Impact 5-2: Light and Glare Impacts. The project would be expected to facilitate (permit) construction of five-to-six-story (100- foot) maximum height structures along the east side of Mathilda Avenue and within the North of Washington District. Such buildings could include nighttime exterior illumination features. These exterior
r lighting features would be introduced in a downtown area that is already urbanized, with an abundance of existing lights. Future proposed individual developments within the project area would also be required to comply with existing lighting controls set forth in the Sunnyvale Municipal Code section 19.42.050, which states that "*Lights, spotlights, floodlights, reflectors, and other means of illumination shall be shielded or equipped with special lenses in such a manner as to prevent any glare or direct illumination on any public street or other property.*" Nevertheless, exterior lighting features above the 50-foot elevation on the permitted five-to-six story buildings along Mathilda, including exterior building illumination and illuminated signage, could be prominently visible at night and represent a noticeable visual
r distraction in views from surrounding driving routes and from surrounding residential
r areas. Such effects could represent a ***significant adverse visual impact*** (see criteria a, c, and d in subsection 5.3.1, "Significance Criteria").

Mitigation 5-2: In addition to required compliance with lighting controls set forth in Sunnyvale Municipal Code section 19.42.050, include in the conditions of approval for any individual downtown construction project involving building heights of greater than 50 feet, a prohibition on exterior illumination of any building element above 50 feet after 10:00 PM, every day, or establish this requirement by ordinance for the entire project area. Implementation and enforcement of this measure would reduce this impact to a ***less-than-significant level***.

Mitigation 7-1. Provision of one additional travel lane along these ten freeway segments would reduce impacts due to the project-related traffic increment to a less-than-significant level. However, widening of these freeway segments would require additional right of way acquisition impacts and other costs significantly greater than current funding constraints for freeway expansion in Santa Clara County, and is therefore considered infeasible. In anticipation of such freeway impacts, and consistent with State law, the Santa Clara Valley Transportation Authority (TVA) is currently preparing a Countywide Deficiency Plan which will identify offsetting improvements and other mitigation measures for CMP freeway impacts on a regional basis, and associated local roles and mechanisms for implementing these improvements. The VTA, in conjunction with its Countywide Deficiency planning program, is also undertaking freeway corridor studies of Routes 237, 85, and 101 which will identify improvements for programming of anticipated State, Federal, and regional transportation funds. These funds are identified as "constrained" in VTA's *Valley Transportation Plan 2020* (the regional transportation plan for Santa Clara County), meaning that there is a reasonable likelihood of receiving funds and constructing improvements within the lifetime of the project (the updated Downtown Improvement Program). The VTP 2020 is updated every three years to assure that improvement and funding assumptions remain current. However, given the possibility that the *Countywide Deficiency Plan* and associated improvements may not be adopted or otherwise implemented, this impact to the freeway system is considered ***significant and unavoidable***. As a member agency of the VTA Congestion Management Program, the City of Sunnyvale is participating in the development of the *Countywide Deficiency Plan* and associated improvements, and will continue in this role as a means to support mitigation of project impacts.

Impact 7-2: Impacts on Freeway Segments (Project or No Project Conditions). Additional freeway segments would be subject to significant impacts due to projected 2020 traffic volume conditions **with or without** the project. These freeway segments are identified in bold type in Tables 7.10 and 7.11 and are listed below. Under year 2020 cumulative conditions ***with or without*** the project, these identified freeway segments would be subject to a downgrading of freeway operation from LOS E to LOS F, or where the freeway segment is already operating at LOS F under the Existing Conditions scenario, a traffic volume increase which is greater than 1 percent of design capacity. Either effect would represent a ***potentially significant cumulative impact*** on freeway operations (see criterion 1 in subsection 7.3.1, "Significance Criteria," above.)

The segments that would be significantly impacted under 2020 Project Conditions according to the CMP criteria are listed below.

- U.S. 101 northbound south of Montague Expressway in the AM peak hour
- U.S. 101 northbound between Montague Expressway and Bowers Avenue and SR 237 in the AM peak hour
- U.S. 101 northbound between SR 237 and Ellis Street in the both the AM and PM peak hours
- U.S. 101 northbound between Ellis Street and Moffett Boulevard in both the AM and PM peak hours
- U.S. 101 northbound between Moffett Boulevard and SR 85 in the AM peak hour

Mitigation 7-2: Provision of one additional travel lane along these freeway segments would reduce cumulative operational impacts under the 2020 Project Conditions scenario to a less than significant level. However, widening of these freeway segments would require substantial right of way acquisition and other costs significantly greater than the funding constraints for freeway expansion in Santa Clara County, and is therefore considered infeasible. In anticipation of such cumulative freeway impacts, and consistent with State law, the Santa Clara Valley Transportation Authority is currently preparing a Countywide Deficiency Plan which will identify offsetting improvements and other measures for CMP freeway impacts on a regional basis. The VTA, in conjunction with its Countywide Deficiency planning program, is also undertaking freeway corridor studies of Routes 237, 85, and 101 which will identify improvements for programming of anticipated State, Federal, and regional transportation funds. These funds are identified as "constrained" in VTA's *Valley Transportation Plan 2020* (the regional transportation plan for Santa Clara County), meaning that there is a reasonable likelihood of receiving funds and constructing improvements within the lifetime of the project (the updated Downtown Improvement Program). The VTP 2020 is updated every three years to assure that improvement and funding assumptions remain current. However, given the possibility that the *Countywide Deficiency Plan* and associated improvements may not be adopted or otherwise implemented, this impact to the freeway system is considered ***significant and unavoidable***. As a member agency of the VTA Congestion Management Program, the City of Sunnyvale is participating in the development of the *Countywide Deficiency Plan* and associated improvements, and will continue in this role as a means to support mitigation of project impacts.

(c) 2020 Project Conditions (Scenario 3)--Intersection Level of Service Impacts. Figure 7.5 presents traffic volumes estimated at the study intersections under 2020 Project Conditions (Scenario 3). Table 7.11 presents intersection LOS calculation results for 2020 Project Conditions (Scenario 3). Associated impact conclusions are identified below:

Impact 7-3: Impacts on Intersections (Project Conditions). The 2020 Project Conditions scenario (Scenario 3)--i.e., the addition of project-related traffic to the anticipated 2020 No Project Conditions (Scenario 2)--would result in a significant operational (level of service) impact at the following intersection:

- El Camino Real and Sunnyvale Avenue: a change in LOS from D- to E+ in the AM peak hour.

The project would therefore have a ***potentially significant impact*** at this location (see criterion 1 in subsection 7.3.1, "Significance Criteria," above).

Mitigation 7-3. Adjust the signal cycle lengths. The resulting LOS would be C- during the AM peak hour. Implementation of this measure would therefore reduce the project impact to a ***less-than-significant level***.

Impact 7-4: Impacts on Intersections (Project Condition or No Project Condition). Additional intersections would be impacted from cumulative traffic growth by the year 2020 ***with or without*** the addition of project traffic. The following intersections would be subject to a deterioration in operation (LOS) from acceptable to unacceptable based on City of Sunnyvale, Santa Clara VTA (Congestion Management Program) or City of Cupertino level of service standards:

- Sunnyvale Avenue and El Camino Real: a change from LOS D to E+ in the AM peak hour,
- Sunnyvale-Saratoga Road and Remington Drive: a change from LOS D to F in the AM peak hour,
- De Anza Boulevard and Homestead Road: a change from LOS D to F in the AM peak hour,
- Mary Avenue and Central Expressway: a change from LOS D to F in the AM and PM peak hour,
- Mary Avenue and Evelyn Avenue: a change from LOS C- to E- in the PM peak hour,
- Mary Avenue and El Camino Real: a change from LOS D to F in the PM peak hour, and
- El Camino Real and Hollenbeck Avenue: a change from LOS D- to E+ in the AM peak hour.

These deteriorations in intersection operation would represent a ***potentially significant cumulative impact*** (see criterion 7.3.1(c) in "Significance Criteria").

Mitigation 7-4. For impacts at the intersections of El Camino Real and Hollenbeck Avenue and El Camino Real and Sunnyvale Avenue, adjust the signal cycle lengths. Implementation of this measure would reduce the project impact to a ***less-than-significant level***.

In anticipation of cumulative intersection impacts at the intersections of Sunnyvale-Saratoga Road and Remington Drive, Mary Avenue and El Camino Real and Mary Avenue and Evelyn Avenue, the City of Sunnyvale General Plan *Land Use and Transportation Element* includes mitigating projects to provide a northbound right turn lane at the intersection of Sunnyvale-Saratoga Road and Remington Drive, and a southbound right turn lane at the intersection of Mary Avenue and El Camino Real. The City of Sunnyvale is currently also developing a *Sunnyvale Transportation Strategic Program* that will include these mitigating projects, and is developing a mitigating project for the intersection of Mary Avenue and Evelyn Avenue (provision of a southbound right turn lane). The *Transportation Strategic Program* will also identify funding for these four intersection improvement projects through adoption of a Transportation Impact Fee.

The intersection of Mary Avenue and Central Expressway is identified in this EIR traffic analysis as operating at LOS F in the AM and PM peak hours under the No Project and Project Condition scenarios. This intersection is within the jurisdiction of the County of Santa Clara. The County recently completed its own analysis of future conditions at this location for its *Comprehensive County Expressway Planning Study and Implementation Plan*. The County, using a different forecasting methodology considered more appropriate for forecasting conditions on major regional transportation facilities such as Central Expressway, determined that this location would operate at LOS E under 2025 conditions. As the responsible agency for Central Expressway, the County's forecasts are applicable for determining future improvements at this location. The *Comprehensive County Expressway Planning Study and Implementation Plan* includes future at-grade or grade separation improvements at Central Expressway and Mary Avenue to address forecasted operating issues, which would mitigate the level of service deficiency identified under this Impact 7-4 to a ***less-than-significant level***, even though the *Comprehensive County Expressway Planning Study and implementation Plan* indicates that local and regional level of service standards are not forecast to be violated at this location.

The intersection of De Anza Boulevard and Homestead Road is within the jurisdiction of the City of Cupertino. Provision of an additional southbound through lane and signal cycle length adjustment at this CMP intersection would result in LOS

r F operation during the PM peak hour. However, previous discussion with the City of Cupertino indicates that this improvement is considered infeasible. Therefore this particular cumulative intersection impact is considered to be ***significant and unavoidable.***

(d) 2020 Cumulative Conditions (Scenario 3 Plus Moffett Park)--Traffic Volume Estimates. A Cumulative Conditions (Scenario 3 Plus Moffett Park) analysis has also been performed for th year 2020. This scenario includes the 2020 Project Conditions (Scenario 3) traffic plus the added traffic from the City-selected "Preferred Alternative" for the Moffett Park site. The procedure to forecast traffic impacts for this scenario using the City of Sunnyvale travel model, was identical to the one used to determine 2020 Project Conditions (Scenario 3). Compared to the Project Conditions (Scenario 1), the land use data for this Cumulative Conditions scenario differs only in the zones covering the Moffett Park area of Sunnyvale. Under the "Preferred Alternative," the Moffett Park zones would have an overall increase of about six million square feet in research and development land use.

The differences between the 2020 No Project and 2020 Cumulative Conditions model volumes for all study freeway segments and study intersections were calculated to identify impacts associated with this scenario. This traffic growth increment was added to the 2020 No Project Conditions volumes for each study freeway segment and intersection to estimate the Cumulative Conditions volumes. The volumes were reset to the existing count volumes if the projected volumes were less than existing levels.

2020 Cumulative Conditions (Scenario 3 Plus Moffett Park)--Freeway Levels of Service Impacts. Tables 7.12 and 7.13 present freeway segment LOS calculation results under 2020 Cumulative Conditions for the AM and PM peak hours, respectively. The tables indicate that the 2020 Cumulative Conditions (Scenario 3 Plus Moffett Park) traffic would not impact any additional study freeway segments compared to the 2020 Project Conditions (Scenario 3 without Moffett Park). Therefore, cumulative effects-plus-Moffett-Park on the study freeway segments would represent a ***less-than-significant impact***.

Mitigation. No significant cumulative-plus-Moffett-Park impacts on study freeway segments have been identified; no mitigation associated with cumulative impacts is required.

2020 Cumulative Conditions (Scenario 3 Plus Moffett Park)--Intersection Levels of Service. Figure 7.6 presents the traffic volumes estimated at the study intersections under 2020 Cumulative Conditions (Scenario 3 Plus Moffett Park). Table 7.14 presents intersection LOS calculation results for 2020 Cumulative Plus Moffett Park Conditions. The table indicates that the 2020 Cumulative Conditions (Scenario 3 Plus Moffett Park) traffic would ***not impact*** any additional intersections compared to 2020 Project Conditions (Scenario 3).

Mitigation. No significant cumulative-plus-Moffett-Park impacts on study intersections have been identified; no mitigation associated with cumulative impacts is required.

Neighborhood Street Impacts. The potential impact of the project-facilitated growth scenario on the traffic conditions along nearby neighborhood streets has also been assessed. Table 7.15 presents the existing peak-hour traffic volumes, the traffic added under Project Conditions, total traffic, and the percent increase for each of the study segments. The existing volumes are based on machine counts or turning movement counts at adjacent intersections conducted in November and December 1998.

Typically, for neighborhood streets with existing peak hour traffic volumes above 500 trips, additional traffic would not be noticeable by the residents in locations where it represents less than a 15 percent increase over existing volumes. In general, the issue of traffic increases on neighborhood streets with peak hour volumes below 500 vehicles is one of resident perception rather than quantifiable roadway capacity or safety. For the study street segments listed in Table 7.15, the existing-plus-project increment volumes present the percentage increase anticipated for residential streets in the area, for informational purposes. The anticipated existing-plus-project volumes are well below typical residential street volumes. Therefore, the project is considered to result in a ***less-than-significant*** impact on study neighborhood street segments. Nevertheless, the potential exists for residents on some project study streets to perceive an increase in traffic volumes from the project. In cases where neighborhood streets are experiencing existing peak hour traffic levels below 500 trips, even a doubling of traffic volumes (a 100 percent increase) would be well within normally acceptable levels, based on conventional traffic engineering standards. For the study street segments listed in Table 7.15,

Mitigation 10-1 (continued):

- Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.
- Hydroseed or apply (nontoxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more).
- Enclose, cover, water twice daily, or apply (nontoxic) soil binders to exposed stockpiles (dirt, sand, etc.).
- Limit traffic speeds on unpaved roads to 15 miles per hour.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways.
- Replant vegetation in disturbed areas as quickly as possible.

Implementation of these measures would reduce the impact of the project to a ***less-than-significant level.***

10.3.3 Long-Term Local Air Quality Effects

Localized (Microclimate) Wind Impacts. The localized climatic factor most changed as a result of the additional five-to-six story buildings permitted in some subdistricts under the proposed downtown improvement program update would definitely be wind. Localized temperature, humidity, rainfall, etc., would not be measurably affected. A free-standing building extending well above surrounding structures will intercept and bring to ground level stronger elevated winds. Wind near the upwind corners of the structure and along the sides of the structure will be accelerated. Winds behind the structure will be greatly diminished. The degree of ground-level wind acceleration near buildings is a function of building exposure, massing, and orientation.

Exposure is a measure of the extent that the building extends above surrounding structures into the wind stream. A building that is surrounded by taller structures is not likely to cause adverse wind acceleration at ground level, while even a small building can cause wind problems if it is freestanding and exposed.

Massing is an important design factor in determining wind impact. The extent and character of the building mass controls how much wind is intercepted by the structure and whether building-generated wind acceleration occurs above-ground or at ground level. In general, slab-shaped buildings have the greatest potential for wind problems. Buildings that have an unusual shape

r or utilize setbacks have a lesser effect. A general rule is that the more complex the building is
r geometrically, the less the probable wind impact at ground level.

r Orientation also determines how much wind is intercepted by the structure, a factor that
r directly determines wind acceleration. In general, a building that is oriented with its wide axis
r across the prevailing wind direction will have a greater impact on ground-level winds than a
r building oriented with its long axis along the prevailing wind direction.

r Due to the many variables involved, no one particular impact or pattern of impacts can be
r predicted regarding the microclimate effects of changes in permitted building heights proposed
r under the Downtown Improvement Program Update. Identification of an overall central area
r significant microclimatic impact as a result of the proposed maximum building height limitation
r changes would be too speculative at this point. As shown in Table 18.2 in the Alternatives
r chapter of the Draft EIR (pages 18-5 and 18-6), the differences in maximum permitted building
r height between what is permitted under the current (1993) Specific Plan and what is proposed
r varies substantially from subdistrict to subdistrict. In two subdistricts (18a and 20), the
r permitted maximum building height would increase by from 25 to 70 feet under the proposed
r update; in ten subdistricts (1a, 4, 5, 6, 13, 13a, 14, 15, 16, 17), the permitted maximum
r building height would decrease by from 10 to 25 feet under the proposed update; in three
r subdistricts (2, 3, 7), the permitted maximum building height would not change.

r **Mitigation.** No significant impact has been identified; no mitigation is required.
r

Changes in Local Carbon Monoxide Levels. Development activity resulting from the proposed project would generate new vehicle trips. Along local streets, these new trips would affect concentrations of carbon monoxide. Within the regional air basin, these new trips would add to the pollution burden. Nevertheless, modeling results indicate that future local carbon monoxide levels near worst-case intersections in the project area under the "with project" year 2020 growth scenario would be well within state and federal air quality standards. This impact would therefore be considered ***less-than-significant.***

At the local level, the pollutant of greatest concern is carbon monoxide. Concentrations of carbon monoxide are greatest near intersections and roadways with congested traffic. Such carbon monoxide emissions can be a problem in wintertime when stagnant meteorological conditions occur (i.e., very little vertical or horizontal mixing of air in the lower atmosphere).

Future "with project" local carbon monoxide levels were modeled using a screening form of the CALINE-4 computer model developed by the BAAQMD. Carbon monoxide levels were modeled at the ten busiest signalized intersections affected by growth and intensification in the project area, each forecasted to operate at LOS E or F in the year 2020 during the critical PM peak hour. Modeled inputs included "with project" worst-case traffic levels and meteorological conditions for wintertime when the greatest potential for elevated carbon monoxide levels

11. DRAINAGE AND WATER QUALITY

This chapter describes (1) existing drainage and water quality characteristics within the proposed project area, (2) the potential impacts of anticipated project-facilitated development and improvement activities on these conditions, and (3) any measures necessary to mitigate identified significant impacts.[1]

11.1 SETTING

11.1.1 Areawide Drainage and Hydrology

The Downtown Improvement Program project area is located within the northern Santa Clara Valley Watershed and drains into San Francisco Bay, approximately five miles north of the project area. Overall drainage patterns in Santa Clara County are separated at an alluvial divide near Morgan Hill, approximately 30 miles southeast of the project are. Areas north of the divide drain northward to San Francisco Bay, while southern areas drain southward to Monterey Bay through the Pajaro River. Surface drainage along the northern valley floor consists of developed urban storm drains with highly modified stream channels. Major rivers of the Santa Clara Valley Watershed include the Guadalupe River, Coyote Creek, Saratoga Creek, Calabazas Creek, and Stevens Creek. The project area is located approximately 1.5 miles east of Stevens Creek and 2.5 miles west of Calabazas Creek.[2]

Precipitation in Sunnyvale drains either to Stevens Creek in the southwest portion of the city, Calabazas Creek in the east, or to one of three constructed channels in the interior of the city. The three flood channels (Sunnyvale East and West Channels and the El Camino Channel) were constructed to accommodate increased runoff from the increasing impervious surfaces within the city limits and in order to decrease the potential for flooding and property damage. The City owns and operates approximately 4,270 storm drain inlets,[3] two

[1]The "Setting" and portions of "Pertinent Plans and Policies" are derived from chapter III.4 (Water Quality and Hydrology) of the Olson Cherry Orchard Mixed-Use Project Final Environmental Impact Report, prepared for the City of Sunnyvale by ESA, May 1999. Statistics have been verified or, as necessary, revised by Wagstaff and Associates.

[2]Ibid., p. III.4-1.

[3]Jim Craig, Field Services Superintendent, City of Sunnyvale Department of Public Works, written communication, March 18, 2003.

pump stations, and 150 miles of storm drains. The flood channels and creeks within the city limits (Stevens Creek, Calabazas Creek, the Sunnyvale East and West Channels, and the El Camino Channel) are owned and maintained by the Santa Clara Valley Water District (SCVWD).[1]

11.1.2 South San Francisco Bay

South San Francisco Bay (south of the Dumbarton Bridge) is characterized by shallow depths, limited freshwater inflow, and slow currents, which create increased potential for environmental impacts from natural and human activities. The South Bay receives all water runoff from the northern Santa Clara Valley Watershed, which is bounded by the Diablo Mountains to the east, the Santa Cruz Mountains to the south and west, and Coyote Reservoir to the south. All the land in the watershed drains to storm drains, creeks, and rivers, which, in turn, flow to the Bay. Fresh water also comes from the three South Bay wastewater treatment plants in Palo Alto, Sunnyvale, and San Jose. The watershed's edge is lined with sloughs, salt ponds, and salt and brackish marshes that lead up to creekside woodland habitat above the basin floor.[2]

Due to its unique physical characteristics and location adjacent to a major urban area, the South Bay faces continual water pollution. Government regulations and pollution prevention programs have been instrumental in reducing the flow of pollutants from areas within its watershed. In the past, most of these measures were aimed at wastewater treatment facilities and major industries. However, it is currently recognized that urban and rural sources play a major role in contributing to pollutants entering creeks and the Bay.[3]

Nonpoint (i.e., decentralized) source pollution is considered the major contributor to the mass loading of pollutants into the South Bay. Pollution from nonpoint sources has been more difficult to manage than point source pollution. Nonpoint sources include pollutants entrained in surface runoff from streets, parking lots, landscaping, and other urban areas where the runoff proceeds directly to storm drains. This polluted runoff is not treated and flows through the storm drain directly into the Bay. Typical for urban areas, nonpoint source pollution is likely to come from fairly common sources, including sediment, trash and debris, metals, salts, hydrocarbons, volatile organic compounds, grease and oils, bacteria, fecal coliform, herbicides and pesticides, and fertilizers.[4]

To address all sources of pollution that threaten the Bay, and to protect water quality throughout Santa Clara Basin watersheds, the Watershed Management Initiative (WMI) was

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[1]Olson Cherry Orchard FEIR, p. III.4-1.

[2]Ibid., p. III.4-2.

[3]Ibid.

[4]Ibid.

11.1.5 Groundwater Quality and Groundwater Related Issues

Sunnyvale lies above the Santa Clara Valley groundwater basin (DWR Basin No. 2-9B), which r covers approximately 240 square miles, has a range of depth to water from less than 0 (for r flowing artesian wells) to an average of 50 to 60 feet, a storage capacity of 350,000 acre-feet, and a sustainable perennial yield of 100,000 acre-feet. This aquifer is used as an important source of municipal and domestic water, industrial process water, industrial service water, and agricultural water supply.[1]

The Santa Clara Valley groundwater basin is comprised of multiple sub-aquifers existing both r horizontally and vertically in the geologic formation. Most drinking water is now pumped from depths of greater than 200 feet in the north valley to avoid polluted groundwater in upper r aquifers. Urban uses in the project area that contribute contaminants to storm runoff also contaminate groundwater wherever water on the ground surface percolates into the groundwater system.[2]

Subsidence is another effect of overdraft in Santa Clara County. Subsidence occurs when groundwater is withdrawn at a rate faster than it is recharged (overdraft) and the aquifer sediments density (subsidence). Due to excessive groundwater pumping for irrigated agriculture, and subsequently for urban and industrial development, some areas of Santa Clara County have subsided up to 14 feet. Within Sunnyvale, ground subsidence totaled approximately six to eight feet throughout the city from 1934 to 1967. The highest levels of subsidence that occurred earlier this century have been halted by a system of reservoirs and

[1]Ibid.

[2]Ibid., p. III.4-6.

groundwater recharge facilities that the SCVWD operates. Groundwater levels have recovered primarily due to the availability of surface water imports to Santa Clara County for direct use and recharge of aquifers.[1]

Historic groundwater level data indicates that the water table in Santa Clara County can fluctuate from year to year by 60 feet in some areas. The direction of regional groundwater flow is to the north-northeast toward San Francisco Bay. High groundwater tables can lead to water damage to below-grade structures and result in contaminant spreading where excavation and subsequent pumping is required.[2]

11.1.6 Local Drainage and Hydrology

The topography in Sunnyvale slopes generally to the northeast, with elevations ranging from sea level to approximately 290 feet. The project area is generally flat and highly urbanized with buildings, pavement, and roadways. The project area is serviced by a storm drainage system that includes 12- to 33-inch-diameter lines.[3] The existing storm drain inlets in the City were designed to accommodate flows from the 10-year frequency storm, which is the design standard for Sunnyvale. The City attempts to maintain and operate the storm drainage system so that surface runoff is drained from 95 percent of the streets within one hour after a storm event.[4]

According to the flood mapping of the Federal Emergency Management Agency (FEMA) (Flood Insurance Rate Map, Community Panel Number 060352-0001-D, Panels 1 and 2, August 23, 1998), the CalTrain tracks, which form the northern border of the project area, are within a 100-year flood area; however, no housing or structures are proposed for this location. No other portion of the project area is located in a 100-year flood area.

r Under current conditions, Sunnyvale West and East Channels do not provide protection in the
r event of a 100-year flood. The SCVWD has identified the need for improvements on
r Sunnyvale East Channel from Guadalupe Slough to Highway 280, and on Sunnyvale West
r Channel from Guadalupe Slough to Highway 101. The SCVWD has identified these capital
r projects for construction by the year 2016 in the "Clean, Safe Creeks, and Natural Flood
r Protection" Plan.

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[1]Ibid., p. III.4-5.

[2]Ibid., p. III.4-6.

[3]Craig.

[4]Olson Cherry Orchard FEIR, p. III.4-5.

11.1.7 Local Water Quality

Urban uses in the project area are assumed to contribute suspended sediments, trace metals, chemical pollutants (pesticides), oil and grease, and other debris to the surface runoff (nonpoint source pollution) collected by storm drains. Pollutant levels in storm runoff are typically highest in the early part of the hydrologic year (autumn), especially during the first major rainfall event after the dry season, then generally decrease with successive storm flows. Water quality monitoring of surface runoff for the City storm drain system was initiated in 1988.

(SCVURPPP). The program is run under a National Pollution Discharge Elimination System (NPDES) permit from the Regional Water Quality Control board (RWQCB), which defines the responsibilities of participants to control nonpoint source pollution, including the adoption and enforcement of local ordinances, control measures, and monitoring and inspections programs. The program began in 1986 when the County of Santa Clara, the SCVWD, and local jurisdictions joined together to comply with federal stormwater requirements of the RWQCB's *Water Quality Control Plan.* An NPDES permit for stormwater was adopted by the RWQCB for the SCVURPPP in June 1990. The permit requires the administrators of the program to plan and implement the following programs: elimination of illicit connections and illegal dumping, management of stormwater, identification and control of runoff from industrial dischargers' facilities, field testing of selected stormwater pollutant control measures, source control, toxicity control; characterization of urban transportation corridors, monitoring, and reporting.[1]

In the northern Santa Clara Valley, storm drains flow directly to local creeks and San Francisco Bay. Some common sources of this pollution include spilled oil, fuel, and fluids from vehicles and heavy equipment; construction debris, including dirt; landscaping runoff containing pesticides or weed killers; yard and waste debris; and materials such as used motor oil, antifreeze, and paint products that people pour or spill into a street or storm drain. Thirteen valley cities have joined together with Santa Clara County and the SCVWD to educate local residents and business and to decrease storm drain pollution. Under the SCVURPPP, the local jurisdiction is responsible for monitoring the activities that occur on a construction site. Owners and contractors may be held responsible for any environmental damage caused by subcontractors or employees.[2]

The areawide municipal stormwater NPDES permit, under which the City of Sunnyvale is covered, also requires the SCVURPPP to implement an infiltration policy for Santa Clara Valley.[3]

The SCVWD shares responsibility for flood control with the City. For over 30 years, the SCVWD has shared responsibility for both water supply and flood management in Santa Clara County. About 70,000 homes and businesses in the valley could be flooded to some degree in a major flood. SCVWD, as the countywide flood control agency, shares responsibility for reducing or eliminating flooding. To accomplish that task, the district undertakes a wide variety of flood

[1]Ibid., pp. III.4-7 and 8; and Kristy McCumby, Environmental Specialist, City of Sunnyvale Department of Public Works, written communication, March 14, 2003.

[2]Olson Cherry Orchard FEIR, p. III.4-8.

[3]Ibid.

r protection projects. Typical solutions to flood hazards include floodplain zoning (a City
r responsibility), maintaining existing facilities, levee and flood wall construction, or structural work in flood channels with rock, gabions, concrete, earth-lining, or other material.[1]

11.2.3 San Francisco Bay Regional Water Quality Control Board

The project area is located within the jurisdiction of the San Francisco Bay Regional Water Quality Control Board (RWQCB). The RWQCB has issued a NPDES stormwater discharge general permit to the SCVURPPP, of which the City is a co-permittee. The RWQCB is responsible for the protection of beneficial uses of water resources within the San Francisco Bay Region. The RWQCB uses planning, permitting, and enforcement authorities to meet this responsibility, and has adopted the *Water Quality Control Plan* (*Basin Plan*) (latest edition 1995) to implement plans, policies, and provisions for water quality planning and management. The *Basin Plan* contains water quality objectives that are intended to protect the beneficial uses of the basin. The RWQCB has set water quality objectives for all surface waters in the region. Water quality objectives are also listed for groundwater.[2]

The RWQCB administers the NPDES stormwater-permitting program in the Bay Area. As of July 1, 2003, construction activities that create one acre or more of impervious surface are subject to the newly revised permitting requirements of the NPDES General Permit for Discharges of Storm Water Runoff Associated With Construction Activity (General Construction Permit).[3] Project owners submit a Notice of Intent (NOI) to the RWQCB to be covered by the General Permit prior to the beginning of construction. The General Construction Permit requires the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must be prepared before construction begins, usually during the planning and design phases of a project. The plan must include specifications for Best Management Practices (BMPs) that would be implemented during project construction to control contamination of surface flows and the potential discharge of pollutants from the site. Additionally, the plan must describe measures to prevent or control pollutants in runoff after construction is complete, and identify a plan to inspect and maintain these measures. Implementation of the plan starts with the commencement of construction and continues through project completion. The SWPPP document itself remains on-site during construction. After completion of the project, the owners submit a Notice of Termination to the RWQCB to indicate that construction is completed.[4]

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[1]Ibid.

[2]Ibid., pp. III.4-8 and 9.

[3]*Municipal Storm Water Permit Revisions: Impacts to Cities and New Development Programs*, www.SCVURPPP.org, March 24, 2003.

[4]Olson Cherry Orchard FEIR, p. III.4-9.

(o) CERCLIS Database. The Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) contains data on potentially hazardous waste sites that have been reported to the US EPA by pursuant to Section 103 of the Comprehensive Response, Compensation, and Recovery Act (CERCLA). CERCLIS contains sites that are either proposed for or on the National Priorities List (NPL), and sites that are in the screening and assessment phase for possible inclusion on the NPL. One site in the project vicinity, the Northrop Grumman site at 401 East Hendy Avenue (north of the project area), is on this list.

(p) CERCLIS-NFRAP Database. This database identifies CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) as of February 1995. These sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly, or the contamination was not serious enough to require federal Superfund action. As indicated in Table 13.1, one CERCLIS-NFRAP site was identified in the project vicinity, the Signetics Corporation site at 305 Mathilda Avenue (in the project area).

(q) PADS Database. The PCB Activity System Database (PADS) identifies generators, transporters, commercial storers, and/or brokers and disposers of PCBs who are required to notify the U.S. EPA of such activities. One site in the project vicinity (but outside the project area), the Northrop Grumman site noted above, is on this list. The source of this database is the U.S. EPA.

13.1.3 Soil/Groundwater Contamination Potential

As indicated by the data described above and summarized in Table 13.1, the project vicinity contains numerous sites where hazardous materials are generated, stored, handled, and/or treated, including sites of existing and past industrial uses, gas stations, auto repair enterprises, and other land uses that use, store, or dispose of hazardous materials and wastes. The data indicate that some underground tanks in the project vicinity have leaked. It is also possible that fuel spills have occurred around associated above- or below-grade fuel storage tanks. Both types of occurrences could result in contamination of soil and/or groundwater in the vicinity. If fuel spills or leaks have occurred and the soil or groundwater is contaminated, project construction workers could be exposed to contamination in the short term during site preparation work. In addition, past transport, handling, and storage of fuels and other hazardous materials associated with such uses may have resulted in soil or groundwater contamination in the project vicinity. However, none of the identified sites in or immediately adjacent to the project area have been determined to pose a hazard to human health.

13.1.4 Asbestos, PCB, and Lead-Based Paint Potentials

Existing buildings in the project area could contain asbestos, polychlorinated biphenyls (PCBs), and/or lead-based paint (LBP). The presence of asbestos in a building does not necessarily mean that the building

poses a health hazard. In many cases, asbestos within buildings is inaccessible or sealed within another material, and thus unable to cause a health hazard. However, asbestos fibers can be released during building renovation or demolition, unless proper precautions are taken.

The adverse health effects associated with asbestos exposure have been extensively studied. Studies have demonstrated that inhalation of asbestos fibers may lead to increased risk of developing respiratory or abdominal cancers. There is no known safe level of exposure.

The removal, handling, transport, and disposal of asbestos are heavily regulated at the federal, state, and local levels. These regulations are designed to minimize any exposure of on-site employees (e.g., construction workers) and the general public to asbestos. The U.S. EPA provides asbestos standards. The federal Occupational Safety and Health Administration (OSHA) and its state counterpart, CalOSHA, regulate various aspects of asbestos removal, handling and disposal, to ensure worker safety. Transport and disposal of asbestos-containing material is also regulated.

PCBs are another potentially hazardous class of compounds commonly found in the electrical transformers in older commercial buildings. While manufacture of PCBs has been banned since 1977, some older pieces of equipment may still contain PCBs.

r Older buildings in the project area could also contain lead-based paint (LBP). LBP can be
r toxic, with adverse health effects if safe work and disposal practices are not followed during
r demolition.

13.1.5 Regulatory and Planning Considerations

The following agencies have regulatory authority for the handling and management of hazardous materials/wastes within Sunnyvale.

(a) Environmental Protection Agency. The Environmental Protection Agency (EPA), Region IX, regulates chemical and hazardous materials use, storage, treatment, handling, transport, and disposal practices; protects workers and the community (along with CalOSHA--see below); and integrates the federal Clean Water Act and Clean Air Act into California legislation.

(b) Federal Occupational Health and Safety Administration. The federal Occupational Health and Safety Administration (OSHA) establishes and enforces regulations related to health and safety of workers exposed to toxic and hazardous materials. In addition, OSHA sets health and safety guidelines for construction activities and manufacturing facility operations.

(c) California Occupational Safety and Health Administration. The California Occupational Safety and Health Administration (CalOSHA) is responsible for promulgating and enforcing health and safety standards and implementing federal OSHA laws.

(d) State of California Water Quality Control Board. The Regional Water Quality Control Board (RWQCB), San Francisco Region, protects surface and groundwater quality from pollutants discharged or threatened to be discharged to the waters of the state. The RWQCB issues and enforces National Pollutant Discharge Elimination System (NPDES) permits.

Step 3. If it is determined that extensive soil contact would accompany the intended use of the site, undertake a Phase II investigation, involving soil sampling at a minimum, at the expense of the property owner or responsible party. Should further investigation reveal high levels of hazardous materials in the site soils, mitigate health and safety risks according to City of Sunnyvale, Santa Clara County Department of Environmental Health, and Regional Water Quality Control Board (RWQCB), and California Department of Toxic Substances Control (DTSC) regulations. This would include site-specific health and safety plans prepared prior to undertaking any building or utility construction. Also, if buildings are situated over soils that are significantly contaminated, undertake measures to either remove the chemicals or prevent contaminants from entering and collecting within the building. If remediation of contaminated soil is infeasible, a deed restriction would be necessary to limit site use and eliminate unacceptable risks to health or the environment.

(b) Surface or Groundwater Contamination. In order to reduce potential health hazards due to construction personnel or future occupant exposure to surface water or groundwater contamination, developers would complete the following steps for each site proposed for disturbance as part of a project-facilitated construction activity in the project area:

Step 1. Investigate the site to determine whether it has a record of hazardous material discharge into surface or groundwater, and if so, characterize the site according to the nature and extent of contamination that is present before development activities proceed at that site.

Step 2. Install drainage improvements in order to prevent transport and spreading of hazardous materials that may spill or accumulate on-site.

Step 3. If investigations indicate evidence of chemical/environmental hazards in site surface water and/or groundwater, then mitigation measures acceptable to the RWQCB would be required to remediate the site prior to development activity.

Step 4. Inform construction personnel of the proximity to recognized contaminated sites and advise them of health and safety procedures to prevent exposure to hazardous chemicals in surface water/groundwater.

Mitigation. No significant additional adverse impacts have been identified; no additional mitigation is required.

Potential Asbestos, PCB, and Lead-Based Paint Exposure. Removal or disturbance of asbestos-containing material (ACM), transformers, and/or lead-based paint (LBP) during project-facilitated alteration, renovation, or demolition of existing structures within the project area could expose construction workers and the general public to friable asbestos, PCBs, and/or LBP. Therefore, as a condition of project-

facilitated alteration, renovation, or demolition permit approval for buildings within the project area, the City would routinely require the project applicant to coordinate with the Bay Area Air r Quality Management District (BAAQMD) to determine if asbestos, PCBs, or LBP are present.

r Ensuring proper identification and removal of ACM, PCBs, and/or LBP requires each project applicant to complete the following steps:

Step 1. Thoroughly survey the project site and existing structures for the presence of r asbestos-containing material, PCBs, and LBP. The survey shall be performed by a person who is properly certified by OSHA and has taken and passed an EPA-approved building inspector course.

Step 2. If building elements containing any amount of asbestos are present, prepare a written *Asbestos Abatement Plan* describing activities and procedures for removal, handling, and disposal of these building elements using the most appropriate procedures, work practices, and engineering controls.

Step 3. Provide the asbestos survey findings, the written *Asbestos Abatement Plan* (if necessary), and notification of intent to demolish to the City of Sunnyvale and Santa Clara County Department of Environmental Health at least ten days prior to commencement of demolition.

r Step 4. Assume that all painted surfaces in buildings over 10 years old include lead-based r paint (LBP), abate the LBP or conduct an LBP assessment of the buildings, and r implement associated remediation (lead-safe work practices and appropriate r disposal practices) in accordance with applicable federal, state, and Santa Clara r County regulations.

r Step 5. Remove any on-site transformers prior to demolition of non-residential buildings.

Implementation of these required measures would be expected to reduce the potentially r significant health and safety impacts associated with asbestos removal, PCBs, and LBP to a ***less-than-significant level***.

Mitigation. No significant adverse impacts have been identified; no additional mitigation is required.

Interference With Emergency Response Plans. The project would not interfere with any established emergency response plan, provided that mitigation measures identified in chapter 8 (Public Services and Utilities) are implemented.

Mitigation. No significant adverse impacts have been identified; no additional mitigation is required.

Table 18.1
ALTERNATIVES COMPARISON: DEVELOPMENT POTENTIAL AND MAX. BLDG. HEIGHT

Land Use/Max. Building Height	Existing Conditions	Proposed Project	Alt. 1: 1993 Specific Plan	Alt. 2: Reduced Development	Alt. 3: Modified Land Uses	Alt. 4: Multi-Use
Residential (Units)	850	2,520	1,760	2,073	2,137	1,725
Office (sq. ft.)[1]	329,550	1,272,190	1,039,440	1,145,470	999,911	796,632
Retail (sq. ft.)	1,330,910	1,447,550	1,508,780	1,447,550	1,447,670	1,032,303
Theater (seats)	0	0	2,280	0	0	3,230
Hotel (rooms)	155	0	208	0	0	0
Multi-Use (sq. ft.)	0	0	0	0	0	635,600
Public Facility (sq. ft.)	0	12,240	12,240	12,240	12,240	12,240
r Max. Bldg. Height (ft.)[2]	30-50	30-100	30-125	30-75	30-75	30-46

SOURCE: City of Sunnyvale Community Development Department; Wagstaff and Associates

[1] The Mozart development (450,000 sq. ft. of office and 10,000 sq. ft. of retail/restaurant/entertainment) was under construction at the time preparation of this EIR commenced (Fall 2002). Since the potential environmental impacts of that development's long-term operation (e.g., project-generated traffic, noise and air emissions associated with project-generated traffic, public service and utility needs, etc.) have not yet become part of existing environmental conditions, the Mozart development has been included in "development potential" and not in "existing" conditions. The specific environmental impacts of the Mozart development were addressed in the Block 1 Office/Retail Project Initial Study/Mitigated Negative Declaration (February 2000).

[2] Max. bldg. height figures refer to all subdistricts except #1, the recently completed Mozart development, which includes
r buildings up to 106 feet tall (5 to 6 stories). For Alt. 1, a maximum building height of 125 feet is permitted in subdistrict 1a, the
r Town and Country site. For Alt. 4, max. building heights also exclude possible 100-foot tall stage block portion of the performing arts center.

Table 18.2
ALTERNATIVES COMPARISON: CHANGES IN DEVELOPMENT TOTALS (INCL. EXISTING)

Subdistrict	Land Use/Max. Bldg. Height	Existing Conditions Buildout Total	Existing Conditions Change vs. Project	Proposed Project Buildout Total	Alt. 1: Buildout Under Current Specific Plan Buildout Total	Alt. 1: Buildout Under Current Specific Plan Change vs. Project	Alt. 2: Reduced Development/ Reduced Height Buildout Total	Alt. 2: Reduced Development/ Reduced Height Change vs. Project	Alt. 3: Modified Land Uses and Bldg. Heights Buildout Total	Alt. 3: Modified Land Uses and Bldg. Heights Change vs. Project	Alt. 4: Multi-Use and Reduced Bldg. Heights Buildout Total	Alt. 4: Multi-Use and Reduced Bldg. Heights Change vs. Project
1a	Residential (units)	20	-490	510	118	-392	255	-255	255	-255	0	-510
	Retail (sq. ft.)	126,622	+74,122	52,500	0	-52,500	52,500	0	52,500	0	0	-52,500
	Multi-Use (sq. ft.)	0	0	0	0	0	0	0	0	0	157,000	+157,000
	Theater (seats)	0	0	0	1,750	+1,750	0	0	0	0	3,230	+3,230
	Hotel (rooms)	0	0	0	208	+208	0	0	0	0	0	0
	Max. Bldg. Height (ft.)	125	+25	100	125	+25	50	-50	50	-50	46	-54
2	Residential (units)	1	+1	0	0	0	0	0	0	0	0	0
	Office (sq. ft.)	0	-80,000	80,000	80,000	0	80,000	0	80,000	0	80,000	0
	Retail (sq. ft.)	170,891	0	170,891	146,500	-24,391	170,891	0	170,891	0	146,500	-24,391
	Theater (seats)	0	0	0	330	+330	0	0	0	0	0	0
	Max. Bldg. Height (ft.)	36	0	36	36	0	36	0	36	0	36	0
3	Residential (units)	0	0	0	157	+157	0	0	0	0	157	+157
	Retail (sq. ft.)	28,117	-34,483	62,600	0	0	62,600	0	62,600	0	0	-62,600
	Hotel (rooms)	106	+106	0	0	0	0	0	0	0	0	0
	Max. Bldg. Height (ft.)	50	0	50	50	0	50	0	50	0	50	0
4, 5, 6	Residential (units)	162	-366	528	424	-104	528	0	528	0	406	-122
	Retail (sq. ft.)	130,343	+130,343	0	0	0	0	0	0	0	0	0
	Max. Bldg. Height (ft.)	50	+10	40	50	+10	40	0	40	0	30-40	0-(-10)
7	Residential (units)	100	0	100	100	0	100	0	100	0	100	0
	Office (sq. ft.)	0	-36,000	36,000	80,000	44,000	36,000	0	36,000	0	36,000	0
	Retail (sq. ft.)	47,658	+33,658	14,000	14,000	0	14,000	0	14,000	0	14,000	0
	Max. Bldg. Height (ft.)	50	0	50	50	0	50	0	50	0	36	-14
13, 13a	Residential (units)	6	-134	140	0	-140	140	0	0	-140	0	-140
	Office (sq. ft.)	88,449	-211,551	300,000	176,021	-123,979	300,000	0	176,021	-123,979	176,021	-123,979
	Retail (sq. ft.)	0	-10,000	10,000	20,120	+10,120	10,000	0	20,120	+10,120	20,120	+10,120
	Max. Bldg. Height (ft.)	50	+0-20	30-50	50	+0-20	30-50	0	50	+0-20	30	0-(-20)
14, 15, 16, 17	Residential (units)	54	-511	565	320	-245	373	-192	565	0	373	-192
	Office (sq. ft.)	51,302	+51,302	0	298,931	+298,931	0	0	0	0	0	0
	Retail (sq. ft.)	14,862	+14,862	o	0	0	0	0	0	0	0	0
	Max. Bldg. Height (ft.)	50	+0-20	30-50	50	+0-20	30	0-(-20)	30-50	0	30-40	0-(-10)
r 18	Residential (units)	0	-200	200	0	-200	200	0	200	0	0	-200
	Retail (sq. ft.)	710,876	-287,000	997,876	997,876	0	997,876	0	997,876	0	617,000	-380,876
	Multi-Use (sq. ft.)	0	0	0	0	0	0	0	0	0	120,600	+120,600
r	Max. Bldg. Height (ft.)	75	0	75	75	0	75	0	75	0	46	-24

Subdistrict	Land Use/Max. Bldg. Height	Existing Conditions Buildout Total	Existing Conditions Change vs. Project	Proposed Project Buildout Total	Alt. 1: Buildout Under Current Specific Plan Buildout Total	Alt. 1: Buildout Under Current Specific Plan Change vs. Project	Alt. 2: Reduced Development/ Reduced Height Buildout Total	Alt. 2: Reduced Development/ Reduced Height Change vs. Project	Alt. 3: Modified Land Uses and Bldg. Heights Buildout Total	Alt. 3: Modified Land Uses and Bldg. Heights Change vs. Project	Alt. 4: Multi-Use and Reduced Bldg. Heights Buildout Total	Alt. 4: Multi-Use and Reduced Bldg. Heights Change vs. Project
18a	Residential (units)	0	0	0	0	0	0	0	0	0	0	0
	Office (sq. ft.)	29,856	-278,144	308,000	65,000	-243,000	203,280	-104,720	203,280	-104,720	0	-308,000
	Retail (sq. ft.)	0	-10,000	10,000	0	-10,000	10,000	0	10,000	0	115,000	+105,000
	Multi-Use (sq. ft.)	0	0	0	0	0	0	0	0	0	358,000	+358,000
	Max. Bldg. Height (ft.)	30	-70	100	30	-70	60	-40	60	-40	30-40	(-60)-(-70)
20	Residential (units)	12	+12	0	168	+168	0	0	12	+12	12	+12
	Office (sq. ft.)	21,121	-43,579	64,700	130,250	+65,550	42,700	-22,000	21,121	-43,579	21,121	-43,579
	Retail (sq. ft.)	0	-10,000	10,000	0	-10,000	10,000	0	0	-10,000	0	-10,000
	Max. Bldg. Height (ft.)	55	-45	100	55	-45	60	-40	55	-45	55	-45
Remaining Areas	Residential (units)	129	-348	477	473	-4	477	0	477	0	477	0
	Office (sq. ft.)	102,822	-308,668	483,490	209,238	-274,252	483,490	0	483,490	0	483,490	0
	Retail (sq. ft.)	265,542	+145,859	119,683	330,284	+210,601	119,683	0	119,683	0	119,683	0
	Theater (seats)	0	0	0	0	0	0	0	0	0	0	0
	Hotel (rooms)	49	+49	0	0	0	0	0	0	0	0	0
	Public Facility (sq. ft.)	0	-12,240	12,240	12,240	0	12,240	0	12,240	0	12,240	0
	Max. Bldg. Height (ft.)	--	--	--	--	--	--	--	--	--	--	--
Total Project Area	Residential (units)	850	-1,670	2,520	1,760	-760	2,073	-447	2,137	-383	1,725	-795
	Office (sq. ft.)	329,550	-942,640	1,272,190	1,039,440	-232,750	1,145,470	-126,720	999,911	-272,279	796,632	-475,558
	Retail (sq. ft.)	1,330,910	-116,640	1,447,550	1,508,780	+61,230	1,447,550	0	1,447,670	+120	1,032,303	-415,247
	Theater (seats)	0	0	0	2,080	+2,080	0	0	0	0	0	0
	Hotel (rooms)	155	+155	0	208	+208	0	0	0	0	0	0
	Multi-Use (sq. ft.)	0	0	0	0	0	0	0	0	0	635,600	+635,600
	Public Facility (sq. ft.)	0	-12,240	12,240	12,240	0	12,240	0	12,240	0	12,240	0
	Max. Bldg. Height (ft.)	30-50	--	30-100	30-50	--	30-75	--	30-75	--	30-46	--

SOURCE: City of Sunnyvale Department of Community Development; Wagstaff and Associates.

Legend:

sq. ft. = square feet
ft. = feet
st. = stories

Notes:

(1) Max. building height figures are for all districts except district 1, the recently completed Mozart development, which includes building s of 5- to 6-stories up to 106 feet high. For alt. 5, the building height range excludes a possible 100-foot tall stage block portion of the performing arts center.

(2) For theater seats (subdistricts 1a and 2), consistent with the 1993 Specific Plan, the gross square footage of the proposed theater building has been divided by a factor of 52.6 square feet per seat to obtain the approximate total number of seats (e.g., 170,000 sq. ft. ÷ 52.6 sq. ft./seat = 3,250 seats--see Alt. 5).

Table 18.3
ALTERNATIVES COMPARISON: ESTIMATED TOTAL BUILDING FLOOR AREA

Alternative	Residential Units	Residential Sq. Ft.[1]	Office/Retail, Public Facility and Multi-Use Sq. Ft.[2]	Estimated Total Sq. Ft.
Existing Conditions	850	935,000	1,660,460	2,595,460
Proposed Project	2,520	2,772,000	2,719,740	5,491,740
Alternative 1: 1993 Specific Plan	1,760	1,936,000	2,657,628 [3]	4,593,628
Alternative 2: Reduced Development	2,073	2,280,300	2,593,020	4,873,320
r Alternative 3: Modified Land Use	2,137	2,350,700	2,447,581	4,798,281
Alternative 4: Multi-Use	1,725	1,897,500	2,573,943	4,471,443

SOURCE: Wagstaff and Associates, March 2003.

Notes:

(1) Residential floor area total based on an assumed average per unit floor area total (gross) of 1,100 square feet, derived from comparable recent multifamily housing development projects in Peninsula central areas.

(2) Includes an assumed floor area of 52.6 sq. ft. per theater seat, based on the 1993 Specific Plan and comparable Bay Area theater projects.

(3) Includes buildout of subdistrict 20.

Table 18.5
ALTERNATIVES COMPARISON: ENVIRONMENTAL IMPACTS IN COMPARISON TO THE PROPOSED PROJECT

Impact	Proposed Project	Alt. 1: Current Specific Plan	Alt. 2: Reduced Development	Alt. 3: Modified Land Uses	Alt. 4: Multi-Use
Land Use	No significant impacts	No significant impacts	No significant impacts	No significant impacts	No significant impacts
Aesthetics	Significant bldg. scale and light/glare impacts	Reduced bldg. scale and light/glare impacts	Reduced bldg. scale and light/glare impacts	Similar bldg. scale and light/glare impacts	Reduced bldg. scale and light/glare impacts
Transportation and Parking[1]	Significant AM and PM intersection and freeway impacts	Less AM and greater PM impacts	Less AM and less PM impacts	Less AM and less PM impacts	Less AM and less PM impacts
Public Services and Utilities	No significant impact	Similar impacts	Less impact	Less impact	Less impact
Noise	Significant construction and long term impacts	Similar impacts	Similar impacts	Similar impacts	Similar impacts
Air Quality[1]	Significant construction and long term impacts	Similar impacts	Similar impacts	Similar impacts	Similar impacts
Drainage and Water Quality	Significant water quality impacts	Similar impacts	Similar impacts	Similar impacts	Similar impacts
Soils and Geology	Significant soil stability impacts	Similar impacts	Similar impacts	Similar impacts	Similar impacts
Hazards and Hazardous Materials	No significant impacts	No significant impacts	No significant impacts	No significant impacts	No significant impacts
Biological Resources	No significant impacts	No significant impacts	No significant impacts	No significant impacts	No significant impacts
Cultural and Historic Resources	Significant impacts	Similar impacts	Similar impacts	Similar impacts	Similar impacts

SOURCE: Wagstaff and Associates, 2003.

[1] The proposed project and all identified alternatives would result in significant unavoidable transportation and air quality impacts. For all other environmental categories, all potentially significant impacts can be reduced to less-than-significant levels by implementing the mitigation measures identified in this EIR.

NOTE: Alternatives 5 (Modified Redevelopment Activities) and 6 (Modified Improvement Program Boundaries/Redevelopment Plan Boundaries) involve fundamental revisions to the proposed project definition which preclude quantitative comparisons; therefore, these two alternatives are not included in the table.