Boulevard Site would remain the same as existing conditions and no zoning changes would be made. In addition, no buildings would be constructed at the site.

### **Existing Zoning Alternative**

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**300 Airport Boulevard.** The Existing Zoning Alternative would develop the 300 Airport Boulevard Site in accordance with the existing Bayfront Specific Plan Design Guidelines and Anza Point North (APN) Zoning Code regulations (and Anza Point South for the 0.4-acre Rezone Parcel). The office/life science buildings at the site would be constructed at 0.6 FAR and the amenities center would be constructed at 0.5 FAR, which would result in no more than 473,725 square feet (sf) of development. In addition, the buildings at the 300 Airport Boulevard Site would not exceed 30 feet in height along the Bay and 50 feet along Sanchez Channel. Up to 1,529 workers could be employed under the Existing Zoning Alternative. Since the 300 Airport Boulevard Project would be smaller, Airport Boulevard would not be realigned and shoreline improvements would be less extensive.

*Changes to the Anza Point North Zoning Regulations.* The Existing Zoning Alternative would retain the current APN zoning regulations and would not include amendments to the Zoning Code or Bayfront Specific Plan. The office/life science buildings would be constructed at no more than 0.6 FAR and the amenities center would be constructed at 0.5 FAR. All buildings would not exceed a height limit of 30 feet in height along the Bay and 50 feet along Sanchez Channel. In addition, the building setback, parking, and signage requirements would remain the same.

The permitted uses at the 300 Airport Boulevard Site under the existing Zoning Code include hotels, restaurants, office uses, training facilities, commercial recreation, publically-owned recreation areas, and adult-oriented businesses. As such, the Existing Zoning Alternative would only include office uses, commercial recreation, and publically-owned recreation areas. The childcare facility that would be included in the 300 Airport Boulevard Project would not be developed under the Existing Zoning Alternative since this use would require a Conditional Use Permit to operate. In addition, no cafeterias (which are considered incidental food establishments rather than restaurants) or retail uses would be included under the Existing Zoning Alternative since these are currently not permitted.

*Office/Life Science Uses.* Office/life science uses would be constructed at both the East and West Campuses, similar to the 300 Airport Boulevard Project. The buildings, combined, would be 450,725 sf, and would range from two to three stories. The floor plans would consist of open areas for cubicles, individual offices, and/or laboratories. The buildings would also include bicycle commuter facilities, utilities/trash/recycling enclosures, and loading areas. The office/life science buildings would be dedicated solely to these uses and would not include retail or food services.

As with the 300 Airport Boulevard Project, the Existing Zoning Alternative could include either office uses or a life science campus. It is estimated that the office uses would provide jobs for approximately 1,502 office employees.<sup>1</sup> If this alternative would include life science uses, approximately 1,127 life science jobs would be created.<sup>2</sup>

*Amenities Center.* The amenities center would be a one-story, 23,000-sf building. This building would be in the southern portion of the site, immediately north of the existing Beach Road driveway and east of the proposed parking structure. The amenities center would likely include a reception/lobby, locker rooms, and an exercise area. Since a conditional use permit is required for childcare uses and incidental food sales, these components would not be included in the Existing Zoning Alternative. The amenities center could employ up to 27 individuals,<sup>3</sup> for a total of 1,529 employees under the office scenario and 1,154 employees under the life science scenario. In addition, the Existing Zoning Alternative would not include a swimming pool at the amenities center, since the southern portion of the site would remain zoned APS, which would not permit a swimming pool use.

*TDM Program and Parking.* As with the 300 Airport Boulevard Project, the Existing Zoning Alternative would include a Transportation Demand Management (TDM) program. However, this TDM program would be scaled-down to match the needs of a reduced site plan. Since there would be fewer employees, the TDM program would not be as extensive, but would still be provided to reduce traffic.

The existing parking requirements under the Zoning Code mandate a ratio of one parking space per 300 sf of office and cafeteria space and a ratio of one parking space per 200 square feet of exercise area. As such, to be compliant with the existing zoning, this alternative would include approximately 1,618 spaces throughout the site.<sup>4</sup> The parking structure would include parking on three levels and would be able to accommodate approximately 415 vehicles. The structure would be in the southwest corner of the site, west of the amenities center and east of the Sanchez Channel and the Bay Trail. In addition, parking would be located in an underground garage below the 300 Airport Boulevard Site and limited parking would be provided in surface lots. The below-ground and surface parking areas would consist of approximately 1,190 spaces.

*Vehicular and Bicycle/Pedestrian Connections.* Unlike the 300 Airport Boulevard Project, Airport Boulevard would not be realigned to bisect the site under the Existing Zoning Alternative. The street would remain in its current alignment, as included in the Bayfront Specific Plan. In addition, open space improvements in the area would be less extensive, including reduced level of improvements to

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<sup>1</sup> DES Architects + Engineers, Memo from Tom Gilman and Kenny Hung to Maureen Brooks, City of Burlingame Planning Manager, March 3, 2011. This estimate assumes 300 sf per employee based on similar office density rates on the San Francisco Peninsula.  $450,725 \text{ sf of office} / 300 \text{ sf} = \sim 1,502 \text{ employees}$ .

<sup>2</sup> DES Architects + Engineers, Memo from Tom Gilman and Kenny Hung to Maureen Brooks, City of Burlingame Planning Manager, March 3, 2011. This estimate assumes 400 sf per employee based on similar life science density rates on the San Francisco Peninsula.  $450,725 \text{ sf of office} / 400 \text{ sf} = \sim 1,127 \text{ employees}$ .

<sup>3</sup> Association of Bay Area Governments, *1987 Input-Output Model and Economic Multipliers for the San Francisco Bay Region*, March 1995. Multiplier for “Amusement and Recreational Services” averages 870 sf per employee. As such  $23,000 \text{ sf of proposed amenities center} / 870 \text{ sf} = \sim 27 \text{ employees}$ .

<sup>4</sup> Office Use:  $450,725 \text{ sf of office} / 300 \text{ sf} = 1,503 \text{ spaces}$ . Exercise area:  $23,000 \text{ sf} / 200 \text{ sf} = 115 \text{ spaces}$

the shoreline along Sanchez Channel, connections to the Bay Trail via the east-west pedestrian promenade, smaller open space and landscaped areas, and to the offsite Eastern Shoreline open space and Bay Trail along the Bay. Nonetheless, no buildings would be constructed within the 100-foot shoreline band.

**350 Airport Boulevard.** The Existing Zoning Alternative for the 350 Airport Boulevard Project would develop the 350 Airport Boulevard Site in accordance with the existing Bayfront Specific Plan Design Guidelines and APN Zoning Code regulations. The office buildings at the site would be constructed at 0.6 FAR, which would result in no more than 224,250 sf of development. In addition, the buildings at the 350 Airport Boulevard Site would not exceed 30 feet in height along the Bay and 50 feet along Sanchez Channel. Up to 748 workers could be employed under the Existing Zoning Alternative, assuming office uses. For the purposes of this analysis, the Existing Zoning Alternative for the 350 Airport Boulevard Site does not include a TDM program.

### **Office/Hotel Alternative**

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As explained above, there is currently no proposed site plan for the 350 Airport Boulevard Site. As such, no further alternatives are provided for this project. The following description pertains to the 300 Airport Boulevard Project only.

The Office/Hotel Alternative would include offices in Buildings B3 and B4, an amenities center, and a parking structure, as proposed under the 300 Airport Boulevard Project. However, Buildings B1 and B2 would be replaced by a 226,338-sf hotel. The Zoning Code would be amended as per the 300 Airport Boulevard Project; however, the existing requirements and limitations for hotel uses would still be applicable. Up to 1,786 workers would be employed under the Office/Hotel Alternative.

**Changes to the Anza Point North Zoning Regulations.** The Office/Hotel Alternative would need to include changes to the Anza Point Zoning Regulations and Bayfront Specific Plan due to the proposed office buildings and amenities center. This alternative would include the same amount of development at the West Campus as proposed under the 300 Airport Boulevard Project; therefore, the same amendments would need to be made.

As with the 300 Airport Boulevard Project, amendments to the APN zoning regulations would be needed to increase the maximum floor area ratio allowed for office uses from 0.6 FAR to 1.0 FAR, and the floor area ratio allowed for commercial recreation facilities from 0.5 FAR to 1.0 FAR. Additionally, the height limitations would be revised to require maximum heights to be determined by impacts on the prevailing wind and consistency with the community wind standards for the APN subarea.

In addition to the FAR and height amendments, the Office/Hotel Alternative would consist of the same changes to the Zoning Code and the Bayfront Specific Plan, including setbacks and signage restrictions. The Office/Hotel Alternative would also rezone a 120-foot by 150-foot portion (0.4 acres) of the site along Beach Road from the APS zoning district to the APN zoning district. Rezoning this area would bring the 300 Airport Boulevard Site entirely within the APN district and would allow for the construction of a swimming pool in this area.

The permitted uses at the 300 Airport Boulevard Site under the Zoning Code include hotels, restaurants, office uses, training facilities, commercial recreation, publically-owned recreation areas, and adult-oriented businesses. As such, the Office/Hotel Alternative would include office uses, commercial recreation, publically-owned recreation areas, and a hotel. However, this alternative would also include a childcare facility, retail, and a cafeteria in the amenities center and retail and cafeterias in the office buildings. As such, in order to house these uses at the 300 Airport Boulevard Site, the Office/Hotel Alternative would need to include amendments to the Zoning Code to allow for incidental food establishments and retail services in a business campus. In addition, the childcare facility would require a Conditional Use Permit to operate.

Unlike the 300 Airport Boulevard Project, the Office/Hotel Alternative would not require an amendment to the Zoning Code to allow for a reduction in the number of parking spaces required with the implementation of a transportation demand management (TDM) program.

The East Campus would be developed with a hotel. Although changes would be made to the Zoning Code and the Bayfront Specific Plan for the office and amenities center uses, no amendments would be included for the hotel. Section 25.48.020 of the Municipal Code allows hotels with a maximum density of 85 rooms to the acre and a FAR of 1.0 or less. Hotel-related facilities provided on site may include convention and meeting facilities, restaurants, retail sales, and personal service uses. The Office/Hotel Alternative would be consistent with these requirements.

**Office Uses.** Office uses would be constructed at the West Campus only with the same West Campus site plan as the 300 Airport Boulevard Project. The two office buildings, combined, would consist of 447,000 sf and would range from seven to eight stories. The floor plans would consist of open areas for cubicles, individual offices, and/or laboratories. Approximately 428,330 sf would be dedicated to office uses. In addition, the first floors of the two buildings would include a total of 7,470 sf of retail space and a total of 11,200 sf of food service areas. The buildings would also include bicycle commuter facilities, a utilities/trash/recycling enclosure and loading areas, and outdoor cafeteria areas. It is estimated that the office uses would provide jobs for approximately 1,428 office employees,<sup>5</sup> the retail component would provide jobs for approximately 17 employees,<sup>6</sup> and the food service would provide jobs for approximately 25 employees,<sup>7</sup> for a total of 1,470 employees at the two office buildings.

**Amenities Center.** The amenities center would be a two-story, 37,000-sf building, similar to the 300 Airport Boulevard Project. This building would be in the southern portion of the site, immediately north of the existing Beach Road driveway and east of the proposed parking structure. The first floor

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<sup>5</sup> DES Architects + Engineers, Memo from Tom Gilman and Kenny Hung to Maureen Brooks, City of Burlingame Planning Manager, March 3, 2011. This estimate assumes 300 sf per employee based on similar office density rates on the San Francisco Peninsula.  $428,330 \text{ sf of office} / 300 \text{ sf} = \sim 1,428 \text{ employees}$ .

<sup>6</sup> Association of Bay Area Governments, *1987 Input-Output Model and Economic Multipliers for the San Francisco Bay Region*, March 1995. Multiplier for “Retail Trade” averages 450 sf per employee. As such  $7,470 \text{ sf of proposed retail} / 450 \text{ sf} = \sim 17 \text{ employees}$ .

<sup>7</sup> Association of Bay Area Governments, *1987 Input-Output Model and Economic Multipliers for the San Francisco Bay Region*, March 1995. Multiplier for “Retail Trade” averages 450 sf per employee. As such  $11,200 \text{ sf of proposed food service area} / 450 \text{ sf} = \sim 25 \text{ employees}$ .

of the amenities center would include a reception/lobby, an office, locker rooms, a laundry room, retail space, a spa, a café, and a childcare center. The second floor would include an exercise area with spinning, yoga, group exercise, and Pilates rooms. In addition, a swimming pool would be to the south of the amenities center. The amenities center would be accessible to the office workers, the hotel guests, and the public. Up to 46 individuals would be employed at the amenities center.<sup>8</sup>

**Hotel Uses.** The Zoning Code allows a maximum of 85 hotel rooms per acre. The East Campus, which would house the hotel, is approximately 5.2 acres. As such, the hotel building would consist of up to 425 rooms. Per the Zoning Code, hotels can be constructed up to 1.0 FAR; therefore, the hotel building would be developed at no more than 226,338 square feet. In addition to the hotel rooms, the hotel would include a restaurant and lounge area of approximately 5,000 sf and a meeting/conference facility of approximately 10,000 sf. It is estimated that the hotel uses would provide jobs for approximately 270 hotel employees.<sup>9</sup>

**Parking.** The existing parking requirements under the Zoning Code mandate a ratio of one parking space per 300 sf of office and cafeteria space, a ratio of one parking space per 200 square feet of exercise area, one parking space per 400 sf of retail space, and one parking stall per hotel room plus one designated parking space for shuttle buses. As such, to be compliant with the existing zoning, this alternative would include approximately 1,965 spaces throughout the site. The parking structure would include parking on six levels and would be able to accommodate approximately 901 vehicles. The structure would be in the southwest corner of the site, west of the amenities center and east of the Sanchez Channel and the Bay Trail. In addition, parking would be located in an underground garage below the 300 Airport Boulevard Site and limited parking would be provided in surface lots. The below-ground and surface parking areas would consist of approximately 1,064 spaces. Since the Office/Hotel Alternative would be able to provide the required parking, no amendments would be made to the Zoning Code to allow for more parking with a TDM program.

**Vehicular and Bicycle/Pedestrian Connections.** As with the 300 Airport Boulevard Project, Airport Boulevard would be realigned to bisect the site with the Office/Hotel Alternative. The street would be realigned across the site from the southeast corner to the northwest corner. Although Airport Boulevard would bisect the 300 Airport Boulevard Site, the East Campus and West Campus would be connected by various pedestrian linkages and paths. Open space at the 300 Airport Boulevard Site would include improvements to the shoreline along Sanchez Channel including the Bay Spur Trail, connections to the Bay Trail via the east-west pedestrian promenade, smaller open space and landscaped areas, and improvements to the offsite Eastern Shoreline open space and Bay Trail along

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<sup>8</sup> Association of Bay Area Governments, *1987 Input-Output Model and Economic Multipliers for the San Francisco Bay Region*, March 1995. Multiplier for “Amusement and Recreational Services” averages 870 sf per employee. As such 33,400 sf of proposed amenities center/870 sf = ~38 employees. Multiplier for “Retail Trade” averages 450 sf per employee. 1,200 sf of retail + 2,400 sf of food service/450 sf = 8 employees, for a total of 46 employees at the amenities center.

<sup>9</sup> Association of Bay Area Governments, *1987 Input-Output Model and Economic Multipliers for the San Francisco Bay Region*, March 1995. Multiplier for “Hotels and Lodging Places” averages 840 sf per employee. As such 226,338 sf of hotel/840 sf = ~270 employees.

the Bay. No buildings would be constructed within the 100-foot shoreline band, and the 100-foot shoreline band would be restored and rehabilitated to provide bicycle and pedestrian access.

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### **5.3 ALTERNATIVES CONSIDERED BUT REJECTED**

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An off-site alternative was considered for this analysis but rejected from further review because it would be infeasible, would not attain most of the basic Project objectives, and would not sufficiently reduce the 300 Airport Boulevard impacts. As stated in CEQA Guidelines, Section 15126.6(f)(1), factors that may be considered when a Lead Agency is assessing the feasibility of an alternative include: “site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site (or the site is already owned by the proponent).”

CEQA Guidelines Section 1512.6(f)(2) states that an EIR must consider off-site alternatives if such alternatives are deemed to be feasible by the Lead Agency. Alternative locations for the 300 Airport Boulevard Project are not feasible because 350 Beach Road, LLC (the Project Sponsor) owns this site and wants to develop it. An alternate location for the office/life science uses would require additional land acquisition, which is not included in the Project Sponsor plans or objectives. Although the Project could be constructed on other similar-sized parcels along the Peninsula waterfront (for example San Mateo, Millbrae, and San Bruno), there are currently no alternative sites in these areas that could accommodate the development intensity proposed given existing land use designations and zoning. In addition, the significant and unavoidable impacts as a result of the 300 Airport Boulevard Project would likely occur regardless of location, meaning that an offsite alternative would not further reduce these impacts. Therefore, this EIR does not analyze an off-site location alternative for the 300 Airport Boulevard Project.

Alternatives that would consist of permanent uses other than office, hotel, or recreation were not considered because they would not be consistent with applicable City zoning, Bayfront Specific Plan, and General Plan land use designations and policies. For example, residential uses at the Project Site were considered, but rejected, since the site is not zoned for single-family residential or mixed uses with residential units. Additionally, an alternative that would consist entirely of hotel uses was considered but rejected because a hotel that could efficiently occupy 18.12 acres at the 300 Airport Boulevard Site would be larger than what the mid-Peninsula hotel market could economically absorb given the other existing hotels in the area.

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### **5.4 ATTAINMENT OF PROJECT OBJECTIVES**

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An evaluation of how each alternative meets or does not meet basic 300 Airport Boulevard Project objectives is provided below. Pursuant to CEQA Guidelines Section 15126.6(a), this analysis compares the alternatives to the objectives of the 300 Airport Boulevard Project. As described in detail

above, there are three alternatives for the 300 Airport Boulevard Project: No Project Alternative, Existing Zoning Alternative, and Office/Hotel Alternative. The following analysis describes the extent to which these alternatives meet or do not meet the Project Sponsor objectives as described in Section 2, Project Description.

There are no project objectives for the 350 Airport Boulevard Site since no development proposal has been submitted at this time. If and when subsequent project-level environmental review occurs for the 350 Airport Boulevard Site, a list of project objectives and a discussion of whether the alternatives meet these objectives will be included in that documentation. As such, the below discussion does not include an analysis of whether the two alternatives for the 350 Airport Boulevard Project (No Project Alternative and Existing Zoning Alternative) would meet the objectives.

### **No Project Alternative**

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The No Project Alternative is not satisfactory at achieving the basic 300 Airport Boulevard Project objectives. The No Project Alternative would not meet the primary objective of providing a corporate campus of multiple office buildings and an amenities center at the 300 Airport Boulevard Site. The No Project Alternative would not include construction of buildings; therefore, office/life science and amenity uses would not be able to function at the site. In addition, the No Project Alternative would not allow for the realignment of Airport Boulevard through the site, which is intended to provide traffic-calming and safety in the area. Further, waterfront access would not be improved and access to the eastern shoreline of Sanchez Channel would continue to be blocked to the public. As such, the No Project Alternative does not meet the objectives of the 300 Airport Boulevard Site.

### **Existing Zoning Alternative**

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The Existing Zoning Alternative would meet the majority of the Project Sponsor objectives. The Existing Zoning Alternative would still develop the 300 Airport Boulevard Project, but to a lesser extent than the Project as proposed. This alternative would develop a waterfront corporate campus of multiple office buildings with an amenities center. Since the alternative would be in the same location at 300 Airport Boulevard, the campus would still be located in a prominent location proximate to major transportation corridors. The Existing Zoning Alternative would be Leadership in Energy & Environmental Design (LEED) certified and designed in a sustainable manner. In addition, Airport Boulevard would be realigned to bisect the site and adequate parking would be provided to meet the demand. Further, this alternative would allow public access to the shoreline along the Bay and Sanchez Channel by extending and rehabilitating the existing Bay Trail.

However, the primary objective states that the 300 Airport Boulevard Project should “develop an approximately 800,000-sf waterfront corporate campus.” The Existing Zoning Alternative would include only 473,725 sf of development (compared to 767,000 sf under the 300 Airport Boulevard Project), which is significantly less than the stated objective. As such, this alternative would not include the desired development intensity and the overall corporate campus would be smaller in scale.

In addition, the Existing Zoning Alternative would not allow the buildings to exceed 30 feet in height along the Bayshore and 50 feet in height along Sanchez Channel. In order to accommodate approximately 473,725 sf of development at the 300 Airport Boulevard Site within the existing height limits, the buildings would likely have a greater footprint impact than the buildings proposed under the 300 Airport Boulevard Project. This would conflict with the objective of developing the campus “with sufficient building height and density to provide usable public open space among the buildings that connects to the improved waterfront edges of the site.” Since the building footprints would likely be larger, the open space and campus connectors between buildings would be limited.

### **Office/Hotel Alternative**

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The Office/Hotel Alternative would meet the majority of the Project Sponsor’s objectives. The 300 Airport Boulevard Site would be developed with a 447,000-sf office campus with a 37,000-sf amenities center in the West Campus and a 226,338-sf hotel in the East Campus, for a total of 710,338 sf. Although the corporate campus would be significantly less than proposed under the 300 Airport Boulevard Project, the hotel complex would be added, making the proposed square footage almost equal to the Project. As such, the Office/Hotel Alternative would build out the site to almost the full development potential allowed under the revised zoning.

Consistent with the Project Sponsor objectives, this alternative would develop a waterfront corporate campus of multiple office buildings with an amenities center. Since the alternative would be in the same location at 300 Airport Boulevard, the campus would still be located in a prominent location proximate to major transportation corridors. The Office/Hotel Alternative would be LEED certified and would design the office and hotel uses to function in a sustainable manner. In addition, Airport Boulevard would be realigned to bisect the site and adequate parking would be provided to meet the demand. Further, this alternative would allow public access to the shoreline along the Bay and Sanchez Channel by extending and rehabilitating the existing Bay Trail. Since the Office/Hotel Alternative would include amendments to the Specific Plan and Zoning Code, the buildings would be able to be constructed at a greater height than currently permitted. As such, the taller building heights would allow for more open space between the buildings.

However, the primary objective states that the 300 Airport Boulevard Project should “develop an approximately 800,000-sf waterfront corporate campus.” As with the Existing Zoning Alternative, the Office/Hotel Alternative would include significantly less office development than the stated objective. As such, this alternative would not include the desired development intensity and the overall corporate campus would be smaller in scale. Nonetheless, the office uses would be replaced by hotel uses and would develop the site to its maximum potential.

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## **5.5 IMPACT ASSESSMENT**

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This section evaluates whether the alternatives would reduce the significant impacts of the 300 Airport Boulevard Project and the 350 Airport Boulevard Project to less-than-significant levels and/or would generate impacts other than those identified for the 300 Airport Boulevard Project and the 350 Airport

Boulevard Project. Summarized lists of recommended mitigation measures for each alternative are provided in the below analysis; however, these mitigation measures are fully described in Section 3, Environmental Analysis, of this document. In addition, a comparative analysis of the 300 Airport Boulevard Project and the 350 Airport Boulevard Project and their alternatives is provided below and summarized in Table 5-9 and Table 5-10, respectively.

## **No Project Alternative**

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As described above, under the No Project Alternative, the development of 300 Airport Boulevard Project would not occur. In addition, on-site roadway and bicycle/pedestrian trail improvements would not be included. No new land uses, Bayfront Specific Plan amendments, or rezoning would occur under this alternative.

### **Land Use**

#### **300 Airport Boulevard**

The No Project Alternative for the 300 Airport Boulevard Project would not require a Bayfront Specific Plan Amendment and/or rezoning of the 300 Airport Boulevard Site. Since this alternative would not include development, there would be no conflict with existing land use designations or zoning. In comparison, the 300 Airport Boulevard Project impacts would be less than significant after the proposed amendments to the Bayfront Specific Plan and the Zoning Ordinance. Additionally, the No Project Alternative, in combination with other reasonably foreseeable probable future development in the area, would have no cumulative impact on overall existing or planned land uses in the vicinity of the 300 Airport Boulevard Site.

However, the No Project Alternative would result in several policy conflicts. The Bayfront Specific Plan promotes growth in this area and supports development of economic centers. In addition, the Bayfront Specific Plan emphasizes the importance of recreational opportunities along the shoreline and protection of the visual quality of the area. The No Project Alternative would not include development at the 300 Airport Boulevard Site, including economically-viable uses, the Bay Trail rehabilitation and extension, and the increased visual quality of the site associated with the new landscaping, vegetation, and on-site open spaces. As such, the No Project Alternative would not be consistent with the majority of goals and policies outlined in the Bayfront Specific Plan, resulting in a significant and unavoidable impact. (S/SU)

#### **350 Airport Boulevard**

The No Project Alternative for the 350 Airport Boulevard Project would not require a Bayfront Specific Plan Amendment and/or rezoning of the 350 Airport Boulevard Site. Similar to the No Project Alternative for the 300 Airport Boulevard Site, this alternative would not include development, resulting in no conflict with existing land use designations or zoning. However, the No Project Alternative would result in policy conflicts since it would not promote growth in this area, would not support the development of economic centers, and would not rehabilitate the Bay Trail and the shoreline area. As such, the No Project Alternative for the 350 Airport Boulevard Site would not be

consistent with the majority of goals and policies outlined in the Bayfront Specific Plan, resulting in a significant and unavoidable impact. (S/SU)

## **Visual Quality**

### **300 Airport Boulevard**

Since the No Project Alternative for the 300 Airport Boulevard Project would not develop the 300 Airport Boulevard Site, no buildings would be constructed that could block views from scenic vista including the Coyote Point Recreation Area. The No Project Alternative would retain the existing conditions at the 300 Airport Boulevard Site and would not result in changes to the current visual character and quality of the site and the surrounding areas. Additionally, since no new structures would be built under the No Project Alternative, a new source of light and glare would not be created. This alternative would not cumulate with other foreseeable development. As such, the No Project Alternative would result in no project-related or cumulative impacts to scenic vistas and changes to the existing character compared to the less-than-significant impacts under the 300 Airport Boulevard Project. (NI)

### **350 Airport Boulevard**

Since the No Project Alternative would not develop the 350 Airport Boulevard Site, no buildings would be constructed that could block views from scenic vista including the Coyote Point Recreation Area. The No Project Alternative would retain the existing conditions at the 350 Airport Boulevard Site and would not result in changes to the current visual character and quality of the site and the surrounding areas. Additionally, since no new structures would be built under the No Project Alternative, a new source of light and glare would not be created. This alternative would not cumulate with other foreseeable development. As such, the No Project Alternative for the 350 Airport Boulevard Project would result in no project-related or cumulative impacts to scenic vistas and changes to the existing character compared to the less-than-significant impacts under the 350 Airport Boulevard Project. (NI)

## **Transportation**

### **300 Airport Boulevard**

The No Project Alternative for the 300 Airport Boulevard Project would retain existing conditions at the 300 Airport Boulevard Site and would not generate additional traffic or parking demand. This alternative would result in the same daily vehicle trips and affected intersections as existing conditions, since no new uses would be constructed at the 300 Airport Boulevard Site. This alternative would avoid the significant and avoidable impacts to one study intersection and to several study freeway segments. (NI)

### **350 Airport Boulevard**

The No Project Alternative for the 350 Airport Boulevard Project would retain existing conditions at the 350 Airport Boulevard Site and would not generate additional traffic or parking demand. This

alternative would result in the same daily vehicle trips and affected intersections as existing conditions, since no new uses would be constructed at the 350 Airport Boulevard Site. This alternative would avoid the significant and avoidable impacts to one study intersection and to several study freeway segments. (NI)

## **Air Quality**

### **300 Airport Boulevard**

The No Project Alternative for the 300 Airport Boulevard Project would not construct new uses at the 300 Airport Boulevard Site and would not generate air emissions above existing conditions. This alternative would avoid the significant and unavoidable construction emissions and criteria pollutant emissions associated with the 300 Airport Boulevard Project. In addition, the No Project Alternative would not include the placement of new sensitive receptors (such as office uses and a daycare) at the 300 Airport Boulevard Site. As such, the No Project Alternative would avoid the 300 Airport Boulevard Project's less-than-significant impacts associated with exposure to objectionable odors and TAC emissions. The No Project Alternative would have no potential to contribute to cumulative impacts on air quality. (NI)

### **350 Airport Boulevard**

The No Project Alternative for the 350 Airport Boulevard Project would not construct new uses at the 350 Airport Boulevard Site and would not generate air emissions above existing conditions. This alternative would avoid the significant and unavoidable construction emissions and criteria pollutant emissions associated with the 350 Airport Boulevard Project. The No Project Alternative would have no potential to contribute to cumulative impacts on air quality. (NI)

## **Climate Change**

### **300 Airport Boulevard**

The No Project Alternative for the 300 Airport Boulevard Project would result in no new direct emissions from area and mobile sources, or indirect emissions from electricity generation and solid waste. Since this alternative would not construct new buildings and no new uses would operate at the 300 Airport Boulevard Site, there would be no increase in greenhouse gas (GHG) emissions over existing conditions, resulting in no impact. (NI)

### **350 Airport Boulevard**

The No Project Alternative for the 350 Airport Boulevard Project would result in no new direct emissions from area and mobile sources, or indirect emissions from electricity generation and solid waste. Since this alternative would not construct new buildings and no new uses would operate at the 350 Airport Boulevard Site, there would be no increase in greenhouse gas (GHG) emissions over existing conditions, resulting in no impact. (NI)

## **Noise**

### **300 Airport Boulevard**

Unlike the 300 Airport Boulevard Project, the No Project Alternative would not include on-site sensitive receptors (such as office uses and a daycare) and would therefore avoid the 300 Airport Boulevard Project's significant, but mitigable, construction noise and vibration impacts. Additionally, there would be no construction noise impacts to off-site receptors. This alternative would avoid the potentially significant, but mitigable, noise impacts under the 300 Airport Boulevard Project related to exposure of new sensitive receptors to traffic noise, and would avoid the potentially significant, but mitigable, noise impacts associated with heating, ventilation, and air conditioning (HVAC) systems. (NI)

### **350 Airport Boulevard**

The No Project Alternative would not include on-site sensitive receptors and would therefore avoid the 350 Airport Boulevard Project's potentially significant but mitigable construction noise and vibration impacts. Additionally, there would be no construction noise impacts to off-site receptors. This alternative would avoid the potentially significant but mitigable noise impacts under the 350 Airport Boulevard Project related to exposure of new sensitive receptors to traffic noise, and would avoid the potentially significant but mitigable noise impacts associated with heating, ventilation, and air conditioning (HVAC) systems. (NI)

## **Biological Resources**

### **300 Airport Boulevard**

The No Project Alternative for the 300 Airport Boulevard Project would not lead to the construction of buildings at the 300 Airport Boulevard Site and all existing vegetation would remain in place. As with the 300 Airport Boulevard Project, it is unlikely that the special status species exist in the area and since no construction would occur, any potential species or sensitive habitats would not be impacted. Since the existing trees and shrubs would not be removed under the No Project Alternative, the potential for disturbance of nesting migratory birds at the 300 Airport Boulevard Site would be eliminated, resulting in no impacts, compared to a potentially significant impact under the 300 Airport Boulevard Project. In addition, potential wetlands or other waters of the U.S. would not be impacted since the site conditions would remain the same. As such, no cumulative impacts would occur under the No Project Alternative and there would be no conflicts with local policies aimed to protect biological resources. (NI)

### **350 Airport Boulevard**

The No Project Alternative for the 350 Airport Boulevard Project would not lead to the construction of buildings at the 350 Airport Boulevard Site and all existing vegetation would remain in place. As with the 350 Airport Boulevard Project, it is unlikely that the special status species exist in the area and since no construction would occur, any potential species or sensitive habitats would not be impacted.

Since the existing trees and shrubs would not be removed under the No Project Alternative, the potential for disturbance of nesting migratory birds at the 350 Airport Boulevard Site would be eliminated, resulting in no impacts, compared to a potentially significant impact under the 350 Airport Boulevard Project. In addition, potential wetlands or other waters of the U.S. would not be impacted since the site conditions would remain the same. As such, no cumulative impacts would occur under the No Project Alternative and there would be no conflicts with local policies aimed to protect biological resources. (NI)

## **Hydrology**

### **300 Airport Boulevard**

The No Project Alternative for the 300 Airport Boulevard Project would not modify the existing conditions at the 300 Airport Boulevard Site, which would remain primarily covered with impervious surfaces. This alternative would avoid the less-than-significant drainage, water quality, and groundwater impacts associated with the 300 Airport Boulevard Project. Conditions of the 300 Airport Boulevard Site would be the same as the existing conditions and there would be no impacts associated with stormwater runoff or hydrology and water quality from implementation of the No Project Alternative. The No Project Alternative would also have no potential to contribute to cumulative impacts on hydrological resources. However, the No Project Alternative would not result in improvements to existing shoreline revetment. As such, the No Project Alternative would have a potentially significant flooding impact at the Site associated with sea level rise. (PS)

### **350 Airport Boulevard**

The No Project Alternative for the 350 Airport Boulevard Project would not modify the existing conditions at the 350 Airport Boulevard Site, which would remain primarily covered with impervious surfaces. This alternative would not result in impacts to drainage, water quality, and groundwater impacts associated with the 300 Airport Boulevard Project. Conditions of the 350 Airport Boulevard Site would be the same as the existing conditions and there would be no impacts associated with stormwater runoff or hydrology and water quality from implementation of the No Project Alternative. The No Project Alternative would also have no potential to contribute to cumulative impacts on hydrological resources. However, the No Project Alternative for the 350 Airport Boulevard Site would not result in improvements to existing shoreline revetment. As such, the No Project Alternative would have a potentially significant flooding impact at the Site associated with sea level rise. (PS)

## **Population and Housing**

### **300 Airport Boulevard**

The No Project Alternative for the 300 Airport Boulevard Project would result in no change in housing or employment levels over existing conditions. The No Project Alternative would not result in the creation of new jobs that would otherwise occur under the 300 Airport Boulevard Project, which subsequently would result in a demand for new housing units within the City of Burlingame. As such, the No Project Alternative would avoid the less-than-significant direct and indirect population growth

that would result from the 300 Airport Boulevard Project. The No Project Alternative would have no potential to contribute to cumulative impacts on population, housing, or employment growth. (NI)

### **350 Airport Boulevard**

The No Project Alternative for the 350 Airport Boulevard Project would result in no change in housing or employment levels over existing conditions. The No Project Alternative would not result in the creation of new jobs that would otherwise occur under the 350 Airport Boulevard Project, which subsequently would result in a demand for new housing units within the City of Burlingame. As such, the No Project Alternative would avoid the less-than-significant direct and indirect population growth that would result from the 350 Airport Boulevard Project. The No Project Alternative would have no potential to contribute to cumulative impacts on population, housing, or employment growth. (NI)

## **Parks and Wind Effects on Recreation**

### **300 Airport Boulevard**

Unlike the 300 Airport Boulevard Project, the No Project Alternative would have no impact on recreational areas or wind patterns. The No Project Alternative would not construct office/life science buildings and therefore, no employees would be added to the 300 Airport Boulevard Site. As such, the No Project Alternative would not increase the daytime population, which would normally demand recreational facilities for use during breaks and before and after work. Additionally, since no buildings would be constructed, wind speeds would not be altered or blocked. Due to the lack of development at the 300 Airport Boulevard Site, the No Project Alternative would have no impact on parks and wind effects on recreation. (NI)

### **350 Airport Boulevard**

Unlike the 350 Airport Boulevard Project, the No Project Alternative would have no impact on recreational areas or wind patterns. The No Project Alternative would not construct office/life science buildings and therefore, no employees would be added to the 350 Airport Boulevard Site. As such, the No Project Alternative would not increase the daytime population, which would normally demand recreational facilities for use during breaks and before and after work. Additionally, since no buildings would be constructed, wind speeds would not be altered or blocked. Due to the lack of development at the 350 Airport Boulevard Site, the No Project Alternative would have no impact on parks and wind effects on recreation, compared to a potentially significant impact under the 350 Airport Boulevard Project. (NI)

## **Utilities**

### **300 Airport Boulevard**

The No Project Alternative would not change the existing use at the 300 Airport Boulevard Site, which is an unused, vacant parcel. Therefore, the No Project Alternative would have similar water, sewer, electrical, gas, and operational solid waste demands as the existing conditions. In comparison, the 300

Airport Boulevard Project would increase utility demand usage as a result of increased development and activity on site, although impacts would be less than significant. The No Project Alternative would have no potential to contribute to cumulative impacts related to utilities. (NI)

### **350 Airport Boulevard**

The No Project Alternative would not change the existing use at the 350 Airport Boulevard Site, which is an unused, vacant parcel. Therefore, the No Project Alternative would have similar water, sewer, electrical, gas, and operational solid waste demands as the existing conditions. In comparison, the 350 Airport Boulevard Project would increase utility demand usage as a result of increased development and activity on site, although impacts would be less than significant. The No Project Alternative would have no potential to contribute to cumulative impacts related to utilities. (NI)

### **Existing Zoning Alternative**

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As described above, the Existing Zoning Alternative for the 300 Airport Boulevard Project would allow development at the levels permitted in the Bayfront Specific Plan and the Zoning Ordinance. Since the development would be limited to 0.6 FAR and 30 to 50 feet in height, approximately 473,725 sf of office or life science uses and amenity center would be constructed. Due to the smaller size of the Project, Airport Boulevard would not be realigned to bisect the site and the improvements to the Bay Trail system would not be as extensive.

The Existing Zoning Alternative would also apply to the 350 Airport Boulevard Project. The Existing Zoning Alternative for the 350 Airport Boulevard Project would develop the 350 Airport Boulevard Site in accordance with the existing Bayfront Specific Plan Design Guidelines and APN Zoning Code regulations. The office buildings at the site would be constructed at 0.6 FAR, which would result in no more than 224,250 sf of development.

## **Land Use**

### **300 Airport Boulevard**

**Conflicts with Applicable Land Use Designations and Zoning.** The Existing Zoning Alternative would not require a Bayfront Specific Plan Amendment and/or rezoning of a portion of the 300 Airport Boulevard Site. Since this alternative would be required to adhere to the existing zoning, there would be no conflict with current land use designations or zoning. In comparison, the 300 Airport Boulevard Project impacts would be less than significant after adoption of the proposed amendments to the Bayfront Specific Plan and the Zoning Ordinance. (NI)

**Conflicts with Bayfront Specific Plan Policies.** Following adoption of the proposed amendments, no Bayfront Specific Plan policy conflicts would occur under the 300 Airport Boulevard Project. The Existing Zoning Alternative would develop the 300 Airport Boulevard Site consistent with the goals and policies of the Bayfront Specific Plan. However, the Bayfront Specific Plan emphasizes the importance of recreational opportunities along the shoreline and protection of the visual quality of the area. The Existing Zoning Alternative would include less extensive improvements along the Bay

Shoreline As such, the Existing Zoning Alternative would be less consistent with several goals and policies outlined in the Bayfront Specific Plan. Nonetheless, since zoning and Bayfront Specific Plan amendments would not occur, the Existing Zoning Alternative would be generally consistent with the existing policies, resulting in a less-than-significant impact. (LTS)

**Cumulative Impacts.** The Existing Zoning Alternative, in combination with other reasonably foreseeable probable future development in the area, would have a less-than-significant cumulative impact on overall existing or planned land uses in the vicinity of the 300 Airport Boulevard Site. Similarly, the 300 Airport Boulevard Project would not contribute to a cumulative land use conflict. (LTS)

### **350 Airport Boulevard**

The Existing Zoning Alternative for the 350 Airport Boulevard Project would not require a Bayfront Specific Plan Amendment and/or rezoning of a portion of the 350 Airport Boulevard Site. Since this alternative would be required to adhere to the existing zoning, there would be no conflict with current land use designations or zoning. Following adoption of the proposed amendments, no Bayfront Specific Plan policy conflicts would occur under the 350 Airport Boulevard Project. However, the Bayfront Specific Plan emphasizes the importance of recreational opportunities along the shoreline and protection of the visual quality of the area. The Existing Zoning Alternative would include less extensive Bay Trail improvements and rehabilitation of the 100-foot shoreline buffer. As such, the Existing Zoning Alternative would be less consistent with several goals and policies outlined in the Bayfront Specific Plan. Nonetheless, since zoning and Bayfront Specific Plan amendments would not occur, the Existing Zoning Alternative would be generally consistent with the existing policies, resulting in a less-than-significant impact. In addition, less-than-significant cumulative impacts would occur. (LTS)

## **Visual Quality**

### **300 Airport Boulevard**

**Adverse Effect on a Scenic Vista.** Under the 300 Airport Boulevard Project, the 97- to 144-foot buildings would be visible from the Coyote Point Recreation Area, which is considered a scenic vista due to its encompassing views of the Bay and the Santa Cruz Mountains. Under the Existing Zoning Alternative, the buildings would still be visible, but to a lesser extent than the 300 Airport Boulevard Project. With the existing height limits of 30 feet along the Bayshore and 50 feet along Sanchez Channel, the buildings under the Existing Zoning Alternative would be substantially lower than those proposed under the 300 Airport Boulevard Project. From the Coyote Point Recreation Area, the Existing Zoning Alternative buildings would appear to be similar in height and scale as light-industrial buildings to the south and the buildings at the office park across Sanchez Channel to the west. The Existing Zoning Alternative buildings would therefore be similar to existing surrounding development and would not block views of the Santa Cruz Mountains. As such, the Existing Zoning Alternative would result in less-than-significant impacts on a scenic vista, similar to the 300 Airport Boulevard Project. (LTS)

**Damage Scenic Resources within a State Scenic Highway.** The 300 Airport Boulevard Site is in the vicinity of US 101; however, US 101 is not designated as a State Scenic Highway. Therefore, as with the 300 Airport Boulevard Project, the Existing Zoning Alternative would result in no impact. (NI)

**Degradation of Existing Visual Character.** Similar to the 300 Airport Boulevard Project, the Existing Zoning Alternative would have less-than-significant impacts on on-site visual character in the context of surrounding development. Although there would be increased massing of approximately 473,725 sf compared to existing conditions, this expansion would not substantially alter existing aesthetic conditions. The buildings would be limited to 30 to 50 feet in height. As such, the Existing Zoning Alternative would not be as visible from surrounding areas including US 101 and Victoria Park. This alternative, similar to the 300 Airport Boulevard Project, would also include landscape improvements that would visually enhance the site. As such, the Existing Zoning Alternative would not degrade the existing visual character of the 300 Airport Boulevard Site and its surroundings, resulting in a less-than-significant impact. (LTS)

**New Sources of Light and Glare.** The Existing Zoning Alternative would add a new source of light and glare to the area because of the proposed buildings, which do not exist under current conditions. However, due to the height of the buildings and the proposed finishings, this would not result in a significant impact. In addition, the parking garage would be smaller in height, limiting light impacts from vehicle headlights. Therefore, similar to the 300 Airport Boulevard Project, the Existing Zoning Alternative would result in a less-than-significant impact. (LTS)

**Cumulative Impacts.** As discussed in Section 3.3, Visual Quality, cumulative impacts associated with sensitive views, visual character, and light and glare, would be less than significant. Since a reduction in the amount of development would occur under Existing Zoning Alternative, cumulative impacts would remain less than significant. (LTS)

### **350 Airport Boulevard**

Development at the 350 Airport Boulevard Site under the Existing Zoning Alternative would alter the existing visual character of the site and its surroundings. However, the impacts would be less than under the 350 Airport Boulevard Project. The revised APN zoning under the 350 Airport Boulevard Project would allow greater FAR and density at the site. Therefore, any future buildings proposed at the 350 Airport Boulevard Site would have a greater potential over existing zoning regulations to block views of the Santa Cruz Mountains from the Coyote Point Recreation Area. New buildings under the Existing Zoning Alternative would also block views and change the current visual setting. However, as with the 350 Airport Boulevard Project, the Existing Zoning Alternative at the 350 Airport Boulevard Site would need to adhere to the Design Guidelines of the Anza Point subarea. Compliance with the landscaping and exterior building materials guidelines would further reduce the less-than-significant impacts.

The Existing Zoning Alternative at the 350 Airport Boulevard Project would likely result in light spillage and glare impacts on the surrounding properties and roads. Nonetheless, lighting would be required to meet the requirements of the Municipal Code Section 18.16.030 to prevent light spillage

offsite. In addition, landscaped buffers would help reduce the amount of light spilling onto adjacent commercial properties. Therefore, compliance with the Municipal Code and installation of landscaping would result in a less-than-significant light spillage and glare impacts. Cumulative impacts would also remain less than significant. (LTS)

## **Transportation**

### **300 Airport Boulevard**

Table 5-3 shows the project trip generation estimates for 300 Airport Boulevard Site under the Existing Zoning Alternative based on trip rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation*, Eighth Edition. Trip reductions were applied to the alternative to reflect a potential Transportation Demand Management (TDM) program that would be similar to the 300 Airport Boulevard Project. Also, similar trip reductions were taken for internal trips for the amenities center, retail, and restaurant uses. As shown in the table, based on the ITE rates for each proposed land use, the Existing Zoning Alternative would generate 590 trips during the AM Peak Hour and 573 trips during the PM Peak Hour. These numbers are both lower compared to the 300 Airport Boulevard Project.

Traffic conditions at the study intersections, freeway ramps, and freeway segments were evaluated under the Existing Zoning Alternative based on a qualitative analysis assuming that the trips for the Existing Zoning Alternative would follow the same trip distribution patterns as for the 300 Airport Boulevard Project.

**Intersection Operations.** Since the Existing Zoning Alternative would generate fewer trips compared to the 300 Airport Boulevard Project, the study intersections would also operate at LOS D or better during both peak hours, similar to the 300 Airport Boulevard Project. However, the unsignalized Amphlett Boulevard/Poplar Avenue intersection has operational problems under existing conditions. Similar to the 300 Airport Boulevard Project, the Existing Zoning Alternative would add traffic to this intersection resulting in a significant unavoidable impact. (SU)

**Freeway Ramp Operations.** For reasons similar to those described for intersection operations, with the addition of traffic generated by the Existing Zoning Alternative, the study freeway ramps would continue to operate at acceptable levels under the Existing Zoning Alternative. (LTS)

**Freeway Segment Operations.** As described in Section 3.4, Transportation, implementation of the 300 Airport Boulevard Project would result in significant and unavoidable impacts during the AM and/or PM peak hours at six study freeway segments. By factoring down the results from the 300 Airport Boulevard Project based on the Existing Zoning Alternative trip generation, the Existing Zoning Alternative would have a significant and unavoidable impact on only the following three freeway segments: (SU)

- US 101, northbound, between Peninsula Avenue and SR 92 – AM peak hour only;
- US 101, southbound between Whipple Avenue and the Santa Clara County line – PM peak hour only;
- SR 92, eastbound between I-280 and US 101 – AM and PM peak hour.

**Table 5-3  
Project Trip Generation Estimates for the Existing Zoning Alternative**

Land Use	Size	Daily Rate	Daily Trips	AM Peak Hour			PM Peak Hour			Total Trips	
				Peak-Hour Rate	In	Out	Peak-Hour Rate	In	Out		
<b>300 Airport Blvd Project</b>											
Office <sup>a</sup>	690 ksf	8.56	5,902	1.27	774	106	879	1.23	145	707	851
Day Care <sup>b</sup>	8 ksf	79.26	634	12.25	52	46	98	12.50	47	53	100
<i>Internal Reduction</i>		50%	-317	50%	-26	-23	-49	50%	-24	-27	-50
Health Club <sup>c</sup>	25 ksf	32.93	836	1.38	16	19	35	3.53	51	39	90
<i>Internal Reduction</i>		50%	-418	50%	-8	-10	-18	50%	-26	-19	-45
Retail <sup>d</sup>	20 ksf	42.94	877	1.00	12	8	20	3.73	37	39	76
<i>Internal Reduction</i>		50%	-439	50%	-8	10	-18	50%	-19	-19	-38
Restaurant <sup>e</sup>	25 ksf	127.15	3,179	11.52	152	180	292	11.15	165	114	279
<i>Internal Reduction</i>		50%	-1,589	50%	-76	-70	-146	50%	-82	-57	-140
Hotel <sup>f</sup>	0 rooms	8.17	0	0.56	0	0	0	0.59	0	0	0
<i>TDM Reduction</i>		8% of office	-450	13% of office	-101	-14	-114	13% of office	-19	-92	-111
<b>Total</b>			<b>8,215</b>		<b>789</b>	<b>199</b>	<b>988</b>		<b>276</b>	<b>737</b>	<b>1,013</b>
<b>Existing Zoning Alternative</b>											
Office <sup>a</sup>	451 ksf	9.44	4,253	1.39	551	75	626	1.29	99	484	584
Day Care <sup>b</sup>	6 ksf	79.26	437	12.26	36	32	68	12.46	32	36	69
<i>Internal Reduction</i>		50%	-218	50%	-18	-16	-34	50%	-16	-18	-34
Health Club <sup>c</sup>	18 ksf	32.93	578	1.38	11	13	24	3.53	35	27	62
<i>Internal Reduction</i>		50%	-289	50%	-5	-7	-12	50%	-18	-13	-31
Retail <sup>d</sup>	0 ksf	42.94	0	1.00	0	0	0	3.73	0	0	0
<i>Internal Reduction</i>		50%	0	50%	0	0	0	50%	0	0	0
Restaurant <sup>e</sup>	0 ksf	127.15	0	11.52	0	0	0	11.15	0	0	0
<i>Internal Reduction</i>		50%	0	50%	0	0	0	50%	0	0	0
Hotel <sup>f</sup>	0 rooms	8.17	0	0.56	0	0	0	0.59	0	0	0
<i>TDM Reduction</i>		7% of office	-314	13% of office	-72	-10	-81	13% of office	-13	-63	-76
<b>Total</b>			<b>4,446</b>		<b>502</b>	<b>88</b>	<b>590</b>		<b>120</b>	<b>453</b>	<b>573</b>

*Sources:*

- a. Institute of Transportation Engineers, Trip Generation, 8th Edition. General Office Building (710).
- b. Institute of Transportation Engineers, Trip Generation, 8th Edition. Day Care Center (565).
- c. Institute of Transportation Engineers, Trip Generation, 8th Edition. Health/Fitness Club (492).
- d. Institute of Transportation Engineers, Trip Generation, 8th Edition. Shopping Center (820).
- e. Institute of Transportation Engineers, Trip Generation, 8th Edition. High-Turnover (Sit-Down) Restaurant (932).
- f. Institute of Transportation Engineers, Trip Generation, 8th Edition. Hotel (310).

**Air Traffic Patterns.** The Existing Zoning Alternative would be subject to review by the City/County Association of Governments (C/CAG) of San Mateo County Airport Land Use Committee (ALUC) for project consistency with the San Mateo County Comprehensive Airport Land Use Plan (ALUP). Similar to the 300 Airport Boulevard Project, this review would ensure that the Existing Zoning Alternative would have no impact on air traffic patterns. (NI)

**Transit Service, Pedestrian Facilities, and Bicycle Facilities.** As discussed in Section 3.4, Transportation, the 300 Airport Boulevard Project would have less-than-significant impacts associated with transit service, pedestrian facilities, and bicycle facilities. Since a reduction in the amount of development would occur under Existing Zoning Alternative, impacts would remain less than significant. (LTS)

**Site Access, Circulation, and Parking.** Similar to the 300 Airport Boulevard Project, site plans for the Existing Zoning Alternative would be reviewed for adequacy prior to approval by the City. Therefore, also similar to the 300 Airport Boulevard Project, the Existing Zoning Alternative would result in no impacts associated with site circulation, access, and parking. (NI)

**Cumulative Impacts.** Since the Existing Zoning Alternative would generate fewer trips compared to the 300 Airport Boulevard Project, all but one of the study intersections would also operate at acceptable levels of service during both peak hours under cumulative conditions, as was determined for the 300 Airport Boulevard Project. However, the unsignalized Amphlett Boulevard/Poplar Avenue intersection has operational problems under existing conditions. Similar to the 300 Airport Boulevard Project, the Existing Zoning Alternative would add traffic to this intersection resulting in a significant unavoidable impact. (SU)

In addition, as discussed in Section 3.4, Transportation, the 300 Airport Boulevard Project would have less-than-significant cumulative impacts to freeway ramp operations. The Existing Zoning Alternative would generate fewer trips compared to the 300 Airport Boulevard Project. As such, the Existing Zoning Alternative would also result in less-than-significant cumulative impacts to freeway ramp operations.

However, the 300 Airport Boulevard Project would have significant and unavoidable cumulative impacts to study freeway segment operations. Although the Existing Zoning Alternative would generate fewer trips compared to the 300 Airport Boulevard Project, impacts to study freeway segment operations would remain significant and unavoidable under the Existing Zoning Alternative. (SU)

### **350 Airport Boulevard**

Table 5-4 shows the project trip generation estimates for the 350 Airport Boulevard Site under Existing Zoning Alternative based on trip rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation*, Eighth Edition. As shown in the table, based on the ITE rates for each proposed land use, the Existing Zoning Alternative would generate 312 trips during the AM Peak Hour and 289 trips during the PM Peak Hour. These numbers are both lower compared to the 350 Airport Boulevard Project.

**Table 5-4  
Project Trip Generation Estimates for the Existing Zoning Alternative**

Land Use	Size	Daily Rate <sup>a</sup>	Daily Trips	AM Peak Hour			PM Peak Hour				
				Peak-Hour Rate	In	Out	Total Trips	Peak-Hour Rate	In	Out	Total Trips
<b>300 Airport Blvd Project</b>											
350 Airport Boulevard	374,000	9.85	3,684	1.44	474	65	539	1.33	85	413	498
<b>Existing Zoning Alternative</b>											
Existing Zoning Alternative <sup>b</sup>	224,250 sf	9.44	2,117	1.39	274	37	312	1.29	49	240	289

*Sources:*

a. Institute of Transportation Engineers, Trip Generation, 8th Edition. General Office Building (710).

*Notes:*

b. There is no specific project proposed for the 350 Airport Boulevard Site and therefore no proposed TDM plan or TDM reduction.

Traffic conditions at the study intersections, freeway ramps, and freeway segments were evaluated under the Existing Zoning Alternative based on a qualitative analysis assuming that the trips for the Existing Zoning Alternative would follow the same trip distribution patterns as for the 350 Airport Boulevard Project.

Since the Existing Zoning Alternative would generate fewer trips compared to the 300 Airport Boulevard Project, most of the study intersections would also operate at LOS D or better during both peak hours, similar to the 300 Airport Boulevard Project. However, the unsignalized Amphlett Boulevard/Poplar Avenue intersection has operational problems under existing conditions. Similar to the 300 Airport Boulevard Project, the Existing Zoning Alternative would add traffic to this intersection resulting in a significant unavoidable impact. (SU)

For reasons similar to those described for intersection operations, with the addition of traffic generated by the Existing Zoning Alternative, the study freeway ramps would continue to operate at acceptable levels under the Existing Zoning Alternative. (LTS)

As described in Section 3.4, Transportation, implementation of the 300 Airport Boulevard Project would result in significant and unavoidable impacts during the AM and/or PM peak hours at six study freeway segments. By factoring down the results from the 300 Airport Boulevard Project based on the Existing Zoning Alternative trip generation, the Existing Zoning Alternative would have a significant and unavoidable impact on only the following three freeway segments: (SU)

- US 101, northbound, between Peninsula Avenue and SR 92 – AM peak hour only;
- US 101, southbound between Whipple Avenue and the Santa Clara County line – PM peak hour only;
- SR 92, eastbound between I-280 and US 101 – AM and PM peak hour.

The Existing Zoning Alternative would be subject to review by the City/County Association of Governments (C/CAG) of San Mateo County Airport Land Use Committee (ALUC) for project consistency with the San Mateo County Comprehensive Airport Land Use Plan (ALUP). Similar to the 300 Airport Boulevard Project, this review would ensure that the Existing Zoning Alternative would have no impact on air traffic patterns. Similar to the 300 Airport Boulevard Project, site plans for the Existing Zoning Alternative would be reviewed for adequacy prior to approval by the City. Therefore, also similar to the 300 Airport Boulevard Project, the Existing Zoning Alternative would result in no impacts associated with site circulation, access, and parking. (NI)

As discussed in Section 3.4, Transportation, the 300 Airport Boulevard Project would have less-than-significant impacts associated with transit service, pedestrian facilities, and bicycle facilities. Since a reduction in the amount of development would occur under Existing Zoning Alternative, impacts would remain less than significant. (LTS)

Since the Existing Zoning Alternative would generate fewer trips compared to the 300 Airport Boulevard Project, all but one of the study intersections would also operate at acceptable levels of service during both peak hours under cumulative conditions, as was determined for the 300 Airport Boulevard Project. However, the unsignalized Amphlett Boulevard/Poplar Avenue intersection has operational problems under existing conditions. Similar to the 300 Airport Boulevard Project, the Existing Zoning Alternative would add traffic to this intersection resulting in a significant unavoidable impact. (SU)

In addition, as discussed in Section 3.4, Transportation, the 300 Airport Boulevard Project would have less-than-significant cumulative impacts to freeway ramp operations. The Existing Zoning Alternative would generate fewer trips compared to the 300 Airport Boulevard Project. As such, the Existing Zoning Alternative would also result in less-than-significant cumulative impacts to freeway ramp operations.

However, the 300 Airport Boulevard Project would have significant and unavoidable cumulative impacts to study freeway segment operations. Although the Existing Zoning Alternative would generate fewer trips compared to the 300 Airport Boulevard Project, impacts to study freeway segment operations would remain significant and unavoidable under the Existing Zoning Alternative. (SU)

## **Air Quality**

### **300 Airport Boulevard**

**Compliance with the 2010 Clean Air Plan.** As described in Section 3.5, Air Quality, in order for a plan or project to be consistent with the 2010 Clean Air Plan (CAP), the plan or project must not result in a percentage increase in vehicle miles traveled (VMT) over the Metropolitan Transportation Commission's (MTC) 2035 VMT projections greater than the percentage increase in population over MTC's 2035 population estimate. In order to determine VMT for the Existing Zoning Alternative, the average trip length used in the URBEMIS model (Appendix L) for the 300 Airport Boulevard Project was divided by the number of total daily trips that would result from implementation of the Existing Zoning Alternative. It is assumed that because the Existing Zoning Alternative would include similar uses and would be constructed in the same location as the 300 Airport Boulevard Project, the average vehicle trip length associated with the Existing Zoning Alternative would also be similar to the 300

Airport Boulevard Project. Additionally, in order to determine the population increase that could result from implementation of the Existing Zoning Alternative, the worst case population increase scenario was used (similar to the 300 Airport Boulevard Project) as the total increase in population. Based on this methodology, the Existing Zoning Alternative would result in a percentage increase in VMT equal to the percentage increase in population (over MTC 2035 projections). Furthermore, the Existing Zoning Alternative would implement a TDM program similar to the 300 Airport Boulevard Project, but scaled-down to meet the needs of a smaller site plan. Therefore, this alternative would be consistent with the 2010 CAP and would have a less-than-significant impact. (LTS)

**Fugitive Dust from Construction Activities.** Similar to the 300 Airport Boulevard Project, construction of the Existing Zoning Alternative would adhere to Mitigation Measures AQ-2.1 in order to reduce the potential for significant impacts related to fugitive dust to a less-than-significant level. (PS/LTS)

**Construction-Related Criteria Air Pollutant Emissions.** The Existing Zoning Alternative would result in construction emissions similar to those described for the 300 Airport Boulevard Project. The operation of heavy equipment during construction of buildings at the 300 Airport Boulevard Site would result in the generation of air emissions. Although the construction of the Existing Zoning Alternative would result in approximately 40 percent less total building area as compared to the 300 Airport Boulevard Project, the overall project footprint would be the same if not larger because the Existing Zoning Alternative would not increase the allowable height limit at the 300 Airport Boulevard Site. Therefore, the extent of construction activities associated with the building footprint such as mass site grading, fine site grading, and trenching would be similar for the Existing Zoning Alternative as modeled for the 300 Airport Boulevard Project. According to the results of the URBEMIS model, provided in Appendix L, the largest source of NO<sub>x</sub> emissions is associated with these building-footprint construction activities. As such, implementation of the Existing Zoning Alternative would result in the same significant and unavoidable construction-related NO<sub>x</sub> emissions as identified in Section 3.5, Air Quality.

Furthermore, as identified in Section 3.5, Air Quality, construction of the 300 Airport Boulevard Project would result in ROG emissions substantially higher than the BAAQMD threshold. Based on the results of the URBEMIS model, as shown in Appendix L, the largest single contributor of ROG emissions associated with construction of the 300 Airport Boulevard Project is architectural coating. Although the Existing Zoning Alternative would result in the construction of approximately 40 percent less total building area and consequently about 40 percent less architectural coating, ROG emissions, with incorporation of the mitigation measures identified for the 300 Airport Boulevard Project, would still be above the allowable threshold.<sup>10</sup> Therefore, the Existing Zoning Alternative would result in significant and unavoidable construction-related air quality impacts, even with incorporation of Mitigation Measures AQ-3.1 and AQ-3.2. (SU)

**Operational Criteria Air Pollutant Emissions.** Because the 300 Airport Boulevard Site is currently vacant and uninhabited, there would be an increase in operational emissions over existing conditions with implementation of the Existing Zoning Alternative. Assuming implementation of a scaled-down

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<sup>10</sup> Under the 300 Airport Boulevard Project ROG emissions associated with architectural coating would be 108.43 lbs/day. A 40 percent reduction would bring ROG emissions down to approximately 65.06 lbs/day. The BAAQMD threshold for ROG is 54 lbs/day.

version of the TDM program proposed under the 300 Airport Boulevard Project, average daily vehicle trip rates were estimated for the Existing Zoning Alternative. Using these trip rates in conjunction with the size of the various buildings/uses proposed under the Existing Zoning Alternative, operational emissions were calculated using the URBEMIS software (Appendix L). Table 5-5 summarizes the operational area source and vehicle emissions associated with the Existing Zoning Alternative. Operation of the Existing Zoning Alternative would not result in the generation of emissions above the allowable thresholds as designated by the BAAQMD. Therefore, the Existing Zoning Alternative would result in less-than-significant operational air quality impacts. (LTS)

**Table 5-5  
Existing Zoning Alternative Daily Operational Air Pollutant Emissions**

Emissions Source	Project Emissions (Pounds per Day)			
	ROG	NOx	PM <sub>10</sub>	PM <sub>2.5</sub>
Stationary	3.37	3.29	0.03	0.03
Vehicle	<u>29.54</u>	<u>33.39</u>	<u>67.22</u>	<u>12.80</u>
<b>Total</b>	<b>32.91</b>	<b>36.68</b>	<b>67.25</b>	<b>12.83</b>
BAAQMD Significance Thresholds	54	54	82	54
Exceeds BAAQMD Thresholds?	No	No	No	No

*Source:* Atkins, 2011. Based on URBEMIS 2007 Version 9.2.4, and compliance with BAAQMD Regulation 8, Rule 3. URBEMIS Models are provided in Appendix L.

**Local Concentrations of CO.** Analysis conducted for the 300 Airport Boulevard Project determined that operation of the 300 Airport Boulevard Project would not generate traffic volumes above the BAAQMD screening criteria for assessing potential CO impacts. Because the Existing Zoning Alternative would result in fewer daily vehicle trips than the 300 Airport Boulevard Project, the Existing Zoning Alternative would not result in any CO hot spots at study area intersections, similar to the 300 Airport Boulevard Project. Impacts related to CO hot spots associated with the Existing Zoning Alternative would be less than significant. (LTS)

**Exposure to PM<sub>2.5</sub> and TACs.** The Existing Zoning Alternative would not include the placement of new sensitive receptors at the 300 Airport Boulevard Site. Unlike the 300 Airport Boulevard Project, under the Existing Zoning Alternative a childcare center is not permitted, therefore this construction component would not expose sensitive receptors to PM<sub>2.5</sub> and Toxic Air Contaminant (TAC) concentrations. Furthermore, operation of the Existing Zoning Alternative would not exceed BAAQMD thresholds for criteria air pollutants. Therefore, this alternative would not expose sensitive receptors to health risks. This impact would be less than significant. (LTS)

**Objectionable Odors.** The Existing Zoning Alternative would not involve land uses that BAAQMD has identified as prime sources of odors. Additionally, analysis of the 300 Airport Boulevard Project determined that there are no significant off-site sources of odors that could affect individuals on the project site. Because the Existing Zoning Alternative would be developed at the same site as the 300 Airport Boulevard Project, it would also not expose individuals to off-site odor sources. Therefore, the Existing Zoning Alternative would have no impact related to odors. (NI)

**Cumulative Impacts.** The Existing Zoning Alternative would comply with the 2010 CAP. As such, this alternative would not impede realization of the goals outlined in the CAP for the region and would therefore have a less-than-significant impact on the 2010 CAP.

The 300 Airport Boulevard Project's emissions of ROG and NO<sub>x</sub> during construction and emission of PM<sub>10</sub> during operation were identified as making cumulatively considerable contributions to significant cumulative impacts. Under the Existing Zoning Alternative, emissions of ROG and NO<sub>x</sub> during construction would also potentially exceed the BAAQMD's 54 lbs/day threshold, and could contribute to significant cumulative impacts. Consequently, this alternative's construction-related ROG and NO<sub>x</sub> emissions would be cumulatively significant. (SU)

### **350 Airport Boulevard**

Although no zoning changes would occur at the 350 Airport Boulevard Site under the Existing Zoning Alternative, development of the site would result in an increase in the number of employees over existing conditions, which, in turn, would increase traffic. However, it is assumed that because the Existing Zoning Alternative would construct buildings to the current FAR and reflect a population increase accounted for under the MTC 2035 projections. Based on this methodology, the Existing Zoning Alternative would result in a percentage increase in VMT relative to the percentage increase in population. Therefore, this alternative would be consistent with the 2010 CAP and would have a less-than-significant impact. (LTS)

Similar to the 350 Airport Boulevard Project, construction of the Existing Zoning Alternative would adhere to Mitigation Measures AQ-2.1 in order to reduce the potential for significant impacts related to fugitive dust to a less-than-significant level. (PS/LTS)

The Existing Zoning Alternative would result in construction emissions similar to those described for the 350 Airport Boulevard Project. The operation of heavy equipment during construction of buildings at the 350 Airport Boulevard Site would result in the generation of air emissions. Based on the results of the URBEMIS model (Appendix L), the largest single contributor of ROG emissions associated with construction of the 350 Airport Boulevard Project is architectural coating (Appendix L). Construction of the 350 Airport Boulevard Project would result in ROG emissions higher than the BAAQMD threshold. Although the Existing Zoning Alternative would result in the construction of approximately 60 percent less total building area and consequently about 60 percent less architectural coating, ROG emissions, with incorporation of the mitigation measures identified for the 350 Airport Boulevard Project, would still be above the allowable threshold.<sup>11</sup> Therefore, the Existing Zoning Alternative would result in significant and unavoidable construction-related air quality impacts, even with incorporation of Mitigation Measures AQ-3.1 and AQ-3.2. (SU)

Because the 350 Airport Boulevard Site is currently vacant and construction would occur after development of the 300 Airport Boulevard Site, there would be an increase in operational emissions

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<sup>11</sup> Under the 350 Airport Boulevard Project ROG emissions associated with architectural coating would be 179.10 lbs/day. A 60 percent reduction would bring ROG emissions down to approximately 71.63 lbs/day. The BAAQMD threshold for ROG is 54 lbs/day.

over existing conditions with implementation of the Existing Zoning Alternative. Using these trip rates in conjunction with the size of the various buildings/uses proposed under the Existing Zoning Alternative, operational emissions were calculated using the URBEMIS software (Appendix L).<sup>12</sup> As shown in Table 5-6, operation-related emissions only associated with the 350 Airport Boulevard Existing Zoning Alternative would not have the potential to exceed the 2011 BAAQMD thresholds of significance based on the estimated model. However, since it is assumed that the 350 Airport Boulevard Site would be in operation after construction of the 300 Airport Boulevard Site operational activities with both Project Sites would occur concurrently. The combined effect of the operation at both the 300 Airport Boulevard Site and the 350 Airport Boulevard Site would exceed BAAQMD thresholds. The exceedance of BAAQMD significance standards for these criteria pollutants under the Existing Zoning Alternative would be significant and unavoidable. (SU)

**Table 5-6**  
**Existing Zoning Alternative 300 Airport Boulevard plus 350 Airport Boulevard Project Daily Operational Air Pollutant Emissions**

Emissions Source	Project Emissions (Pounds per Day)			
	ROG	NOx	PM <sub>10</sub>	PM <sub>2.5</sub>
<b><u>300 Airport Boulevard</u></b>				
Stationary	3.37	3.29	0.03	0.03
Vehicle	<u>29.54</u>	<u>33.39</u>	<u>67.22</u>	<u>12.80</u>
<b>Sub-Total</b>	<b>32.91</b>	<b>36.68</b>	<b>67.25</b>	<b>12.83</b>
BAAQMD Significance Thresholds	54	54	82	54
Exceeds BAAQMD Thresholds?	No	No	No	No
<b><u>350 Airport Boulevard</u></b>				
Stationary	1.54	1.51	0.01	0.01
Vehicle	<u>15.47</u>	<u>17.73</u>	<u>35.73</u>	<u>6.81</u>
<b>Sub-Total</b>	<b>17.01</b>	<b>19.24</b>	<b>35.74</b>	<b>6.82</b>
BAAQMD Significance Thresholds	54	54	82	54
Exceeds BAAQMD Thresholds?	No	No	No	No
<b><u>300 Airport Boulevard &amp; 350 Airport Boulevard</u></b>				
<b>Combined Total</b>	<b>49.92</b>	<b>58.92</b>	<b>102.99</b>	<b>19.65</b>
BAAQMD Significance Thresholds	54	54	82	54
Exceeds BAAQMD Thresholds?	No	Yes	Yes	No

*Source:* Atkins, 2011. Based on URBEMIS 2007 Version 9.2.4, and compliance with BAAQMD Regulation 8, Rule 3. URBEMIS Models are provided in Appendix L.

Analysis conducted for the 350 Airport Boulevard Project determined that operation of the 350 Airport Boulevard Project would not generate traffic volumes above the BAAQMD screening criteria for assessing potential CO impacts. Because the Existing Zoning Alternative would result in fewer daily

<sup>12</sup> 300 Airport Blvd Existing Zoning Alternative would include a TDM program that would reduce office related trips by 7 percent. Hexagon Transportation Consultants, *Memorandum, 300 Airport Alternatives*, August 1, 2011.

vehicle trips than the 350 Airport Boulevard Project, the Existing Zoning Alternative would also not result in any CO hot spots at study area intersections. Impacts related to CO hot spots associated with the Existing Zoning Alternative would be less than significant. (LTS)

The Existing Zoning Alternative would not include the placement of new sensitive receptors at the 350 Airport Boulevard Site. Unlike the 350 Airport Boulevard Project, under the Existing Zoning Alternative a childcare center is not permitted at the 300 Airport Boulevard Site, therefore this construction component would not expose sensitive receptors to PM<sub>2.5</sub> and Toxic Air Contaminant (TAC) concentrations. Furthermore, operation of the Existing Zoning Alternative would not exceed BAAQMD thresholds for criteria air pollutants. Therefore, this alternative would not expose sensitive receptors to health risks. This impact would be less than significant. (LTS)

The Existing Zoning Alternative would not involve land uses that BAAQMD has identified as prime sources of odors. Additionally, analysis of the 300 Airport Boulevard Project determined that there are no significant off-site sources of odors that could affect individuals on the project site. Because the Existing Zoning Alternative would be developed at the same site as the 300 Airport Boulevard Project, it would also not expose individuals to off-site odor sources. Therefore, the Existing Zoning Alternative would have no impact related to odors. (NI)

The Existing Zoning Alternative would comply with the 2010 CAP. As such, this alternative would not impede realization of the goals outlined in the CAP for the region and would therefore have a less-than-significant impact on the 2010 CAP.

The 350 Airport Boulevard Project's emissions of ROG during construction and air pollutants associated with the combination of 350 Airport Boulevard and 300 Airport Boulevard operation were identified as making cumulatively considerable contributions to significant cumulative impacts. Under the Existing Zoning Alternative, emissions of ROG during construction would also potentially exceed the BAAQMD's 54 lbs/day threshold, and could contribute to significant cumulative impacts. In addition, operational impacts associated with the 300 Airport Boulevard and 350 Airport Boulevard combined operational emission total would exceed BAAQMD Thresholds. Consequently, this alternative's construction-related ROG emissions would be cumulatively significant. (SU)

## **Climate Change**

### **300 Airport Boulevard**

**Emissions of Greenhouse Gases.** The Existing Zoning Alternative would result in less direct emissions from area and mobile sources, and less indirect emissions from electricity generation, water and wastewater demand, and solid waste when compared to the 300 Airport Boulevard Project due to the relative size of the buildings included in the Existing Zoning Alternative. Although the Existing Zoning Alternative would result in substantial reductions to GHG emissions due to smaller overall building area and fewer employees (and fewer associated vehicle trips), the Existing Zoning Alternative would still result in significant and unavoidable impacts to GHG emissions. (SU)

**Consistency with the Climate Action Plan.** As described above, the Existing Zoning Alternative would result in potentially significant GHG emissions. Because the Existing Zoning Alternative would potentially exceed the BAAQMD threshold for operation GHG emission it would inhibit the City in meeting the short-term and long-term GHG reduction goals established in the City's Climate Action Plan (CAP). Therefore, implementation of the Existing Zoning Alternative would result in significant and unavoidable impacts to local and state GHG reduction plans, policies, and regulations. (SU)

**Cumulative Impacts.** As described in the BAAQMD's CEQA Air Quality Guidelines, no single project could generate enough GHG emissions to noticeably change the global average temperature. The combination of GHG emissions from past, present, and future projects contribute substantially to the phenomenon of global climate change and its associated environmental impacts. If a project would generate GHG emissions above the threshold level, it would be considered to contribute substantially to a cumulative impact, and would be considered significant. As described above, the Existing Zoning Alternative would potentially exceed the BAAQMD's threshold of significance for project-level, operational GHG emissions. Therefore, implementation of the Existing Zoning Alternative would result in a cumulatively considerable impact on GHG emission. (SU)

### **350 Airport Boulevard**

The Existing Zoning Alternative for the 350 Airport Boulevard Project would result in fewer direct emissions from area and mobile sources, and fewer indirect emissions from electricity generation, water and wastewater demand, and solid waste when compared to the 350 Airport Boulevard Project, due to the relative size of the buildings included in the Existing Zoning Alternative. Although the Existing Zoning Alternative would result in substantial reductions to GHG emissions due to smaller overall building area and fewer employees (and fewer associated vehicle trips), the Existing Zoning Alternative would still result in significant and unavoidable impacts to GHG emissions. As such, under the Existing Zoning Alternative, the 350 Airport Boulevard Project would inhibit the City in meeting the short-term and long-term GHG reduction goals established in the City's CAP. Further, because the Existing Zoning Alternative would potentially exceed BAAQMD's threshold of significance for project-level, operational GHG emissions, the 350 Airport Boulevard Project would be result in a cumulatively considerable impact on GHG emissions. Implementation of the 350 Airport Boulevard Project under the Existing Zoning Alternative would result in significant and unavoidable GHG impacts. (SU)

## **Noise**

### **300 Airport Boulevard**

**Construction Impacts.** The types of construction activities required for the Existing Zoning Alternative at the 300 Airport Boulevard Site would be similar to the 300 Airport Boulevard Project, but the amount construction could be substantially less. The closest sensitive receptors to the Project Site include the intermittent users of the Bay Trail and Fisherman's Park, which are approximately 400 feet from the Project Site. Construction of the Existing Zoning Alternative would result in temporary impacts during construction by raising ambient noise levels in the Project vicinity, resulting in a

potentially significant impact. Similar to the 300 Airport Boulevard Project, implementation of Mitigation Measure NO-1.1, which requires Best Management Practices to reduce construction noise, would result in a less-than-significant impact.

Construction equipment for general construction activities and potential pile driving would have the potential to exceed 65 VdB at 25 feet. Therefore, construction would have the potential to result in vibration levels exceeding 65 VdB at nearby vibration-sensitive uses and this would be a potentially significant impact of the Existing Zoning Alternative. If pile driving is used under the Existing Zoning Alternative, and vibration levels exceed the FTA damage thresholds of 0.2 in/sec to 0.5 in/sec, then the Existing Zoning Alternative could damage to the adjacent structures, resulting in potentially significant impacts. However, Mitigation Measures NO-2.1, NO-2.2, and NO-2.3 would reduce construction-related impacts to vibration-sensitive areas to a less-than-significant level. (PS/LTS)

**Operational Impacts.** Similar to the 300 Airport Boulevard Project, the Existing Zoning Alternative would expose the new sensitive receptors at the 300 Airport Boulevard Site (office workers and children at the childcare center) to traffic noise and the use of HVAC systems. Areas along the main access routes to the Project Site would experience an increase in traffic noise levels associated with operation of the Existing Zoning Alternative, but to a lesser extent than the 300 Airport Boulevard Project. Daily operation of office uses would generate new stationary noise sources, such as from the operation of mechanical HVAC systems, parking lot and structure noise, and delivery of supplies. Implementation of Mitigation Measure NO-4.1 would implement specific placement or screening of HVAC mechanical equipment in order to reduce noise levels at the nearest property boundary, thus resulting in a less-than-significant impact. Based on the alternative trip generation estimates, the Existing Zoning Alternative would have approximately 50 percent less daily trips than the 300 Airport Boulevard Project resulting in a decrease in traffic noise modeled in Section 3.7, Noise. Therefore, operational impacts would be less than significant. (PS/LTS)

**Cumulative Impacts.** Cumulative noise impacts would be similar under this alternative as compared to the 300 Airport Boulevard Project. As with the 300 Airport Boulevard Project, the Existing Zoning Alternative would not result in significant cumulative construction noise. Cumulative development would result in a substantial permanent ambient noise level increase in the vicinity of the Project Site as a result of increases in traffic. However, the Existing Zoning Alternative's contribution would be less than significant. Operation of the Existing Zoning Alternative and other cumulative developments would not result in the cumulative exposure of sensitive receptors to excessive airport noise. Vibration levels from construction of cumulative development in the City would generally not combine to result in the exposure of people to or the generation of excessive ground-borne vibration, due to the localized nature of vibration impacts and the fact that construction throughout the City would not occur at the same time. All of the cumulative projects are located more than a mile from the Project Site. As such, the vibration impact of the Existing Zoning Alternative, in conjunction with vibration from other cumulative development, would not result in a significant cumulative impact. (LTS)

### **350 Airport Boulevard**

The Existing Zoning Alternative at 300 Airport Boulevard Site would likely be in operation during construction of the Existing Zoning Alternative at the 350 Airport Boulevard Site. Therefore, construction at either site would not combine together to exceed noise standards. Sensitive receptors would include users of the immediately adjacent Fisherman's Park and Bay Trail. Temporary impacts during construction could result in a temporary increase in ambient noise levels in the Project vicinity, resulting in a potentially significant impact. However, similar to the 350 Airport Boulevard Project, implementation of Mitigation Measure NO-1.1 under the Existing Zoning Alternative would result in a less-than-significant impact.

Ground-borne vibration would likely occur during construction under the Existing Zoning Alternative, similar to the 300 Airport Boulevard Project. The Bay Trail and Fisherman's Park are not considered vibration-sensitive land uses and no residential areas would be impacted by construction at the 350 Airport Boulevard Site. However, construction of the Existing Zoning Alternative could impact the new buildings at the 300 Airport Boulevard Site, resulting in potentially significant vibration impacts. However, Mitigation Measures NO-2.1, NO-2.2, and NO-2.3 would reduce construction-related impacts to vibration-sensitive areas to a less-than-significant level. (PS/LTS)

Similar to development under the 350 Airport Boulevard Project, daily operation of the Existing Zoning Alternative would be expected to generate noise from an increase in activity and new stationary noise sources, such as from the operation of mechanical HVAC systems, parking areas, and delivery of supplies. These operational activities and systems would occur on a daily basis throughout the 350 Airport Boulevard Site once operational. Noise from the increase in activity on-site would be similar to the 350 Airport Boulevard Project. Parking area noise would result in intermittent noise and would not result in a significant impact. Truck deliveries would be required to comply with the Noise Ordinance, which would serve to avoid significant negative impacts. However, HVAC equipment, if located within 60 feet of a property boundary, would have the potential to cause an increase in the ambient noise level by more than 5 dBA at the property line and exceed the Bayfront Specific Plan threshold. Therefore, impacts from HVAC mechanical equipment would be potentially significant, while all other operations noise sources would be less than significant. Implementation of Mitigation Measure NO-4.1, however, would reduce mechanical equipment noise impacts to less than significant. (PS/LTS)

Cumulative noise impacts would be similar under this alternative as compared to the 350 Airport Boulevard Project. As with the 300 Airport Boulevard Project, the Existing Zoning Alternative would not result in significant cumulative construction or operational noise impacts. (LTS)

### **Biological Resources**

#### **300 Airport Boulevard**

**Special Status Species or Sensitive Habitat Impacts.** Generally, there is no habitat on-site that is capable of supporting special-status plants or State or federally listed wildlife. Based on the urban history of the Project Site, and the lack of suitable habitat, the area would not support any of the

special-status plant or wildlife species listed in the database query results. The Project Site is isolated from any grassland, chaparral or woodland habitats by urban development, and does not contain any suitable habitat for any of the salt marsh species known to occur along the Bay. Therefore, as with the 300 Airport Boulevard Project, the Existing Zoning Alternative would result in less-than-significant impacts to special status species and sensitive habitats. (LTS)

**Potential Loss of Wetlands and Other Waters of the United States.** The eastern and southern portion of the 300 Airport Boulevard Site contains a series of channels and depressions that retain surface water for extended periods, and as a result support a variety of ruderal wetland plant species. Due to the urban history of the 300 Airport Boulevard Site, it is likely that these features would not be considered subject to regulation under the Clean Water Act. If some or all of these features were determined to be subject to Clean Water Act regulation, then any fill activity associated with grading for the Existing Zoning Alternative would require a permit from the Corps and water quality certification from the RWQCB. Because it is unknown at this time whether the depressional features present on the 300 Airport Boulevard Site are subject to CWA regulation, the loss of wetlands or other waters of the U.S. as a result of construction under the Existing Zoning Alternative would be a potentially significant impact, similar to the 300 Airport Boulevard Project. However, Mitigation Measures BR-2.1 and BR-2.2, as presented in Section 3.8, Biological Resources, would reduce this alternative's impact on wetlands and other waters of the U.S. to a less-than-significant level. (PS/LTS)

**Loss of Nesting Migratory Birds.** Shrubs and trees at the Project Site could potentially provide nesting habitat for raptors (i.e., birds of prey), and other migratory birds. Tree and shrub removal associated with the Existing Zoning Alternative could result in "take" caused by the direct mortality of adult or young birds, nest destruction, or disturbance of nesting native bird species. Disruption of nesting birds would be a potentially significant impact under the Existing Zoning Alternative, similar to the 300 Airport Boulevard Project. However, Mitigation Measures BR-3.1 and BR-3.2, as included in Section 3.8, would reduce the Project's impact on nesting migratory birds to a less-than-significant level. (PS/LTS)

**Conflicts with Local Policies or Ordinances.** No trees protected under any City of Burlingame tree preservation policy or ordinance are located at the Project Site. In addition, the Existing Zoning Alternative would not conflict with any known habitat conservation plans, natural community conservation plans, or other approved local or regional conservation plans because there are no approved plans that apply to the Project Site or its vicinity. As with the 300 Airport Boulevard Project, the Existing Zoning Alternative would result in less-than-significant impacts. (LTS)

**Cumulative Impacts.** Construction activities that result in the removal of existing shrubs and trees could adversely affect nesting migratory birds, either by causing the loss of young birds or the abandonment of an active nest. With future development in the City, it is reasonable to expect there would be a loss of trees and other vegetation that provide nesting habitat. Disturbance to these habitats under the Existing Zoning Alternative, in combination with the potential loss of similar habitats in the vicinity of the Project Site, would result in a potentially significant cumulative impact. Similar to the 300 Airport Boulevard Project, implementation of Mitigation Measures BR-3.1 and BR-3.2 would

mitigate the Existing Zoning Alternative's contribution to this potentially significant cumulative impact to less than cumulatively considerable. (PS/LTS)

### **350 Airport Boulevard**

The 350 Airport Boulevard Site was created by Bay fill and current conditions consist of an abandoned one-story wooden structure and vacant paved surfaces, which are not considered natural in origin. The 350 Airport Boulevard Site is isolated from any grassland, chaparral, or woodland habitats by urban development, and does not contain any suitable habitat for any of the salt marsh species known to occur along the Bay. As such, similar to the 350 Airport Boulevard Project, the Existing Zoning Alternative would not impact special-status species or wetlands. Additionally, the Existing Zoning Alternative at the 350 Airport Boulevard Site would not conflict with local policies or ordinances. (LTS)

However, shrubs and trees at the 350 Airport Boulevard Site could provide nesting habitat for raptors and other migratory birds. Removal of this vegetation under the Existing Zoning Alternative could disrupt nesting birds, resulting in a potentially significant impact on both a project- and cumulative-level. Implementation of Mitigation Measures BR-3.1 and BR-3.2, as included in Section 3.8, would reduce the Existing Zoning Alternative's impact on nesting migratory birds to a less-than-significant level. (PS/LTS)

## **Hydrology**

### **300 Airport Boulevard**

**Violation of Water Quality Standards or Waste Discharge Requirements.** The Existing Zoning Alternative would allow office/life science campus uses, commercial recreation, and publically-owned recreation areas. These uses would not result in construction or operational activities subject to NDPES permits or WDRs that would differ from the 300 Airport Boulevard Project. This alternative would result in the same less-than-significant impact identified for the 300 Airport Boulevard Project. (LTS)

**Water Quality Degradation, or Erosion and/or Sedimentation.** Construction of the Existing Zoning Alternative could result in a slightly larger disturbance footprint than the 300 Airport Boulevard Project. This has the potential to generate more sediment or other pollutants from construction sites, but construction would be required to implement a SWPPP and BMPs, identical to the 300 Airport Boulevard Project. The less-than-significant construction impact for water quality degradation, erosion, and sedimentation would be the same as the 300 Airport Boulevard Project.

The development footprint of the Existing Zoning Alternative would be expected to result in more impervious surfaces and an increase in pollutants in stormwater runoff, compared to existing conditions. It could also result in slightly more impervious surfaces, which could increase peak flow runoff and volume. However, based on the types of allowable uses, the constituents in stormwater runoff would be expected to be similar to the 300 Airport Boulevard Project. Identical to the 300 Airport Boulevard Project, as a condition of approval and prior to issuance of grading permits, the City would be responsible for ensuring the appropriate Regional Permit Provision C.3 (particularly Low

Impact Development) features are incorporated into project design. For those reasons, the Existing Zoning Alternative would result in the same less-than-significant water quality impacts as the 300 Airport Boulevard Project. (LTS)

**Drainage Systems.** Operation of the Existing Zoning Alternative would generate stormwater runoff that would need to be managed in an on-site storm drain system prior to discharge to Sanchez Channel or the Bay. It would not affect the City's storm drain system, and the less-than-significant impact identified for the 300 Airport Boulevard Project would be the same for the Existing Zoning Alternative. Please also refer to the alternatives discussion under Utilities, below. (LTS)

**Groundwater.** Other than shallow groundwater that may need to be extracted during construction (and which would be subject to necessary discharge permits), as would potentially occur with the 300 Airport Boulevard Alternative, there would be no long-term permanent impact on groundwater. Water demand for the Existing Zoning Alternative would be met through existing SFPUC supplies without the need for additional supplies (see also, Utilities). The less-than-significant groundwater impacts identified for the 300 Airport Boulevard Project would be the same for the Existing Zoning Alternative. (LTS)

**Tidal Flooding and Sea Level Rise.** Identical to the 300 Airport Boulevard Project, development in the Existing Zoning Alternative could be at risk of flooding from high tides, wind-induced wave action, and sea level rise. The site would need to be elevated and shoreline protection improvements would need to be implemented. The potentially significant impact requiring mitigation for the 300 Airport Boulevard Project (underground structures, stormwater conveyance flow capacity, and shoreline protection) would be the same for this alternative. Additional mitigation would be required for this alternative to address elevating the site to protect above-grade structures. Overall, this alternative would result in similar effects as the 300 Airport Boulevard Project. (PS/LTS)

**Cumulative Impacts.** The Existing Zoning Alternative would result in the same project impacts as the 300 Airport Boulevard Project. Therefore, the cumulative less-than-significant impacts for drainage, water quality, and groundwater resources, and the potentially significant tidal flooding and sea level rise impacts, would be the same. (PS/LTS)

### **350 Airport Boulevard**

Under the Existing Zoning Alternative for the 350 Airport Boulevard Project, the Project Site would be developed in under similar regulations regarding hydrological resources as the 300 Airport Boulevard Project. As such, potential impacts to water quality standards, waste discharge, erosion, drainage systems, and ground water would be similar. Compliance with all applicable regulations would ensure that the Existing Zoning Alternative would have less-than-significant impacts on these resources. (LTS)

Identical to the 300 Airport Boulevard Project, development of the 350 Airport Boulevard Site under the Existing Zoning Alternative could be at risk of flooding from high tides, wind-induced wave action, and sea level rise. The site would need to be elevated and shoreline protection improvements would need to be implemented. The potentially significant impact requiring mitigation for the 300 Airport

Boulevard Project (underground structures, stormwater conveyance flow capacity, and shoreline protection) would be the same the 350 Airport Boulevard Site for this alternative. Additional mitigation would be required for the Existing Zoning Alternative to address elevating the site to protect above-grade structures. Overall, this alternative would result in similar effects as the 300 Airport Boulevard Project. (PS/LTS)

## **Population and Housing**

### **300 Airport Boulevard**

**Population Increases.** The Existing Zoning Alternative at the 300 Airport Boulevard Site would not include development of new housing units and would thus not directly increase the residential population within the region. However, as with the 300 Airport Boulevard Project, there would be an indirect population increase associated with new visitorship and employment during construction and operation the Existing Zoning Alternative. Approximately 1,529 new workers would be employed during the operation of the Existing Zoning Alternative, which would increase the daytime population at the 300 Airport Boulevard Site. The 2009 ABAG Projections already includes the employment growth estimated under the Bayfront Specific Plan. As such, since the Existing Zoning Alternative would include development up to the permitted amount under the Bayfront Specific Plan, the population increases associated with the Existing Zoning Alternative are already considered in the projections.

The increase in employment would result in a demand for new housing units and an indirect increase in the residential population. However, the percentage of regional housing demand resulting from the Existing Zoning Alternative would be relatively small in comparison with projected housing growth in the region. In addition, this alternative represents only a portion of the net population increase expected for the 300 Airport Boulevard Project, which would have a less-than-significant impact. Therefore, the impact of the Existing Zoning Alternative would be less than significant, as with the 300 Airport Boulevard Project. (LTS)

**Cumulative Impacts.** The Existing Zoning Alternative, in combination with other projected growth in the City, would increase population, employment, and housing in the City. The contribution of the Existing Zoning Alternative to any cumulative increase in employment would not result in direct adverse impact, resulting in a less than cumulatively considerable impact, as with the 300 Airport Boulevard Project. (LTS)

### **350 Airport Boulevard**

The Existing Zoning Alternative at the 350 Airport Boulevard Site would not include development of new housing units and would thus not directly increase the residential population within the region. However, as with the 350 Airport Boulevard Project, there would be an indirect population increase associated with new visitorship and employment during construction and operation of the Existing Zoning Alternative. Approximately 748 new workers would be employed at the 350 Airport Boulevard Site during the operation of the Existing Zoning Alternative, which would increase the daytime population at the site. The 2009 ABAG Projections already include the employment growth estimated

under the Bayfront Specific Plan. As such, since the Existing Zoning Alternative would include development up to the permitted amount under the Bayfront Specific Plan, the population increases associated with the Existing Zoning Alternative are already considered in the projections.

When combined, development of the 300 and 350 Airport Boulevard Sites under the Existing Zoning Alternative would result in a total increase of 2,277 employees. However, as previously described, the 2009 ABAG Projections already include the employment growth estimated under the Bayfront Specific Plan. Because the Existing Zoning Alternative would include development up to the permitted amount under the Bayfront Specific Plan at both the 300 and 350 Airport Boulevard Sites, the population increase associated with the Existing Zoning Alternative are already considered in the projections. Further, according to the 2009 ABAG Projections, the total projected population growth for the City from 2010 to 2025 is 4,500 residents. Under the worst case scenario, if the increase of 2,277 employees at the 300 and 350 Airport Boulevard Sites were to result in an equal increase in residents, an increase of 2,277 residents would be within ABAG's projected population growth for the City.

The increase in employment would result in a demand for new housing units and an indirect increase in the residential population. However, the percentage of regional housing demand resulting new employment at the 300 and 350 Airport Boulevard Sites under the Existing Zoning Alternative would be relatively small in comparison with projected housing growth in the region. Therefore, the project- and cumulative-level impact of the Existing Zoning Alternative would be less than significant, as with the 350 Airport Boulevard Project. (LTS)

## **Parks and Wind Effects on Recreation**

### **300 Airport Boulevard**

**Recreation.** As with the 300 Airport Boulevard Project, the Existing Zoning Alternative would result in an increased demand and utilization of nearby parks and recreational services due to increased employment and on-site activity at the 300 Airport Boulevard Site. As such, this alternative could contribute to accelerated deterioration of parkland and recreational facilities. The Existing Zoning Alternative would include less extensive improvements to the Bay Trail or expansive open space areas than are proposed by the 300 Airport Boulevard Project. However, because the increase in worker population would not be substantial relative to City population, it is unlikely that this alternative's demand would cause substantial deterioration of City parks, resulting in a less-than-significant impact. (LTS)

**Wind Effects.** Development of the 300 Airport Boulevard Site under the Existing Zoning Alternative would result in a wind shadow effect over the Bay adjacent to the eastern edge of the Project Site. However, the winds in this area would be less affected than under the 300 Airport Boulevard Project because the buildings would be between 30 to 50 feet under the Existing Zoning Alternative rather than 97 to 144 feet. The 300 Airport Boulevard Project would not result in substantial adverse effects to windsurfing resources in the Project area; and therefore, it was determined that the 300 Airport Boulevard Project would result in a less-than-significant impact to windsurfing recreational resources. Because the Existing Zoning Alternative would result in buildings with less height and bulk, the effect

on wind speeds would be minimized and this alternative would also have a less-than-significant effect on nearby windsurfing recreational resources. (LTS)

**Cumulative.** Because there is no other development planned for the Bayfront Specific Plan area, there would be no cumulative impact on windsurfing recreational resources at Coyote Point Recreation Area. Due to the inclusion of onsite open spaces, improvements to the offsite Eastern Shoreline open space and Bay Trail, the Project would have a less than significant impact with regard to the physical deterioration of existing recreation facilities as a result of increased use.

### **350 Airport Boulevard**

As with the 350 Airport Boulevard Project, because there is currently no site plan for the Existing Zoning Alternative, future development cannot be accurately modeled. Therefore, future development at the 350 Airport Boulevard Site would result in potentially significant impact to windsurfing recreation resources at Coyote Point Recreation Area. Implementation of Mitigation Measure RW-1.1, as included in Section 3.11, Parks and Wind Effects on Recreation, would reduce the impact to less than significant. (PS/LTS)

In addition, the Existing Zoning Alternative at the 350 Airport Boulevard Site would result in a less-than-significant impact to recreational facilities. This alternative could contribute to accelerated deterioration of parkland and recreational facilities; however, because the increase in worker population would not be substantial relative to City population, it is unlikely that this alternative's demand would cause substantial deterioration of City parks. (LTS)

## **Utilities**

### **300 Airport Boulevard**

**Water Demand.** Like the 300 Airport Boulevard Project, the Existing Zoning Alternative would have less-than-significant impacts related to water supply. As stated in the description of the Existing Zoning Alternative, this alternative would increase site activity compared to existing conditions, but would result in approximately 60 percent of the activity proposed under the 300 Airport Boulevard Project. As stated in the Water Supply Assessment for the 300 Airport Boulevard Project, upon full buildout, the 300 Airport Boulevard Project would increase water demand by up to 206 acre-feet per year, under the worst case water conservation scenario.<sup>13</sup> Water demand estimates are based on a factor of water demand per square foot of building area. Because implementation of the Existing Zoning Alternative would result in less total building area, water demand under the Existing Zoning Alternative would be less than the 300 Airport Boulevard Project. The City's existing water transmission facilities have adequate capacity available to serve the increased demands of the 300 Airport Boulevard Project under normal water supply conditions. Further, as with the 300 Airport Boulevard Project, the Existing Zoning Alternative would not cause the existing water supply facilities to experience substantial physical deterioration that would cause the need for their replacement.

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<sup>13</sup> City of Burlingame, *300 Airport Boulevard Project Draft Water Supply Assessment, Table 3-1: Project Land Use and Water Demand Land Use Data and Water Demand*, June 2011.

Therefore, the construction and operation of the Existing Zoning Alternative would result in a less-than-significant impact related to water demand and the deterioration of water supply facilities. (LTS)

**Wastewater Generation.** As discussed in Section 3.12, Utilities, the 300 Airport Boulevard Project would have less-than-significant impacts related to wastewater generation. Since the Existing Zoning Alternative would generate less wastewater than the 300 Airport Boulevard Project, this alternative would also result in less-than-significant impacts related to wastewater generation. However, as identified in the Burlingame Point Wastewater Study, the existing pump station at 399 Rollins Road is near capacity under existing conditions and any increase wastewater flow would have to be mitigated. Therefore, implementation of the Existing Zoning Alternative would need to implement Mitigation Measure UT-3.1 as described in Section 3.12, Utilities. With implementation of the wastewater mitigation measures, wastewater generated by the Existing Zoning Alternative would be within the capacity of the existing system; therefore, it is unlikely that this alternative would contribute to any premature physical deterioration of the wastewater system. Consequently, as with the 300 Airport Boulevard Project, the Existing Zoning Alternative would not cause the existing wastewater facilities to experience substantial physical deterioration that would cause the need for their replacement. Therefore, the construction of the Existing Zoning Alternative would result in a less-than-significant impact related to wastewater generation and the deterioration of wastewater facilities. (PS/LTS)

**Stormwater Generation.** As discussed in Section 3.12, Utilities, the 300 Airport Boulevard Project would have no impact related to stormwater collection system capacity. However, the Existing Zoning Alternative may have more impervious surfaces than the 300 Airport Boulevard Project due to the height restrictions and the need for larger building footprints to accommodate the proposed building area. Therefore, increased stormwater flow over the 300 Airport Boulevard Project could occur under this alternative. Nonetheless, the existing 300 Airport Boulevard Site is comprised of approximately 89 percent impervious surfaces and it is unlikely that the Existing Zoning Alternative would add more impervious surfaces than what is currently at the site. Comparatively, the 300 Airport Boulevard Project would develop the site at 78 percent impervious surfaces. Although it is anticipated that the Existing Zoning Alternative would include more impervious surfaces than the 300 Airport Boulevard Project, it is unlikely that stormwater generation would increase over existing conditions. Similar to the 300 Airport Boulevard Project, all stormwater generated by the Existing Zoning Alternative would be treated onsite and discharged directly into the Bay via several onsite stormwater outfalls. As such, similar to the 300 Airport Boulevard Project, the Existing Zoning Alternative would not convey stormwater to the City's storm drain system and would result in no impact related to stormwater generation and the deterioration of stormwater facilities. (NI)

**Cumulative Demand for Utilities.** As discussed in Section 3.12, Utilities, the City's water, wastewater, and stormwater drainage facilities have sufficient capacity to serve the cumulative development of the City. The City of Burlingame would have adequate supplies to meet customer demand until 2035, including the demand of the 300 Airport Boulevard Project combined with existing and planned future uses. Since the Existing Zoning Alternative would use less water and generate less wastewater and stormwater than the 300 Airport Boulevard Project, which would be cumulatively less

than considerable, implementation of the Existing Zoning Alternative would not be cumulatively considerable. (LTS)

### **350 Airport Boulevard**

As with the 350 Airport Boulevard Project, the Existing Zoning Alternative at the 350 Airport Boulevard Site would result in less-than-significant impacts to water supply and existing facilities. The City of Burlingame would have sufficient water supplies to accommodate future development of the Existing Zoning Alternative during normal year conditions. During single and multiple dry year events, the City would rely on the supply curtailments and subsequent stages of demand reductions to balance demand with supply curtailments. As a result, the impact on water supply would be less than significant. Similarly, the Existing Zoning Alternative at the 300 Airport Boulevard Site would not require the construction of new water treatment facilities or the expansion of existing facilities, resulting in a less-than-significant impact. As with the 350 Airport Boulevard Project, the Existing Zoning Alternative would result no impact to drainage facilities since stormwater would be conveyed directly into the Bay. (LTS/NI)

The 300 Airport Boulevard Project and 350 Airport Boulevard Project, combined, would increase average wastewater generation by approximately 270,750 gallons per day and peak wet weather flow by approximately 552,472 gallons per day, under the conservative scenario. Wastewater generation estimates are based on an input/output ratio of 1:1 (although water used for irrigation is not included in wastewater flows). Therefore, because the Existing Zoning Alternative would result in a lower water demand than the Project, the average wastewater generation would also be less. Nonetheless, the WWTP is currently over capacity during some wet weather events, resulting in a potentially significant impact to the City's wastewater system. Similar to the Project, implementation of Mitigation Measure UT-3.1 would reduce the potential wastewater impacts to a less-than-significant level. (PS/LTS)

### **Office/Hotel Alternative**

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As described above, the Office/Hotel Alternative would develop the West Campus with 438,000 sf of office uses, 37,000 sf of amenities center uses, and a parking structure, consistent with the site plan for the 300 Airport Boulevard Project. However, the East Campus would be developed with 226,338 sf of hotel uses, including a restaurant and a conference room. As with the 300 Airport Boulevard Project, Airport Boulevard would be realigned to bisect the site and the Bay Trail system would be rehabilitated and extended. Since no site plan is proposed at the 350 Airport Boulevard Site, the below analysis of the Office/Hotel Alternative applies only to the 300 Airport Boulevard Site.

### **Land Use**

**Conflicts with Applicable Land Use Designations and Zoning.** The Office/Hotel Alternative would require a Bayfront Specific Plan amendment and rezoning of a portion of the 300 Airport Boulevard Site to APN. As with the 300 Airport Boulevard Project, the Bayfront Specific Plan and Zoning Code would be amended to allow increased office and recreational development on the West Campus. The Zoning Code would be amended to increase office use FAR from 0.6 to 1.0 and to increase recreational FAR from 0.5 to 1.0. However, the hotel development at the East Campus would be

consistent with existing FAR requirements (1.0 FAR) and would not require a change in zoning. In addition, the Zoning Code would also be amended to allow for increased height limits at the entire 300 Airport Boulevard Site. As with the 300 Airport Boulevard Project, impacts would be less than significant after adoption of the proposed amendments to the Bayfront Specific Plan and the Zoning Code. (LTS)

**Conflicts with Bayfront Specific Plan Policies.** Following adoption of the proposed amendments no Bayfront Specific Plan policy conflicts would occur under the 300 Airport Boulevard Project. The Office/Hotel Alternative would develop the 300 Airport Boulevard Site consistent with the goals and policies of the Bayfront Specific Plan. As such, similar to the 300 Airport Boulevard Project, the Office/Hotel Alternative would adhere to the Bayfront Specific Plan policies. This impact would be less-than-significant. (LTS)

**Cumulative Impacts.** The Office/Hotel Alternative, in combination with other reasonably foreseeable probable future development in the area, would have a less-than-significant cumulative impact on overall existing or planned land uses in the vicinity of the 300 Airport Boulevard Site. Similarly, the 300 Airport Boulevard Project would not contribute to a cumulative land use conflict. (LTS)

## **Visual Quality**

**Adverse Effect on a Scenic Vista.** Under the 300 Airport Boulevard Project, the 97- to 144-foot buildings would be visible from the Coyote Point Recreation Area, which is considered a scenic vista due to its encompassing views of the Bay and the Santa Cruz Mountains. Under the Office/Hotel Alternative, the buildings would be equivalent in height and bulk as the buildings under the 300 Airport Boulevard Project. At the West Campus, the buildings would range from 48.5 feet to 144 feet in height, while the hotel building at the East Campus would be no more than 97 feet in height. Nonetheless, the increase of development associated with the Office/Hotel Alternative would represent a small portion of the overall vista. In addition, multi-story development to the west of the 300 Airport Boulevard Site already partially obstructs sections of the Santa Cruz Mountains. There is existing development of similar size and scale as the Office/Hotel Alternative in the area and the new height and bulk under this alternative would not contribute to significant additional blockage of Santa Cruz Mountain and ridgeline views. As such, although the proposed height and massing would increase, this would represent an insignificant part of the overall view available from this location. Therefore, the Office/Hotel Alternative would result in less-than-significant impacts on a scenic vista, similar to the 300 Airport Boulevard Project. (LTS)

**Damage Scenic Resources within a State Scenic Highway.** The 300 Airport Boulevard Site is in the vicinity of US 101; however, US 101 is not designated as a State Scenic Highway. Therefore, as with the 300 Airport Boulevard Project, the Office/Hotel Alternative would result in no impact. (NI)

**Degradation of Existing Visual Character.** Similar to the 300 Airport Boulevard Project, the Office/Hotel Alternative would have less-than-significant impacts on on-site visual character in the context of surrounding development. Although there would be increased massing of approximately 710,338 sf compared to existing conditions, this expansion would not substantially alter existing

aesthetic conditions. The Office/Hotel Alternative would provide more design continuity within the Bayfront Specific Plan area by creating contiguous landscaping and buildings that reflect a similar architectural design. As a result, the development of new buildings and the addition of new landscaping would not be considered a substantial degradation of the existing visual character or quality of the 300 Airport Boulevard Site and its surroundings, resulting in a less-than-significant impact. This alternative, similar to the 300 Airport Boulevard Project, would also include landscape improvements that would visually enhance the site. The Office/Hotel Alternative would comply with the City's design review process and landscaping standards to ensure future development would be visually compatible with the character of the surrounding area. As such, the Office/Hotel Alternative would not degrade the existing visual character of the 300 Airport Boulevard Site and its surroundings, resulting in a less-than-significant impact, similar to the 300 Airport Boulevard Project. (LTS)

**New Sources of Light and Glare.** The Office/Hotel Alternative would add a new source of light and glare to the area because of the proposed buildings, which do not exist under current conditions. However, due to the proposed finishings, which would be the same as the ones used for the 300 Airport Boulevard Project, this would not result in a significant impact. As with the 300 Airport Boulevard Project, the Office/Hotel Alternative would include a parking structure at 69.5 feet. The proposed garage with six stories of aboveground parking would be located immediately adjacent to the light-industrial uses to the south and would be visible from US 101 to the south and the office uses to the west. Glare from vehicle headlights on the levels of aboveground parking could be a nuisance to occupants of the light-industrial and office uses to the south and west and to motorists along US 101. However, with similar parking garage design features as proposed under the 300 Airport Boulevard Project, the majority of the light and glare from vehicle headlights would be blocked, resulting in less-than-significant impacts. (LTS)

**Cumulative Impacts.** As discussed in Section 3.3, Visual Quality, cumulative impacts associated with sensitive views, visual character, and light and glare, would be less than significant. Since relatively the same development would occur under the Office/Hotel Alternative as under the 300 Airport Boulevard Project, cumulative impacts would remain less than significant. (LTS)

## **Transportation**

Table 5-7 shows the project trip generation estimates for the Office/Hotel Alternative based on trip rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation*, Eighth Edition. Trip reductions were applied to the alternative to reflect a potential transportation demand management (TDM) program that would be similar to the 300 Airport Boulevard Project. Also, similar trip reductions were taken for internal trips for the amenities center, retail, and restaurant uses. As shown in the table, based on the ITE rates for each proposed land use, the Office/Hotel Alternative would generate 665 trips during the AM Peak Hour and 667 trips during the PM Peak Hour. These numbers are both lower compared to the 300 Airport Boulevard Project.

**Table 5-7  
Project Trip Generation Estimates for the Office/Hotel Alternative**

Land Use	Size	Daily Rate	Daily Trips	AM Peak Hour			PM Peak Hour			Total Trips	
				Peak-Hour Rate	In	Out	Peak-Hour Rate	In	Out		
<b>300 Airport Blvd Project</b>											
Office <sup>a</sup>	690 ksf	8.56	5,902	1.27	774	106	879	1.23	145	707	851
Day Care <sup>b</sup>	8 ksf	79.26	634	12.25	52	46	98	12.50	47	53	100
<i>Internal Reduction</i>		50%	-317	50%	-26	-23	-49	50%	-24	-27	-50
Health Club <sup>c</sup>	25 ksf	32.93	836	1.38	16	19	35	3.53	51	39	90
<i>Internal Reduction</i>		50%	-418	50%	-8	-10	-18	50%	-26	-19	-45
Retail <sup>d</sup>	20 ksf	42.94	877	1.00	12	8	20	3.73	37	39	76
<i>Internal Reduction</i>		50%	-439	50%	-8	10	-18	50%	-19	-19	-38
Restaurant <sup>e</sup>	25 ksf	127.15	3,179	11.52	152	180	292	11.15	165	114	279
<i>Internal Reduction</i>		50%	-1,589	50%	-76	-70	-146	50%	-82	-57	-140
Hotel <sup>f</sup>	0 rooms	8.17	0	0.56	0	0	0	0.59	0	0	0
<i>TDM Reduction</i>		8% of office	-450	13% of office	-101	-14	-114	13% of office	-19	-92	-111
<b>Total</b>			<b>8,215</b>		<b>789</b>	<b>199</b>	<b>988</b>		<b>276</b>	<b>737</b>	<b>1,013</b>
<b>Office/Hotel Alternative</b>											
Office <sup>a</sup>	428 ksf	9.55	4,089	1.40	529	72	601	1.30	95	464	559
Day Care <sup>b</sup>	9 ksf	79.26	702	12.26	58	51	109	12.46	52	59	110
<i>Internal Reduction</i>		50%	-351	50%	-29	-26	-54	50%	-26	-29	-55
Health Club <sup>c</sup>	28 ksf	32.93	929	1.38	18	21	39	3.53	57	43	100
<i>Internal Reduction</i>		50%	-465	50%	-9	-11	-19	50%	-28	-21	-50
Retail <sup>d</sup>	7 ksf	42.94	321	1.00	5	3	7	3.73	14	14	28
<i>Internal Reduction</i>		50%	-160	50%	-2	-1	-4	50%	-7	-7	-14
Restaurant <sup>e</sup>	11 ksf	127.15	1,424	11.52	67	62	129	11.15	74	51	125
<i>Internal Reduction</i>		50%	-712	50%	-34	-31	-65	50%	-37	-26	-62
Hotel <sup>e</sup>	425 rooms	8.17	3,472	0.56	145	93	238	0.59	133	118	251
<i>TDM Reduction</i>		7% of office	-301	13% of office	-69	-9	-78	13% of office	-12	-60	-73
<b>Total</b>			<b>5,476</b>		<b>533</b>	<b>131</b>	<b>665</b>		<b>181</b>	<b>487</b>	<b>667</b>

*Sources:*

- a. Institute of Transportation Engineers, Trip Generation, 8th Edition. General Office Building (710).
- b. Institute of Transportation Engineers, Trip Generation, 8th Edition. Day Care Center (565).
- c. Institute of Transportation Engineers, Trip Generation, 8th Edition. Health/Fitness Club (492).
- d. Institute of Transportation Engineers, Trip Generation, 8th Edition. Shopping Center (820).
- e. Institute of Transportation Engineers, Trip Generation, 8th Edition. High-Turnover (Sit-Down) Restaurant (932).
- f. Institute of Transportation Engineers, Trip Generation, 8th Edition. Hotel (310).

Traffic conditions at the study intersections, freeway ramps, and freeway segments were evaluated under the Office/Hotel Alternative based on a qualitative analysis assuming that the trips for the Office/Hotel Alternative would follow the same trip distribution patterns as for the 300 Airport Boulevard Project.

**Intersection Operations.** Since the Office/Hotel Alternative would generate fewer trips compared to the 300 Airport Boulevard Project, the study intersections would also operate at LOS D or better during both peak hours, similar to the 300 Airport Boulevard Project. However, the unsignalized Amphlett Boulevard/Poplar Avenue intersection has operational problems under existing conditions. Similar to the 300 Airport Boulevard Project, the Office/Hotel Alternative would add traffic to this intersection resulting in a significant unavoidable impact. (SU)

**Freeway Ramp Operations.** For reasons similar to those described for intersection operations, with the addition of traffic generated by the Office/Hotel Alternative, the study freeway ramps would continue to operate at acceptable levels under the Office/Hotel Alternative. (LTS)

**Freeway Segment Operations.** As described in Section 3.4, Transportation, implementation of the 300 Airport Boulevard Project would result in significant and unavoidable impacts during the AM and/or PM peak hours at six study freeway segments. By factoring down the results from the 300 Airport Boulevard Project based on the Office/Hotel Alternative trip generation, the Office/Hotel Alternative would have a significant and unavoidable impact on only the following four freeway segments: (SU)

- US 101, southbound between Millbrae Avenue and Broadway – AM peak hour only;
- US 101, northbound, between Peninsula Avenue and SR 92 – AM peak hour only;
- US 101, southbound between Whipple Avenue and the Santa Clara County line –PM peak hour only;
- SR 92, eastbound between I-280 and US 101 – AM and PM peak hour.

**Air Traffic Patterns.** The Office/Hotel Alternative would be subject to review by the City/County Association of Governments (C/CAG) of San Mateo County Airport Land Use Committee (ALUC) for project consistency with the San Mateo County Comprehensive Airport Land Use Plan (ALUP). Similar to the 300 Airport Boulevard Project, this review would ensure that the Office/Hotel Alternative would have no impact on air traffic patterns. (NI)

**Transit Service, Pedestrian Facilities, and Bicycle Facilities.** As discussed in Section 3.4, Transportation, the 300 Airport Boulevard Project would have less-than-significant impacts associated with transit service, pedestrian facilities, and bicycle facilities. Since a reduction in the amount of development would occur under Office/Hotel Alternative, impacts would remain less than significant. (LTS)

**Site Access, Circulation, and Parking.** Similar to the 300 Airport Boulevard Project, site plans for the Office/Hotel Alternative would be reviewed for adequacy prior to approval by the City. Therefore, also similar to the 300 Airport Boulevard Project, the Office/Hotel Alternative would result in no impacts associated with site circulation, access, and parking. (NI)

**Cumulative Intersection Operations.** Since the Office/Hotel Alternative would generate fewer trips compared to the 300 Airport Boulevard Project, all but one of the study intersections would also operate at acceptable levels of service during both peak hours under cumulative conditions, as was determined for the 300 Airport Boulevard Project. However, the unsignalized Amphlett Boulevard/Poplar Avenue intersection has operational problems under existing conditions. Similar to the 300 Airport Boulevard Project, the Office/Hotel Alternative would add traffic to this intersection resulting in a significant unavoidable impact. (SU)

**Cumulative Freeway Ramp Operations.** As discussed in Section 3.4, Transportation, the 300 Airport Boulevard Project would have less-than-significant cumulative impacts to freeway ramp operations. The Office/Hotel Alternative would generate fewer trips compared to the 300 Airport Boulevard Project. As such, the Office/Hotel Alternative would also result in less-than-significant cumulative impacts to freeway ramp operations. (LTS)

**Cumulative Freeway Segment Operations.** As discussed in Section 3.4, Transportation, the 300 Airport Boulevard Project would have significant and unavoidable cumulative impacts to study freeway segment operations. Although the Office/Hotel Alternative would generate fewer trips compared to the 300 Airport Boulevard Project, impacts to study freeway segment operations would remain significant and unavoidable under the Office/Hotel Alternative. (SU)

## **Air Quality**

**Compliance with the 2010 Clean Air Plan.** As described in Section 3.5, Air Quality, in order for a plan or project to be consistent with the 2010 Clean Air Plan (CAP), the plan or project must not result in a percentage increase in VMT over MTC's 2035 VMT projections that would be greater than the percentage increase in population over MTC's 2035 population estimate. In order to determine VMT for the Office/Hotel Alternative, the average trip length used in the URBEMIS model (Appendix L) for the 300 Airport Boulevard Project was divided by the number of total daily trips that would result from implementation of the Office/Hotel Alternative. It is assumed that because the Office/Hotel Alternative would include similar uses and would be constructed in the same location as the 300 Airport Boulevard Project, the average vehicle trip length associated with the Office/Hotel Alternative would also be similar to the 300 Airport Boulevard Project. Additionally, in order to determine the population increase that could result from implementation of the Office/Hotel Alternative, the worst case population increase scenario was used (similar to the 300 Airport Boulevard Project). Under this scenario, the maximum number of employees that could result from the Office/Hotel Alternative was used as the total increase in population. Based on this methodology, the Office/Hotel Alternative would result in a percentage increase in VMT greater than the percentage increase in population (over MTC 2035 projections). Although the Office/Hotel Alternative would implement a TDM program similar to the 300 Airport Boulevard Project it would not comply with the 2010 CAP based on the

percentage increase in VMT. Therefore, this alternative would result in a significant and unavoidable impact with regard to the 2010 CAP. (SU)

**Fugitive Dust from Construction Activities.** Similar to the 300 Airport Boulevard Project, construction of the Office/Hotel Alternative would adhere to Mitigation Measures AQ-2.1 and AQ-2.2 in order to reduce the potential for significant impacts related to fugitive dust to a less-than-significant level. (PS/LTS)

**Construction-Related Criteria Air Pollutant Emissions.** The Office/Hotel Alternative would result in construction emissions similar to those described for the 300 Airport Boulevard Project. The operation of heavy equipment during construction of buildings at the 300 Airport Boulevard Site would result in the generation of air emissions. Construction of the Office/Hotel Alternative would result in approximately 710,338 sf of total development, which constitutes approximately 93 percent of the total development that would result from implementation of the 300 Airport Boulevard Project. In light of this consideration, the construction schedule, equipment, and activities required to implement the Office/Hotel Alternative would be similar to those necessary for the 300 Airport Boulevard Project. Construction-related emissions generated by the Office/Hotel Alternative would also be similar to those associated with the 300 Airport Boulevard Project. As described in Section 3.5, Air Quality, even with implementation of mitigation measure AQ-3.1, construction of the 300 Airport Boulevard Project would result in ROG and NO<sub>x</sub> emissions substantially over the BAAQMD threshold. As identified above, the Office/Hotel Alternative would result in approximately 7 percent less total development (in terms of building) compared to the 300 Airport Boulevard Project. A 7 percent reduction in construction-related ROG and NO<sub>x</sub> emissions would not bring emissions to a level below the allowable BAAQMD thresholds. Incorporation of mitigation measures similar to those proposed to reduce impacts under the 300 Airport Boulevard Project would also be applied to the Office/Hotel Alternative. However, based on the size of development, the Office/Hotel Alternative would result in similar significant and unavoidable ROG and NO<sub>x</sub> construction emissions, as determined for the 300 Airport Boulevard Project. (SU)

**Operational Criteria Air Pollutant Emissions.** Because the 300 Airport Boulevard Site is currently vacant and uninhabited, there would be an increase in operational emissions over existing conditions with implementation of the Office/Hotel Alternative. Assuming implementation of a similar TDM program as proposed under the 300 Airport Boulevard Project, average daily vehicle trip rates were estimated for the Office/Hotel Alternative. Using these trip rates in conjunction with the size of the various buildings/uses proposed for the Office/Hotel Alternative, operational emissions were calculated using the URBEMIS software (Appendix L). Table 5-8 summarizes the operational area source and vehicle emissions associated with the Office/Hotel Alternative. Operation of the Office/Hotel Alternative would result in the emission of ROG, NO<sub>x</sub> and PM<sub>10</sub> beyond the acceptable thresholds established by the BAAQMD. Therefore, this alternative would result in significant and unavoidable operational air quality impacts. (SU)

**Table 5-8  
Office/Hotel Alternative Daily Operational Air Pollutant Emissions**

Emissions Source	Project Emissions (Pounds per Day)			
	ROG	NOx	PM <sub>10</sub>	PM <sub>2.5</sub>
Stationary	5.30	6.90	0.04	0.04
Vehicle	<u>53.30</u>	<u>60.0</u>	<u>120.54</u>	<u>22.94</u>
<b>Total</b>	<b>58.60</b>	<b>66.90</b>	<b>120.58</b>	<b>22.98</b>
BAAQMD Significance Thresholds	54	54	82	54
Exceeds BAAQMD Thresholds?	Yes	Yes	Yes	No

Source: Atkins, 2011.

**Local Concentrations of CO.** Analysis conducted for the 300 Airport Boulevard Project determined that operation of the 300 Airport Boulevard Project would not generate traffic volumes above the BAAQMD screening criteria for assessing potential CO impacts. Because the Office/Hotel Alternative would result in fewer daily vehicle trips than the 300 Airport Boulevard Project, the Office/Hotel Alternative would not result in any CO hot spots at study area intersections, similar to the 300 Airport Boulevard. Impacts related to CO hot spots associated with the Office/Hotel Alternative would be less than significant. (LTS)

**Exposure to PM<sub>2.5</sub> and TACs.** The Office/Hotel Alternative would include the placement of new sensitive receptors (office workers and children at the amenities center daycare) at the 300 Airport Boulevard Site. Similar to the 300 Airport Boulevard Project, it is unknown which phase the childcare center would be constructed. Assuming it would be constructed during Phase 1 of construction activities and operating while Phase 2 is under construction, sensitive receptors at the childcare center could be exposed to health risks. Similar to the 300 Airport Boulevard Project, potential risk during operation of the daycare center would be reduced to less than significant for both individual and cumulative risk during construction through implementation of Mitigation Measure AQ-5.1a, b, and c. However, if the childcare center is constructed during Phase 2 of construction activities, operation would occur after the completion of construction. As such, sensitive receptors would not be exposed to health risks. Because the Office/Hotel Alternative would be constructed at the same location as the 300 Airport Boulevard Project measures would be taken to reduce health risks, this alternative would not expose sensitive receptors to health risks. This impact would be less than significant. (PS/LTS)

**Objectionable Odors.** The Office/Hotel Alternative would not involve land uses that BAAQMD has identified as prime sources of odors. Additionally, analysis of the 300 Airport Boulevard Project determined that there are no significant off-site sources of odors that could affect individuals on the project site. Because the Office/Hotel Alternative would be developed at the same site as the 300 Airport Boulevard Project, it would also not expose individuals to off-site odor sources. Therefore, the Office/Hotel Alternative would have no impact related to odors. (NI)

**Cumulative Impacts.** The 300 Airport Boulevard Project's emissions of ROG and NOx during construction and emission of PM<sub>10</sub> during operation were identified as making cumulatively

considerable contributions to significant cumulative impacts. Additionally, the 300 Airport Boulevard Project would not comply with the 2010 CAP. Under the Office/Hotel Alternative, emissions of ROG and NOx during construction would also potentially exceed the BAAQMD's 54 lbs/day threshold, and could contribute to significant cumulative impacts. Furthermore, implementation of this alternative would not comply with the 2010 CAP. Consequently, this alternative's construction-related ROG and NOx emissions and inconsistency with the 2010 CAP would be cumulatively significant. (S/SU)

## **Climate Change**

**Result in Significant Emissions of Greenhouse Gases.** The Office/Hotel Alternative would result in less direct emissions from area and mobile sources, and less indirect emissions from electricity generation, solid waste, and water when compared to the 300 Airport Boulevard Project due to the relative size of the buildings included in the Office/Hotel Alternative. However, as identified in Table 5-1 above, the Office/Hotel Alternative would only reduce the total area of development by 56,662 square feet or approximately seven percent compared with the 300 Airport Boulevard Project. Additionally, employment would be reduced by 689 people or approximately 30 percent. This reduction in square footage and employment would not bring the Office/Hotel Alternative below the established threshold for operation GHG emissions. Therefore, the Office/Alternative would result in a significant and unavoidable impact related to GHG emissions. (SU)

**Consistency with the Climate Action Plan.** As described above, the Office/Hotel Alternative would result in significant GHG emissions. Because the Office/Hotel Alternative would potentially exceed the BAAQMD threshold for operation GHG emission it would inhibit the City in meeting the short-term and long-term GHG reduction goals established in the City's Climate Action Plan (CAP). Therefore, implementation of the Office/Hotel Alternative would result in a significant and unavoidable impact to local and state GHG reduction plans, policies, and regulations. (SU)

**Cumulative Impacts.** As described in the BAAQMD's CEQA Air Quality Guidelines, no single project could generate enough GHG emissions to noticeably change the global average temperature. The combination of GHG emissions from past, present, and future projects contribute substantially to the phenomenon of global climate change and its associated environmental impacts. If a project would generate GHG emissions above the threshold level, it would be considered to contribute substantially to a cumulative impact, and would be considered significant. As described above, the Office/Hotel Alternative would exceed the BAAQMD's threshold of significance for project-level, operational GHG emissions. Therefore, implementation of the Office/Hotel Alternative would result in a cumulatively considerable impact on GHG emission. (SU)

## **Noise**

**Construction Impacts.** Under the Office/Hotel Alternative, the types of construction activities would be similar to the 300 Airport Boulevard Project. The closest sensitive receptors to the Project Site include the intermittent users of the Bay Trail and Fisherman's Park, which are approximately 400 feet from the Project Site. Construction of the Office/Hotel Alternative would result in temporary impacts during construction by raising ambient noise levels in the Project vicinity, resulting in a potentially

significant impact. Similar to the 300 Airport Boulevard Project, implementation of Mitigation Measure NO-1.1, which requires Best Management Practices to reduce construction noise, would result in a less-than-significant impact.

Construction equipment for general construction activities and pile driving would have the potential to exceed 65 VdB at 25 feet. Therefore, construction would have the potential to result in vibration levels exceeding 65 VdB at nearby vibration-sensitive uses and this would be a potentially significant impact of the Office/Hotel Alternative. If pile driving resulted in vibration levels in excess of the FTA damage thresholds of 0.2 in/sec to 0.5 in/sec, the project could result in damage to the adjacent structures, resulting in potentially significant impacts. However, Mitigation Measures NO-2.1, NO-2.2, and NO-2.3 would reduce construction-related impacts to vibration-sensitive areas to a less-than-significant level. (PS/LTS)

**Operational Impacts.** Similar to the 300 Airport Boulevard Project, the Office/Hotel Alternative would expose the new sensitive receptors at the 300 Airport Boulevard Site (office workers and children at the childcare center) to traffic noise and the use of HVAC systems. Areas along the main access routes to the Project area would experience an increase in traffic noise levels associated with operation of the Office/Hotel Alternative. Daily operation of office uses would generate new stationary noise sources, such as from the operation of mechanical HVAC systems, parking lot and structure noise, and delivery of supplies. Implementation of Mitigation Measure NO-4.1 would implement specific placement or screening of HVAC mechanical equipment in order to reduce noise levels at the nearest property boundary, thus resulting in a less than significant impact. Based on the alternative trip generation estimates, the Office/Hotel Alternative would have less daily trips than the 300 Airport Boulevard Project resulting in a decrease in traffic noise modeled in Section 3.7, Noise. Therefore, operational impacts would be less than significant. (PS/LTS)

**Cumulative Impacts.** Cumulative noise impacts would be similar under both this alternative and the 300 Airport Boulevard Project. As with the 300 Airport Boulevard Project, there would not be significant cumulative construction noise. Cumulative development would result in a substantial permanent ambient noise level increase in the vicinity of the Project Site as a result of increases in traffic. However, the Office/Hotel Alternative's contribution would be less than significant. Operation of the Office/Hotel Alternative and other cumulative developments would not result in the cumulative exposure of sensitive receptors to excessive airport noise. Vibration levels from construction of cumulative development in the City would generally not combine to result in the exposure of people to or the generation of excessive ground-borne vibration, due to the localized nature of vibration impacts and the fact that construction throughout the City would not occur at the same time. All of the cumulative projects are located more than a mile from the Project Site. As such, the vibration impact of the Office/Hotel Alternative, in conjunction with vibration from other cumulative development, would not result in a significant cumulative impact. (LTS)

## **Biological Resources**

**Special Status Species or Sensitive Habitat Impacts.** Generally, there is no habitat on-site that is capable of supporting special-status plants or State or federally listed wildlife. Based on the urban history of the 300 Airport Boulevard Site, and the lack of suitable habitat, the area would not support any of the special-status plant or wildlife species listed in the database query results. The 300 Airport Boulevard Site is isolated from any grassland, chaparral or woodland habitats by urban development, and does not contain any suitable habitat for any of the salt marsh species known to occur along the Bay. Therefore, as with the 300 Airport Boulevard Project, the Office/Hotel Alternative would result in less-than-significant impacts to special status species and sensitive habitats. (LTS)

**Potential Loss of Wetlands and Other Waters of the United States.** The eastern and southern portion of the 300 Airport Boulevard Site contains a series of channels and depressions that retain surface water for extended periods, and as a result support a variety of ruderal wetland plant species. Due to the urban history of the 300 Airport Boulevard Site, it is likely that these features would not be considered subject to regulation under the Clean Water Act. If some or all of these features were determined to be subject to Clean Water Act regulation, then any fill activity associated with grading for the Office/Hotel Alternative would require a permit from the Corps and water quality certification from the RWQCB. Because it is unknown at this time whether the depressional features present on the 300 Airport Boulevard Site are subject to CWA regulation, the loss of wetlands or other waters of the U.S. as a result of construction under the Office/Hotel Alternative would be a potentially significant impact, similar to the 300 Airport Boulevard Project. However, Mitigation Measures BR-3.1 and BR-3.2, as presented in Section 3.8, Biological Resources, would reduce this alternative's impact on wetlands and other waters of the U.S. to a less-than-significant level. (PS/LTS)

**Loss of Nesting Migratory Birds.** Shrubs and trees at the 300 Airport Boulevard Site could potentially provide nesting habitat for raptors (i.e., birds of prey), and other migratory birds. Tree and shrub removal associated with the Office/Hotel Alternative could result in "take" caused by the direct mortality of adult or young birds, nest destruction, or disturbance of nesting native bird species. Disruption of nesting birds would be a potentially significant impact under the Office/Hotel Alternative, similar to the 300 Airport Boulevard Project. However, Mitigation Measures BR-4.1 and BR-4.2, as included in Section 3.8, Biological Resources, would reduce the Office/Hotel Alternative's impact on nesting migratory birds to a less-than-significant level. (PS/LTS)

**Conflicts with Local Policies or Ordinances.** No trees protected under any City of Burlingame tree preservation policy or ordinance are located at the 300 Airport Boulevard Site. In addition, the Office/Hotel Alternative would not conflict with any known habitat conservation plans, natural community conservation plans, or other approved local or regional conservation plans because there are no approved plans that apply to the 300 Airport Boulevard Site or its vicinity. As with the 300 Airport Boulevard Project, the Office/Hotel Alternative would result in less-than-significant impacts and would not conflict with local policies. (LTS)

**Cumulative Impacts.** Construction activities that result in the removal of existing shrubs and trees could adversely affect nesting migratory birds, either by causing the loss of young birds or the

abandonment of an active nest. With future development in the City, it is reasonable to expect there would be a loss of trees and other vegetation that provide nesting habitat. Disturbance to these habitats under the Office/Hotel Alternative, in combination with the potential loss of similar habitats in the vicinity of the 300 Airport Boulevard Site, would result in a potentially significant cumulative impact. Implementation of Mitigation Measures BR-4.1 and BR-4.2 would mitigate the Office/Hotel Alternative's contribution to this potentially significant cumulative impact to less than cumulatively considerable. (PS/LTS)

## Hydrology

**Violation of Water Quality Standards or Waste Discharge Requirements.** The Office/Hotel Alternative would not result in construction or operational activities subject to NDPES permits or WDRs that would differ from the 300 Airport Boulevard Project. This alternative would result in the same less-than-significant impact identified for the 300 Airport Boulevard Project. (LTS)

**Water Quality Degradation, or Erosion and/or Sedimentation.** Construction of the Office/Hotel Alternative would involve site disturbance that could result in water quality degradation, erosion, or sedimentation, as would occur with the 300 Airport Boulevard Project. Construction would be required to implement a SWPPP and BMPs, identical to the 300 Airport Boulevard Project. The less-than-significant construction impact for water quality degradation, erosion, and sedimentation would be the same as the 300 Airport Boulevard Project.

The development footprint of the Office/Hotel Alternative would be expected to result in more impervious surfaces and an increase in pollutants in stormwater runoff, compared to existing conditions. Based on the types of allowable uses, the constituents in stormwater runoff would be expected to be similar to the 300 Airport Boulevard Project. Identical to the 300 Airport Boulevard Project, as a condition of approval and prior to issuance of grading permits, the City would be responsible for ensuring the appropriate Regional Permit Provision C.3 (particularly Low Impact Development) features are incorporated into project design. For those reasons, the Office/Hotel Alternative would result in the same less-than-significant water quality impacts as the 300 Airport Boulevard Project. (LTS)

**Drainage Systems.** Operation of the Office/Hotel Alternative would generate stormwater runoff that would need to be managed in an on-site storm drain system prior to discharge to Sanchez Channel or the Bay. It would not affect the City's storm drain system, and the less-than-significant impact identified for the 300 Airport Boulevard Project would be the same for the Office/Hotel Alternative. Please also refer to the alternatives discussion under Utilities, below. (LTS)

**Groundwater.** Other than shallow groundwater that may need to be extracted during construction (and which would be subject to necessary discharge permits), as would potentially occur with the 300 Airport Boulevard Alternative, there would be no long-term permanent impact on groundwater. Water demand for the Office/Hotel Alternative would be met through existing SFPUC supplies without the need for additional supplies (see also, Utilities). The less-than-significant groundwater impacts

identified for the 300 Airport Boulevard Project would be the same for the Office/Hotel Alternative. (LTS)

**Flooding and Sea Level Rise.** Identical to the 300 Airport Boulevard Project, development in the Office/Hotel Alternative could be at risk of flooding from high tides, wind-induced wave action, and sea level rise. The site would need to be elevated and shoreline protection improvements would need to be implemented. The potentially-significant impact requiring mitigation for the 300 Airport Boulevard Project (underground structures, stormwater conveyance flow capacity, and shoreline protection) would be the same for this alternative. Additional mitigation would be required for this alternative to address elevating the site to protect above-grade structures. Overall, this alternative would result in similar effects as the 300 Airport Boulevard Project. (PS/LTS)

**Cumulative Impacts.** The Office/Hotel Alternative would result in the same project impacts as the 300 Airport Boulevard Project. Therefore, the cumulative less-than-significant impacts for drainage, water quality, and groundwater resources, and the potentially significant tidal flooding and sea level rise impacts, would be the same. (PS/LTS)

## **Population and Housing**

**Population Increases.** The Office/Hotel Alternative would not include development of new housing units and would thus not directly increase the residential population within the region. However, as with the 300 Airport Boulevard Project, there would be an indirect population increase associated with new visitorship and employment during construction and operation the Office/Hotel Alternative. Approximately 1,786 new workers would be employed during the operation of the Office/Hotel Alternative, which would increase the daytime population at the 300 Airport Boulevard Site. As described in Section 3.10, Population and Housing, the 2009 ABAG Projections already includes the employment growth estimated under the Bayfront Specific Plan, which accounts for approximately 1,529 new workers. Since the Office/Hotel Alternative would result in 1,786 new workers, this would be an increase in approximately 257 employees over ABAG's estimates. The increase in 1,786 workers represent about 40 percent of the anticipated population growth within the City (a conservative scenario) while the net increase of 257 employees unaccounted for in the 2009 ABAG Projections would represent approximately 6 percent.

The increase in employment would result in a demand for new housing units and an indirect increase in the residential population. However, the percentage of regional housing demand resulting from the Office/Hotel Alternative would be relatively small in comparison with projected housing growth in the region. In addition, this alternative represents only a portion of the net population increase expected for the 300 Airport Boulevard Project, which would have a less-than-significant impact. Therefore, the impact of the Office/Hotel Alternative would be less than significant, as with the 300 Airport Boulevard Project. (LTS)

**Cumulative Impacts.** The Office/Hotel Alternative, in combination with other projected growth in the City, would increase population, employment, and housing in the City. The contribution of the Office/Hotel Alternative to any cumulative increase in employment would not result in direct adverse

impact, resulting in a less than cumulatively considerable impact, as with the 300 Airport Boulevard Project. (LTS)

## **Parks and Wind Effects on Recreation**

**Recreation Impacts.** Similar to the 300 Airport Boulevard Project, the Office/Hotel Alternative would result in an increased demand and utilization of nearby parks and recreational services due to increased employment and on-site activity at the 300 Airport Boulevard Site. Employees would likely use parks during breaks and before and after work, while the visitors to the hotel could seek nearby recreational activities. As such, this alternative could contribute to accelerated deterioration of parkland and recreational facilities. However, because the increase in worker and hotel patron population would not be substantial relative to City population, it is unlikely that this alternative's demand would cause substantial deterioration of City parks. Additionally, as with the 300 Airport Boulevard Project, the Office/Hotel Alternative would include open spaces and would provide recreational opportunities at the Bay Trail and the amenities center. Therefore, the onsite recreational facilities provided under the Office/Hotel Alternative would offset any impacts that the alternative could have on surrounding park areas, resulting in a less-than-significant impact. (LTS)

**Wind Effects.** The Office/Hotel Alternative would change the current wind speeds due to the height and mass of the proposed buildings, which would be similar to the 300 Airport Boulevard Project. Development of the 300 Airport Boulevard Site under the Office/Hotel Alternative would result in a wind shadow effect over the Bay adjacent to the eastern edge of the Project Site. As with the 300 Airport Boulevard Project, this would not result in substantial adverse effects to windsurfing resources in the Project area; and therefore would result in a less-than-significant impact to windsurfing recreational resources and wind patterns. (LTS)

**Cumulative.** Because there is no other development planned for the Bayfront Specific Plan area, there would be no cumulative impact on windsurfing recreational resources at Coyote Point Recreation Area. Due to the inclusion of onsite open spaces, improvements to the offsite Eastern Shoreline open space and Bay Trail, the Office/Hotel Alternative would have a less-than-significant impact with regard to the physical deterioration of existing recreation facilities as a result of increased use. When considered in the context of cumulative development within the City, this alternative would not result in cumulatively considerable adverse effects to recreation facilities or the environment. (LTS)

## **Utilities**

**Water Demand.** Like the 300 Airport Boulevard Project, the Office/Hotel Alternative would have less-than-significant impacts related to water supply. As stated in the description of the Office/Hotel Alternative, this alternative would increase site activity compared to existing conditions. However the total area of the Office/Hotel Alternative would be less than that of the 300 Airport Boulevard Project. As stated in the Water Supply Assessment for the 300 Airport Boulevard Project, upon full buildout, the 300 Airport Boulevard Project would increase water demand by up to 206 acre-feet per year, under

the worst case water conservation scenario (life-sciences land use).<sup>14</sup> Water demand estimates are based on a given factor of water demand (dependent on the proposed land use) per square foot of building area. Because implementation of the Office/Hotel Alternative would result in less total building area and because office and hotel land uses would be similar to research and development, water demand under the Office/Hotel Alternative would be less than the 300 Airport Boulevard Project. The City's existing water transmission facilities have adequate capacity available to serve the increased demands of the 300 Airport Boulevard Project. Consequently, as with the 300 Airport Boulevard Project, the Office/Hotel Alternative would not cause the existing water supply facilities to experience substantial physical deterioration that would cause the need for their replacement. Therefore, the construction and operation of the Office/Hotel Alternative would result in a less-than-significant impact related to water demand and the deterioration of water supply facilities. (LTS)

**Wastewater Generation.** The 300 Airport Boulevard Project would increase average wastewater generation by 204,450 gallons per day and peak wet weather flow by approximately 419,872 gallons per day, under the moderate water conservation scenario for the life sciences land use.<sup>15</sup> As discussed in Section 3.12, Utilities, the 300 Airport Boulevard Project would have less-than-significant impacts related to wastewater generation. Wastewater generation estimates are largely based on building square footage. Since the Office/Hotel Alternative would result in the construction of less total building square footage than the 300 Airport Boulevard Project, it would likely generate less wastewater than the 300 Airport Boulevard Project. Therefore, this alternative would also result in less-than-significant impacts related to wastewater generation.

Wastewater generated by the Office/Hotel Alternative would be within the capacity of the existing system; therefore, it is unlikely that this alternative would contribute to any premature physical deterioration of the wastewater system. Consequently, as with the 300 Airport Boulevard Project, the Office/Hotel Alternative would not cause the existing wastewater facilities to experience substantial physical deterioration that would cause the need for their replacement. Therefore, the construction of the Office/Hotel Alternative would result in a less-than-significant impact related to wastewater generation and the deterioration of wastewater facilities. (LTS)

**Stormwater Generation.** As discussed in Section 3.12, Utilities, the 300 Airport Boulevard Project would have no impact related to stormwater collection system capacity. The existing 300 Airport Boulevard Site is comprised of approximately 89 percent of impervious surfaces and it is unlikely that the Office/Hotel Alternative would add more impervious surfaces than what is currently at the site. Comparatively, the 300 Airport Boulevard Project would develop the site at 78 percent impervious surfaces and it is expected that the development under the Office/Hotel Alternative would be similar. Therefore, as with the 300 Airport Boulevard Project, the Office/Hotel Alternative would result in no impact related to stormwater generation and the deterioration of stormwater facilities. (NI)

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<sup>14</sup> City of Burlingame, *300 Airport Boulevard Project Draft Water Supply Assessment, Table 3-1: Project Land Use and Water Demand Land Use Data and Water Demand*, June 2011.

<sup>15</sup> BKF Engineers, *Burlingame Point Wastewater Study*, June 14, 2011.

**Cumulative.** As discussed in Section 3.12, Utilities, the City’s water, wastewater, and stormwater drainage facilities have sufficient capacity to serve the cumulative development of the City. The City of Burlingame would have adequate supplies to meet customer demand in until 2035, including the demand of the 300 Airport Boulevard Project combined with existing and planned future uses. Since the Office/Hotel Alternative would use less water and generate less wastewater and stormwater than the 300 Airport Boulevard Project, which would be cumulatively less than considerable, implementation of the Office/Hotel Alternative would not be cumulatively considerable. (LTS)

**Table 5-9  
Comparison of Impacts among Project Alternatives for the 300 Airport Boulevard Project**

Environmental Issue	300 Airport Boulevard Project	No Project Alternative	Existing Zoning Alternative	Office/Hotel Alternative
<b>Land Use</b>				
Conflicts with Applicable Land Use Designations and Zoning	LTS	NI	NI	LTS
Conflicts with Bayfront Specific Plan Policies	LTS	SU	LTS	LTS
Cumulative Impacts	NI	SU	LTS	LTS
<b>Visual Quality</b>				
Adverse Effect on a Scenic Vista	LTS	NI	LTS	LTS
Damage Scenic Resources within a State Scenic Highway	NI	NI	NI	NI
Degradation of Existing Visual Character	LTS	NI	LTS	LTS
New Sources of Light and Glare	LTS	NI	LTS	LTS
Cumulative Impacts	LTS	NI	LTS	LTS
<b>Transportation</b>				
Intersection Operations	SU	NI	SU	SU
Freeway Ramp Operations	LTS	NI	LTS	LTS
Freeway Segment Operations	SU	NI	SU	SU
Air Traffic Patterns	NI	NI	NI	NI
Transit Service, Pedestrian Facilities, and Bicycle Facilities	LTS	NI	LTS	LTS
Site Access, Circulation, and Parking	LTS	NI	NI	NI
Cumulative Impacts	SU	NI	SU	SU
<b>Air Quality</b>				
Compliance with the 2010 Clean Air Plan	SU	NI	LTS	SU
Fugitive Dust from Construction Activities	LTS	NI	LTS	LTS
Construction-Related Criteria Air Pollutant Emissions	SU	NI	SU	SU
Operational Criteria Air Pollutant Emissions	SU	NI	LTS	SU
Local Concentrations of CO	LTS	NI	LTS	LTS
Exposure to PM <sub>2.5</sub> and TACs	PS/LTS	NI	LTS	PS/LTS
Objectionable Odors	NI	NI	NI	NI
Cumulative Impacts	SU	NI	SU	SU
<b>Climate Change</b>				
Result in Significant Emissions of Greenhouse Gases	SU	NI	SU	SU
Consistency with the Climate Action Plan	SU	NI	SU	SU
Cumulative Impacts	SU	NI	SU	SU

**Table 5-9  
Comparison of Impacts among Project Alternatives for the 300 Airport Boulevard Project**

Environmental Issue	300 Airport Boulevard Project	No Project Alternative	Existing Zoning Alternative	Office/Hotel Alternative
<b>Noise</b>				
Construction Impacts	PS/LTS	NI	PS/LTS	PS/LTS
Operational Impacts	PS/LTS	NI	PS/LTS	PS/LTS
Cumulative Impacts	LTS	NI	LTS	LTS
<b>Biological Resources</b>				
Special Status Species or Sensitive Habitat Impacts	LTS	NI	LTS	LTS
Loss of Wetlands and Other Waters of the U.S.	PS/LTS	NI	PS/LTS	PS/LTS
Loss of Nesting Migratory Birds	PS/LTS	NI	PS/LTS	PS/LTS
Conflicts with Local Policies and Ordinances	LTS	NI	LTS	LTS
Cumulative	PS/LTS	NI	PS/LTS	PS/LTS
<b>Hydrology</b>				
Violation of Water Quality Standards or Waste Discharge Requirements	LTS	NI	LTS	LTS
Water Quality Degradation, or Erosion and/or Sedimentation	LTS	NI	LTS	LTS
Drainage Systems	LTS	NI	LTS	LTS
Groundwater	LTS	NI	LTS	LTS
Flooding and Sea Level Rise	PS/LTS	NI	PS/LTS	PS/LTS
Cumulative Impacts	PS/LTS	NI	PS/LTS	PS/LTS
<b>Population and Housing</b>				
Population Increases	LTS	NI	LTS	LTS
Cumulative Impacts	LTS	NI	LTS	LTS
<b>Parks and Wind Effects on Recreation</b>				
Recreation Impacts	LTS	NI	LTS	LTS
Wind Effects	LTS	NI	LTS	LTS
Cumulative Impact	LTS	NI	LTS	LTS
<b>Utilities and Service Systems</b>				
Water Demand	LTS	NI	LTS	LTS
Wastewater Generation	PS/LTS	NI	PS/LTS	LTS
Stormwater Generation	NI	NI	NI	NI
Cumulative Demand for Utilities	LTS	NI	LTS	LTS

Source: Atkins, 2011.

**Table 5-10  
Comparison of Impacts among Project Alternatives for the 350 Airport Boulevard Project**

Environmental Issue	350 Airport Boulevard Project	No Project Alternative	Existing Zoning Alternative
<b>Land Use</b>			
Conflicts with Applicable Land Use Designations and Zoning	LTS	NI	NI
Conflicts with Bayfront Specific Plan Policies	LTS	SU	LTS
Cumulative Impacts	NI	SU	LTS
<b>Visual Quality</b>			
Adverse Effect on a Scenic Vista	LTS	NI	LTS
Damage Scenic Resources within a State Scenic Highway	NI	NI	NI
Degradation of Existing Visual Character	LTS	NI	LTS
New Sources of Light and Glare	LTS	NI	LTS
Cumulative Impacts	LTS	NI	LTS
<b>Transportation</b>			
Intersection Operations	SU	NI	SU
Freeway Ramp Operations	LTS	NI	LTS
Freeway Segment Operations	SU	NI	SU
Air Traffic Patterns	NI	NI	NI
Transit Service, Pedestrian Facilities, and Bicycle Facilities	LTS	NI	LTS
Site Access, Circulation, and Parking	LTS	NI	LTS
Cumulative Impacts	SU	NI	SU
<b>Air Quality</b>			
Compliance with the 2010 Clean Air Plan	SU	NI	LTS
Fugitive Dust from Construction Activities	PS/LTS	NI	PS/LTS
Construction-Related Criteria Air Pollutant Emissions	SU	NI	SU
Operational Criteria Air Pollutant Emissions	SU	NI	SU
Local Concentrations of CO	LTS	NI	LTS
Exposure to PM <sub>2.5</sub> and TACs	LTS	NI	LTS
Objectionable Odors	NI	NI	NI
Cumulative Impacts	SU	NI	SU
<b>Climate Change</b>			
Result in Significant Emissions of Greenhouse Gases	SU	NI	SU
Consistency with the Climate Action Plan	SU	NI	SU
Cumulative Impacts	SU	NI	SU
<b>Noise</b>			
Construction Impacts	PS/LTS	NI	PS/LTS
Operational Impacts	PS/LTS	NI	PS/LTS
Cumulative Impacts	LTS	NI	LTS
<b>Biological Resources</b>			
Special Status Species or Sensitive Habitat Impacts	LTS	NI	LTS
Loss of Wetlands and Other Waters of the U.S.	LTS	NI	LTS
Loss of Nesting Migratory Birds	PS/LTS	NI	PS/LTS

**Table 5-10  
Comparison of Impacts among Project Alternatives for the 350 Airport Boulevard Project**

Environmental Issue	350 Airport Boulevard Project	No Project Alternative	Existing Zoning Alternative
Conflicts with Local Policies and Ordinances	LTS	NI	LTS
Cumulative	PS/LTS	NI	PS/LTS
<b>Hydrology</b>			
Violation of Water Quality Standards or Waste Discharge Requirements	LTS	NI	LTS
Water Quality Degradation, or Erosion and/or Sedimentation	LTS	NI	LTS
Drainage Systems	LTS	NI	LTS
Groundwater	LTS	NI	LTS
Flooding and Sea Level Rise	PS/LTS	NI	PS/LTS
Cumulative Impacts	PS/LTS	NI	PS/LTS
<b>Population and Housing</b>			
Population Increases	LTS	NI	LTS
Cumulative Impacts	LTS	NI	LTS
<b>Parks and Wind Effects on Recreation</b>			
Recreation Impacts	LTS	NI	LTS
Wind Effects	LTS	NI	PS/LTS
Cumulative Impact	LTS	NI	LTS
<b>Utilities and Service Systems</b>			
Water Demand	LTS	NI	LTS
Wastewater Generation	PS/LTS	NI	PS/LTS
Stormwater Generation	NI	NI	NI
Cumulative Demand for Utilities	LTS	NI	LTS

Source: Atkins, 2011.

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## 5.6 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

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Sections 21002 and 21081 of CEQA requires lead agencies to adopt feasible mitigation measures or feasible environmentally superior alternatives in order to substantially lessen or avoid otherwise significant adverse environmental effects, unless specific social or other conditions make such mitigation measures or alternatives infeasible. CEQA also requires that an environmentally superior alternative be identified among the alternatives analyzed. In general, the environmentally superior alternative is the project that avoids or substantially lessens some or all of the significant and unavoidable impacts of the proposed project (CEQA Guidelines Section 15126.6).

On the basis of comparing the extent to which the alternatives reduce or avoid the significant impacts of the 300 Airport Boulevard Project and the 350 Airport Boulevard Project, the No Project Alternative would be the environmentally superior alternative. Since no development would occur at the Project Site, there would be no construction or operational impacts. However, CEQA requires the selection of another alternative other than the No Project Alternative as the environmentally superior alternative (CEQA Guidelines, Section 15126.6(e)(2)); therefore, the No Project Alternative can be selected as the environmentally superior alternative.

The Existing Zoning Alternative would result in a reduction in total square footage and employees when compared to the 300 Airport Boulevard Project, the 350 Airport Boulevard Project, and the Office/Hotel Alternative. This reduction in square footage and employees would still result in impacts similar to the 300 Airport Boulevard Project and the Office/Hotel Alternative. However, the Existing Zoning Alternative would reduce the significant and unavoidable air quality impacts related to compliance with the 2010 Clean Air Plan and operational air pollutant emissions. Because the significant and unavoidable impacts associated with compliance with the 2010 Clean Air Plan and operational air pollutant emissions would be less severe under the Existing Zoning Alternative than under the 300 and 350 Airport Boulevard Projects and the Office/Hotel Alternative, the Existing Zoning Alternative for both projects would be considered the environmentally superior alternative.

# Section 6

## List of Preparers

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- Ruben Hurin, Senior Planner

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### 6.2 CONSULTANTS

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