4.10 POPULATION AND HOUSING

ENVIRONMENTAL ISSUES

This section addresses population and housing changes that could be anticipated should the proposed Project be approved and constructed, including increases of local housing and inducement of significant population growth within the Project area.

ENVIRONMENTAL SETTING

The Association of Bay Area Governments (ABAG), the Council of Governments organization responsible for preparing and tracking population and demographic changes within the Bay Area region, anticipates that the Bay Area will continue to grow at a steady rate. Factors contributing to this growth include a favorable climate, recreational activities, top universities and career opportunities. Over the next 20 years, the regional population is expected to increase to more than 8.5 million persons, an 18.7 percent increase over the current population. Population increases are expected to be primarily due to increases in births and longer life expectancies rather than significant in-migration. Table 4.10-1 depicts anticipated comparative population and household growth in the Bay Area region, Alameda County and Hayward in the years 2010, 2020 and 2030.

Table 4.10-1. Regional, County and Hayward Total Population (Pop) & Household (HH) Projections

	2010		2020		2030	
	Pop.	HHs	Pop.	HHs	Pop.	HHs
Region	7,412,500	2,696,580	7,914,600	2,941,760	8,554,800	3,177,440
Alameda Co.	1,517,400	564,880	1,700,700	614,790	1,8586,800	671,700
Hayward	152,000	48,150	161,100	51,310	249,300	54,960

Source: ABAG Projections 2007

Alameda County's population is expected to reach a level of approximately 1.8 million over the next approximate 20 years, making it the second most populous county in the ABAG region behind Santa Clara County. ABAG notes that the Hayward and Tri-Valley areas are anticipated to experience the highest growth rates in Alameda County over the next 20 years. Although the rate of household growth was rapid during the late 1990s, ABAG anticipates a slowdown during the coming two decades.

The Hayward General Plan, adopted in 2002, states that the City will employ Smart Growth principles to accommodate future growth and development of the community. These principles include a mix of land uses, compact building designs, walkable neighborhoods and fostering a sense of place and similar principles.

STANDARDS OF SIGNIFICANCE

A population and housing impact would be considered significant if a proposed project would induce substantial population growth, either directly or indirectly.

ENVIRONMENTAL IMPACTS

Approval and implementation of the proposed Project would increase the future population of the community and would add a potentially significant population increase within the eastern portion of Hayward. Table 4.10-2 identifies the net anticipated increases of population within the Project area under the proposed alternatives.

Table 4.10-2. Project Population Projection at Buildout

Alternative/ Dwelling Type	Dwelling Units[1]	Estimated Population[2]
Alternative A		
Suburban Density	51	174
Low Density	396	1354
Medium Density	398	1043
High Density	727	1534
Sustainable Mixed Use	942	1988
Mission Blvd. Density	436	930
Station Area Density	47	99
Commercial/High Density	222	468
Subtotal-Alt. A	*3,220*	*7,590*
Alternative B		
Rural Estate	21	72
Suburban Density	12	41
Low Density	211	722
Preservation Park	23	60
Limited Medium Density	497	1032
Medium Density	60	157
High Density	185	390
Commercial/High Density	174	367
Subtotal-Alt B	*1,183*	*2,841*
Alternative C		
Eden Low –Medium Density	3	10
Eden High Density	81	171
Castro Valley Single Family	3	10
Castro Valley Small Dwelling	17	45

Alternative/ Dwelling Type	Dwelling Units[1]	Estimated Population[2]
Castro Valley Low Density Multifamily	30	103
Castro Valley Medium Density Multifamily	197	516
Castro Valley Comm./Mixed Use	20	42
Suburban Density	103	352
Low Density	169	578
Limited Medium Density	36	94
Medium Density	399	1,045
High Density	683	1,441
Mission Blvd. Residential	266	697
Commercial/High Density	119	251
Subtotal-Alt. C	*2,126*	*5,355*

Notes:
(1) Dwelling Units are "average" potential dwellings based on build-out of each Alternative. See Table 3.1 in this document.
(2) Population per Dwelling Unit based on 2000 US census data and 2006 American Community Survey, as follows:
a) Single-family detached dwelling: 3.42 persons per unit
b) Townhome dwelling: 2.62 person per dwelling
c) Apartment dwelling: 2.11 persons per dwelling

Approval of the proposed Project would add an estimated 2,841 to 7,590 residents to the City of Hayward, depending on the alternative chosen by the Hayward City Council. As shown in Table 4.10-2, population increases would be the greatest under Alternative A (an estimated 7,590 people), somewhat less under Alternative C (an estimated 5,355 people) and least under Alternative B (an estimated 2,841 people).

Existing General Plan land use designations allow construction of approximately 2,512 dwellings at the mid-point density range (source: CD+A, 1/7/09). Thus, the Hayward General Plan would need to be amended to accommodate proposed dwellings and associated population.

It is unlikely that this amount of population increase has been included in regional population projections undertaken by the Association of Bay Area Governments, which are based on existing Hayward General Plan land use designations. Under Alternatives A and C, a portion of the potential increase in residential densities and population would be near major public transit hub, the South Hayward BART station. These Alternatives also include higher density housing along Mission Boulevard that is served by public bus transportation.

Alternative A also includes the proposed "Quarry Village" sustainable development north of the CSUEB main campus. This proposal would include construction of approximately 1,000 dwellings in a relatively dense, nearly car-free design using energy-saving construction materials and designs as well as local-serving commercial uses (source: www.quarryvillage.org).

Such a proposal would be consistent with the Smart Growth principles set forth in the Hayward General Plan, the Bay Area Air Quality Management District's Clean Air Plan and other regional plans by promoting higher density, pedestrian-oriented housing near transit.

Proposed development that could be facilitated under Alternative B would be more low density in character.

Such increases under any of the Alternatives would represent a population increase above regional population projections prepared by ABAG and would be a potentially significant impact.

Future development that could occur under any of the Alternatives would be require to comply with inclusionary housing requirements currently enforced by the City of Hayward. Under these provisions, developers of individual projects will be required to either provide a fixed number of below market-rate housing units as part of the development or pay in-lieu fees to the City.

Impact 4.10-1 (population increase). Approval of any of the Land Use Alternatives would exceed population estimates for the City of Hayward published by ABAG (*potentially significant and mitigation required).*

Adherence to the following measure will reduce permanent noise impacts to a less-than-significant level.

Mitigation Measure 4.10-1 (population increase). The City of Hayward shall consult with ABAG to ensure that final buildout populations for the project area are included in future regional population projections.

4.11 TRANSPORTATION AND CIRCULATION

ENVIRONMENTAL ISSUES

This section of the DEIR examines potential impacts of the proposed project on the transportation and circulation network, including motor vehicles, transit, pedestrians and non-motorized travel. Traffic calculation sheets are located in Appendix 8.7 of this document and this information is incorporated by reference into this DEIR.

ENVIRONMENTAL SETTING

This section of the DEIR examines the existing transportation system, including roadways, public transit systems, bicycle and pedestrian systems and parking resources. Most of the analysis was obtained from two previous reports, *South Hayward BART/ Mission Boulevard Concept Design Plan* and the *Route 238 Corridor Improvement Project: Final Environmental Impact Report (FEIR).* Vehicle intersection turning movement counts were conducted between 2003 and 2005. These documents are incorporated by reference into this DEIR and are available for review at the Hayward Public Works Department during normal business hours.

Background and terminology

Several traffic analysis concepts were used to evaluate the Project's impacts on the future transportation system. The following is an explanation of traffic terminology used in this section.

Level of Service concept. "Levels of service" describe the operating conditions experienced by motorists during peak times of travel. Level of service (LOS) is a qualitative measure of the effect of a number of factors, including speed and travel time, traffic interruptions, freedom to maneuver, driving comfort and convenience. Levels of service are designated "A" through "F" from best to worst, which cover the entire range of traffic operations that might occur. Level of Service (LOS) "A" through "E" generally represent traffic volumes at less than intersection capacity, while LOS "F" represents over capacity and/or significant delays.

Traffic Analysis Zones. The City of Hayward Model was used to calculate future land use and traffic volumes. In order to forecast traffic generated by land uses, the Model divides the region into Traffic Analysis Zones (TAZs), which contain information on existing and projected land uses that are located within a particular TAZ. Each TAZ is connected to the adjacent street network via a connector, which provides access to and from the TAZ. Depending on the type of land uses allocated to each zone, the TAZ will generate daily outbound trips (trip production) and inbound trips (trip attraction) that are calibrated based on household travel surveys conducted by MTC. The trips from each TAZ are then split into different travel modes and then peaked into the analysis time periods of AM and PM peak hour before they are assigned to the highway and transit network.

Existing and planned roadway facilities

This section describes key roadway characteristics in the study area. All roadways are located in Hayward unless otherwise noted.

Regional vehicular access to the Project area is provided primarily by the freeway and state route system that traverses most of the City of Hayward. Interstate 580 (I-580), an east-west freeway, has ramps that are located directly north of the Project site at Mattox Road. Interstate 238 (I-238), an east-west freeway that connects I-880 and I-580, also has ramps that are located directly north of the Project site at Mattox Road. Interstate 880 (I-880), a north-south freeway, is located about 1.75 miles from the southern portion of the Project site. State Route 238 (SR-238), a north-south facility that parallels the Project site, is located along Mission Boulevard and Foothill Boulevard. State Route 92 (SR-92), known as Jackson Street, is an east-west facility located a ½ mile west of the Project site with its terminus at the Foothill Boulevard-Jackson Street & Mission Boulevard intersection.

Arterial Roadways, The Project area is served by the following arterial (major) roadways.

Foothill Boulevard (SR-238) is a six-lane north-south roadway carrying from 50,000 to 57,000 average daily vehicles along the section from Grove Way to A Street (2006 Caltrans). From Apple Avenue to Mattox Road, the roadway is located in unincorporated Alameda County. There is a raised median that runs intermittently throughout the corridor. Posted speeds vary from 25 mph to 35 mph. This corridor section provides local access to residential and commercial developments and access to interstate freeways I-580 and I-238. Land uses are varied and primarily commercial and institutional, including retail stores, motels, sit-down and fast-food restaurants, schools, and gas stations. On-street parking is permitted on intermittent sections of the roadway. AC Transit operates one bus route on a portion of Foothill Boulevard. Sidewalks are on both sides of the roadway, except in the northern portion in the unincorporated area, and generally continuous. There are currently no bikeways on Foothill Boulevard, but planned facilities detailed in the *City of Hayward Bicycle Master Plan* calls for bike lanes between A and D Streets. Major roadway changes include the conversion of a portion of Foothill Boulevard to a northbound one-way roadway as a couplet with Mission Boulevard's conversion to a southbound roadway. The detailed planned roadway changes, according to the *Route 238 Corridor Improvement Project,* include the following:

- Modify Foothill Boulevard between Apple Avenue and Civic Center Drive (South) to provide four travel-lanes in each direction during peak hours and three travel-lanes with parking in each direction during off-peak hours;
- Modify Foothill Boulevard between Civic Center Drive (South) and A Street to provide four travel lanes in each direction and replacement of existing raised medians with narrower ones;
- Removal of traffic signal and left-turn pockets at Russell Way and restriction of vehicle turning movements on Russell Way to right-in/right out;
- Convert Foothill Boulevard from A Street to Mission Boulevard to six one-way travel lanes in the northbound direction with parking prohibited on the west side of the roadway;
- Provide triple right-turn lanes in the southbound direction at A Street.

- Providing right-turn-only access from northbound Foothill Boulevard to eastbound Main Street.

Mission Boulevard (SR-238) is a four- to six-lane north-south roadway carrying from 36,000 to 45,500 average daily vehicles along the section from Industrial Parkway West to Harder Road (2006 Caltrans). There is a raised median that runs intermittently throughout the corridor. Posted speeds are generally 35 mph. This corridor provides local access to residential and commercial developments, but also serves as a regional connection from Oakland (as International Boulevard/State Route 185) to Fremont. Mission Boulevard is on the Alameda County Congestion Management Program (CMP) network. Land uses are varied and primarily commercial and institutional, including retail stores, motels, car dealerships, auto body and repair shops, sit-down and fast-food restaurants, religious facilities, schools, bars, and gas stations. Several lots, especially in the southern portion of the corridor, are vacant and/or abandoned. On-street parking is permitted on intermittent sections of the roadway. The *Route 238 Corridor Improvement Project* details future projects on Mission Boulevard that include improvements to the Carlos Bee intersection, access changes at Moreau High School, conversion of some parking lanes to travel lanes in the peak hours, and other access improvements. AC Transit operates two bus routes on Mission Boulevard and one on a portion of Foothill Boulevard. Sidewalks exist on the corridor but tend to be discontinuous, especially in the southern portion. However, the *Route 238 Corridor Improvement Project* will correct this deficiency. Major roadway changes include the conversion of a portion of Mission Boulevard to a southbound one-way roadway as a couplet with Foothill Boulevard's conversion to a northbound roadway. The detailed planned roadway changes, according to the *Route 238 Corridor Improvement Project,* include the following:

- Convert Mission Boulevard to a five-lane, one-way street in the southbound direction street between A and D Streets;
- Convert Mission Boulevard to a six-lane, one-way street in the southbound direction street between D and Jackson Streets, with four through-lanes and two right-turn lanes at Jackson Street;
- Provide three northbound through lanes at Foothill Boulevard-Jackson Street intersection that will merge onto northbound Foothill Boulevard and eliminate northbound through movements to Mission Boulevard;
- Eliminate vehicular access to E Street from Mission Boulevard;
- Provide four southbound lanes south of Jackson Street and reduce to three lanes at the approach to Fletcher Lane.
- Modify Mission Boulevard between Fletcher Lane and Palisades Street to provide three travel-lanes in each direction during peak hours and two travel-lanes with parking in each direction during off-peak hours;
- Widen Mission Boulevard at Carlos Bee Boulevard intersection to provide three through lanes in each direction, dual left-turn lanes from southbound Mission Boulevard to eastbound Carlos Bee Boulevard, a right-turn lane from southbound Mission Boulevard to Orchard Avenue, and a left-turn lane from northbound Mission Boulevard to westbound Orchard Avenue;
- At the Harder Road intersection, provide three through lanes and dedicated left-turn lanes in each direction on Mission Boulevard by restricting parallel parking;

- At the Tennyson Road intersection, restrict parking to provide three through lanes in each direction on Mission Boulevard, a left-turn lane from southbound Mission Boulevard to eastbound Tennyson Road, a right-turn lane from southbound Mission Boulevard to westbound Tennyson Road, and dual left-turn lanes from northbound Mission Boulevard to westbound Tennyson Road;
- Removal of traffic signal and left-turn pockets at Jefferson Street and restriction of vehicle turning movements on Jefferson Street to right-in/right out;
- Provide signalized southbound left-turn access into Moreau High School's driveway;
- Convert Pinedale Court, Palisade Street, Devon Drive, Broadway Street, Webster Street, and Monticello Street intersections to right-in, right-out movement only;
- Relocate the eastern leg of Berry Avenue three hundred (300) feet north to align with its western leg and signalize it;
- Signalize the Valle Vista Avenue intersection at Mission Boulevard.

A Street is a four-lane, east-west arterial roadway located in unincorporated Alameda County to the east of San Lorenzo Creek and in Hayward to the west. Its intersection with Rockaway Lane-4th Street is signalized. On-street parking is permitted intermittently in the study area. Sidewalks in the study area are discontinuous. There is currently a bike route and AC Transit operates two bus routes on this roadway in the study area. Planned roadway changes, according to the *Route 238 Corridor Improvement Project,* include converting A Street to a five-lane, one-way roadway in the westbound direction between Foothill and Mission Boulevards, with triple left turn-lanes at westbound A Street to Mission Boulevard southbound.

Tennyson Road is a four-lane, east-west arterial that traverses Hayward, terminating east of Mission Boulevard. From Pacific Street to Mission Boulevard, the roadway is divided by a raised, landscaped median and passes under the BART tracks. On-street parking is not allowed in this segment of Tennyson Road. Land use along Tennyson Road is mixed commercial and residential. The speed limit is 35 miles per hour. Planned changes to Tennyson will include extension of the roadway east of Mission Boulevard to serve new development. The intersections at Dixon Street-East 12th Street and Mission Boulevard are signalized.

Industrial Parkway is a four-lane, east-west arterial. To the east, Industrial Parkway becomes Alquire Parkway at Mission Boulevard. In the project area between Dixon Street and Mission Boulevard, it is divided by a raised, landscaped median and has residential, commercial, and recreational uses. The intersections of Mission Boulevard and Dixon Street are both signalized and contain left turn pockets.

Collector Roads. The following collector (secondary) roads serve the Project area.

Mattox Road is a four to six-lane, east-west collector roadway located in unincorporated Alameda County. [12] A raised median is located east of Foothill Boulevard. It provides access to I-580, I-238, and Foothill Boulevard (SR-238). On-street parking is not allowed in the study area. There are continuous sidewalks on the southern side of the roadway and intermittent sidewalks on the northern side. Pedestrian crossings at the freeway ramp intersections are

[12] *Eden Area Draft General Plan*. Alameda County Community Development Agency. October 14, 2005.

limited. There are currently no bikeways but bike plans are proposed for the future.[13] There are currently no transit routes operating on Mattox Road in the study area.

B Street is a two-lane, east-west collector roadway. Its intersection with 4th Street is signalized and marked crosswalks are found on all but the east leg. AC Transit operates several bus routes on this roadway in the study area that connect to the downtown Hayward BART station. Planned roadway changes, according to the *Route 238 Corridor Improvement Project,* include converting B Street to a two-way street between Foothill Boulevard and 2nd Street.

D Street is a two-lane, east-west collector roadway. It provides access via 5th Street to Markham Elementary School. There is currently a bike route[14] and AC Transit operates a bus route on this roadway in the study area. A marked crosswalk is located at 5th Street in the study area. Planned roadway changes, according to the *Route 238 Corridor Improvement Project,* include eliminating dual left turns from westbound D Street to southbound Foothill Boulevard and roadway widening to provide an eastbound through-lane and triple left-turn lanes from eastbound D Street to northbound Foothill Boulevard.

Highland Boulevard is a two-lane, east-west collector roadway. It is curvilinear and contains gentle grades. It parallels a hiking and riding trail greenbelt and is discontinuous due to a mid-block barricade between Tiegen Drive and Morse Court.

Carlos Bee Boulevard is a four-lane, east-west collector roadway. It is curvilinear and contains steep grades. It provides direct access to the California State University East Bay (CSUEB) campus. At Mission Boulevard in the westbound direction, the street is renamed as Orchard Avenue and becomes a local roadway. There is currently a bike route on the roadway and AC Transit operates a bus route on the eastern portion near the CSUEB campus. Its intersection with Mission Boulevard is signalized. Planned roadway changes, according to the *Route 238 Corridor Improvement Project,* include dual left-turn lanes from westbound Carlos Bee Boulevard to southbound Mission Boulevard and dual left-turn lanes, a through lane, and a shared through-right lane from Orchard Avenue at Mission Boulevard.

Harder Road is a four-lane, east-west collector roadway with a raised median. It is curvilinear and contains gentle grades. It provides direct access to the CSUEB campus. Its intersection with Mission Boulevard is signalized. Planned roadway changes, according to the *Route 238 Corridor Improvement Project,* include dual left-turn lanes on Harder Road in both directions at the Mission Boulevard intersection.

Dixon Street is a two-lane, north-south collector roadway that runs from Tennyson Road to Industrial Parkway. The street is primarily residential with a mix of single-family and multi-family residences. Several new residential developments are being constructed or have been constructed along this roadway. Dixon provides sole access to the South Hayward BART's main and satellite parking lots. On-street parking is allowed on both sides of the street for non-commercial vehicles and is unrestricted save for twice-monthly street cleaning days. Bike lanes are installed on this roadway and AC Transit operates several bus routes out of the BART station. The posted speed limit is 25 mph.

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[13] *2006 Countywide Bicycle Plan*. Alameda County Congestion Management Agency. Adopted October 26, 2006.
[14] *City of Hayward Bicycle Master Plan*. November 20, 2007.

Local Streets. The Project area is served by the following local roads.

Ash Street is a two-lane, east-west local roadway located in unincorporated Alameda County. At its intersection with Foothill Boulevard, vehicles may only turn right in and out of the street and there are no pedestrian crossing facilities.

Oak Street is a two-lane, short section north-south local roadway located in Hayward. It has intersections with Apple Street in the north and Grove Way in the south and provides access to a few commercial businesses located east of Foothill Boulevard.

Apple Avenue is a two-lane, east-west local roadway located in Hayward. At its intersection with Foothill Boulevard, vehicles may only turn right in and out of the street due to the raised median on Foothill Boulevard. Planned roadway changes, according to the *Route 238 Corridor Improvement Project,* include converting Apple Avenue between Foothill Boulevard and Oak Street to be one-way in the eastbound direction.

Grove Way is a two-lane, east-west local roadway. It is located in unincorporated Alameda County east of Oak Street and in Hayward from Oak Street to Locust Street. Its intersection with Foothill Boulevard is signalized and marked crosswalks are provided on all four legs. It becomes curvilinear and steeper grades are found on the western portion of the roadway. AC Transit operates a bus route on a portion of this roadway in the study area.

Gary Drive is a two-lane, north-south local roadway located in unincorporated Alameda County. Its intersection with Grove Way is four-way stop-controlled and a marked crosswalk is provided on the northern leg. It is curvilinear and steep grades are found on the southern portion of the roadway leading to the project site.

Crescent Avenue is a two-lane, east-west local roadway located in unincorporated Alameda County. It provides access to the Senior Center, Japanese Gardens, Botany Garden, Little Theater, and San Lorenzo Creek.

North 3rd Street is a two-lane, north-south local roadway on the border of Hayward and unincorporated Alameda County. It provides access to the Senior Center, Japanese Gardens, Botany Garden, Little Theater, and San Lorenzo Creek.

Rockaway Lane-4th Street is a two-lane, north-south local roadway. It provides access to the Senior Center, Japanese Gardens, Botany Garden, Little Theater, and San Lorenzo Creek. Its intersection with A Street is signalized and marked crosswalks are found on all but the east leg.

5th Street is a two-lane, north-south local roadway. It is stop-controlled, offset at B Street, and discontinuous from C to D Streets. It provides direct access to Markham Elementary School.

Ruby Street is a two-lane, north-south local roadway. Its intersection with A Street is stop-controlled and marked crosswalks are found on all but the western leg.

C Street is a two-lane, east-west local roadway. Its intersection with 4th Street is all-way stop-controlled and marked crosswalks are found on two legs.

E Street is a two-lane, east-west local roadway. It provides access via East Avenue to Hayward High School and direct access to Bret Harte Middle School. AC Transit operates a bus route on this roadway in the study area. Marked crosswalks are located at 5th Street and East Avenue in the study area.

East Avenue is a two-lane, east-west local roadway. East of E Street, it is located within unincorporated Alameda County. It provides direct access to Hayward High School. AC Transit operates a bus route on this roadway in the study area. Marked crosswalks are located at E Street and at a mid-block crossing in the front of the school.

2nd Street is a two-lane, north-south local roadway. It traverses the backside of Hayward High School. There is currently a bike route[15] and AC Transit operates a bus route on this roadway in the study area. Marked crosswalks are located at E Street, Walpert Street and at a school access road.

Walpert Street-Fletcher Lane is a two-lane, east-west local roadway. It is curvilinear and contains steep grades, especially in the western portion near its intersection with Mission Boulevard.

Overlook Avenue is a two-lane, north-south local roadway with a 68 foot right of way width. Its intersection with Carlos Bee Boulevard is stop-controlled. Its northern leg dead-ends at the project site at the former quarry operations.

Palisade Street is a two-lane, east-west curvilinear local roadway. Its intersection with Mission Boulevard is stop-controlled. Its eastern leg dead-ends at the project site at the former quarry operations. Planned roadway changes, according to the *Route 238 Corridor Improvement Project,* include restricting turning movement access at Mission Boulevard to right-in, right-out only.

Central Boulevard is a two-lane, east-west curvilinear local roadway with gentle grades. The right of way width is 50 feet from Mission Boulevard to Delmar, and narrows to a substandard 40 feet after that. It provides direct access to Spring Grove Park. Its intersection with Mission Boulevard is stop-controlled. Planned roadway changes, according to the *Route 238 Corridor Improvement Project,* include closing Central Boulevard between Mission Boulevard and Belmont Avenue to through vehicular movements while maintaining vehicular access to local residents on this segment.

Maitland Drive is a narrow two-lane, north-south curvilinear local roadway with gentle grades and a substandard right of way width of 40 feet . It provides access to sparse, residential land uses.

Bunker Hill Boulevard is a narrow two-lane, north-south curvilinear local roadway with steep grades and a substandard right of way width of 40 feet. It provides access to sparse, residential land uses.

Westview Way is a two-lane, north-south local roadway. Its intersection with Harder Road is stop-controlled.

Calhoun Street is a two-lane, east-west curvilinear local roadway with gentle to steep grades. Its intersection with Mission Boulevard is signalized.

East 16th Street is a two-lane, north-south local roadway. Its intersection with Calhoun Street is stop-controlled.

Webster Street is a two-lane, east-west local roadway. Its intersection with Mission Boulevard is stop-controlled. Planned roadway changes, according to the *Route 238 Corridor Improvement*

[15] *City of Hayward Bicycle Master Plan*. November 20, 2007.

Project, include restricting turning movement access at Mission Boulevard to right-in, right-out only.

Hancock Street is a two-lane, east-west local roadway. Its intersection with Mission Boulevard is signalized.

Valle Vista Avenue is a two-lane, east-west local street. Its intersection with Mission Boulevard is stop-controlled and its intersection with Dixon Street is all-way stop controlled. It terminates at the BART train tracks to the west. On-street parking is allowed on both sides of the street and is unrestricted save for twice-monthly street cleaning days. Planned roadway changes, according to the *Route 238 Corridor Improvement Project,* include signalizing its intersection with Mission Boulevard.

Existing and planned transit facilities

While a major trunk route (AC Transit Route 99) exists on Mission Boulevard, in general the project area is not served by existing transit because development of these parcels is sparse or non-existent. However, regional rail and local bus services are located in close proximity to portions of the project site. This section contains detailed descriptions of transit services in the Project area.

Rail Service. The San Francisco Bay Area Rapid Transit District (BART) provides rail, regional transit service to four counties in the Bay Area, including San Francisco. There are two BART stations in Hayward, one in the downtown area near C Street & Atherton Street and the other in the southern part of the city near Dixon Street & Tennyson Road. Both stations are served extensively by AC Transit bus service. BART's direct service from this station includes the Fremont-Richmond line and the Fremont-Daly City line.

Table 4.11-1 shows a summary of BART's approximate hours and frequency of service and **Figure 4.11-1** shows BART's existing system map.

Amtrak's Capital Corridor line provides inter-city rail service to San Jose and Sacramento and stations in between. The station is located on Meekland Avenue near B Street. Service is provided in each direction every 90 to 150 minutes between roughly 6:30 AM and 8:00 PM on the weekdays and 8:00 AM and 8:30 PM on the weekends. [16]

Bus Service. Bus service in Hayward is provided by the Alameda-Contra Costa Transit District (AC Transit). Fourteen bus routes operate in the study area: Detailed service times and frequencies are contained in Table 4.11-2 and 4.11-3. Most bus stops in the study area are indicated by free-standing poles with signs indicating bus route numbers. The Hayward and South Hayward BART stations, as well as some bus stops on Mission Boulevard, contain other amenities, such as shelters and bus route maps. **Figure 4.11-2** displays a map of AC Transit's bus system operating in the study area near the two BART stations.

[16] Amtrak Website www.amtrak.com, accessed November 15, 2007

Table 4.11-1. Summary of BART Service at Hayward Stations

Line	Days	Times	
Fremont-Richmond	Weekday	First	4:15 AM
		Last	12:15 AM
		Frequency	15 min
	Saturday	First	6:00 AM
		Last	12:15 AM
		Frequency	15 min
	Sunday & Holidays	First	8:00 AM
		Last	12:15 PM
		Frequency	15 min
Fremont-Daly City	Weekday	First	5:15 AM
		Last	6:00 PM
		Frequency	15 min
	Saturday	First	9:00 AM
		Last	6:00 PM
		Frequency	20 min
	Sunday & Holidays	No Service	

Source: BART website, www.bart.gov, accessed February 17, 2009

Paratransit service for seniors and adults with disabilities is available to Alameda County residents through East Bay Paratransit, a service of AC Transit and BART. The City of Hayward's (Measure B) paratransit program supplements and compliments this service for residents of Hayward and the unincorporated areas adjacent to Hayward.

Planned changes in the study area include basic improvements to modestly decrease bus travel times along Mission Boulevard and the expansion of transbay service across the San Mateo Bridge, [17] however this is not anticipated in the near future and is likely subject to funding availability.

California State University East Bay (CSUEB) Service). A new shuttle service provided by AC Transit Bus 92 has replaced the Hillhopper Shuttle previously provided by CSUEB. Effective January 2009, students and faculty have been able to ride the AC Transit Bus 92 for free from

[17] *FY2003-FY2012 Short Range Transit Plan*. Alameda Contra Costa Transit District. May 2004

the Hayward BART station to CSUEB by showing their University ID card. This new policy will provide the campus community with the ability to travel more frequently between BART and CSUEB.

Table 4.11-2. AC Transit Routes 77-92 in Project Area

Route	Cities Served	Timepoints	Days	Times	
77	Hayward	Tampa Ave & Tennyson Rd; Ruus Ln. & Georgian Manor; South Hayward BART; Gading Rd & Harder Rd; Hayward BART	**Weekday**	**First**	6:00 AM
				Last	6:00 PM
				Frequency	30 min
			Weekend	**First**	8:45 AM
				Last	6:45 PM
				Frequency	60 min
80	San Leandro Castro Valley Hayward	San Leandro BART; Estudillo Ave & E 14th St; Estudillo Ave & MacArthur Bl; Fairmont Hospital; Castro Valley BART; B St & Center St; Hayward BART	**Weekday**	**First**	6:30 AM
				Last	7:00 PM
				Frequency	30 min
			Weekend	**First**	8:00 AM
				Last	7:00 PM
				Frequency	60 min
83	Hayward Cherryland	South Hayward BART; Tennyson Rd & Hesperian Bl; Eden Landing Rd & Investment Bl; Clawiter Rd & Industrial Bl; Winton Ave & Hesperian Bl; Hesperian Bl & W. A St; Hayward BART	**Weekday**	**First**	5:00 AM
				Last	10:00 PM
				Frequency	30-60 min
			Weekend	No service	
84	San Leandro Castro Valley Hayward	San Leandro BART; Marina Bl & Merced St; Farnsworth St & Lewelling Bl; Fargo Ave & Washington Ave; Washington Ave. & Floresta Bl; Bay Fair BART; 164th Ave & E 14th St; Castro Valley BART; Foothill Bl & Grove Wy; Hayward BART; San Clara St & Jackson St; Kaiser Permanente Hayward Medical Center	**Weekday**	**First**	5:30 AM
				Last	8:15 PM
				Frequency	30 min
			Weekend	**First**	8:45 AM
				Last	7:45 PM
				Frequency	60 min
86	Hayward	South Hayward BART; Tennyson Rd & Hesperian Bl; Depot Rd & Industrial Bl; AC Transit Hayward Division; Winton Ave & Hesperian Bl; Hesperian Bl & W. A St; Hayward BART	**Weekday**	**First**	4:30 AM
				Last	10:30 PM
				Frequency	30 min
			Weekend	**First**	6:00 AM
				Last	10:00 PM
				Frequency	20-30 min
91	Hayward Castro Valley	San Antonio St & San Luis Obispo Ave; Industrial Pkwy & Huntwood Ave; South Hayward BART; Hayward BART; A St & Foothill Bl; Castro Valley BART; Castro Valley Senior Center	**Weekday**	**First**	6:15 AM
				Last	9:15 PM
				Frequency	30-60 min
			Weekend	No Service	
92	Hayward	Chabot College; Southland Shopping Center; Hayward BART; Hayward High School (once a day); Campus Dr & 2nd St; Warren Hall, Cal State East Bay; *(weekends only) South Hayward BART; Kaiser Permanente Hayward Medical Center*	**Weekday**	**First**	6:15 AM
				Last	11:00 PM
				Frequency	15 min
			Weekend	**First**	7:45 AM
				Last	7:00 PM
				Frequency	60 min

Source: AC Transit website, www.actransit.org, accessed February 17, 2009
Dowling Associates, Inc.

Table 4.11-3. AC Transit Routes 94 through M in the Project Area

Route	Cities Served	Timepoints	Days	Times	
94	Hayward	Hayward BART; C St & Foothill Bl; Hayward High School (once a day); Campus Dr & 2nd St; Hayward Bl & Spencer Ln; Hayward Bl & Skyline Dr	**AM Weekday**	**First**	6:30 AM
				Last	8:45 AM
				Frequency	45 min
			PM Weekday	**First**	1:45 PM
				Last	6:30 PM
				Frequency	50-90 min
			Weekend	No Service	
95	Hayward Castro Valley	Hayward BART; C St & Foothill Bl; Bret Harte Middle School (once a day); Hayward High School (once a day); D St & Maud Ave; Kelly St & Eddy St; Don Castro Regional Park (weekends only)	**Weekday**	**First**	6:30 AM
				Last	6:30 PM
				Frequency	30-60 min
			Weekend	**First**	9:15 AM
				Last	7:15 PM
				Frequency	60 min
99	Fremont Union City Hayward San Leandro	Fremont BART; Mission Bl & Mowry Ave; Mission Bl & Nursery Ave; Terrace Dr & Gurdwara Rd; Mission Bl & 7th St; Union City BART; Mission Bl & Whipple Ave; Mission Bl & Gresel St; South Hayward BART; Mission Bl & Harder Rd; Hayward BART; Bay Fair BART	**Weekday**	**First**	5:30 AM
				Last	12:00 AM
				Frequency	15-30 min
			Weekend	**First**	6:15 AM
				Last	11:45 PM
				Frequency	30 min
210	Fremont Union City Hayward	Ohlone College; Fremont Bl & Washington Bl; Fremont Bl & Mowry Ave; Fremont Bl & Peralta Bl; Paseo Padre Pkwy & Fremont Bl; Dyer St & Alvarado Bl; Union Landing Shopping Center; Huntwood Ave & Whipple Rd; Industrial Pkwy & Huntwood Ave; South Hayward BART	**Weekday**	**First**	5:30 AM
				Last	7:00 PM
				Frequency	30 min
			Weekend	No service in Hayward on weekends	
801	Fremont Union City Hayward San Leandro Oakland	Fremont BART; Mission Bl & Nursery Ave; Union City BART; Mission Bl & Gresel St; South Hayward BART; Hayward BART; Bay Fair BART; San Leandro BART; 98th Ave & International Bl; Seminary Ave & International Bl; Fruitvale BART; 23rd Ave & International Bl; 14th St & Broadway	**Weekday & Saturday**	**First**	12:00 AM
				Last	5:00 AM
				Frequency	60 min
			Sunday & Holiday	**First**	12:00 AM
				Last	7:00 AM
				Frequency	60 min
M	Castro Valley Hayward Foster City San Mateo *(Weekday only)* *Redwood Shores* *Redwood City* *Menlo Park* *Fremont* *Union City*	Castro Valley BART; Hayward BART; Chabot College; 1163 Chess Dr (AM only); Vintage Park Dr & Metro Center Bl; E Hillsdale Bl & Saratoga Dr; Hillsdale Caltrain; Hillsdale Shopping Center; *(Weekday only) Oracle Headquarters; Stanford Midpoint Center; Sun Microsystems; Ardenwood Park & Ride; Paseo Padre Pkwy & Fremont Bl; Union City BART*	**Weekday**	**First**	5:45 AM
				Last	8:30 PM
				Frequency	30-120 min
			Weekend	**First**	7:00 AM
				Last	5:00 PM
				Frequency	120 min

Source: AC Transit website, www.actransit.org, accessed February 17, 2009
Dowling Associates, Inc.

Existing bicycle facilities

The City of Hayward adopted its *Bicycle Master Plan* in 1997 and adopted the Bicycle Master Plan update on November 20, 2007. Additionally, the Circulation Element of Hayward's *General Plan* and the Neighborhood Plans in the study area (Harder-Tennyson, Hayward Highlands, Mission Foothills, Mission-Garin, North Hayward, and Upper B Street) contain references to providing bicycling facilities and creating bicycling-friendly environments.

Foothill Boulevard and Mission Boulevard are currently four- to six-lane arterials with heavy traffic and high speeds. The adjacent land uses consist mainly of commercial uses with some housing. Based on field observations, the *South Hayward BART/Mission Boulevard Concept Plan: Transportation Access Assessment*, and the *City of Hayward Bicycle Master Plan* 2007, the following East-West bikeways may be found along the following roadways and trails near the project area:

- Class III bike route on City Center Drive from Maple Court to 2nd Street.
- Class III bike route on "A" Street from 4th Street to Montgomery Street, which connects to Class II bike lanes west of Montgomery Street.
- Class II bike lanes on "D" Street from Myrtle Street to 2nd Street, which connects to a Class III bike route from 2nd Street to the eastern city limit and onto bikeways in the unincorporated areas of Alameda County.
- Class III bike route on Orchard Avenue-Carlos Bee Boulevard-Hayward Boulevard from Soto Road to Mission Boulevard.
- Class I bike path on the Eden Greenway from east of Soto Road to Hesperian Boulevard.
- Class II bike lanes on Harder Road from Santa Clara Street to Westview Way.
- Class II bike lanes on Tennyson Road from Industrial Boulevard to Dixon Street.
- Class I bike path on Industrial Parkway west of Pacific Street.

The following North-South bikeways may be found along the following roadways and trails near the Project area:

- Class III bike route on 2nd Street from City Center Drive to Cricket Hill Court, which connects to Class I multi-use trails through Hayward Area Recreational District's (HARD) parks and green belt.
- Class III bike route on Western Boulevard-Grand Street-Silva Avenue-Whitman Street from the northern city limit to Tennyson Road.
- Class II bike lanes along Huntwood Avenue from Tennyson Road to the southern city limit.
- Class II bike lanes on Dixon Street from Tennyson Road to Industrial Parkway West

Figure 4.11-3 shows existing bikeway network in close proximity to the Project area.

Policies that support bicycle parking facilities are found in the City of Hayward's Municipal Code 10-2.406 for off-street parking, which includes the provision of bicycle and motorcycle parking in developments with more than fifty (50) required off-street parking spaces. Additionally, developers can replace up to 5% of the required number of off-street parking

spaces with bicycle parking. There is currently no city program to install bicycle parking on arterials close to existing developments, due to the lack of funding for such a program.

Bicycle loop detectors are located at the signalized intersection of Industrial Parkway-Dixon Street. Field observations did not reveal the existence of other traffic signal loop detectors for bicycles or employee locker/showering facilities at employment centers.

Bicyclist volumes at select study intersections are detailed in **Figure 4.11-4**. The highest bicyclist volumes were found at the Dixon Street-Valle Vista Avenue intersection, which is in close proximity to the South Hayward BART station. Important destinations for bicyclists and pedestrians include those listed in Table 4.11-5.

Table 4.11-4. Bicyclist Volumes at Intersections

Intersection		Peak Hour	Volumes
6	Mission Boulevard at Jackson Street-Foothill Boulevard	AM	10
		Mid-day	10
		2:50-3:50 PM	4
		PM	5
19	Mission Boulevard at Valle Vista Avenue	AM	2
		PM	3
21	Dixon Street at Tennyson Road	AM	2
		PM	7
22	Dixon Street at Valle Vista Avenue	AM	29
		PM	31
23	Dixon Street at Industrial Parkway	AM	6
		PM	8

AM counts were done 7:00-9:00 AM; PM counts were done 4:00-6:00 PM

Counts at intersection 6 were done in 2005 by All Traffic Data on Tuesday, November 1 except the 2:50-3:50 count, which was done on Thursday, September 21, 2006.

Counts at all other intersections were conducted on weekdays in November, 2005 by Wiltec. Volumes indicated are based on peak one-hour counts within a two-hour observation period.

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Table 4.11-5. Important Destinations for Bicyclists and Pedestrians

Transit
Hayward BART Station (Fremont-Daly City, Fremont-Richmond line, and AC Transit buses)
South Hayward BART Station (Fremont-San Francisco and Fremont-Richmond line, and AC Transit buses)
Mission Boulevard for AC Transit bus routes 82, 99, and 801 (The All-Nighter)
Grove Way for AC Transit bus route 84
Foothill Boulevard for AC Transit bus route 84
A Street for AC Transit bus route 91 and M (Transbay)
B Street for AC Transit bus route 80
D Street for AC Transit bus route 95
2nd Street for AC Transit bus route 92 and 94
East Street for AC Transit bus route 94
Schools
California State University East Bay (east of study area between Carlos Bee Boulevard and Harder Road)
Moreau Catholic High School on Mission Boulevard at Jefferson Street
Strobridge Elementary School
Hayward High School
Markham Elementary School
Tennyson High School (Whitman Street north of Tennyson Road)
Bret Harte Middle School (on "E" Street near the Foothill / Mission / Jackson intersection)
Shopping/Employment
Downtown Hayward (near Hayward BART station)
Foothill Boulevard (i.e., Mervyn's headquarters, Safeway, Washington Mutual, old town shopping area)
Mission Boulevard (Lucky's Center, other commercial areas)
Parks
Bret Harte Park and Field (Foothill / Mission / Jackson intersection)
Carlos Bee Park (Grove Way)
Eden Greenway (west of Whitman Street near Berry Avenue)
Green Belt Hiking and Riding Trails (east of study area starting at Hayward Memorial Park)
Hayward Memorial Park (near Pinedale Court)
Botany Gardens (Little Theater and Japanese Garden)
Miscellaneous
The Plunge Swim Center (East Avenue)
Holy Sepulchre Cemetery (Mission Boulevard between Harder Road and Sorenson Road)
Tennyson Swim Center (Whitman Street)
YMCA (Palisade Street)

Source: Dowling Associates, Inc, 2008

Planned Bicycle Facilities

According to the *City of Hayward Bicycle Master Plan* 2007, there are some proposed bikeway facilities in the Project study area. **Figure 4.11-5** displays the existing and proposed bikeway network. The proposed bikeway network includes additions adjacent to the project study area, including:

- Extending Industrial Parkway's Class I multi-use trail to Mission Boulevard, locating the path through the property of a former bowling alley. However, since this facility was not built in conjunction with the Twin Bridges development, this bike facility will now be constructed along Industrial Parkway and along Mission Boulevard. It has been identified as a high priority project in the Alameda County Congestion Management Agency Countywide Bicycle Master Plan.
- Class II bike lane (northbound) on Foothill Boulevard from A to D Streets.

The Alameda County Congestion Management Agency Bike Plan (ACCMABP) was last updated in September 2006. The ACCMABP proposes Class II bike lanes on Mission Boulevard between Lewelling Boulevard in San Lorenzo and "A" Street in Hayward. In conjunction with the *Route 238 Corridor Improvement Project*, wide curb lanes will be constructed on Mission Boulevard between "A" Street and Industrial Parkway West, which will be able to accommodate bicycles but will not be designated as a bike route. However, the ACCMABP is neither consistent with the *City of Hayward Bicycle Master Plan 2007*, which takes precedent, nor with the *Route 238 Corridor Improvement Project.*

The proposed class I bike path along the Hayward Fault (east of Mission Boulevard) is dependent upon the release of Route 238 right of way along the fault.

A Class I bike path, called the East Bay BART Greenway, is being considered to follow the BART right-of-way from Hayward to Oakland. Urban Ecology is taking the lead on this effort, along with other affected jurisdictions and interested parties. It may be implemented as part of seismic retrofit work in 2009; however, construction, operation and maintenance funding is uncertain. A parallel study of the possible use of the Oakland subdivision rail line between Fremont and Oakland is also underway.

Existing and planned pedestrian facilities

The City of Hayward does not have a separate pedestrian master plan. The Circulation Element of Hayward's *General Plan* and the Neighborhood Plans in the study area (Harder-Tennyson, Hayward Highlands, Mission Foothills, Mission-Garin, North Hayward, and Upper B Street) contain references to providing pedestrian facilities and creating pedestrian-friendly environments. In 2003, the City of Hayward completed a sidewalk rehabilitation project in its downtown area, which included the installation of street furniture, lighting, bus shelters, and signage.

<u>Existing Pedestrian Conditions</u>. Foothill Boulevard and Mission Boulevard are currently four- to six-lane arterials with heavy traffic and high speeds. The adjacent land uses consist mainly of

commercial uses with some housing. Important destinations for bicyclists and pedestrians include those listed in Table 4.15-5 (shown previously).

Field work conducted in June 2006 revealed the following about existing pedestrian facilities along the SR-238 corridor (Mission Boulevard and Foothill Boulevard in the study area) and near the South Hayward BART station:

- Foothill Boulevard has continuous sidewalks on both sides of the roadway in the study area except near the freeway ramps.
- Curb ramps and marked crosswalks are at most signalized intersections on Mission Boulevard. Some intersections do not have crosswalks on all legs to avoid conflict with heavy left-turn vehicle volumes.
- Raised medians on Mission Boulevard are not designed to serve as ADA accessible pedestrian refuges at intersections.
- Most curb ramps do not issue onto the crosswalks properly and they lack yellow or grey high-contrast truncated domes, which are the standard design requirements for detectable warnings for determining the boundary between the sidewalk and street by people with visual disabilities. However, all new city projects for construction at new pedestrian ramps will include dark gray truncated domes. The pedestrian ramps are currently under the purview of Caltrans. When the City of Hayward assumes control of this facility as part of the *Route 238 Corridor Improvement Project*, it is anticipated that the new pedestrian ramps would be constructed according to the updated requirements.
- Most signalized intersections have signal heads with pedestrian activation.
- Sidewalks in some sections need to be repaired because they are deteriorating or uneven. Sidewalks on Mission and Foothill Boulevards will be repaired as part of the *Route 238 Corridor Improvement Project.*
- In the sections from A Street to the north, the sidewalks are sometime narrow and/or bordered by surface parking lots.
- From B Street to D Street, the pedestrian environment includes wider sidewalks, and street trees.
- At the Jackson/Mission/Foothill junction, pedestrians are prohibited from crossing the northeast side of the intersection. The intersection is generally difficult to cross because it is a five-legged intersection at skewed angles with high traffic volumes on Mission Boulevard, Foothill Boulevard, and Jackson Street. The City of Hayward is planning to construct pedestrian improvements at this intersection as part of the *Route 238 Corridor Improvement Project,* including a pedestrian-actuated signal.
- Many objects impede pedestrian movement on sidewalks, including utilities (poles, guy wires), and some road signs (The City has plans to underground utilities on Mission Boulevard from Fletcher Lane south).
- The intersection of Calhoun Street allows no pedestrian crossing of Mission Boulevard on either leg, although there is a crosswalk on the north side of the Mission Blvd/ Jefferson intersection which facilitates pedestrian access to Moreau High School.

- On Mission Boulevard from Fletcher Lane to Foothill Boulevard on the east side, the sidewalk bends abruptly, becomes extremely narrow, and is bordered by a retaining wall, creating issues for visually impaired pedestrians and wheelchair users.
- The pedestrian pathway is unpaved in a number of locations on the southern portion of Mission Boulevard. However, the *Route 238 Corridor Improvement Project* includes constructing new sidewalk, which will rectify the following issues as part of that project or in conjunction with future development:
    * Discontinuous sidewalk/unpaved trail north of Sorenson Road on the west side.
    * Near Monticello Street, the sidewalk is paved with asphalt and has no raised curb on the west side, resulting in vehicles parked in the pedestrian right-of-way.
    * From Tennyson Road to Industrial Parkway, the sidewalk is discontinuous on both sides of the roadway, alternating between concrete, asphalt, and dirt walkways.
    * From Hancock Street to Webster Street, there is only an informal dirt path on the east side that is slightly elevated above the road.
    * Near Douglas Street, the sidewalk is discontinuous on the east side, leading to a dirt path for a half block.
    * Near Broadway Street on the east side, the pedestrian walkway is paved with asphalt and has no raised curb
- Existing sidewalks and curb ramps in the South Hayward BART station area are in good condition and are continuous, affording pedestrians with access to the station. Sidewalks are located at the perimeter of BART's surface parking lot but most pedestrians approaching the station from Dixon Street intersections were observed walking diagonally through the parking lot, which afforded a more direct walking route, rather than using the perimeter sidewalks. Pedestrian access to the station is wheelchair accessible from Dixon Street or by stairs on the south side of Tennyson Road.
- Sidewalks on Dixon Street, E. 12th Street, Industrial Parkway West and Tennyson Road are continuous and generally well-maintained.
- Marked crosswalks and pedestrian signal heads exist on all legs at the signalized intersections on Dixon Street.
- There is a marked midblock crossing on Dixon Street between Tennyson Road and Valle Vista Avenue to connect BART's satellite parking lot with the station.
- Long stretches between intersections dissuade pedestrian activity if pedestrians are not given access. The Project Area contains a fenced, undeveloped area located between Mission Boulevard and Dixon Street that creates a 0.3 mile barrier to pedestrians from Valle Vista Avenue to Industrial Parkway. Several stretches along Mission Boulevard in the study area exceed 0.25 miles between intersections, which limit pedestrian access.

A Project site tour visit in July 2007 revealed the following about pedestrian facilities on the other roadways in the Project study area, on collector or local roadways:

- Sidewalks are provided on some roadways on at least one side, but continuous sidewalks are lacking.

- Marked crosswalks are generally found at signalized intersections, but are not as common at unsignalized intersections.
- There are few pedestrian amenities.

Pedestrian volumes at select study intersections are detailed in Table 4.11-6. The highest pedestrian volumes were found at the Mission Boulevard-Jackson Street-Foothill Boulevard intersection, which is in close proximity to Bret Harte Middle School. Important destinations for bicyclists and pedestrians include those listed previously Table 4.11-5.

Table 4.11-6. Pedestrian Volumes at Intersections

Intersection		Peak Hour	Volumes
6	Mission Boulevard at Jackson Street-Foothill Boulevard	AM	42
		Mid-day	46
		2:50-3:50 PM	112
		PM	53
19	Mission Boulevard at Valle Vista Avenue	AM	10
		PM	10
21	Dixon Street at Tennyson Road	AM	38
		PM	18
22	Dixon Street at Valle Vista Avenue	AM	42
		PM	71
23	Dixon Street at Industrial Parkway	AM	26
		PM	38

AM counts were done 7:00-9:00 AM; PM counts were done 4:00-6:00 PM

Counts at intersection 6 were done in 2005 by All Traffic Data on Tuesday, November 1 except the 2:50-3:50 count, which was done on Thursday, September 21, 2006.

Counts at all other intersections were conducted on weekdays in November, 2005 by Wiltec. Volumes indicated are based on peak one-hour counts within a two-hour observation period.

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Planned Pedestrian Facilities. The Route 238 Corridor Improvement Project includes many improvements to pedestrian facilities along Mission Boulevard and Foothill Boulevard in the Project study area, as detailed above. Additionally, the City of Hayward is constructing sidewalks on 2nd Street adjacent to Hayward High School.

The Circulation Element of Hayward's *General Plan* and the Neighborhood Plans in the study area (Harder-Tennyson, Hayward Highlands, Mission Foothills, Mission-Garin, North Hayward, and Upper B Street) contain references to providing pedestrian facilities and creating pedestrian-friendly environments. Recommendations generally include the provision of continuous sidewalks and access to parks and open space. Some plans call for additional improvements, such as land-use patterns that encourage more vibrant places to walk and better access to transit.

Existing traffic operations

A set of intersections was selected for analysis based upon the anticipated volume and distributional patterns of project traffic and known locations of operational difficulty. This selection was made in collaboration with City of Hayward staff. The following locations, shown in Figure 4.11-6, were studied**:**

1 Foothill Boulevard & Mattox Rd
2 Foothill Boulevard & Grove Way
3 Foothill Boulevard & A Street
4 Foothill Boulevard & B Street
5 Foothill Boulevard & D Street
6 Mission Boulevard & Jackson Street-Foothill Boulevard
7 2nd Street & B Street
8 Mission Boulevard & Fletcher Lane
9 Mission Boulevard & Highland Boulevard
10 Mission Boulevard & Carlos Bee Boulevard
12 Mission Boulevard & Berry Avenue
14 Mission Boulevard at Harder Road
15 Mission Boulevard at Sorenson Road
16 Mission Boulevard at Jefferson Street-Calhoun Street
17 Mission Boulevard at Hancock Street
18 Mission Boulevard at Tennyson Road
19 Mission Boulevard at Valle Vista Avenue
20 Mission Boulevard at Industrial Parkway
21 Dixon Street at Tennyson Road
22 Dixon Street at Valle Vista Avenue
23 Dixon Street at Industrial Parkway

Mission Boulevard at the La Vista Quarry entry, a signalized intersection between Tennyson Road and Valle Vista Avenue, was not analyzed as part of this study because the intersection is temporary and will be removed during construction of the La Vista Development.

Existing Vehicle Volumes. Turning traffic volumes were counted at the study intersections during the weekday AM and PM commuter periods (7:00 to 9:00 AM and 4:00 to 6:00 PM). Almost all of the study intersection counts on Mission Boulevard were done in 2003 and were taken from the *State Route 238 Corridor Improvement Project Traffic Analyses* report, prepared by Dowling Associates on January 30, 2007, as part of the Draft Environmental Impact Report (DEIR) for the *Route 238 Corridor Improvement Project*. The following four intersections were

counted in November 2005 for the *South Hayward BART/ Mission Boulevard Concept Design Plan*:

19 Mission Boulevard at Valle Vista Avenue
21 Dixon Street at Tennyson Road
22 Dixon Street at Valle Vista Avenue
23 Dixon Street at Industrial Parkway West

Existing Intersection Levels of Service. The existing AM and PM peak-hour operating conditions at the project area intersections are shown in Tables 4.11-7 and 4.11-8.

As indicated in Table 4.11-7, the following signalized intersection is currently operating at LOS F in the AM peak-hour:

10 Mission Boulevard & Carlos Bee Boulevard at LOS F

Additionally, the stop-controlled approaches at the following unsignalized intersection are experiencing LOS F and significant delays in the AM peak-hour:

12 Mission Boulevard & Berry Avenue

As indicated in Table 4.11-8, the following signalized intersection is currently operating at LOS F in the PM peak-hour:

7 Mission Boulevard & Jackson Street-Foothill Boulevard at LOS F

Additionally, the stop-controlled approaches at the following unsignalized intersection are experiencing LOS F and significant delays in the PM peak-hour:

12 Mission Boulevard & Berry Avenue

As stated in the Existing and Planned Roadway Facilities sub-section, the intersection of Mission Boulevard & Berry Avenue will be signalized in the future, which will mitigate its LOS issues.

Table 4.11-7. Existing Intersection LOS—AM Peak

	Intersection	Traffic Control	Average LOS	Average Delay	Worst LOS	Worst Delay
1	Foothill Blvd & Mattox Rd	Signal	D	36		
2	Foothill Blvd & Grove Wy	Signal	C	19		
3	Foothill Blvd & A St	Signal	D	26		
4	Foothill Blvd & B St	Signal	C	16		
5	2nd St & B St	Signal	C	24		
6	Foothill Blvd & D St	Signal	D	36		
7	Mission Blvd & Jackson St-Foothill Blvd	Signal	E	46		
8	Mission Blvd & Fletcher Ln	Signal	B	12		
9	Mission Blvd & Highland Blvd	Signal	B	13		
10	Mission Blvd & Carlos Bee Blvd	Signal	***F***	***62***		
12	Mission Blvd & Berry Ave	SSSC	C	21	***F***	***1112***
14	Mission Blvd at Harder Rd	Signal	D	29		
15	Mission Blvd at Sorenson Rd	Signal	B	6		
16	Mission Blvd at Jefferson St-Calhoun St	Signal	D	25		
17	Mission Blvd at Hancock St	Signal	A	4		
18	Mission Blvd at Tennyson Rd	Signal	C	20		
19	Mission Blvd at Valle Vista Ave	SSSC	A	1	D	29
20	Mission Blvd at Industrial Parkway	Signal	C	25		
21	Dixon St at Tennyson Rd	Signal	C	15		
22	Dixon St at Valle Vista Ave	AWSC	B	11	B	11
23	Dixon St at Industrial Parkway	Signal	B	12		

LOS = Level of Service; **Delay** = Weighted average delay for vehicles in seconds; **SSSC** = Side Street stop control; **AWSC** = All Way stop control

Average LOS is based on the weighted average delay per vehicle of the total intersection approaches; **Worst LOS** is calculated for stop-controlled intersections and is based on the weighted average control delay per vehicle of the intersection leg with the worst delay.

Signalized intersections were analyzed using the 1994 Highway Capacity Manual (HCM) methodology whereas stop-controlled intersections were analyzed using the 2000 HCM methodology.

Source: Dowling Associates, Inc. using TRAFFIX 8.0

Table 4.11-8. Existing Intersection LOS—PM Peak

	Intersection	Traffic Control	Average LOS	Average Delay	Worst LOS	Worst Delay
1	Foothill Blvd & Mattox Rd	Signal	E	44		
2	Foothill Blvd & Grove Wy	Signal	D	31		
3	Foothill Blvd & A St	Signal	E	52		
4	Foothill Blvd & B St	Signal	B	14		
5	2nd St & B St	Signal	D	26		
6	Foothill Blvd & D St	Signal	D	37		
7	Mission Blvd & Jackson St-Foothill Blvd	Signal	***F***	***80***		
8	Mission Blvd & Fletcher Ln	Signal	C	17		
9	Mission Blvd & Highland Blvd	Signal	C	18		
10	Mission Blvd & Carlos Bee Blvd	Signal	E	57		
12	Mission Blvd & Berry Ave	SSSC	B	14	***F***	***733***
14	Mission Blvd at Harder Rd	Signal	D	32		
15	Mission Blvd at Sorenson Rd	Signal	C	15		
16	Mission Blvd at Jefferson St-Calhoun St	Signal	B	13		
17	Mission Blvd at Hancock St	Signal	B	6		
18	Mission Blvd at Tennyson Rd	Signal	C	21		
19	Mission Blvd at Valle Vista Ave	SSSC	A	1	C	20
20	Mission Blvd at Industrial Parkway	Signal	D	27		
21	Dixon St at Tennyson Rd	Signal	C	15		
22	Dixon St at Valle Vista Ave	AWSC	B	11	B	12
23	Dixon St at Industrial Parkway	Signal	B	11		

LOS = Level of Service; **Delay** = Weighted average delay for vehicles in seconds; **SSSC** = Side Street stop control; **AWSC** = All Way stop control

Average LOS is based on the weighted average delay per vehicle of the total intersection approaches; **Worst LOS** is calculated for stop-controlled intersections and is based on the weighted average control delay per vehicle of the intersection leg with the worst delay.

Signalized intersections were analyzed using the 1994 Highway Capacity Manual (HCM) methodology whereas stop-controlled intersections were analyzed using the 2000 HCM methodology.

Source: Dowling Associates, Inc. using TRAFFIX 8.0

Regulatory framework

Hayward General Plan. The Circulation Element of the General Plan contains policies and strategies relating to regional traffic, promoting alternative transportation modes and improving local access and circulation.

- Reduce the amount of Regional Through Traffic in the Hayward Area. (*Policy 1*)
  - * Support transportation plans that incorporate alternatives to automobile use. (*Strategy 1.2*)
  - * Coordinate transportation planning with regional agencies and adjoining jurisdictions. (*Strategy 1.4*)

- Minimize adverse impacts of regional traffic on existing neighborhoods. (*Policy 3*)

- Improve Mobility to Foster Economic Vitality. (*Policy 4*)

  - * Provide a safe and efficient transportation system for the movement of people, goods and services through and within Hayward. (*Strategy 4. 1*)

- Improve Coordination among Public Agencies and Transit Providers. (*Policy 5*)
  - * Consider needs of transit riders, pedestrians, people in wheelchairs, cyclists and others in long-range planning and review of development proposals. (*Strategy 5.1)*
  - * Promote effective intermodal connections at transit stations. (*Strategy 5.5*)

- Support expansion and reconfiguration of public transit service to meet demand (*Policy 6*)
- Address special needs of transit users (*Policy 7*).

- Create improved and safer circulation facilities for pedestrians (*Policy 8*).

- Provide the opportunity for safe, convenient, and pleasant bicycle travel throughout all areas of Hayward (Policy 9).

- Encourage Land Use Patterns that Promote Transit usage. (*Policy 10*)
  - * Encourage transit-oriented development, where appropriate, encourage intensive new residential and commercial development within 1/2 mile of transit stations or 1/4 mile of major bus routes. (*Strategy 10.1)*
  - * Encourage mixed-use residential and commercial development to reduce the need for multi-destinational trips. (*Strategy 10.2*)
  - * Promote high density new residential development, including residential above commercial uses, near transit facilities, activity generators and along major arterials. (*Strategy 10.3)*
  - * Encourage alternatives to automobile transportation through development policies and provision of transit, bike and pedestrian amenities. (*Strategy 4*)
  - * Encourage design of development that facilitates use of transit. (*Strategy 6)*

Bicycle Master Plan

The City's *Bicycle Master Plan* (update adopted in September 2007) provides an assessment of existing conditions, policy goals, a proposed network and implementation plan to enhance and improve the bicycling environment and encourage bicycle use in the City of Hayward. The key purposes of the Master Plan update are:

- Develop an implementation strategy
- Provide needed facilities
- Enhance the quality of life in Hayward
- Integrate the Hayward bicycle network with regional bicycle routes
- Maximize funding sources

North Hayward Neighborhood Plan

- Design circulation and Transportation to respect the needs of residents. (*Policy F*)
  * Control traffic on local streets. (*Strategy F 1*)
  * Design Mission Boulevard for transit and pedestrian amenity (*Strategy F 2)*
  * Comprehensively review Route 238 through North Hayward (*Strategy F 3*)

Upper B Street Neighborhood Plan. Applicable policies and strategies include:

- Promote "B" Street for local traffic. (*Policy 4*)
  * Amend precise plan line for "B" Street to a 60-foot precise plan line west of Vermont Street to discourage increased through traffic and reflect existing conditions (*Strategy 4.A*)
  * Limit Improvements to the Center-"B"- Kelly intersection to those that facilitate movement between Center and Kelly. (*Strategy 4 B*)
  * Promote Grove Way, Redwood Road and "A" Street as alternatives to "B" Street. (*Strategy 4 .C*)

- Provide a circulation system to improve safety and facilitate the flow of local traffic. (*Policy 5*)
  * Improve safety and access onto "B" Street by considering installing a traffic signal at the intersection of "B" Street and Seventh Avenue. (*Strategy 5.A*)
  * Consider installing a 4-way stop at "D" and Seventh streets to improve safety. (*Strategy 5.B*)
  * Assign a high priority to the installation of a traffic signal at "A" Street and Fourth Street. (*Strategy 5 C*)
  * Adopt street plan lines to reflect existing widths of neighborhood streets(*Strategy 4 A*)
  * Limit Improvements to the Center-"B"- Kelly intersection to those that facilitate movement between Center and Kelly. (*Strategy 5 D*)
  * Study the feasibility of developing a north-south connection between "B" and "D" Streets at Templeton. (*Strategy 5 E*)

- Promote alternative forms of transportation by providing for pedestrian, bicycle and transit travel. (*Policy 7*)
  * Develop bike routes on "A," "D" and Fourth Streets as proposed by the Hayward Bicycle Facilities Plan, and on Second Street as proposed by the East Bay Bicycle Coalition. On Fourth Street, improve right-of-way prior to development of a bike route. (*Strategy 7.A*)
  * For bicycle access to schools designate bike routes on Sixth from "B" to "D" Streets, and along Fifth Street from Markham to "E" Street. (*Strategy 7.B*)

Mission Foothills Neighborhood Plan.

- Design appropriate local streets (*Policy G*)

Hayward Highlands Neighborhood Plan.

- Maintain a street system that safely moves traffic through the neighborhood and develop a system of non-vehicular facilities which is safe and friendly to pedestrians (*Policy 1*)
  * Accept Tribune, Call and Chronicle Avenues as public streets at the time the streets are brought up to City standards (*Strategy 1.1*)
  * Preserve the major system of established open space trails and corridors in the Hayward Highlands and establish links to existing and planned trails in and around the area (*Strategy 1.5*)

Mission-Garin Neighborhood Plan
The following circulation strategies are included in the Mission-Garin Neighborhood Plan.
  * Require phasing of development that is coordinated with transportation system management. (*Strategy 20*)
  * Reduce local traffic by such means as requiring large residential developments to provide shuttle serve to BART and encourage other alternative transportation measures such as bus route changes, construction of bike trails and provision of other pedestrian amenities. (*Strategy 22*)

California Department of Transportation (Caltrans)
Caltrans is responsible for planning, design, construction, and maintenance of all interstate freeways and state routes. State Route 238 in the study area is under Caltrans' jurisdiction. Any improvements to State Route 238 that may not be done in conjunction with the 238 Corridor Improvement Project will need participation from Caltrans until this route is relinquished to the city as part of the Route 238 Corridor Improvement Project.

Alameda County Congestion Management Agency (CMA)
The Alameda County Congestion Management Agency (CMA) prepares the Congestion Management Program (CMP), a plan mandated by California law to describe the strategies to address congestion problems on the CMP network, which includes state highways and principal arterials. The CMP uses LOS standards as a mean to measure congestion and has established LOS standards to determine how local governments meet the standards of the CMP.

STANDARDS OF SIGNIFICANCE

A transportation or circulation impact would be considered significant if it would:

- Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections). Specifically:

    * If the Project causes an intersection to operate at LOS F; or
    * If the Project causes the delay per vehicle to increase by four (4) seconds or more at an intersection operating at LOS F under No Project conditions.

According to the Alameda County Congestion Management Agency 2007 Congestion Management Program (CMP), the LOS standard for Metropolitan Transportation System (MTS) roadways, which include the CMP roadway network, is LOS E, except for those locations at LOS F in 1991. Therefore significant traffic impacts on MTS roadways in the study area are identified if the proposed Project causes:

- The operations on MTS roadways to deteriorate from LOS E or better to LOS F; or
- The volume-to-capacity (V/C) ratio increases by more than five (5%) percent on an MTS roadway that is already operating at LOS F. Based on professional judgment and in consultation with the local agency, this is considered a reasonable threshold given the fluctuations in the travel demand model and the long-range estimates for land use and traffic in Year 2035.

- Result in a change in traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks

- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

ENVIRONMENTAL IMPACTS

Approach and methodology

The analysis methodology for this Project required the use of two transportation tools: The City of Hayward Travel Demand Model that is based on both the Metropolitan Transportation Commission (MTC) region-wide travel demand model and the ACCMA Countywide Model, which forecasts roadway volumes and intersection turning volumes, and TRAFFIX, which uses the previously developed intersection volumes from the demand model to determine intersection levels of service. The Citywide travel demand model has been refined for the study to accurately reflect existing and future vehicle volumes in the local study area. These tools were selected through coordination with the City of Hayward.

Travel demand model assumptions. The City of Hayward has a model that is based on the ACCMA Countywide travel demand model to forecast its travel demand. The model is implemented using the EMME/2 software and is based on network assumptions from the Metropolitan Transportation Commission's 2005 Regional Transportation Plan (RTP) and the Countywide Transportation Plan and regional land use based on ABAG's Projections 2003 and City General Plan land use within Hayward. The model forecasts weekday average daily traffic (ADT), AM and PM peak hour link and intersection volumes based on the industry standard 4-step method and includes a comprehensive post-processing procedure prior to inputting results and analyzing the intersection LOS into TRAFFIX™, a traffic impact analysis computer software. The model was recalibrated to 2000 conditions based on updated land use and network assumptions.

For Cumulative 2025 Conditions, the land uses for the TAZs located within the study area were obtained from ABAG P03 demographics and are consistent with the City's Existing General Plan. Planned roadway changes incorporated into the model for this future year are detailed in the cumulative scenarios.

Intersection level of service model assumptions. The most current version of Traffix (version 8.0) was used to analyze intersections. Signalized intersection levels of service were calculated and reported using the 1994 *Highway Capacity Manual* techniques for operations, as requested by the City of Hayward. Unsignalized intersection levels of service were calculated and reported using the 2000 *Highway Capacity Manual* techniques for operations.

Analysis framework. The analysis of the Project traffic impacts involves multiple sequential steps, with the conclusions of each step reviewed for reasonableness before proceeding with the next step. The sequence of steps in the traffic analysis for the Project was as follows:

Traffic Task	Method or Tool Applied
1. Assign trips to road network	The City of Hayward travel demand model was used to generate and distribute daily person trips and assign peak hour vehicle traffic to and from the Project Site to the future roadway network.
2. Estimate background traffic	The City of Hayward travel demand model was used to determine peak-hour traffic conditions at 23 intersections where the Project may affect traffic. The model was used to generate data files representing traffic movements at those 23 intersections under 2025 conditions. Two intersections that are side-street stop-controlled were dropped from the analysis for 2025 conditions, as requested by the City of Hayward.

3.	Project traffic for future scenarios	Project land use was added to or subtracted from the City of Hayward travel demand model, which was used to distribute daily person trips and assign peak hour traffic to and from the Project Site to the future roadway network. The model was implemented for: • 2025 Project Alternative A (Market Potential) • 2025 Project Alternative B (Community Meetings) • 2025 Project Alternative C (Policies and Public Agencies)
4.	Develop Project future intersection volumes	The model differences between the Project alternatives and the No-Build were quantified and reviewed. These differences were applied to the No-Build intersection turning volume forecasts to develop the new intersection volumes for the alternatives.
5.	Estimate intersection LOS	Intersection operation is characterized by levels of service (LOS) expressed in terms of vehicle delay, ranging from A (none to negligible delay) to F (excessive delay). The City of Hayward conducts level of service calculations for signalized and unsignalized intersections using Traffix software, which implements the *Highway Capacity Manual* (HCM) methodologies. This was done only for 2025 + Project Alternative A after a review of the link difference plots for Alternatives B and C showed lower traffic volumes than the No Project in the corridor.
6.	Identify Project impacts and mitigation measures	For intersections that are identified as exceeding LOS standards, determine if the Proposed Project (Alternative A) has caused an impact and what measures, if any, would improve operations to an acceptable level of service.

Intersection levels of service analysis

Signalized Intersections Analysis**.** Signalized intersection analyses were conducted using the operational methodology outlined in the *1994 Highway Capacity Manual* (Transportation Research Board, Washington, D.C., 1994, Chapters 9 and 10), as required by the City of Hayward. This procedure calculates an average stopped delay per vehicle at a signalized intersection.

Unsignalized Intersections Analysis**.** Stop sign controlled intersections were analyzed utilizing the operational methodology outlined in the *2000 Highway Capacity Manual* (Transportation Research Board, Washington, D.C., 2000, Chapter 17), due to correction of formula errors in the HCM 1994 method for unsignalized intersections.

Table 4.11-9 and Table 4.11-10 illustrate the LOS criteria used in this analysis for both signalized and unsignalized intersections.

Table 4.11-9. Level of Service Criteria for Signalized Intersections (1994 HCM Methodology)

Level of Service (LOS)	Average Delay (seconds/vehicle)	Description
A	≤ 5	Very Low Delay: This level of service occurs when progression is extremely favorable and most vehicles arrive during a green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
B	> 5 and ≤ 15	Minimal Delays: This level of service generally occurs with good progression, short cycle lengths, or both. More vehicles stop than at LOS A, causing higher levels of average delay.
C	> 15 and ≤ 25	Acceptable Delay: Delay increases due to fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level of service. The number of vehicles stopping is significant, though many still pass through the intersection without stopping.
D	> 25 and ≤ 40	Approaching Unstable Operation/Significant Delays: The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume / capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	> 40 and ≤ 60	Unstable Operation/Substantial Delays: These high delay values generally indicate poor progression, long cycle lengths, and high volume / capacity ratios. Individual cycle failures are frequent occurrences.
F	> 60	Excessive Delays: This level, considered unacceptable to most drivers, often occurs with oversaturation (that is, when arrival traffic volumes exceed the capacity of the intersection). It may also occur at high volume / capacity ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

Source: Transportation Research Board, *Highway Capacity Manual,* Washington, D.C., 1994, pages 9-6 and 9-7

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Table 4.11-10. Level of Service Criteria for Unsignalized Intersections (2000 HCM Methodology)

Level of Service (LOS)	Average Delay (seconds/vehicle)	Description
A	≤ 10	Very Low Delay
B	> 10 and ≤ 15	Minimal Delays
C	> 15 and ≤ 25	Acceptable Delay
D	> 25 and ≤ 35	Approaching Unstable Operation and/or Significant Delays
E	> 35 and ≤ 50	Unstable Operation and/or Substantial Delays
F	> 50	Excessive Delays

Source: *Highway Capacity Manual,* 2000, pages 17-2 and 17-32, Transportation Research Board, Washington, D.C.

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Project analysis

Project access and circulation. All of the Project Alternatives include the installation of an extensive, continuous multi-use trail and some changes to the roadway system.

The proposed multi-use trail would begin in the northern portion of the corridor east of Grove Way off of Gary Drive. It would continue across A Street, along and/or parallel to 4th Street until it crosses East Avenue. It proceeds west of Hayward High School to 2nd Street, along 2nd Street until the trail access point off of 2nd Street west of Fawn Meadow Lane (where another trail head is found). The trail would then follow Overlook Avenue, that would be extended to Highland Road, and then would bifurcate to allow either direct access to Carlos Bee Boulevard via Palisade Street and a new access road to Carlos Bee Boulevard, or a more scenic route to Carlos Bee Boulevard through undeveloped and open space land (the upper trail). It would cross Carlos Bee Boulevard and roughly parallel Maitland Drive and Bunker Hill Boulevard across Harder Road. It would traverses mostly open space/ recreational area between Harder Road and Calhoun Street then continues to Tennyson Road. At Tennyson Drive, trail options would include an eastern route further up into the hills or a western route towards Mission Boulevard. The trail would continue south along Mission Boulevard to Valle Vista Avenue, head west on Valle Vista to Dixon Street, then head south on Dixon Street. Between Valle Vista Avenue and Industrial Parkway, the trail would divide to allow access east towards Mission Boulevard or west towards the BART tracks, where it would head south parallel to the BART tracks to Industrial Parkway.

Sections of the trail that along existing or proposed roads would take advantage of sidewalks for pedestrian circulation.

There are some roadway changes that are proposed for these Project Alternatives. These changes are detailed below and apply to each Alternative, unless otherwise specified.

- Gary Drive east of Grove Way – Extend roadway south about 900 feet (Alternatives A and C only).
- 4th Street between D Street and E Street/ East Avenue – Install a new roadway to provide a direct connection of 4th Street to E Street/ East Avenue, including the new intersection of 4th Street and East Avenue (Alternatives A and C only).
- Overlook Avenue between Palisade Street and Highland Boulevard – Extend roadway north about 1,200 feet to provide a new intersection with Highland Boulevard.
- Overlook Avenue between Palisade Street and Carlos Bee Boulevard – Eliminate the existing side street stop-controlled intersection of Overlook Avenue and Carlos Bee Boulevard and replace it with a signalized intersection about 300 feet east (to provide better sight distance of the signal and intersection) along Carlos Bee Boulevard. Extend Palisade Street east to reroute traffic to a new street (as yet unnamed), to provide a connection from Overlook Avenue to Carlos Bee Boulevard. Although detailed analysis was not conducted for this new intersection to determine if a traffic signal is warranted, it will need improved access control in the form of a signal due to the sharp curve and steepness of Carlos Bee Boulevard and the intensity of the development cluster adjacent to Overlook Drive. A signalized intersection would also provide a safe location for the proposed trail crossing at Carlos Bee Boulevard.
- Bunker Hill Boulevard north of Bunker Hill Court – Extend roadway about 200 feet north to provide a new intersection at Carlos Bee Boulevard.
- Central Boulevard and Mission Boulevard Intersection – Eliminate this side-street stop-controlled intersection, as approved for the Route 238 Corridor Improvement Project. Traffic will be rerouted to Berry or Torrano Avenues.
- Berry Avenue and Mission Boulevard Intersection – Relocate the eastern leg of this side-street stop-controlled intersection three hundred (300) feet north to align with its western leg and signalize it, as approved for the Route 238 Corridor Improvement Project.
- Harder Road east of Westview Way – Install a new 1,000-foot roadway loop (as yet unnamed) on the southern side of Harder Road to provide access to the proposed residential development. Two new intersections (one at each end of the loop) along Harder Road will be installed.
- Industrial Parkway and Dixon Street – Install a new roadway (as yet unnamed) to create a square block. New intersections will be located on Industrial Parkway 400 feet west of Dixon Street and on Dixon Street 1,000 feet north of Industrial Parkway.

Project trip generation. Project trip generation was developed from the land uses for each alternative using the City of Hayward demand model. The model generates trips based on the methods consistent with the ACCMA Countywide CMP model and uses socio-demographic data to generate trips by trip purpose. A comparable trip generation using ITE Trip Generation is

shown in Table 4.11-11 below. While the ITE rates were not used directly in this application, general ITE rates are useful to show the differences between the No Project and each project alternative

Table 4-11.11. Project Trip Generation

Type	Use	Size	Units	ITE Code	Daily Rate	Daily Trips	AM Peak Hour Traffic Rate	AM % In	AM % Out	AM In	AM Out	PM Peak Hour Traffic Rate	PM % In	PM % Out	PM In	PM Out
Cumulative (2025) - No Project																
Housing	Single Family	1336	DU	210	9.57	12,788	0.75	0.25	0.75	251	752	1.01	0.63	0.37	850	499
Housing	Apartments	1336	DU	220	6.72	8,980	0.55	0.29	0.71	213	522	0.67	0.61	0.39	546	349
Commercial	Office	129	ksf	710	3.32	428	0.48	0.88	0.12	54	7	0.46	0.17	0.83	10	49
Commercial	Market	129	ksf	850	102.24	13,174	3.59	0.61	0.39	282	180	10.50	0.51	0.49	690	663
	Totals					**35,370**				**800**	**1,461**				**2,096**	**1,560**
Cumulative (2025) + Project Alternative A (Market Potential)																
Housing	Single Family	1610	DU	210	9.57	15,409	0.75	0.25	0.75	302	906	1.01	0.63	0.37	1,025	602
Housing	Apartments	1610	DU	220	6.72	10,820	0.55	0.29	0.71	257	629	0.67	0.61	0.39	658	421
Commercial	Office	117	ksf	710	3.32	390	0.48	0.88	0.12	50	7	0.46	0.17	0.83	9	45
Commercial	Market	117	ksf	850	102.24	12,007	3.59	0.61	0.39	257	164	10.50	0.51	0.49	629	604
			Totals			**38,626**				**866**	**1,706**				**2,321**	**1,672**
	Difference from No Project					**3,256**				**66**	**245**				**225**	**112**
Cumulative (2025) + Project Alternative B (Community Meetings)																
Housing	Single Family	583	DU	210	9.57	5,577	0.75	0.25	0.75	109	328	1.01	0.63	0.37	371	218
Housing	Apartments	583	DU	220	6.72	3,916	0.55	0.29	0.71	93	228	0.67	0.61	0.39	238	152
Commercial	Office	110	ksf	710	3.32	365	0.48	0.88	0.12	46	6	0.46	0.17	0.83	9	42
Commercial	Market	110	ksf	850	102.24	11,242	3.59	0.61	0.39	241	154	10.50	0.51	0.49	589	566
			Totals			**21,100**				**489**	**716**				**1,207**	**978**
	Difference from No Project					**-14,270**				**-311**	**-745**				**-889**	**-582**
Cumulative (2025) + Project Alternative C (Policies and Public Agencies)																
Housing	Single Family	1081	DU	210	9.57	10,348	0.75	0.25	0.75	203	608	1.01	0.63	0.37	688	404
Housing	Apartments	1081	DU	220	6.72	7,266	0.55	0.29	0.71	172	422	0.67	0.61	0.39	442	283
Commercial	Office	120	ksf	710	3.32	399	0.48	0.88	0.12	51	7	0.46	0.17	0.83	9	46
Commercial	Market	120	ksf	850	102.24	12,287	3.59	0.61	0.39	263	168	10.50	0.51	0.49	644	618
			Totals			**30,300**				**689**	**1,205**				**1,783**	**1,351**
	Difference from No Project					**-5,070**				**-111**	**-256**				**-313**	**-209**

DU = Dwelling Units; **ksf** = 1,000 square feet

Source: *Trip Generation, 8th Edition* , Institute of Transportation Engineers, 2008, Washington, DC

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Table 4.11-11 shows that Project Alternative A would increase daily trips by more than 3,200 over Cumulative (2025) No Project conditions, whereas Project Alternatives B and C would reduce daily trips by more than 14,000 and 5,000, respectively. Model comparison plots, contained in the DEIR Appendix 8.7, showing the difference in roadway link volumes of each Project Alternative compared to the Cumulative (2025) No Project mirror the increases and reductions in trips as indicated in Table 4.11-11. Based on this review, Alternatives B and C were not analyzed at the same level of detail as for Alternative A.

Project trip distribution. Trip distribution refers to the approach and departure directions used to access the Project Site. The Project Site is spread over a large area that is covered by about 20 model traffic analysis zones (TAZs). As a result the City of Hayward travel demand model was used to distribute the daily person trips and peak hour vehicle trips from the Project Site to the surrounding areas. Model plots showing the difference in roadway link volumes of each Project Alternative compared to the Cumulative (2025) are contained in the appendices (see Appendix 8.7).

Project mode choice. The City of Hayward travel demand model was used to convert the daily distributed person trips into modes of travel, like auto drive alone and shared ride, and transit

Project trip assignment. The City of Hayward travel demand model was used to assign the vehicular traffic from the site to the surrounding areas on the road network.

Cumulative (2025) analysis

Cumulative 2025 (No Project) conditions. Under Cumulative (2025) No Project conditions, development consistent with Hayward's General Plan is modeled. Planned roadway changes projected to be constructed by 2025 are detailed under the Existing and Planned Roadway Facilities sub-section.

Cumulative (2025) No Project Intersection Turning Movement Volumes. Peak-hour intersection turning movement volumes for Cumulative (2025) No Project Conditions are shown in the appendices in the traffic calculation sheets (see Appendix 8.7).

Cumulative (2025) No Project Intersection Levels of Service. A default of 0.95 peak-hour factor was applied to all intersections for the 2025 analysis. Table 4.11-12 and Table 4.13-13 provide information on levels of service and average delay at all study intersections for the AM and PM peak-hours, respectively. Intersections that operate at LOS F under Cumulative No Project conditions are highlighted in the tables. Detailed LOS calculations for this scenario are contained in the technical appendices (see Appendix 8.7).

As indicated in Tables 4.11-12 and 4.11-13, the following intersections are projected to operate at LOS F, without the proposed Project:

1 Foothill Boulevard and Mattox Road in the AM and PM peak hours

2 Foothill Boulevard and Grove Way in the PM peak hour

6 Foothill Boulevard and D Street in the AM and PM peak hours

Table 4.11-12. Weekday AM Peak-Hour Intersection Level of Service for Cumulative (2025) No Project

Intersection	Traffic Control	No Project LOS	No Project Delay
1 Foothill Blvd & Mattox Rd	Signal	***F***	***75***
2 Foothill Blvd & Grove Wy	Signal	E	50
3 Foothill Blvd & A St	Signal	C	21
4 Foothill Blvd & B St	Signal	E	44
5 2nd St & B St	Signal	D	28
6 Foothill Blvd & D St	Signal	***F***	***93***
7 Mission Blvd & Jackson St-Foothill Blvd	Signal	C	16
8 Mission Blvd & Fletcher Ln	Signal	D	36
9 Mission Blvd & Highland Blvd	Signal	C	17
10 Mission Blvd & Carlos Bee Blvd	Signal	D	35
12 Mission Blvd & Berry Ave	Signal	B	11
14 Mission Blvd at Harder Rd	Signal	D	38
15 Mission Blvd at Sorenson Rd	Signal	B	12
16 Mission Blvd at Jefferson St-Calhoun St	Signal	C	20
17 Mission Blvd at Hancock St	Signal	C	16
18 Mission Blvd at Tennyson Rd	Signal	D	32
19 Mission Blvd at Valle Vista Ave	Signal	B	7
20 Mission Blvd at Industrial Parkway	Signal	D	40
21 Dixon St at Tennyson Rd	Signal	D	36
22 Dixon St at Valle Vista Ave	AWSC	C	17
23 Dixon St at Industrial Parkway	Signal	C	25

LOS = Level of Service; **Delay** = Weighted average delay for vehicles in seconds; **AWSC** = All way stop control

Average LOS is based on the weighted average delay per vehicle of the total intersection approaches.

Signalized intersections were analyzed using the 1994 Highway Capacity Manual (HCM) methodology whereas stop-controlled intersections were analyzed using the 2000 HCM methodology.

Intersections that will operate at substandard levels of service are highlighted.

Source: Dowling Associates, Inc. using TRAFFIX 8.0

Table 4.11-13. Weekday PM Peak-Hour Intersection Level of Service for Cumulative (2025) No Project

Intersection		Traffic Control	No Project LOS	No Project Delay
1	Foothill Blvd & Mattox Rd	Signal	***F***	***99***
2	Foothill Blvd & Grove Wy	Signal	***F***	***77***
3	Foothill Blvd & A St	Signal	B	14
4	Foothill Blvd & B St	Signal	C	19
5	2nd St & B St	Signal	E	50
6	Foothill Blvd & D St	Signal	***F***	***138***
7	Mission Blvd & Jackson St-Foothill Blvd	Signal	D	31
8	Mission Blvd & Fletcher Ln	Signal	D	39
9	Mission Blvd & Highland Blvd	Signal	C	19
10	Mission Blvd & Carlos Bee Blvd	Signal	E	48
12	Mission Blvd & Berry Ave	Signal	B	10
14	Mission Blvd at Harder Rd	Signal	E	46
15	Mission Blvd at Sorenson Rd	Signal	D	38
16	Mission Blvd at Jefferson St-Calhoun St	Signal	C	18
17	Mission Blvd at Hancock St	Signal	D	28
18	Mission Blvd at Tennyson Rd	Signal	D	32
19	Mission Blvd at Valle Vista Ave	Signal	B	6
20	Mission Blvd at Industrial Parkway	Signal	D	36
21	Dixon St at Tennyson Rd	Signal	D	28
22	Dixon St at Valle Vista Ave	AWSC	C	22
23	Dixon St at Industrial Parkway	Signal	C	16

LOS = Level of Service; **Delay** = Weighted average delay for vehicles in seconds; **AWSC** = All way stop control

Average LOS is based on the weighted average delay per vehicle of the total intersection approaches.

Signalized intersections were analyzed using the 1994 Highway Capacity Manual (HCM) methodology whereas stop-controlled intersections were analyzed using the 2000 HCM methodology.

Intersections that will operate at substandard levels of service are highlighted.

Source: Dowling Associates, Inc. using TRAFFIX 8.0

Cumulative (2025) plus Project Alternative A

Land use changes proposed for Alternative A (Market Potential) were converted to vehicle trips and entered into the modeling network for Cumulative (2025) conditions, which assumed the planned roadway network changes detailed previously under the Existing and Planned Roadway Facilities sub-section.

Model difference plots of the roadway link volumes, contained in the Appendix 8.7, were created between Project Alternative A and No Project under Cumulative (2025) Conditions. As detailed in the Trip Generation sub-section, Project Alternative A would produce approximately 3,200 more daily trips than the Cumulative No Project conditions. After surveying the difference plots and comparing trip generation rates, it was determined that intersection LOS analysis was needed because Project Alternative A may have impacts on intersection operations in the corridor.

Cumulative (2025) plus Project Alternative A Intersection Turning Movement Volumes. Peak-hour intersection turning movement volumes for Cumulative (2025) plus Project Alternative A Conditions are shown in the appendices in the traffic calculation sheets (see Appendix 8.7).

Cumulative (2025) plus Project Alternative A Intersection Levels of Service. A default of 0.95 peak-hour factor was applied to all intersections for the 2025 plus Project Alternative A analysis. Table 4.11-14 and Table 4.11-15 provide information on levels of service and average delay at all study intersections for the AM and PM peak-hours, respectively, for Cumulative (2025) with and without Project Alternative A. Intersections operating at LOS F are appear in bold in the tables and intersections that would be impacted by the Project are boxed. Project-related impacts are detailed in the Impacts and Mitigations section. Detailed LOS calculations for this scenario are contained in Appendix 8.7.

With the addition of Project generated traffic, one (1) intersection would be impacted by the Project Alternative A, as follows:

6 Foothill Boulevard and D Street in the AM peak hour

Table 4-11.14. Weekday AM Peak-Hour Intersection Level of Service for Cumulative (2025) No Project Compared to Project Alternative A

	Intersection	Traffic Control	No Project LOS	No Project Delay	Project Alt A LOS	Project Alt A Delay
1	Foothill Blvd & Mattox Rd	Signal	***F***	***75***	***F***	***75***
2	Foothill Blvd & Grove Wy	Signal	E	50	E	50
3	Foothill Blvd & A St	Signal	C	21	C	21
4	Foothill Blvd & B St	Signal	E	44	E	53
5	2nd St & B St	Signal	D	28	D	28
6	Foothill Blvd & D St	Signal	***F***	***93***	***F***	***103***
7	Mission Blvd & Jackson St-Foothill Blvd	Signal	C	16	C	16
8	Mission Blvd & Fletcher Ln	Signal	D	36	D	39
9	Mission Blvd & Highland Blvd	Signal	C	17	C	17
10	Mission Blvd & Carlos Bee Blvd	Signal	D	35	D	40
12	Mission Blvd & Berry Ave	Signal	B	11	B	12
14	Mission Blvd at Harder Rd	Signal	D	38	E	44
15	Mission Blvd at Sorenson Rd	Signal	B	12	B	14
16	Mission Blvd at Jefferson St-Calhoun St	Signal	C	20	C	23
17	Mission Blvd at Hancock St	Signal	C	16	C	18
18	Mission Blvd at Tennyson Rd	Signal	D	32	D	32
19	Mission Blvd at Valle Vista Ave	Signal	B	7	B	8
20	Mission Blvd at Industrial Parkway	Signal	D	40	E	42
21	Dixon St at Tennyson Rd	Signal	D	36	D	39
22	Dixon St at Valle Vista Ave	AWSC	C	17	C	19
23	Dixon St at Industrial Parkway	Signal	C	25	D	27

LOS = Level of Service; **Delay** = Weighted average delay for vehicles in seconds; **AWSC** = All way stop control

Average LOS is based on the weighted average delay per vehicle of the total intersection approaches.

Signalized intersections were analyzed using the 1994 Highway Capacity Manual (HCM) methodology whereas stop-controlled intersections were analyzed using the 2000 HCM methodology.

Intersections that will operate at substandard levels of service are highlighted, while those that will be impacted by the Project are also outlined.

Source: Dowling Associates, Inc. using TRAFFIX 8.0

Table 4.11-15. Weekday PM Peak-Hour Intersection Level of Service for Cumulative (2025) No Project Compared to Project Alternative A

Intersection	Traffic Control	No Project LOS	No Project Delay	Project Alt A LOS	Project Alt A Delay
1 Foothill Blvd & Mattox Rd	Signal	***F***	***99***	***F***	***100***
2 Foothill Blvd & Grove Wy	Signal	***F***	***77***	***F***	***77***
3 Foothill Blvd & A St	Signal	B	14	B	14
4 Foothill Blvd & B St	Signal	C	19	C	19
5 2nd St & B St	Signal	E	50	E	50
6 Foothill Blvd & D St	Signal	***F***	***138***	***F***	***135***
7 Mission Blvd & Jackson St-Foothill Blvd	Signal	D	31	D	34
8 Mission Blvd & Fletcher Ln	Signal	D	39	E	42
9 Mission Blvd & Highland Blvd	Signal	C	19	C	20
10 Mission Blvd & Carlos Bee Blvd	Signal	E	48	E	58
12 Mission Blvd & Berry Ave	Signal	B	10	B	10
14 Mission Blvd at Harder Rd	Signal	E	46	E	51
15 Mission Blvd at Sorenson Rd	Signal	D	38	E	44
16 Mission Blvd at Jefferson St-Calhoun St	Signal	C	18	C	20
17 Mission Blvd at Hancock St	Signal	D	28	D	30
18 Mission Blvd at Tennyson Rd	Signal	D	32	D	33
19 Mission Blvd at Valle Vista Ave	Signal	B	6	B	7
20 Mission Blvd at Industrial Parkway	Signal	D	36	D	36
21 Dixon St at Tennyson Rd	Signal	D	28	D	29
22 Dixon St at Valle Vista Ave	AWSC	C	22	D	29
23 Dixon St at Industrial Parkway	Signal	C	16	C	16

LOS = Level of Service; **Delay** = Weighted average delay for vehicles in seconds; **AWSC** = All way stop control

Average LOS is based on the weighted average delay per vehicle of the total intersection approaches.

Signalized intersections were analyzed using the 1994 Highway Capacity Manual (HCM) methodology whereas stop-controlled intersections were analyzed using the 2000 HCM methodology.

Intersections that will operate at substandard levels of service are highlighted, while those that will be impacted by the Project are also outlined.

Source: Dowling Associates, Inc. using TRAFFIX 8.0

Cumulative (2025) Plus Project Alternative B

Land use changes proposed for Alternative B (Community Meetings) were converted to vehicle trips and entered into the modeling network for Cumulative (2025) conditions, which assumed the planned roadway network changes detailed previously under the Existing and Planned Roadway Facilities sub-section.

Model difference plots of the roadway link volumes, contained in the Appendices, were created between Project Alternative B and No Project under Cumulative (2025) Conditions. As detailed in the Trip Generation sub-section, Project Alternative B would produce approximately 14,000 less daily trips than the Cumulative No Project conditions. After surveying the difference plots and comparing trip generation rates, it was determined that intersection LOS analysis was not needed because Project Alternative B is expected to have less impact on intersection operations than Project Alternative A and the No Project.

Cumulative (2025) Plus Project Alternative C

Land use changes proposed for Alternative C (Policies and Public Agencies) were converted to vehicle trips and entered into the modeling network for Cumulative (2025) conditions, which assumed the planned roadway network changes detailed previously under the Existing and Planned Roadway Facilities sub-section.

Model difference plots of the roadway link volumes, contained in the Appendices, were created between Project Alternative C and No Project under Cumulative (2025) Conditions. As detailed in the Trip Generation sub-section, Project Alternative C would produce approximately 5,000 less daily trips than the Cumulative No Project conditions. After surveying the difference plots and comparing trip generation rates, it was determined that intersection LOS analysis was not needed because Project Alternative C is expected to have less impact on intersection operations than Project Alternative A and the No Project.

Project impacts

The following three intersections are expected to operate at substandard levels of service (LOS F) under No Project conditions, and continue to operate as such under Project Alternative A, but are not impacted by the Project since they would not add more than 4 seconds of additional delay:

1. Foothill Boulevard & Mattox Road in the AM and PM peak hours
2. Foothill Boulevard & Grove way in the PM peak hour
6. Foothill Boulevard & D Street in the PM peak hour

The following impacts were identified for Project Alternative A:

6. Foothill Boulevard & D Street in the AM peak hour

This intersection is expected to operate at substandard levels of service (LOS F) under No Project conditions, but Project Alternative A would further degrade operations at this intersection by increasing delay ten more seconds.

<u>Impact 4.11-1 (cumulative traffic impacts).</u> Project Alternative A would result in a three-second improvement in average delay at the intersection of Foothill Boulevard & D Street in the PM peak hour over the No Project condition under cumulative conditions. However, this intersection would operate with worse delay than under No Project Conditions in the AM peak hour, causing an increase in average delay of ten more seconds. As indicated in the *Route 238 Corridor Improvement Project: Final Environmental Impact Report (FEIR)*, further improvements to accommodate the additional traffic volumes would cause unacceptable right-of-way impacts. Thus, further mitigation of this intersection to achieve more acceptable LOS is considered to be infeasible and the impacts to LOS at the intersection of Foothill Boulevard and D Street is considered to be significant and unavoidable (s*ignificant and unavoidable impact and no mitigation available*).

Congestion Management Program Analysis

Existing freeway and state route operations conditions were taken from the *2006 Level of Service Monitoring Report* prepared by the Alameda County Congestion Management Agency (ACCMA). The ACCMA monitors congestion on freeways and state routes in the region by measuring the average travel speed during the AM and PM peak hours (7:00 to 9:00 AM and 4:00 to 6:00 PM, respectively). Freeway traffic conditions are then described in terms of level of service (LOS), a standard measure for traffic operations defined by the average number of seconds of delay per vehicle, with LOS A representing free-flow conditions and LOS F representing gridlocked conditions.

According to the ACCMA, traffic speeds of 49 miles per hour (mph) or higher on the freeway indicate LOS A through C. At LOS D, traffic operating conditions become unstable and speeds can drop as low as 41 mph. At LOS E, there are virtually no usable gaps in the traffic stream and speeds can drop as low as 30 mph. Below 30 mph, stop-and-go traffic operations often occur and the LOS is F. State route segment LOS standards depend on the range of free-flow vehicle speeds and the arterial class, which are not detailed here.

The proposed project consists of three alternatives, with Alternative A, the Market Potential Alternative, hereafter referred to as the Project, analyzed for the CMP.

Since the proposed Project would generate more than 100 P.M. peak hour trips, as described in the transportation report prepared for this EIR and pursuant to the request of the Alameda County Congestion Management Agency (ACCMA) in their letter dated January 21, 2009 in response to the Notice of Preparation (NOP) of the EIR, a Congestion Management Program (CMP) analysis was conducted for this project. The impacts of the project on the regional transportation system were assessed using the latest version of the ACCMA Countywide Travel Demand Model which uses Association of Bay Area Government's (ABAG) Projections 2007 (P'07) socio-economic forecasts. The land use for the Project was added into the model in the form of socio-demographic data for the 2015 and 2035 forecasts.

The full impact of the proposed land use changes were conservatively assumed to have occurred by 2015 and the network included the Route 238 Corridor Improvement Project for consistency.

For the Project analysis, the "with Project" forecasts were compared to the "no-project" forecasts for roadway and transit systems to determine impacts. The impact analysis for roadways includes all Metropolitan Transportation System (MTS) roadways and Congestion Management Program (CMP) designated roadways, plus several local MTS roadways as well as transit corridors in the vicinity of the project area. Transit impacts were addressed for AC Transit and BART. This chapter provides a summary of the analysis.

Significance criteria

Although the ACCMA does not have a policy for determining a threshold of significance, professional judgment has been applied to determine the significance of the project impacts. The roadway impacts of the project were considered significant if the addition of project-related traffic would result in a level of service (LOS) value worse than LOS E, except where the roadway link was already at LOS F under no project conditions. For those locations where this baseline condition is LOS F, the impacts of the project were considered significant if the contribution of project-related traffic is at least five percent (5%) of the total traffic. This criterion has been included to address impacts along roadway segments currently operating under unacceptable levels and was developed based on professional judgment using a "reasonableness test" of daily fluctuations of traffic. Also given the fluctuations in traffic assignment in the demand model under future congested conditions, a change of "volume to capacity" (V/C) ratio of 5% has been found to be a reasonable threshold for which a perceived change in congestion is observed (the V/C ratio is calculated by comparing the peak hour link volume to the peak hour capacity of the road link).

Level of service (LOS) is a measure of the traffic characteristics of a road segment under different traffic conditions, and is assigned a letter from "A" to "F", with LOS "A" representing uncongested, high speed and minimum delay, conditions, while LOS "F" represents highly unstable congested conditions with low speeds and high delay.

This CMP analysis focuses on roadway links on MTS and CMP highway segments and transit corridors, and does not extend to intersections. This is consistent with the guidelines of the 2007 Congestion Management Program.

Congestion Management Program Land Use Analysis

The traffic forecasts were based on the most recent version of the Countywide Model, which uses Association of Bay Area Government's (ABAG) Projections 2007 (P'07) socio-economic forecasts. The socio-economic data for the project area was added into the model for the 2015 and 2035 forecasts for all traffic analysis zones within the project area. The exhibit below summarizes the changes in land use for the Project. Since the project includes housing and commercial land uses, the changes in the land use assumptions are primarily to the number of housing units and to the six various types of jobs. This EIR evaluated impacts in Year 2015 and long-term Cumulative impacts in Year 2035 for Alternative A only. This Alternative is considered the most intensive and would likely result in the most impacts. The Project Alternative A assumptions include up to 548 additional housing units and approximately 22,835 square feet less commercial development (or approx 57 less jobs) than the No-Project.

The Countywide model uses households and employment as inputs. Therefore the Project housing component was converted to single family and multi-family units, and the commercial component was converted into jobs and then further split into the six categories (retail, service,

other, manufacturing, wholesale and agricultural) using standard conversion rates from square footage to jobs. Table 4.11-15 summarizes the no project land uses that were replaced by Project land uses.

For the CMP analysis, traffic estimates were calculated for the proposed project using the model and then compared against 2015 and 2035 No Project volumes. The model was used to calculate trip generation, trip distribution, mode choice, and trip assignment of project trips from and to the sites. The results were summarized for both highway and transit impacts. Highway impacts were summarized at the designated link locations requested in the ACCMA's comments on the Notice of Preparation for the Project. The roadway links selected include I-880, I-580, I-238, Foothill Boulevard, Mission Boulevard, Harder Road, Tennyson Road, Industrial Parkway, Jackson Street, B Street, D Street and A Street. Transit impacts were addressed for AC Transit (systemwide) and Bay Area Rapid Transit (BART) at the Hayward and South Hayward stations

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Table 4.11-15. Land Use Changes for Project Area

Model TAZ	No Project Existing General Plan		Project Alternative A Market Potential		Project Alternative B Community Meetings		Project Alternative C Public Agencies	
	Households	Employment	Households	Employment	Households	Employment	Households	Employment
623	299	137	180	74	109	78	240	96
624	157	53	42	143	50	12	201	74
637	3	0	2	0	2	0	3	0
650	0	16	0	16	0	16	0	16
655	58	0	68	30	20	0	40	0
666	39	22	23	18	17	10	38	38
669	22	0	26	0	8	0	15	0
697	136	182	308	117	23	107	259	106
698	304	0	942	28	225	0	0	0
699	70	0	112	0	68	0	132	0
700	142	0	163	0	101	0	254	0
701	58	0	91	0	69	0	130	0
702	100	0	118	0	35	0	70	0
703	51	0	60	0	18	0	35	0
705	567	0	258	0	156	0	189	0
708	59	54	47	63	32	139	48	54
709	427	9	600	5	145	25	375	9
711	179	172	179	93	88	164	133	208
Sum	**2,673**	**644**	**3,220**	**587**	**1,165**	**550**	**2,163**	**601**

Source: Dowling Associates, Inc. 2009

CMP and MTS Highway Segments. The LOS for the designated links were analyzed in a spreadsheet using the Florida Department of Transportation LOS methodology, which provides a planning level analysis based on the Highway Capacity Manual 2000 methods. As a planning level analysis, the level of service is based on forecasts of traffic and assumptions for roadway and signalization control conditions, such as facility type (freeway, expressway, and arterial classification), speeds, capacity and number of lanes. The HCM 2000 LOS and capacity assumptions are provided in Appendix 8.7. The assumption for the number of lanes at each link location was extracted from the ACCMA Countywide Travel Model, and also confirmed through aerial and field observations.

The traffic baseline forecasts for 2015 and 2035 were extracted at the required CMP and MTS highway segments from the ACCMA Countywide Travel Model for both the AM and PM peak hours and the peak hour operations were evaluated in compliance with ACCMA requirements. Summary tables, Table 4.11-16 through Table 4.11-19, are provided that compare the no project results to the with-Project results for each model horizon year. The peak hour volumes, V/C ratios and the level of service for with and without project conditions represent both directions of flow. The detailed directional traffic volume and LOS tables for each roadway segment are also provided in Appendix 8.7.

Baseline (2015) Conditions Impacts on Regional and Local Roadways. A summary of the level of service analysis for Baseline 2015 plus project alternative A is shown in Table 4.11-16 for the AM peak hour and Table 4.11-17 the PM peak hour.

The project would contribute to the cumulative impacts on the regional and local roadways. With the addition of the project, some MTS roadways do experience increases in volume and a change in level of service, but no MTS roadway segments are expected to result in significant impacts, and therefore the addition of project-generated traffic to the regional and local CMP roadways would not result in significant impacts.

Cumulative (2035) Conditions Impacts on Regional and Local Roadways. A summary of the level of service analysis for Cumulative 2035 plus project alternative A is shown in Table 4.11-18 for the AM peak hour and Table 4.11-19 the PM peak hour.

The Project would contribute to the cumulative impacts on the regional and local roadways. With the addition of the project, some MTS roadways do experience increases in volume and a change in level of service, but no MTS roadway segments are expected to result in significant impacts, and therefore the addition of project-generated traffic to the regional and local CMP roadways would not result in significant impacts.

MTS transit corridors

The proposed Project is located within the service area of the AC Transit and the Bay Area Rapid Transit (BART) system. The impact of the proposed Project on the transit system was assessed using the latest version of the ACCMA Countywide Model. The ACCMA Countywide model predicts transit ridership for all operators, including AC Transit and BART. A summary

of the daily transit ridership is shown in Table 4.11-20 for AC Transit and Table 4.11-21 for BART. The model generates daily home-based work and non-work transit trips that are then combined, but does not split these daily trips into peak hour transit trips. Therefore to estimate the number of transit trips occurring during the peak period, it was conservatively assumed that 25 percent of all daily transit trips would occur during the AM or PM peak hours (a review of the MTC household survey peaking factors indicates this is a conservative assumption).

Transit ridership on AC Transit Buses. Future growth and development within the Project area would provide minimal changes to the ridership on AC Transit buses as shown in Table 4.11-20. However, this would be a less than significant impact.

Due to the difficulty of splitting out individual project specific AC Transit trips by route, and for the purpose of this analysis, Project-attributed trips are estimated as the difference in overall total AC Transit ridership in Alameda County.

The impacts of the Project on the AC Transit bus system were assessed based on the ridership derived from the Countywide Model. Due to the nature of this Project, which is primarily a housing and commercial development spread over a large area adjacent to the Route 238 corridor and indirectly served by existing AC Transit service and nearby BART stations, it is expected to attract some transit trips from/to the project site. However, given that the study area is not directly served by transit (except for major trunk lines on Mission Boulevard), it expected that the Project would generate less-than-significant additional transit trips.

Some commuters are expected to use the transit system to travel to work. The mode shift to transit was derived from the mode choice component of the Countywide Model. Since the model does not generate peak hour transit trips, for analysis purposes, a conservative assumption was made that 25% of all daily Project-related trips would occur during the peak hour.

Baseline Conditions plus Project Alternative A. Based on the assumptions described above, under baseline plus Project, the Project has the potential to generate increases in system wide AC Transit ridership. As shown in Table 4.11-20, the Project would increase AC bus ridership by 76 daily trips or about 19 estimated trips in the peak hour. While it is expected that ridership will increase over existing, the future increase in bus ridership with the project is low given that most of the study area is not directly served by transit (except for major trunk lines on Mission Boulevard), it is therefore expected that the Project would generate less-than-significant greater transit trips.

Based on a review of the existing bus ridership in the study area, there are no buses with a load factor approaching 1.0 (which defines buses that operate full), therefore the service levels are not currently impacted. As a result, the future ridership change as forecast by the model would not cause a significant impact to the peak hour bus service in terms of change to the 15-30 minute headway standard, and is therefore considered less than significant.

Cumulative Conditions plus Project Alternative A. Based on the assumptions described above, under baseline plus Project, the project has the potential to generate increases in system wide AC Transit ridership. As shown in Table 4.11-20, the Project would increase AC bus ridership by 69

daily trips or about 17 estimated trips in the peak hour. While it is expected that ridership will increase over existing, the future increase in bus ridership with the Project is low given that most of the study area is not directly served by transit (except for major trunk lines on Mission Boulevard), it is therefore expected that the Project would generate les-than-significant greater transit trips.

Based on a review of the existing bus ridership in the study area, there are no buses with a load factor approaching 1.0 (which defines buses that operate full), therefore the service levels are not currently impacted. As a result, the future ridership change as forecast by the model would not cause a significant impact to the peak hour bus service in terms of change to the 15-30 minute headway standard, and is therefore considered less than significant.

Transit ridership on BART

The Project would increase ridership on BART as shown in Table 4.11-21. The impacts of the Project on the BART system were assessed based on the ridership derived from the Countywide Model at the Hayward and South Hayward BART stations.

BART operates two major rail lines that access the Hayward and South Hayward BART stations, from Fremont to San Francisco and from Fremont to Richmond. Passengers can then also transfer at Bayfair station to travel to San Francisco Airport or Pleasanton destinations. Furthermore, the Countywide Model includes future BART service to San Jose that further increases service and will result in more trains operating through the Hayward BART stations.

<u>Baseline Conditions plus Project Alternative A</u>. Based on the assumptions described above, under Baseline plus project conditions, the Project would increase daily BART ridership at the Hayward and South Hayward stations to 69 and 73 trips respectively. The BART service frequency of 15 minutes equates to 12 trains per hour servicing the Hayward stations (includes two BART lines and both directions) and therefore averages to 3 new riders per train.

It is expected that future BART ridership will increase significantly over existing conditions and based on a review of the existing BART ridership in the study area, the load factor is under 1.0 (which defines BART trains that operate full). But based on the future increase with the Project of 3 new riders per train, this is not considered a significant impact. As a result, this Project-related increase would not cause a significant impact to the peak hour BART service in terms of change to the 3.75-15 minute headway standard, and is therefore considered less than significant.

<u>Cumulative Conditions plus Project Alternative A</u>. Based on the assumptions described above, under Cumulative plus project conditions, the Project would increase daily BART ridership at the Hayward and South Hayward stations to 72 and 89 trips respectively. The BART service frequency of 15 minutes equates to 12 trains per hour servicing the Hayward stations (includes two BART lines and both directions) and therefore averages to 3.4 new riders per train.

It is expected that future BART ridership will increase significantly over existing conditions and based on a review of the existing BART ridership in the study area, the load factor is under 1.0 (which defines BART trains that operate full). But based on the future increase with the project

of 3.4 new riders per train, this is not considered a significant impact. As a result, this Project-related increase would not cause a significant impact to the peak hour BART service in terms of change to the 3.75-15 minute headway standard, and is therefore considered less than significant.

Table 4.11-16. CMP Segment Analysis for Baseline Conditions with and without Project Alternative A - AM Peak Hour

Link Location	Northbound/Eastbound								Southbound/Westbound							
	No-Project 2015 AM Vol	Project 2015 AM Vol	% Vol Diff	Vol Diff	No-Project 2015 AM LOS	Project 2015 AM LOS	Change in V/C > 5%	Change in LOS	No-Project 2015 AM Vol	Project 2015 AM Vol	% Vol Diff	Vol Diff	No-Project 2015 AM LOS	Project 2015 AM LOS	Change in V/C > 5%	Change in LOS
Interstate Highways																
I-880 - south of A Street	7,145	7,155	*0.1%*	10	C	C	no	no change	7,624	7,623	*0.0%*	-1	C	C	no	no change
I-880 - north of Industrial Blvd	7,445	7,446	*0.0%*	1	C	C	no	no change	5,926	5,927	*0.0%*	1	C	C	no	no change
I-580 - east of Crow Canyon Blvd	5,731	5,738	*0.1%*	7	C	C	no	no change	10,294	10,292	*0.0%*	-2	E	E	no	no change
I-580 - east of Redwood Rd	5,470	5,479	*0.2%*	9	B	B	no	no change	10,071	10,068	*0.0%*	-3	E	E	no	no change
I-580 - west of I-238	6,856	6,872	*0.2%*	16	C	C	no	no change	5,022	5,023	*0.0%*	1	B	B	no	no change
I-238 - east of Hesperian Blvd	2,148	2,148	*0.0%*	0	A	A	no	no change	5,477	5,476	*0.0%*	-1	C	C	no	no change
Arterials																
Foothill Blvd - north of Grove	2,921	2,943	*0.7%*	22	B	B	no	no change	2,255	2,261	*0.3%*	6	B	B	no	no change
Foothill Blvd - north of A Street	1,818	1,869	*2.7%*	51	B	B	no	no change	2,014	2,018	*0.2%*	4	B	B	no	no change
Foothill Blvd - north of D Street	3,901	3,984	*2.1%*	83	C	C	no	no change	0	0	*0.0%*	0	A	A	no	no change
Mission Blvd - north of A Street	658	676	*2.7%*	18	C	C	no	no change	397	403	*1.5%*	6	C	C	no	no change
Mission Blvd - north of D Street	0	0	*0.0%*	0	A	A	no	no change	4,100	4,114	*0.3%*	14	F	F	no	no change
Mission Blvd - north of Carlos Bee St	2,437	2,573	*5.3%*	136	C	C	no	no change	1,718	1,744	*1.5%*	26	C	C	no	no change
Mission Blvd - north of Industrial Blvd	2,666	2,676	*0.4%*	10	E	E	no	no change	1,972	1,993	*1.1%*	21	C	C	no	no change
Harder Rd - east of Mission Blvd	587	590	*0.5%*	3	C	C	no	no change	864	869	*0.6%*	5	C	C	no	no change
Tennyson - west of Mission Blvd	423	420	*-0.7%*	-3	C	C	no	no change	525	527	*0.4%*	2	C	C	no	no change
Industrial Parkway - west of Mission Bl	685	698	*1.9%*	13	C	C	no	no change	834	847	*1.5%*	13	C	C	no	no change
Jackson - west of Watkins Street	2,328	2,325	*-0.1%*	-3	B	B	no	no change	2,805	2,801	*-0.1%*	-4	E	E	no	no change
A Street - east of Foothill Blvd	1,551	1,569	*1.1%*	18	D	D	no	no change	1,013	1,010	*-0.3%*	-3	C	C	no	no change
B Street - east of Foothill Blvd	514	526	*2.3%*	12	C	C	no	no change	1,795	1,794	*-0.1%*	-1	E	E	no	no change
D Street - east of Foothill Blvd	20	20	*0.0%*	0	C	C	no	no change	538	543	*0.9%*	5	C	C	no	no change

Source: Dowling Associates, Inc., 2009

Table 4.11-17. CMP Segment Analysis for Baseline Conditions with and without Project Alternative A - PM Peak Hour

Link Location	Northbound/Eastbound								Southbound/Westbound							
	No-Project 2015 PM Vol	Project 2015 PM Vol	% Vol Diff	Vol Diff	No-Project 2015 PM LOS	Project 2015 PM LOS	Change in V/C > 5%	Change in LOS	No-Project 2015 PM Vol	Project 2015 PM Vol	% Vol Diff	Vol Diff	No-Project 2015 PM LOS	Project 2015 PM LOS	Change in V/C > 5%	Change in LOS
Interstate Highways																
I-880 - south of A Street	7,100	7,101	*0.0%*	1	C	C	no	no change	7,881	7,886	*0.1%*	5	D	D	no	no change
I-880 - north of Industrial Blvd	6,639	6,641	*0.0%*	2	C	C	no	no change	6,742	6,744	*0.0%*	2	C	C	no	no change
I-580 - east of Crow Canyon Blvd	9,477	9,476	*0.0%*	-1	E	E	no	no change	5,824	5,829	*0.1%*	5	C	C	no	no change
I-580 - east of Redwood Rd	9,407	9,405	*0.0%*	-2	D	D	no	no change	5,450	5,455	*0.1%*	5	B	B	no	no change
I-580 - west of I-238	5,383	5,384	*0.0%*	1	B	B	no	no change	7,439	7,449	*0.1%*	10	C	C	no	no change
I-238 - east of Hesperian Blvd	4,929	4,932	*0.1%*	3	C	C	no	no change	3,126	3,126	*0.0%*	0	B	B	no	no change
Arterials																
Foothill Blvd - north of Grove	3,624	3,631	*0.2%*	7	F	F	no	no change	3,014	3,030	*0.5%*	16	B	C	no	**change**
Foothill Blvd - north of A Street	2,684	2,696	*0.4%*	12	B	B	no	no change	2,001	2,038	*1.8%*	37	B	B	no	no change
Foothill Blvd - north of D Street	4,641	4,653	*0.3%*	12	F	F	no	no change	0	0	*0.0%*	0	A	A	no	no change
Mission Blvd - north of A Street	1,212	1,221	*0.7%*	9	C	C	no	no change	1,547	1,587	*2.5%*	40	D	D	no	no change
Mission Blvd - north of D Street	0	0	*0.0%*	0	A	A	no	no change	4,237	4,327	*2.1%*	90	F	F	no	no change
Mission Blvd - north of Carlos Bee St	2,684	2,724	*1.5%*	40	C	C	no	no change	3,296	3,417	*3.5%*	121	D	E	no	**change**
Mission Blvd - north of Industrial Blvd	2,227	2,245	*0.8%*	18	D	D	no	no change	2,870	2,879	*0.3%*	9	F	F	no	no change
Harder Rd - east of Mission Blvd	1,516	1,547	*2.0%*	31	D	D	no	no change	1,544	1,554	*0.6%*	10	D	D	no	no change
Tennyson - west of Mission Blvd	637	639	*0.3%*	2	C	C	no	no change	534	538	*0.7%*	4	C	C	no	no change
Industrial Parkway - west of Mission Bl	856	866	*1.2%*	10	C	C	no	no change	723	737	*1.9%*	14	C	C	no	no change
Jackson - west of Watkins Street	2,847	2,845	*-0.1%*	-2	F	F	no	no change	1,764	1,761	*-0.2%*	-3	B	B	no	no change
A Street - east of Foothill Blvd	1,683	1,681	*-0.1%*	-2	D	D	no	no change	647	647	*0.0%*	0	C	C	no	no change
B Street - east of Foothill Blvd	836	836	*0.0%*	0	E	E	no	no change	1,778	1,797	*1.1%*	19	E	E	no	no change
D Street - east of Foothill Blvd	337	339	*0.6%*	2	C	C	no	no change	162	164	*1.2%*	2	C	C	no	no change

Source: Dowling Associates, Inc., 2009

Table 4.11-18. CMP Segment Analysis for Cumulative Conditions with and without Project Alternative A - AM Peak Hour

Link Location	Northbound/Eastbound								Southbound/Westbound							
	No-Project 2035 AM Vol	Project 2035 AM Vol	% Vol Diff	Vol Diff	No-Project 2035 AM LOS	Project 2035 AM LOS	Change in V/C > 5%	Change in LOS	No-Project 2035 AM Vol	Project 2035 AM Vol	% Vol Diff	Vol Diff	No-Project 2035 AM LOS	Project 2035 AM LOS	Change in V/C > 5%	Change in LOS
Interstate Highways																
I-880 - south of A Street	7,444	7,449	*0.1%*	5	C	C	no	no change	10,834	10,831	*0.0%*	-3	F	F	no	no change
I-880 - north of Industrial Blvd	7,772	7,776	*0.1%*	4	D	D	no	no change	8,824	8,833	*0.1%*	9	D	D	no	no change
I-580 - east of Crow Canyon Blvd	7,558	7,566	*0.1%*	8	C	C	no	no change	12,110	12,112	*0.0%*	2	F	F	no	no change
I-580 - east of Redwood Rd	7,020	7,035	*0.2%*	15	C	C	no	no change	11,653	11,654	*0.0%*	1	F	F	no	no change
I-580 - west of I-238	7,967	7,985	*0.2%*	18	D	D	no	no change	7,185	7,189	*0.1%*	4	C	C	no	no change
I-238 - east of Hesperian Blvd	2,282	2,283	*0.0%*	1	A	A	no	no change	6,475	6,476	*0.0%*	1	D	D	no	no change
Arterials																
Foothill Blvd - north of Grove	3,588	3,625	*1.0%*	37	F	F	no	no change	3,677	3,683	*0.2%*	6	F	F	no	no change
Foothill Blvd - north of A Street	2,884	2,936	*1.8%*	52	B	B	no	no change	3,142	3,140	*-0.1%*	-2	B	B	no	no change
Foothill Blvd - north of D Street	4,761	4,839	*1.6%*	78	F	F	no	no change	0	0	*0.0%*	0	A	A	no	no change
Mission Blvd - north of A Street	1,358	1,379	*1.5%*	21	C	D	no	**change**	1,600	1,604	*0.2%*	4	D	D	no	no change
Mission Blvd - north of D Street	0	0	*0.0%*	0	A	A	no	no change	4,774	4,777	*0.1%*	3	F	F	no	no change
Mission Blvd - north of Carlos Bee St	3,605	3,744	*3.7%*	139	F	F	no	no change	3,726	3,748	*0.6%*	22	F	F	no	no change
Mission Blvd - north of Industrial Blvd	2,817	2,829	*0.4%*	12	F	F	no	no change	2,864	2,882	*0.6%*	18	F	F	no	no change
Harder Rd - east of Mission Blvd	744	751	*0.9%*	7	C	C	no	no change	1,136	1,133	*-0.3%*	-3	C	C	no	no change
Tennyson - west of Mission Blvd	806	800	*-0.8%*	-6	C	C	no	no change	1,006	1,010	*0.4%*	4	C	C	no	no change
Industrial Parkway - west of Mission Bl	472	480	*1.7%*	8	C	C	no	no change	941	948	*0.7%*	7	C	C	no	no change
Jackson - west of Watkins Street	2,110	2,110	*0.0%*	0	B	B	no	no change	2,886	2,886	*0.0%*	0	F	F	no	no change
A Street - east of Foothill Blvd	1,394	1,410	*1.1%*	16	D	D	no	no change	1,087	1,084	*-0.3%*	-3	C	C	no	no change
B Street - east of Foothill Blvd	437	445	*1.8%*	8	C	C	no	no change	1,905	1,901	*-0.2%*	-4	F	F	no	no change
D Street - east of Foothill Blvd	45	45	*0.0%*	0	C	C	no	no change	787	791	*0.5%*	4	C	C	no	no change

Source: Dowling Associates, Inc., 2009

Table 4.11-19. CMP Segment Analysis for Cumulative Conditions with and without Project Alternative A – PM Peak Hour

Link Location	Northbound/Eastbound								Southbound/Westbound							
	No-Project 2035 PM Vol	Project 2035 PM Vol	% Vol Diff	Vol Diff	No-Project 2035 PM LOS	Project 2035 PM LOS	Change in V/C > 5%	Change in LOS	No-Project 2035 PM Vol	Project 2035 PM Vol	% Vol Diff	Vol Diff	No-Project 2035 PM LOS	Project 2035 PM LOS	Change in V/C > 5%	Change in LOS
Interstate Highways																
I-880 - south of A Street	10,607	10,606	*0.0%*	-1	F	F	no	no change	8,750	8,754	*0.0%*	4	D	D	no	no change
I-880 - north of Industrial Blvd	9,735	9,747	*0.1%*	12	E	E	no	no change	7,361	7,367	*0.1%*	6	C	C	no	no change
I-580 - east of Crow Canyon Blvd	11,065	11,066	*0.0%*	1	F	F	no	no change	7,115	7,117	*0.0%*	2	C	C	no	no change
I-580 - east of Redwood Rd	10,559	10,560	*0.0%*	1	D	D	no	no change	7,037	7,039	*0.0%*	2	C	C	no	no change
I-580 - west of I-238	7,075	7,079	*0.1%*	4	C	C	no	no change	9,071	9,089	*0.2%*	18	D	D	no	no change
I-238 - east of Hesperian Blvd	6,679	6,676	*0.0%*	-3	D	D	no	no change	3,942	3,943	*0.0%*	1	B	B	no	no change
Arterials																
Foothill Blvd - north of Grove	3,746	3,754	*0.2%*	8	F	F	no	no change	3,297	3,333	*1.1%*	36	C	C	no	no change
Foothill Blvd - north of A Street	3,200	3,205	*0.2%*	5	B	B	no	no change	2,791	2,836	*1.6%*	45	B	B	no	no change
Foothill Blvd - north of D Street	4,742	4,748	*0.1%*	6	F	F	no	no change	0	0	*0.0%*	0	A	A	no	no change
Mission Blvd - north of A Street	1,890	1,894	*0.2%*	4	F	F	no	no change	1,907	1,934	*1.4%*	27	F	F	no	no change
Mission Blvd - north of D Street	0	0	*0.0%*	0	A	A	no	no change	4,407	4,488	*1.8%*	81	F	F	no	no change
Mission Blvd - north of Carlos Bee St	3,811	3,840	*0.8%*	29	F	F	no	no change	3,815	3,932	*3.0%*	117	F	F	no	no change
Mission Blvd - north of Industrial Blvd	2,835	2,860	*0.9%*	25	F	F	no	no change	2,953	2,965	*0.4%*	12	F	F	no	no change
Harder Rd - east of Mission Blvd	1,723	1,751	*1.6%*	28	E	E	no	no change	1,658	1,670	*0.7%*	12	D	D	no	no change
Tennyson - west of Mission Blvd	1,458	1,467	*0.6%*	9	D	D	no	no change	1,093	1,091	*-0.2%*	-2	C	C	no	no change
Industrial Parkway - west of Mission Bl	952	959	*0.7%*	7	C	C	no	no change	543	551	*1.5%*	8	C	C	no	no change
Jackson - west of Watkins Street	3,043	3,037	*-0.2%*	-6	F	F	no	no change	1,668	1,671	*0.2%*	3	B	B	no	no change
A Street - east of Foothill Blvd	1,587	1,583	*-0.3%*	-4	D	D	no	no change	976	978	*0.2%*	2	C	C	no	no change
B Street - east of Foothill Blvd	827	828	*0.1%*	1	E	E	no	no change	1,646	1,665	*1.1%*	19	D	D	no	no change
D Street - east of Foothill Blvd	487	489	*0.4%*	2	C	C	no	no change	560	565	*0.9%*	5	C	C	no	no change

Source: Dowling Associates, Inc., 2009

Table 4.11-20. AC Transit Daily Ridership Comparison (Systemwide)

	NO-PROJECT		PROJECT		Increase between No-Project and Project		Percent Growth between No-Project and Project	
Operator	**2015**	**2035**	**2015**	**2035**	**2015**	**2035**	**2015**	**2035**
AC Transit (Systemwide)	301,036	376,779	301,112	376,848	76	69	0.03%	0.02%
Estimated peak hour trips - based on 25% of daily trips					19	17		
Estimated peak hour trips per bus - based on 8 AC Transit buses per hour					2	2		

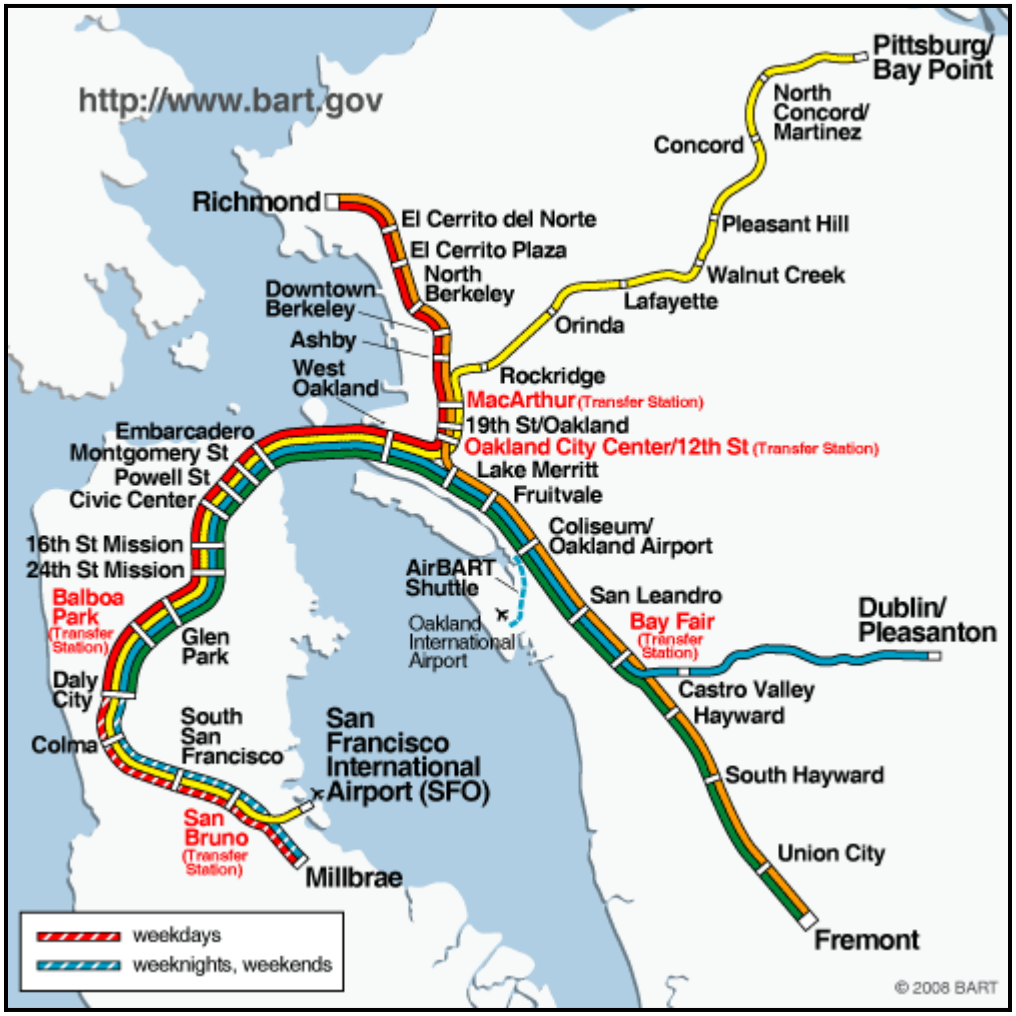
Note: Ridership difference between no-project & project are attributed to the project
Source: Dowling Associates, Inc. 2009

Table 4.11-21. BART Station Daily Ridership Comparison (at Hayward and South Hayward BART Stations)

	NO-PROJECT		PROJECT		Increase between No-Project and Project		Percent Growth between No-Project and Project	
BART Station	**2015**	**2035**	**2015**	**2035**	**2015**	**2035**	**2015**	**2035**
Hayward	6,437	8,418	6,506	8,490	69	72	1.1%	0.9%
South Hayward	20,143	33,673	20,216	33,762	73	89	0.4%	0.3%
Estimated peak hour trips - based on 25% of daily trips					36	40		
Estimated peak hour trips per train - based on 12 BART trains per hour					3	3		

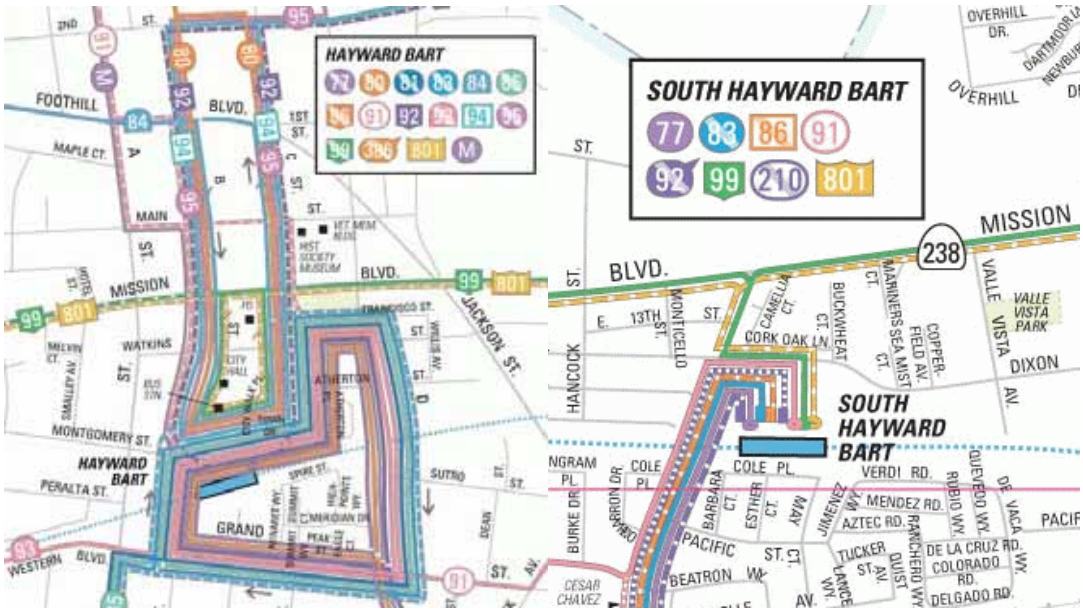
Note: Ridership difference between no-project & project are attributed to the project
Source: Dowling Associates, Inc. 2009

Figure 4.11-1: BART System Map



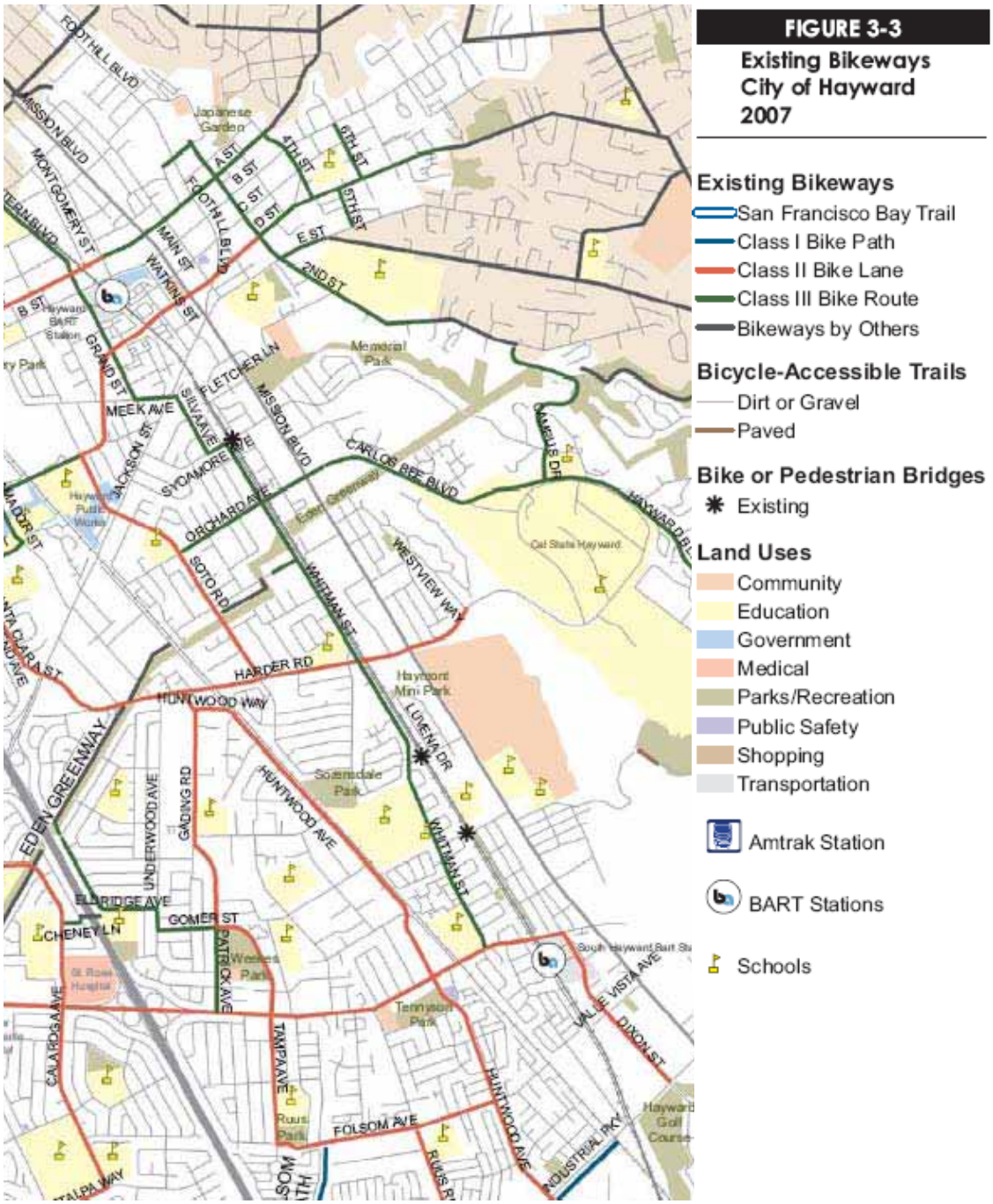
Source: Bay Area Rapid Transit District, www.bart.gov, accessed January 23, 2009.

Figure 4.11-2: AC Transit Bus Service at BART Stations



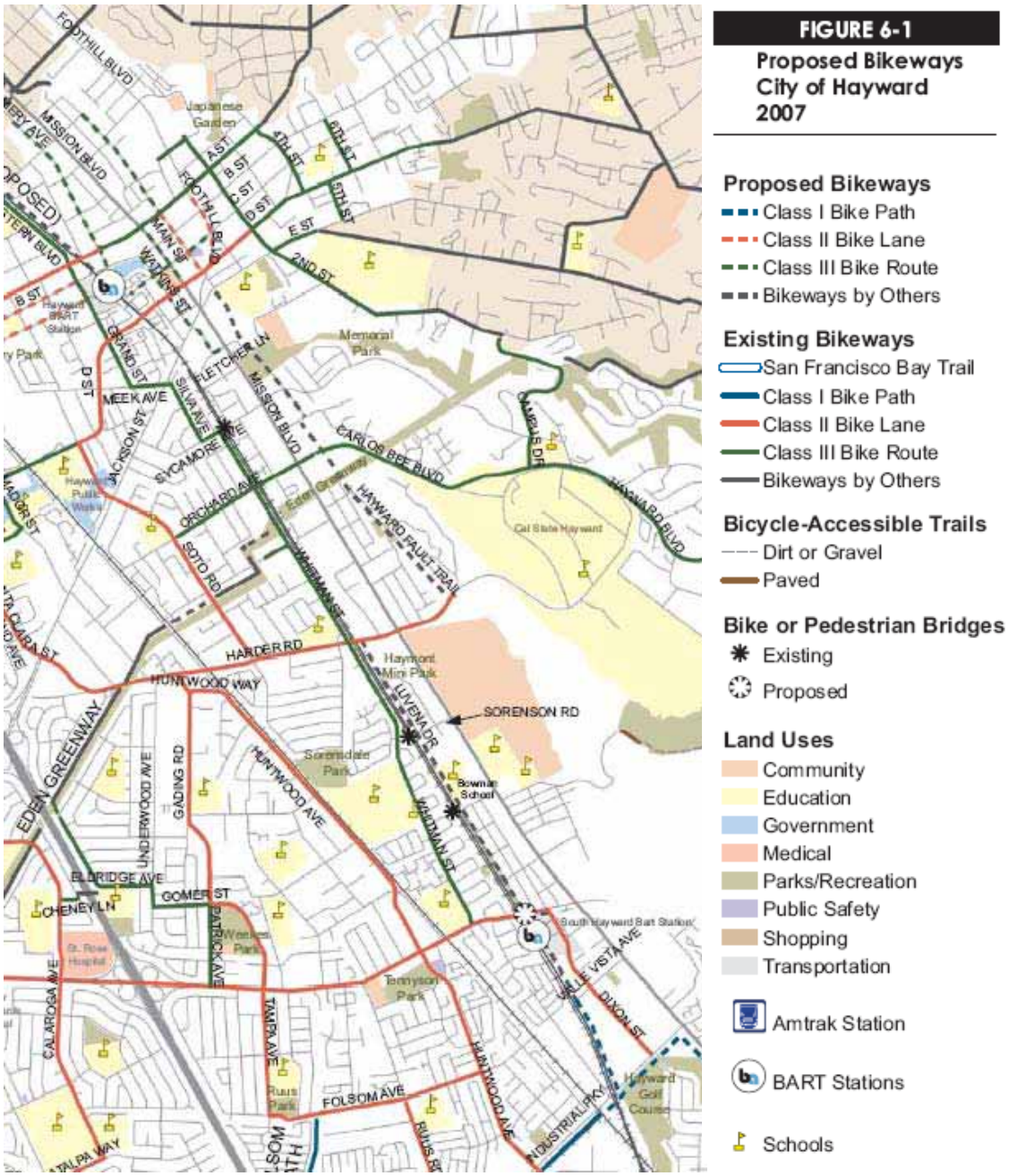
Source: Dowling Associates and Alameda Contra Costa Transit District, www.actransit.org

Figure 4.11-3: Existing Bikeways Network in Study Area



Source: City of Hayward Bicycle Master Plan. November 20, 2007. Figure 3-3.

Figure 1.11-4: Existing and Proposed Bikeways Network in Study Area



Source: City of Hayward Bicycle Master Plan. November 20, 2007. Figure 6-1.

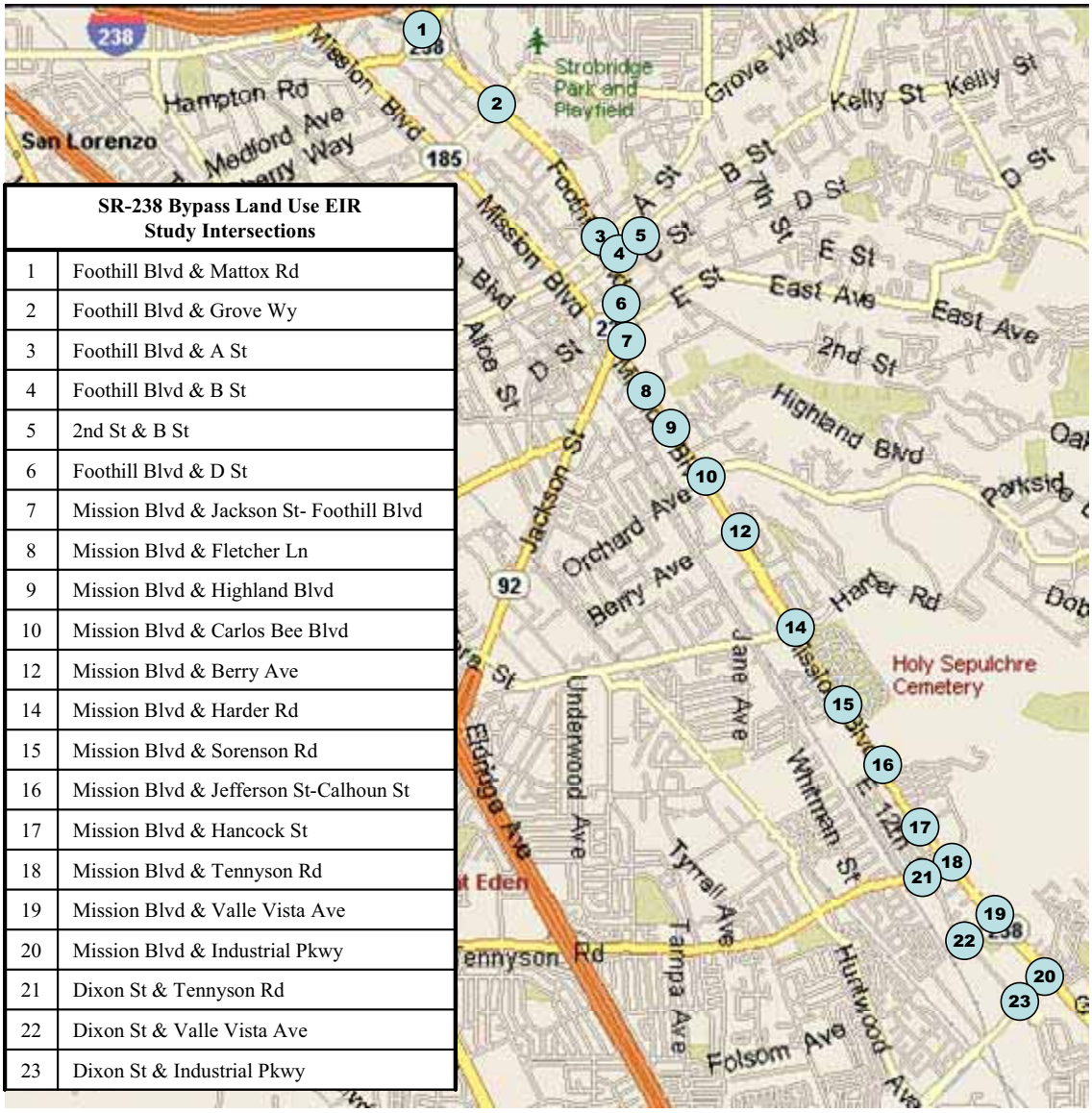
Figure 4.11-5: Bike Parking and Showers at Selected Hayward Employers

Employer Name	Number of Employees	Bike Parking?	Showers?	Notes
Kaiser Permanente Medical Center	2200	yes	yes	
Hayward Unified School District	2100	no	no	Response only for school district headquarters.
Cal State University	1600	yes	yes	Space for 4 bikes in front of police station. Employee shuttles have bike racks.
City of Hayward	847	yes	yes	10 racks at City Hall, some also at police department, firehouses, library, and the corporation yard lock
Chabot College	763	yes	yes	Students generally use racks. There is an additional gated storage room that fits 10 bikes.
St. Rose Hospital	660	yes	yes	Currently have one bike rack (not bolted down) for 6 bikes at front of the hospital. Going to replace rack in front and add one in the back.
Berkeley Farms	640	no	no	
Gillig Corporation	474	no	no	
Alameda Newspaper Group	405	no	no	
Pepsi Cola	400	yes	no	
Cell Genesys, Inc.	375	no	yes	
Injex Industries, Inc.	350	yes	no	6-10 bikes fit on rack Have changing area, but no showers.

Source: Alta Planning + Design Telephone Survey, January 2007

Source: City of Hayward Bicycle Master Plan. November 20, 2007. Page 3-18, Table 3-5.

Figure 4.11-6: Study Area Intersections



SR-238 Bypass Land Use EIR Study Intersections	
1	Foothill Blvd & Mattox Rd
2	Foothill Blvd & Grove Wy
3	Foothill Blvd & A St
4	Foothill Blvd & B St
5	2nd St & B St
6	Foothill Blvd & D St
7	Mission Blvd & Jackson St- Foothill Blvd
8	Mission Blvd & Fletcher Ln
9	Mission Blvd & Highland Blvd
10	Mission Blvd & Carlos Bee Blvd
12	Mission Blvd & Berry Ave
14	Mission Blvd & Harder Rd
15	Mission Blvd & Sorenson Rd
16	Mission Blvd & Jefferson St-Calhoun St
17	Mission Blvd & Hancock St
18	Mission Blvd & Tennyson Rd
19	Mission Blvd & Valle Vista Ave
20	Mission Blvd & Industrial Pkwy
21	Dixon St & Tennyson Rd
22	Dixon St & Valle Vista Ave
23	Dixon St & Industrial Pkwy

4.12 UTILITIES AND PUBLIC SERVICES

ENVIRONMENTAL ISSUES

This section of the DEIR discusses capacities of utility systems, including water and sanitary, and provision of community services, including fire and police services.

ENVIRONMENTAL SETTING

Water resources

The water section of the DEIR is based on a Water Supply Analysis prepared by the City of Hayward Utilities Division. This document is attached as Appendix 8.8 of this DEIR and is incorporated by reference into the DEIR.

Water distribution system. The City of Hayward owns and operates a water distribution system to supply water to all but a small portion of the residential, commercial, industrial and institutional entities within the City boundaries and a small number of properties outside of the City limits through special approvals. The small areas within the City boundaries not served by the City are within the service area of, and are served by, EBMUD.

Hayward's sole source of drinking water since 1962 has been the City and County of San Francisco's regional system, operated by the Public Utilities Commission (SFPUC). This supply is predominantly from the Sierra Nevada, delivered through the Hetch Hetchy aqueducts, but also includes a small amount of treated water produced by the SFPUC from its local watershed and facilities in Alameda County.

The amount of imported water available to the SFPUC's retail and wholesale customers is constrained by hydrology, physical facilities, and the institutional parameters that allocate the water supply of the Tuolumne River. Due to these constraints, the SFPUC is very dependent on reservoir storage to firm up its water supplies. The SFPUC serves its retail and wholesale water demands with an integrated operation of local Bay Area water production and imported water from Hetch Hetchy. In practice, the local watershed facilities are operated to capture local runoff.

The business relationship between San Francisco and its wholesale customers is largely defined by the "Settlement Agreement and Master Water Sales Contract" executed in 1984. The Master Contract primarily addresses the rate-making methodology used to set wholesale water rates for its wholesale customers and water supply and water shortages for the regional system. The contract expires in June 2009, and a new contract is currently under negotiation.

In terms of water supply, the Master Contract provides for a 184 million gallon per day (mgd) supply assurance to the SFPUC's 28 wholesale customers, including Hayward, subject to reduction in the event of drought, water shortage, earthquake, other disasters, or rehabilitation and maintenance of the system, which may affect water distribution. The SFPUC's wholesale customers have agreed to the allocation of 184 mgd among themselves, with each entity's share of the supply assurance set forth in a schedule adopted in 1993. The supply assurance survives the termination of the Master Contract in 2009.

Hayward's water supply from SFPUC is based on a supply agreement signed by both agencies in 1962. This agreement provides Hayward with all of its needed water supply, as long as such supplies are within SFPUC's ability to deliver and water supply conditions are normal. In effect, Hayward does not have a pre-set numerical limit on the amount of water that is provided by SFPUC; however, Hayward's allocation is subject to certain limitations. Hayward currently has very low per-capita water usage, and strives to keep water demands low through water conservation and demand management. Hayward's contract with SFPUC has no expiration date.

The City does not receive any portion of its water supply from groundwater sources.

Over the past five years, (2003 through 2007) average daily water deliveries to Hayward have ranged as summarized in Table 4.12-1.

Table 4.12-1. Five-Year Water Deliveries to Hayward (2003-07)

Year	Total Deliveries (in hundred cubic feet)	Average Daily Consumption (in million gallons per day)
2003	9,055,245	18.6
2004	9,565,598	19.6
2005	8,986,628	18.4
2006	8,947,530	18.3
2007	8,899,579	18.2

Source: SFPUC Billing Records

Water distribution system. The City's water distribution system is comprised of 5 pressure zones, 14 water storage tanks, 10 pump stations, five emergency water supply wells, three emergency interties, and a number of pressure reducing valves. Water is delivered from SFPUC to Hayward through two connections. The City updated its Water Distribution Master Plan in 2002 to identify needed improvements through 2020, and recommended projects have either been constructed or are incorporated into the City's capital improvement program.

Water system demand projections. The 2005 Urban Water Management Plan (UWMP) includes water demand projections that were developed as described in Section 3.0 of the

Urban Water Management Plan document. In summary, residential demand estimates were based on a net growth in housing units in conformance with existing General Plan policies. The computer model was adjusted to account for special circumstances related to Hayward growth, including rehabilitation of some existing housing units, increased number of persons per household, and projected higher use at some newly constructed larger homes. Commercial demand estimates were based on existing General Plan policies to continue attracting commercial businesses, such as retail establishments, restaurants, auto dealerships and other businesses that will serve City residents as well as the region as a whole. The estimates incorporated anticipated demand from identified future commercial and mixed-use development. The 2005 demand projections incorporate cost effective water conservation measures for all customer sectors.

The total projected water deliveries, as shown in the 2005 UWMP, are summarized in Table 4.12-2. The City received written notification from SFPUC in May 2005 indicating that its planned expanded water supply portfolio would be sufficient to deliver the estimated demand.

Table 4.12-2. Total Projected Water Delivers to City per UWMP

Unit	2010	2015	2020	2025	2030
Acre-Feet/Year	24,419	25,539	27,331	29,236	31,252
Average Million Gallons/Day	21.8	22.8	24.4	26.1	27.9

Source: City of Hayward 2005 UWMP, based on written notification from SFPUC

Wastewater collection, treatment and disposal

The City of Hayward is responsible for collection and treatment of wastewater within the community. The City maintains underground sewer lines within and adjacent to the Project area. Wastewater is collected and transported via major trunk sewers to the City's wastewater treatment plant located at the terminus of Enterprise Avenue in western Hayward. The plant currently treats an estimated average of 13.5 million gallons of wastewater per day (mgd) and has a rated capacity of 16.5 mgd. Any additional wastewater generated as a result of the Project should be well within the rated capacity of the plant.

Treated effluent from the plant is disposed of in San Francisco Bay through East Bay Dischargers Authority deep outfall facilities.

Fire service

Fire and emergency medical service to the Project area is provided by the City of Hayward Fire Department, which provides fire prevention, fire suppression, emergency medical, hazardous materials response and related services to the entire City. Nine operating stations are maintained by the Department, which house eleven fire companies. These consist of nine engine companies, which are first responders and provide fire suppression, and two truck companies that provide structural entry, ventilation, laddering and rescue operations as well as medical response.

Fire stations that would serve future development that could be allowed under any of the proposed Alternatives include:

- Fire Station 1, located at 22700 Main Street, staffed with one engine and one truck company;
- Fire Station 2, located at 360 West Harder Road staffed with one engine company;
- Fire Station 3, located at 31982 Medinah Street, staffed with one engine company;
- Fire Station 7, located at 28270 Huntwood Avenue, staffed with one engine company; and
- Fire Station 9, located at 24912 Second Street, staffed with one engine company.

Response time criteria for emergency calls for service include a response of five minutes for arrival of the first engine company to a call, an arrival time of seven minutes for the first truck company and the arrival of the balance of fire personnel within ten minutes.

The City of Hayward has established an optimum service ratio of 1 firefighter per 1,000 residents (Source: *238 Bypass Fiscal Impact Analysis*, Strategic Economics, October 6, 2008)

Fire service for properties within the unincorporated portion of the Project area are provided by the Alameda County Fire Department. The closest station to the Project area is Station No. 2, located at 108 Grove Way in Hayward. Station 2 is equipped with one engine company and one reserve engine.

Both the City Fire Department and Alameda County Fire Department maintain mutual aid agreements.

Police service

The City of Hayward Police Department provides police protection services within the community, including crime prevention, investigation services, traffic control and animal control services to City residents.

Services are provided out of the main headquarters facility located at 300 Winton Avenue. The Department maintains a staff complement of 193 sworn officers and 113 support staff. The Department also maintains a variety of vehicles and support equipment (source: Captain R. Palermini, Hayward Police Department 9/24/08).

The City of Hayward has established an optimum service ratio of 1.5 sworn police officers per 1,000 residents (Source: *238 Bypass Fiscal Impact Analysis*, Strategic Economics, October 6, 2008).

Police services to the unincorporated portion of Alameda County within the Project area is provided by the Alameda County Sheriff's Department. The closest Sheriff's office is located

at the Eden Township substation, located at 15001 Foothill Boulevard, San Leandro, (source: Lt. Hotelling, Alameda County Sheriff, 10/7/08).

Regulatory framework

General Plan. The Public Utilities and Services Chapter of the Hayward General Plan contains the following applicable policies and strategies:

Emergency Response and Preparedness

- The City will seek to maintain an appropriate level of emergency response commensurate with the needs of its residents and businesses. (*Policy 1*)
  * Maintain a well trained and equipped fire suppression force commensurate with the level of risk to life and property from fire. (*Strategy 2)*

- The City will promote disaster preparedness at both the citizen and governmental levels. (*Policy 3*)

Public Utilities

- Public facilities will be maintained and operated in a manner that protects and enhances the environment. (*Policy 4*)

North Hayward Neighborhood Plan
This Neighborhood Plan contains the following strategy relating to public safety.

* Increase Public Safety (*Strategy C.1*)

Upper B Street Neighborhood Plan.
The Upper B Street Neighborhood Plan includes the following polices and strategies regarding public safety.

- Improve Public Safety (*Policy 12*)
  * To deter crime, utilize innovative programs including Neighborhood Watch, landlord training and accountability, and the Safe Street program. Empower the community to work with police and monitor and improve conditions in problem locations (*Strategy A*)
  * Improve city and county cooperation when handling jurisdictional incidents near city-county boundaries (*Strategy D*)

Hayward Highlands
The Hayward Highlands Neighborhood Plan has the following policies and strategies regarding public safety.

- Improve the level of police, fire and emergency response in this neighborhood (*Policy E*)
    * Assure that emergency medical and fire services meet a 5-minute response time standard in the Hayward Highland (*Strategy 1.1*)
    * Support formation of additional Neighborhood Alert groups with assistance from the Hayward Police Department (*Strategy 1.2*)
    * Maintain and enhance the cooperative working relationship between Cal State East Bay and City of Hayward police forces (*Strategy 1.3*)
    * Increase police presence n the Hayward Highlands neighborhood (*Strategy 1.4*)

<u>Mission-Garin Neighborhood Plan</u>
The following strategies are included in the Mission-Garin Neighborhood Plan related to public services and facilities.

* Consider the ability of police and fire departments to provide services to the study area when considering development proposals. (*Strategy 34*)
* Reevaluate design and capacity of proposed water systems improvements to be consistent with the development potential allowed. (*Strategy 35*)

<u>Fairway Park Neighborhood Plan</u>
The Fairway Park Neighborhood Plan contains the following goal and applicable strategies relating to public safety:

- Increase all levels of service, including but not limited to all response times and actively support awareness of public safety in the neighborhood. (*Goal*)
    * Encourage posting of Neighborhood Alert signs at entrances to the community and other strategic locations. (*Strategy 4*)
    * Retain Fire Station #3 and maintain the current level of service, including response times for second and third truck arrivals to the neighborhood. (*Strategy 9*)

STANDARDS OF SIGNIFICANCE

The proposed Project impacts would be considered significant if they would result in:

- a substantial adverse physical impact associated with the provision of or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable response times or other performance objectives for police or fire protection;
- the construction of new water or wastewater treatment facilities or the expansion of existing facilities, with potential to cause significant environmental impacts;
- the violation of wastewater treatment requirements of the San Francisco Bay Regional Water Quality Control Board;

ENVIRONMENTAL IMPACTS

The following environmental impacts are anticipated should the Project be approved.

Water resources

Water use assumptions. Assumptions have been made regarding average water demand for various land use designations. The water demand estimates, which are summarized in Table 4.12-3, are consistent with estimates used in the most recent Water Distribution System Master Plan Update (2002), SFPUC Water Purchase Estimates (2004) and Water System Reservoir Project Study (2008).

Table 4.12-3. Water Demand Estimates by Land Use Designation

Land Use Designation	Water Demand Unit	Water Demand
Residential		
Suburban Density	Gallons/Dwelling Unit/Day	438
Low Density	Gallons/Dwelling Unit/Day	438
Medium Density	Gallons/Dwelling Unit/Day	275
High Density	Gallons/Dwelling Unit/Day	210
Mixed Use	Gallons/Dwelling Unit/Day	210
Commercial		
General Commercial	Gallons/1000 Square Ft/Day	260
Retail and Office Commercial	Gallons/1000 Square Ft/Day	260
Mixed Use	Gallons/1000 Square Ft/Day	260
Parks/Recreation/Open Space		
Public and Quasi Public	Gallons/Acre/Day	1,100
Limited Open Space	Gallons/Acre/Day	1,100

Source: City of Hayward Utility Division, 2008

Based on the water use numbers in Table 4.12-3, it is assumed that the existing General Plan Land Use designations would result in the following water demand at buildout, assuming the average number of potential dwelling units.

Table 4.12-4. Water Demand From Project Area General Plan Buildout

Land Use	Dwelling Units	Square Feet	Acres	Water Demand (gallons/day)
Suburban Density	177			77,526
Low Density	315			137,970
Medium Density	870			239,250
High Density	489			102,690
Mixed Use (Residential)	210			44,100
General Commercial		170,252		44,266
Retail and Office Commercial		0		0
Mixed Use (Commercial)		0		0
Public and Quasi Public			2.80	3,080
Limited Open Space			6.04	6,643
Parks and Recreation Open Space			9.83	10,814
Totals	**2,061**	**170,252**	**18.67**	**666,339**

Sources: Route 238 Bypass Land Use Study Summary and Table 4.12-3

Estimated Water Demand for Land Use Alternative A. Table 4.12-5 summarizes the expected water demand from Alternative A at buildout, assuming the mid-range number of residential dwelling units.

Table 4.12-5. Land Use Alternative A Water Demand

Land Use	Dwelling Units	Square Feet	Acres	Water Demand (gallons/day)
Suburban Density	51			22,338
Low Density	366			160,308
Medium Density	200			55,000
High Density	645			135,450
Mixed Use (Residential)	1,476			309,960
General Commercial		77,972		20,273
Retail and Office Commercial		25,287		6,575
Mixed Use (Commercial)		38,769		10,080
Public and Quasi Public			0.0	0
Limited Open Space			74.80	82,280
Parks and Recreation Open Space			11.44	12,583
Totals	**2,738**	**142,028**	**86.24**	**814,847**

Sources: Route 238 Bypass Land Use Study Summary and Table 4.12-3

Table 4.12-6 summarizes the water use estimates, at buildout, for the existing General Plan and Alternative A, as well as the net increase in water use that would result from implementation of Alternative A.

Table 4.12-6. Summary of Water Demand Estimates and Net Changes in Project Area

	Estimated Water Use (gal/day)	Net Increase over General Plan (gal/day)	% Chg
General Plan	666,339	n/a	n/a
Alternative A	814,847	148,508	22%

Sources: Tables 4.12-4 and 4.12-5

The 2005 UWMP compares Hayward's demand projections with SFPUC's ability to meet the demand in years of average and above-average precipitation levels. In May 2005, the City received written notification from SFPUC indicating that its planned expanded water supply portfolio would be sufficient to deliver the City's estimated purchases through 2030. This document is included as an appendix in the 2005 UWMP. Implementation of Alternative A, at the mid-range of its development potential, would result in modest increases in water use over the UWMP planning period and would exceed SFPUC's confirmed delivery ability to Hayward, beginning after 2010. Per the fiscal impact analysis prepared for the Study, growth between 2008 and 2010 would be minimal. Subsequently, additional housing units would be

added roughly at a rate of about 25% of the total per five-year period through 2030. Thus, the net increase in water use can be expected to increase accordingly.

Table 4.12-7 compares the supply and demand projections, including increased consumption in the Study area.

Table 4.12-7. Projected Normal Year Supply and Demand for Alternative A (million gallons per day)

	2010	2015	2020	2025	2030
Demand	21.8	22.8	24.5	26.2	28.0
Supply from SFPUC	21.8	22.8	24.4	26.1	27.9
Difference	0.0	0.0	0.1	0.1	0.1
% Deficiency	0%	0%	0.4%	0.4%	0.4%

Sources: Demand data interpolated from Table 4.12-6 and supply data from 2005 UWMP

In preparation for the 2005 UWMP, SFPUC evaluated the reliability of the water system, given the estimated system purchases for the years 2010 through 2030 and the expected performance of the water system based on a repeat of the historical hydrology from 1920 through 2002. For the purposes of the analysis, SFPUC assumed that the historical hydrologic period is indicative of future events. The analytical results indicated that system-wide rationing, from 10% to 20% would be implemented in 9 out of the 82 years.

The actual reduction would be based on the Interim Water Shortage Allocation Plan (IWSAP), which was adopted by each agency, including Hayward, in 2000 and remains in effect through June 2009. The IWSAP allocates water between SFPUC retail and wholesale customers, and further allocates available water among wholesale customers. The wholesale customer allocation is based on a formula which accounts for: 1) each agency's supply assurance (or agreed to alternative); 2) each agency's purchases from SFPUC during the three years preceding adoptions of the IWSAP; and 3) each agency's rolling average of purchases from SFPUC during the three years immediately preceding the shortage.

Table 4.12-8 compares the projected single-dry-year supply and demand, including projected demand from the Study area, over the next 25 years, based on Alternative A. SFPUC anticipates that in the event of one critically dry year, a system-wide reduction would not be necessary until 2030 because of storage capabilities. Thus, the deficiencies identified in Table 4.12-7 would remain at the same level until 2030 regardless of whether supplies are normal or a single dry year occurs. If, however, a dry year occurs in 2030, the supply deficiency would be higher than under normal conditions.

Table 4.12-8. Projected Single-Dry Year Supply and Demand Comparison for Alternative A (MGD)

	2010	2015	2020	2025	2030
Demand	21.8	22.8	24.5	26.2	28.0
Supply from SFPUC	21.8	22.8	24.4	26.1	25.1
Difference	0.0	0.0	0.1	0.1	2.9
% Deficiency	0%	0%	0.4%	0.4%	10.5%

Sources: Demand data interpolated from Table 4.12-6 and supply data from 2005 UWMP

Table 4.12-9 compares projected supply and demand during multiple dry years through 2030, including projected demand from the Study area, over the next 25 years, based on Alternative A. From 2010 forward, it is expected that a system-wide reduction would not be necessary in the first dry year until 2030. In the event of a multi-year supply shortage, water supplies would not meet projected demand in the second and third years.

Table 4.12-9. Projected Multiple Dry-Year Supply and Demand Comparison for Alternative A (MGD)

	2010	2015	2020	2025	2030
Multiple Dry Water Years – Year 1					
Demand	21.8	22.8	24.5	26.2	28.0
Supply from SFPUC	21.8	22.8	24.4	26.1	25.1
Difference	0.0	0.0	0.1	0.1	2.9
% Deficiency	0%	0.0%	0.4%	0.4%	10.5%
Multiple Dry Water Years – Year 2					
Demand	22.0	23.1	24.8	26.6	28.0
Supply from SPUC	19.4	19.7	20.3	20.9	22.3
Difference	2.6	3.4	4.5	5.7	5.7
% Deficiency	12%	15%	18%	21%	20%
Multiple Dry Water Years – Year 3					
Demand	22.4	23.5	25.2	26.8	28.0
Supply from SFPUC	19.4	19.7	20.3	20.9	22.3
Difference	3.0	3.8	4.9	5.9	5.7
% Deficiency	13%	16%	19%	22%	20%

Sources: Demand data interpolated from Table 4.12-7 and supply data from UWMP

Table 4.12-10 summarizes the 2030 water demand and supply analyses shown in the previous section. For the purposes of comparison, the tables include demand with and without the additional consumption from Alternative A in the Project area.

Table 4.12-10. Comparison of 2030 Demand and Supply for Normal, Dry-Year and Multiple Dry Years for Alternative A (MGD)

2030 Demand and Supply	Normal	Single Dry	Multiple Dry Year 2	Multiple Dry Year 3
Demand Total (without Project)	27.9	27.9	27.9	27.9
Demand Total (with Project)	28.0	28.0	28.0	28.0
Supply Total	27.9	25.1	22.3	22.3
Difference (without Project)	0.0	2.8	5.6	5.6
Difference (with Project)	**0.1**	**2.9**	**5.7**	**5.7**

Sources: Tables 4.12-8 and 4.12-9

In normal years, a modest deficit would exist between the revised water demand projection and SFPUC's ability to deliver water. However, the City anticipates being able to deliver sufficient water supplies to the Project area for several reasons. For normal years, the City considered the following relative factors:

- Anticipated demand to date has not been fully realized. Climatic conditions, slower-than-expected residential and business development, and effective water conservation programs, have kept Hayward's water consumption at an average of 18.8 mgd from 2005 through 2007, which is comparable to the average demand of the prior three years. The UMWP anticipated that demand in 2010 would be 21.8 mgd; however, the actual demand may be lower. The 2010 UWMP will adjust the actual current consumption, and the resulting analysis is expected to verify that demand from the Study area can be met within SFPUC's ability to deliver water.

- The City will continue to implement aggressive water conservation efforts in order to manage demand.

- Conservative estimates have been used for open space land uses. To the extent that some of these parcels may be used for trails and other non-irrigated purposes, the demand for irrigation water would be lower than estimated.

For single and multiple dry years, the City considers that its Water Shortage Contingency Plan, described in detail in the 2005 UWMP, would allow the City to supply water to the Project area in accordance with required reductions. The Plan involves up to four stages of actions, depending on the severity of the drought, which may include mandatory prohibitions, water rationing and excess use charges, and restricted water deliveries in extreme cases.

Based on the Water Supply Analysis prepared for this Project, an adequate long term water supply can be provided for land uses included in Alternative A, which proposes the greatest amount of development of the three Alternatives. Since Alternatives B and C propose less development than Alternative A, an adequate water supply could be provided by the City for development under these Alternatives as well. This would be a less-than-significant impact.

Wastewater generation and treatment

Wastewater generation would be increased should the proposed Project be approved and implemented, primarily due to an increase in domestic water use. Table 4.12.11 summarizes the anticipated wastewater generation for each of the land use concept alternatives. Wastewater generation does account for existing dwelling units within the Project area, but does not account for existing wastewater generation by non-residential dwellings within the Project area.

Table 4.12-11. Estimated Average Day Residential Wastewater Generation (gallons per day)

Land Use Alternative	Land Uses	Average Wastewater Generation (gallons per day) (1)	Estimated Wastewater Generation (gallons per day)
Alternative A	Residential: 3,220 DU	230 gal./du/day	740,600
	Non-Residential: 234,872 sq. ft. (54.06 ac.)	800 gal./ac./day	43,248
Total			*783,848*
Alternative B	Residential: 1,183 DU	230 gal./du/day	272,090
	Non-Residential: 219,920 (22.6 ac.)	800 gal./ac./day	18.080
Total			*290,170*
Alternative C	Residential: 2,126 DU	230 gal./du/day	488.980
	Non-Residential: 245,653 (22.11 ac.)	800 gal./ac./day	17,688
Total			*506.668*

Source: City of Hayward Utility Division and So. Hayward BART EIR

Based on the above table, the City could expect an estimated increase of 783,848 gallons of untreated wastewater based on anticipated development under Alternative A. Less untreated effluent would be generated under Alternatives B and C as shown in the above table. The effluent would be treated at the City's wastewater plant, which has a maximum dry weather treatment capacity of 16.5 million gallons per day (mgd). Presently, the plant treats an average of 13.5 mgd. The anticipated increase of up to 783,848 mgd could be accommodated at the City's wastewater treatment plant with a less-than-significant impact.

Should this Project be approved by the City of Hayward, future individual development projects will be reviewed by the Hayward Utilities Division staff to ensure that wastewater pipes and related facilities would be adequate to transport effluent from the Project site to the treatment plant. Individual Project developers may be required to replace or upgrade wastewater collection facilities as determined by the City of Hayward.

Fire services

Construction of new residential development could increase the risk of fire to future residents and visitors by adding new dwelling units within the Project area. The number of calls for service for medical emergencies would also increase, based on a higher resident population. Impacts to the Fire Department would be greater under Alternatives A and C, both of which contain greater numbers of residential and non-residential square footages at build-out. Fewer calls for fire and emergency medical would be received by the City under Alternative B, which has a lower resident build-out population and non-residential square footage than the other two Alternatives.

Discussions with representatives of the Hayward Fire Department indicate that implementation of the proposed Project would result in additional dwellings and office and commercial buildings that would need to be served by the Department (pers. comm., Deputy Chief Bennett, 10/3/08). This would include the possible expansion of Fire Station 7 on Huntwood Avenue. Representatives of the Alameda County Fire Department also have determined that construction of proposed land uses under any of the Alternatives would increase the number of calls for service for properties in the unincorporated portion of Alameda County (pers. comm. Bonnie Terra, Alameda County Fire Department, 9/29/08).

Implementation of the Project would ultimately require additional personnel and other resources to ensure that both City and County service standards continue to be met with the amount of proposed development. Based on optimum City of Hayward staffing ratios, there would be a need for 7 additional fire staff under Alternative A, 3 additional staff under Alternative C and 2 additional staff under Alternative B.

Impact 4.12-1 (fire services). Approval of the proposed Project with any of the proposed alternative concept plans would represent a significant impact to the Hayward Fire Department and Alameda County Fire Department, since the amount of future development, including both the number of dwellings and non-residential development, could not be served by existing resources and facilities (s*ignificant impact and mitigation is required*).

Adherence to the following measure would mitigate the above impact to a less-than-significant level.

Mitigation Measure 4.12-1 (fire services). The City of Hayward and Alameda County shall prepare and adopt a mechanism to finance public safety staffing and improvements within the Project area prior to the construction of the first dwelling unit within the Project area. Such a mechanism may include a Community Facilities District or equivalent mechanism that will provide for adequate funding to meet City and County staffing, facility and equipment standards, as determined by each respective jurisdiction.

Police services

Approval of the proposed Project would result in incremental increase in calls for service to the Hayward Police Department and Alameda County Sheriff's Department. Impacts to the two Departments would be the greatest under the Alternative A, which includes the highest number of dwelling units and resident population and the least under Alternative B.

Impact 4.12-2 (police services). Approval of the proposed Project with any of the proposed Alternatives could represent a significant impact to the Hayward Police Department and Alameda County Sheriff Department, since the amount of future development and resulting calls for service may not be adequately served by existing department resources and facilities (s*ignificant impact and mitigation is required*).

Adherence to the following measure would mitigate the above impact to a less-than-significant level.

Mitigation Measure 4.12-2 (police services). Implementation of Mitigation Measure 4.11-1 would reduce police service impacts to a less-than-significant level.

4.13 SCHOOLS AND PARKS

ENVIRONMENTAL ISSUES

This section of the EIR discusses potential impacts to parks and school facilities.

ENVIRONMENTAL SETTING

Parks

The Hayward Area Recreation and Park District (HARD) provides local and community park and recreational facilities for use by local residents. HARD is an autonomous special district. Its boundaries include lands within the City of Hayward as well as the unincorporated areas of Fairview, Cherryland, San Lorenzo and Castro Valley.

Recreational facilities currently maintained by HARD near the Project area, include:

- Fairway Greens Park is located at 30504 Vanderbilt Street, adjacent to Treeview School. This facility contains approximately 3 acres of land and provides a barbecue and picnic area, play area and tot play area.

- Stonybrook Park is located at the intersection of Woodland Avenue and Vanderbilt Street. This is a 4-acre park developed with three tennis courts, a barbecue and picnic area and a play area. On-site vehicle parking is also provided.

- Carlos Bee Park is located at 1905 Grove Street in the Fairview area. This local park contains 6.88 acres of land.

- Spring Grove Park consists of 1.25 acres of land located at 25610 Spring.

- Valle Vista Park is located at 381 Valle Vista Avenue, west of Mission Boulevard. The facility consists of one acre that offers picnic tables, a play area and a half court basketball court.

- Memorial Park and Memorial Plunge is located at 24176 Mission Boulevard. This facility, consisting of 31 acres of land, includes a range of recreational and picnic areas and a community swimming pool.

- Mission Hills of Hayward Golf Course, located off of Industrial Parkway near Mission Boulevard, is an executive nine-hole course, which is owned by the City and operated by HARD.

The Nuestro Parquesito Park also extends along the westerly portion of the Project area. The park is 2.6 acres and is located between East 10th Street and the BART tracks. The linear park has a play area, picnic tables, barbecue, and a basketball court.

The Eden Greenway is a linear park/open space area that extends through the north-central portion of the Project area.

HARD also maintains the 4.44-acre Hayward Area Senior Center/Japanese Gardens and Morrisson Theater as a special use facility, located at 22373 N. 3rd Street at Crescent.

Garin Regional Park also exists east of the Project area on hillsides at higher elevations from the Project area. This facility is owned and maintained by the East Bay Regional Park District, an independent agency which is responsible for providing larger regional park and recreation facilities in Alameda and Contra Costa Counties. Garin Regional Park offers a wide range of recreational features, including those related to hiking and equestrian use and an interpretive center and contains approximately 3,000 acres of land.

HARD organizes and implements a wide range of year-around recreational programs for local residents of all ages. Programs and activities are made available at various locations of the City, but primarily at local parks and playgrounds. HARD operated a community center at the Bidwell School site until Bidwell School was reopened to help accommodate increasing enrollment at Treeview School.

Hayward currently requires subdividers to dedicate land to construct new parks or pay in-lieu fees to the City for the acquisition and development of parks within the City. Hayward's standard for land dedication is 5 acres of parkland per 1,000 population. Maintenance of parkland is the responsibility of HARD.

The City currently charges in-lieu fees of $11,953 for each new single-family detached residence, $11,395 for each new single-family attached residence (e.g., townhomes and condominiums) and $9,653 for each new multiple family residence (e.g., rental apartments) constructed in the District to assist in funding additional parkland and park facilities. Fees are levied at the time building permits are issued and collected prior to issuance of Certificate of Occupancy.

District-wide park standards have been established by HARD. These standards include a "desirable" ratio of 1.5 acres of local and school parks per 1,000 residents, 4.0 acres of community-level parks per 1,000 residents and 3 acres of "other" facilities, such as community centers and special use facilities, per 1,000 population. Parkland goals also call for 1 linear mile of open space trails and linear parks per 1,000 residents. The District also promotes the development of trails and linear greenways to provide connections between District facilities. (Source: District Master Plan, 2006).

HARD has adopted a District Master Plan. The Master Plan sets forth the District's present vision for managing District facilities for the next 15 years while providing specific policies and standards to guide the day-to-day actions of the District.

Schools

The Hayward Unified School District (HUSD) provides K through 12 educational services to the City of Hayward and the Project area. Schools nearest the Project site with their respective enrollments are shown in Table 4.13-1 and **Figure 4.13-1**. Table 4.13-1 also indicates well over one-half of the public schools serving the Project area are at full enrollment capacity or exceed enrollment capacity.

Table 4.13-1. Existing School Enrollments and Capacities

School	2008-09 Enrollment	Total Capacity[1]	Percent of Capacity
Harder Elementary (K-6)	664	660	101%
Bowman Elementary (year round,K-6)	555	480	116%
Burbank Elementary (K-6)	735	800	90%
Cherryland Elementary (K-6)	770	700	110%
Treeview (2-6)/ Bidwell (K-1) Elementary	555	540	103%
Cesar Chavez Middle School (7-8)	602	884	93%
Bret Hart Middle School (7-8)	581	600	97%
Tennyson High School (9-12)	1,604	2,130	75%

[1]Capacity is assumed to be 20 students per classroom for grades K-3, and 30-34 students per classroom for grades 4-12.
Source: Hayward Unified School District, 2008

Regulatory Framework

The Community Facilities and Amenities chapter of the Hayward General Plan contains the following relevant policies and strategies related to educational opportunities, library facilities, parks and recreational opportunities

Educational Facilities and Opportunities

- Advocate the pursuit of academic excellence and the establishment of high standards for physical facilities in the local public schools. (*Policy 1*)

    * Support efforts of the Hayward Unified School District to purse adequate funding for school operations and facilities. (*Strategy 1.2*)
    * Cooperate with the Hayward Unified School District to ensure that the impacts of the new development are addressed and that appropriate mitigation areas are established. (*Strategy 1.3*)
    * Promote the concept of constructing new schools that contain the essential core functions and activities and provide flexible classroom facilities. (*Strategy 1.4*)
    * Support the construction of multi-story schools to maximize the efficiency of available acreage for playground and other open space. (*Strategy 1.5*)
    * Support quality design in the construction of new school facilities. (*Strategy 1 6*)
    * Encourage rehabilitation of selected school facilities to bring the quality and condition of facilities throughout the district to a uniformly acceptable standard. (*Strategy 1.7*)
    * Promote vibrant and viable neighborhoods to encourage community involvement and investment in schools. (*Strategy 1.8*)
    * Encourage evaluation of reconfiguration proposals that would consolidate school campuses into larger facilities with a greater variety of courses and activities. (*Strategy 1.10*)

Parks and Recreation

- Seek to increase the amount, diversity and quality of parks and recreational facilities and opportunities. (*Policy 5*)

    * Work with the Hayward Area Recreation and Park District in the development and implementation of its Master Plan and support the District in its efforts to restore the revenue base. (*Strategy 5.1*)
    * Encourage the provision of recreational opportunities for all people, consistent with the changing demographic composition of the city. (*Strategy 5. 2*)
    * Maintain parks in a consistent manner throughout the city and encourage neighborhood involvement in park maintenance. (*Strategy 5.6*)
    * Maintain park dedication requirements for new residential development at the maximum allowed under state law. (*Strategy 5.7*)
    * Establish park dedication in-lieu fees that reflect land costs. (*Strategy 5.8*)
    * Examine the feasibility of requiring land dedication rather than payment of in-lieu fees, consistent with state law. (*Strategy5. 9*)

North Hayward Neighborhood Plan
Applicable policies and strategies include:

- Provide public facilities and amenities in North Hayward. (*Policy E*)
  * Develop San Lorenzo Channel Trail and Hazel Avenue Bridge Park (*Strategy E1)*
  * Develop Foothill Gateway Park or entry landscape (*Strategy E3)*

Upper B Street Neighborhood Plan
Applicable policies from this Neighborhood Plan include:

- Work with the Hayward Area Recreation and Park District to provide adequate park and recreational facilities that are accessible to neighborhood residents. (*Policy 9*)
  * Encourage the City, HARD and HUSD to develop Markham Elementary School as a neighborhood park resource. (*Strategy 9A)*
  * Acquire additional land for future park development. listed in order of preference:

    - Caltrans properties between "D" and "E" Streets
    - Caltrans properties between "A" and "B" Streets, west of Fourth Street
    - Northeast corner of Templeton and Hill Avenue
    - North side of Kelly St. between Wildwood and Bayview
    - South side of Kelly St between Lorand and Upland
    - Southwest corner of Templeton St. and Hill Ave.
      (*Strategy 9C*)

Mission-Foothills Neighborhood Plan
Applicable policies and strategies from this Plan include:

- Provide adequate schools, parks and recreation. (*Policy D*)
  * Support and assist Hayward Unified School District in obtaining land in the quarry area if it wants to acquire a school site. (*Strategy D.1)*
  * Do more joint development of recreational facilities at Hayward High for public use after school hours, considering night lighting, jogging trail, par course and solar heated pool and support joint HARD-HUSD development at other school sites. (*Strategy D.2)*
  * Extend the Greenway under the transmission PG&E towers from the railroad track to Mission Boulevard to provide a neighborhood park west of Mission and beyond to the east. (*Strategy D.6*)
  * Extend Spring Grove Park to the north to serve more of the hillside residents, (*Strategy D.7*)
  * Develop a greenway/bikeway along the fault corridor connecting Spring Grove Park, the Eden YMCA and Memorial Park (*Strategy D.8*)

Hayward Highlands Neighborhood Plan
Applicable policies from this Neighborhood Plan include:

- Ensure that the neighborhood has exceptional school, park and other recreation facilities to meet demand now and in the future. (*Policy D1*)

Mission-Garin Neighborhood Plan

Applicable policies from the Mission-Garin Neighborhood Plan (1987) include:

- Recommend that sufficient land be provided for park use to serve the projected population of the Preferred Land Use Plan, with particular attention to the area east of Mission Boulevard, north of Alquire Parkway. Consider location adjacent to Route 238. (*Policy 28*)
- Ensure sufficient parkland west of Mission Boulevard and south of Tennyson Road by retaining and expanding Valle Vista mini-park. (*Policy 29*)
- Encourage cooperative agreements between HARD and Hayward Unified School District for the use and maintenance of existing school playgrounds for public recreation. (*Policy 30*)
- Raise the ceiling on developer land dedication fees and require land to be dedicated in lieu of fees if the land is in a location acceptable to HARD and in the best interest of the neighborhood. (*Policy 31*)

Hayward Area Recreation and Park District (HARD)

The Hayward Area Recreation and Park District (HARD) Master Plan was adopted in 2006 The Master Plan contains the following applicable recommended strategies related to meeting parkland and recreation standards in the City of Hayward.

Work with the City of Hayward to evaluate adoption of an ordinance that would require new commercial and industrial campus development to either provide on-site recreational facilities or contribute to park in-lieu fees. (*Strategy H-1*)

In accordance with the General Plan, look for additional opportunities to work with developers in evaluating the feasibility of providing off-site recreational facilities, community centers, or other facilities and amenities (*Strategy H-6*)

Continue to work with the City of Hayward to incorporate neighborhood serving parklands and community centers at new development sites and as part of the revitalization of older neighborhoods (e.g., the la Vista Quarry site, Cannery area, Mission Blvd. Corridor/South Hayward BART station area). (*Strategy H-7*)

As new parklands and/or new community/sports centers are proposed on former industrial or commercial sites such as the Cannery, La Vista Quarry, Mission Blvd. Corridor/South Hayward BART Station area and the Industrial Corridor, consider entering into agreements with non-profits such as the Trust for Public Lands and regulatory agencies to share the skills pertaining to Brownfield sites. (*Strategy H-8*)

Work with the City of Hayward to enhance the aesthetic and recreational values of open space corridors within the urbanized area by: 1) preserving creekside environments through maintenance of native trees; 2) establishing development setbacks from creek slopes; 3) developing sensitive flood control designs; and 4) incorporating trails within these corridors to encourage walking and cycling. (*Strategy H-9*)

Continue to develop the Eden Greenway, a linear space that lies beneath the PG&E power transmission lines that traverse the City in an east-west direction. (*Strategy H-10*)

Continue to maintain and upgrade the special use facilities within the City of Hayward to provide a variety of community services, recreational activities and cultural amenities to meet the needs of the composition of the population served. (*Strategy H-11*)

Expand performing arts to the neighborhood level at HARD's Douglas Morrisson Theater using programs that encourage intergenerational participation (*Strategy H-14*)

Continue to develop the Sorensdale Recreation Center as a special use facility for disabled users focusing on improvements on deferred maintenance. (*Strategy H-15*)

Continue to develop the Japanese Gardens as a cultural and horticultural special use facility. (*Strategy H-17*)

STANDARDS OF SIGNIFICANCE

The proposed Project would be considered to result in a significant impact if there would be a demonstrable increase in the demand of a local or community park, playground or recreational facility such that substantial physical deterioration of the facility would occur or be accelerated, or there would be a need for increased educational or recreational facilities to serve the proposed Project, the construction of which could result in significant environmental impacts.

ENVIRONMENTAL IMPACTS

Parks

Approval and implementation of the proposed Project would increase the demand for local and community parks and recreational facilities within the Project area due to an increase in the number of permanent residents.

Based on average household size as shown in Table 4.13-2, Project Population Projection, found in section 4.9 of this DEIR, Table 4.13-2 shows the amounts of parkland that would be required under the three alternative development scenarios:

Table 4.13-2. Estimated Park Dedication Requirements and Provision of Open Space

Land Use Alternative	Dwelling Units (midpoint)	Projected Project Area Population	Park Acreage Required (@5 acres/1000	Park and Open Space Land Provided

		Increase	people)	(acres)
Alternative A	3,220	7,590	37.95 ac.	27.5-parks 74.8-open space
Alternative B	1,183	2,841	14.21 ac.	49.06-parks 102-open space
Alternative C	2,126	5,355	26.78 ac.	31.73-parks 75.38-open space

Note: Population per Table 4.6.2.
Source: Hayward Community and Economic Development Department

Based on the above table, implementation of the proposed Project would generate a need for between 14.21 to 37.95 additional acres of dedicated parkland within the proposed Project area.

Each of the three Alternatives include properties designated for future park and recreation and limited open spaces. Generally, parkland consists of flatter parcels that are currently vacant that could be purchased or dedicated to HARD for public park purposes. Limited open space lands generally consist of parcels with steep slopes or that have other constraints that should not be developed for urban uses and which would not meet minimum park development criteria. Therefore, these parcels are proposed to remain as undeveloped open space, but could contain public trails and/or other limited public park and recreation purposes.

Alternative A shows 27.5 acres of land for future parkland and 74.8 acres for limited open spaces. Alternative B includes 49.06 acres of parks and recreation land and 102 acres of limited open space land. Alternative C depicts 31.73 acres of parks and recreation land and 75.38 acres of limited open space land.

Under all of the Alternatives, payment of required park dedication in-lieu impact fees to the City of Hayward in combination with reservation of park and open space lands as shown in each of the Alternatives would meet or exceed City and HARD park requirements. No impact would therefore result with regard to provision of parks

Local public schools

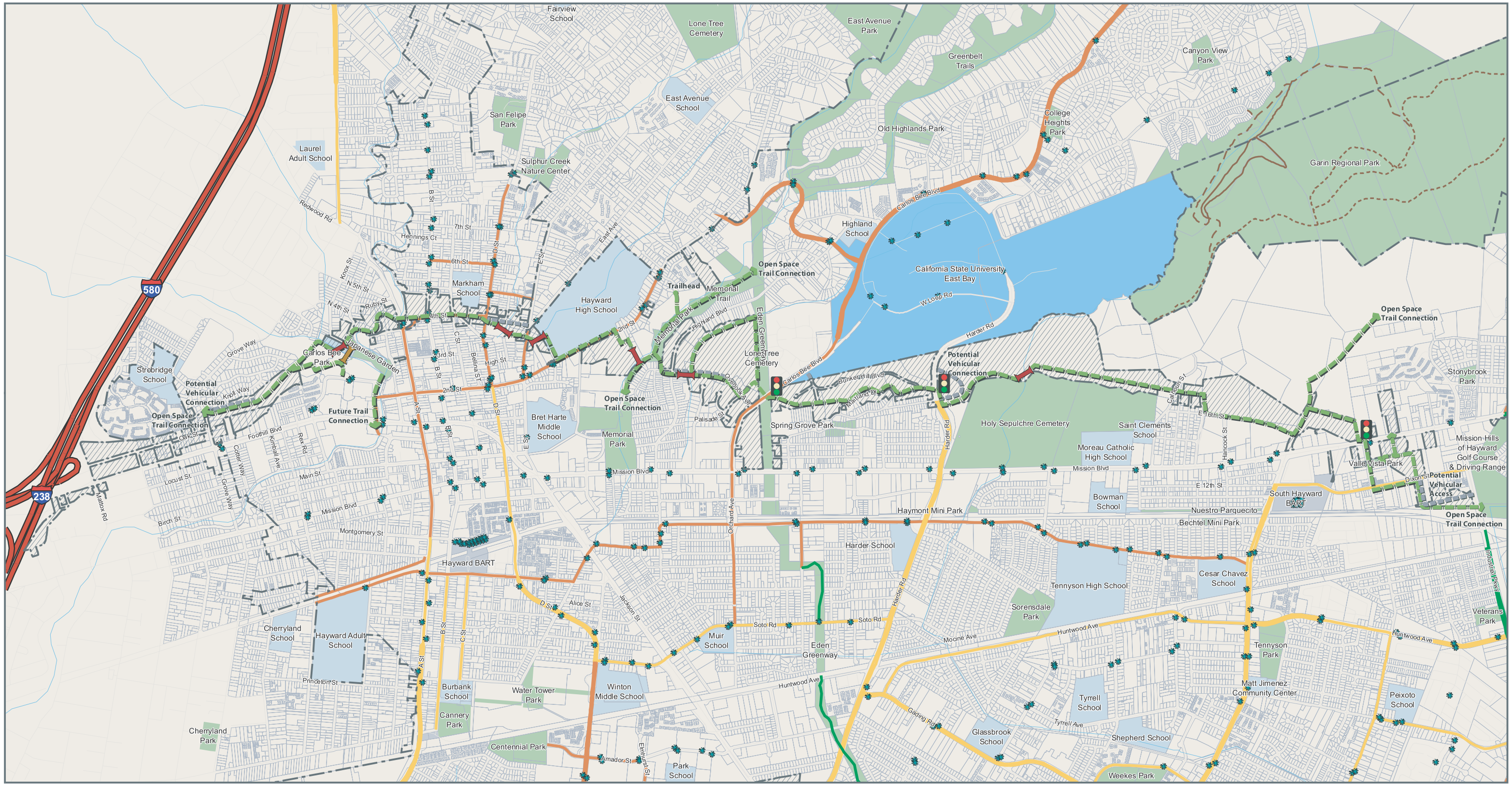
Based on the information provided in Table 4.13-3, below, approval and implementation of the concept alternatives would generate a range of 1,610 new students associated with Alternative A to 577 new students associated with Alternative B.

Table 4.13-3. Project Student Generation

Land Use Alternative	Net Dwelling Units (mid-point)	Student Generation	Estimated Additional Students
Alternative A	3,220	0.5 student/ dwelling	1,610
Alternative B	1,183	0.5 student/ dwelling	577
Alternative C	2,126	0.5 student/ dwelling	1,063

Note: Student generation factor based on 0.5 students per 2,000 dwellings from Dr. Barry Schimmel, Hayward Unified School District

Although schools near the Project area are currently operating near or above maximum capacity, the addition of new students that would be generated under any of the Alternatives would be reduced to a less-than-significant impact through payment of statutory school impact fees. A potential school site would be provided under Alternative C, which is a 26.03-acre Public-Quasi-Public land use designation located east of Carlos Bee Boulevard and north of the Eden Greenway.



THE CITY OF HAYWARD
THE HEART OF THE BAY

Community Design + Architecture
Jerry Haag, Urban Planner
Dowling Associates
Mark Thomas & Co.
Strategic Economics
Overland, Pacific & Cutler

LEGEND

- Caltrans Property
- Freeway
- City Limits
- AC Transit Stops
- Potential Vehicular Access
- Signalized Crossing

Trails

- Foot Trail
- Foot/Horse Trail
- Foot/Horse/Bicycle Trail
- Preferred Trail
- New Bridge
- Existing Bridge

Bike Routes

- On-Street Bike Route
- Bike Lane
- Off-Street Shared Use Path
- Streams

- Schools/Community Centers
- University
- Parks and Cemeteries
- BART Station

Figure 4.13-1 - Community Facilities

Route 238 Land Use Study

Source: City of Hayward Technology Services; AC Transit; MTC

0 500 1,000 2,000 3,000 Feet

5.0 Alternatives to the Proposed Project

The California Environmental Quality Act requires identification and comparative analysis of feasible alternatives to the proposed project that have the potential of achieving project objectives, but would avoid or substantially lessen any significant impacts of the project. The range of alternatives must be "governed by the rule of reason" and require the EIR to set forth a range of alternatives necessary to permit a reasoned choice.

For purposes of this DEIR, the preceding sections of this document established three land use alternatives (Alternatives A, B and C) and analyzed each in light of each environmental topic required by CEQA. Since the proposed Project being analyzed involves potential changes to land use regulations, most importantly the Hayward General Plan and Zoning Ordinance, CEQA Guideline Section 15126.6 specifies that when the underlying Project involves a proposed revision to a land use regulatory plan, the “No Project” alternative will be the continuation of the existing plan into the future. Therefore, for the DEIR, the “No Project” alternative represents development envisioned per existing General Plan land use designations.

5.1 No Project Alternative

Following is an analysis of the No Project Alternative. Under this alternative, existing General Plan land use designations of commercial and residential would remain and the following impacts would be anticipated. Per the mid-point of existing General Plan land use designations, up to 2,512 dwellings could be constructed in the Project area as well as up to 257,707 square feet of non-residential uses.

The No Project alternative is shown on **Figure 4.8-1**.

- *Aesthetics and Light and Glare*: Under the No Project alternative, there would be no substantial changes to aesthetic conditions within the Project area. Development that could occur under the No Project alternative would be somewhat greater than would be allowed under Alternative B and C but less than would be allowed under Alternative A. There would be no significantly different impacts to light and glare conditions.

- *Air Quality*: Air quality and greenhouse gas emissions would increase consistent with development that is presently allowed in the Hayward General Plan and generally consistent with Alternatives B and C. Air pollutants, including greenhouse gas emissions would be less under the No Project Alternative that under Alternative A, Short-term air emissions related to construction would be mitigated through standard conditions of approval requiring dust control methods imposed by the City of Hayward and by adherence to Mitigation Measure 8.1 contained in the General Plan Update EIR.

- *Biological Resources*: Impacts related to special-status plants and wildlife, wetlands and tree resources would be somewhat greater under the No Project Alternative as would be under Alternatives B and C, but greater than Alternative A, since a greater amount of residential development would be allowed under Alternative A. Adherence to mitigation measures 4.3-1, 4.3-2 a through c, 4.3-3 and 4.3-4 will reduce impacts to biological resources to a level of less-than-significant under the No Project alternative.

- *Cultural Resources*: Development that could be allowed under the No Project alternative would be greater with respect to cultural resources than under development that would be allowed under Alternatives B and C, since a greater amount of development and associated ground disturbance would be allowed under current General Plan land use designations. Impacts to cultural resources would be approximately the same under the No Project scenario as under Alternative A, since approximately the same amount of development would be allowed. Adherence to Mitigation Measures 4.4-1 and 4.4-2 will reduce cultural resource impacts to a less-than-significant level.

- *Geology and Soils*: Since development that would be allowed under the No Project Alternative would be greater than allowed under Alternatives B and C, impacts related to seismic hazards, landslides and other soils and geologic impacts would be greater than these two Alternatives. Geology and soil impacts would be greater under Alternative A than the No Project Alternative, since more residents, visitors would be accommodated in the Project area. Adherence to Mitigation Measures 4.5-1 through 4.5-3 will reduce soils and geology impacts to a less than significant level.

- *Hazardous Materials*: Soil and groundwater contamination and associated impacts within the Project area would remain approximately the same under the No Project Alternative as under the three Alternatives. Adherence to Mitigation Measures 4.6-1 and 4.6-2 will reduce hazardous material impacts to a less-than-significant level under the No Project Alternative.

- *Hydrology and Drainage*: The amount of impervious surfaces, associated stormwater runoff and soil erosion allowed in the Project area under the No Project Alternative would be somewhat greater than Alternatives B and C, since more development would be allowed under existing General Plan designations. The amount of impervious surfaces and associated impacts would be greater under Alternative A than the No Project Alternative due to more residential development being allowed. Adherence to Mitigation Measures 4.7-1 and 4.7-2 will reduce hydrology and drainage impacts to a less-than-significant level.

- *Land Use and Planning*: Land Uses under the No Project Alternative would be the same as maintaining the current General Plan land use designations. Since the current Hayward General Plan would allow a greater amount of residential development (although slightly less non-residential development) than Alternatives B and C, less intensive impacts would result. Land Use and Planning impacts would be greater under

Alternative A than the No Project Alternative, since more development would be allowed than under existing General Plan land use designations

- *Noise*: Greater noise impacts with respect to land use compatibility, traffic noise, operational noise and short-term temporary construction impacts would occur under the No Project Alternative than Alternatives B and C, since a greater amount of development would be allowed under existing General Plan land use designations than these two Alternatives. Greater noise impacts would occur under Alternative A than under the No Project Alternative. Adherence to Mitigation Measures 4.9-1 through 4.9-4 included in this DEIR will reduce noise impacts to a less-than-significant level.

- *Population and Housing*: Population increases that could be allowed under the No Project (existing General Plan land use designations) would be greater than under Alternatives B and C since less development would be allowed. Population increases would be greater under Alternative A than under the No Project Alternative. However, since population and housing assumptions contained in the current General Plan are included in current Association of Bay Area Governments regional projections, no impacts would occur with respect to this topic.

- *Transportation and Circulation*: Under cumulative (2025) General Plan buildout conditions, the intersections of Foothill Boulevard and Mattox Road and Foothill Boulevard and D Street are anticipated to operate at LOS F in the AM perk hour. The same two intersections plus the intersection of Foothill Boulevard and Grove Way is anticipated to operate at LOS F in the PM peak hour. These impacts would be approximately the same but slightly better than cumulative conditions under Alternative A. No significant changes to pedestrian, bicycle or public transit operations between the No Project and of the Alternatives have been identified.

- *Utilities and Public Services*: Impacts to utility and public service systems would be greater under the No Project Alternative than under Alternatives B and C, since less development would be allowed. Utility and public service impacts would be greater under Alternative A than the No Project Alternative, since more residential development would be allowed. Impacts to the City of Hayward water and wastewater systems would be less-than-significant as indicated in Section 4.12 of the DEIR. Impacts to police and fire resources would be reduced to a less-than-significant level through adherence to Mitigation Measure 4.12-1.

- *Schools and Parks*: Impacts to schools and parks would be greater under the No Project Alternative since a greater amount of development would be allowed than pursuant to Alternatives B and C. School and park impacts would be greater under Alternative A, that would allow a greater amount of residential development, although a slightly smaller amount of non-residential development. These impacts can be reduced to a less-than-significant level through adherence to Mitigation Measure 4.13-1.

5.2 Environmentally Superior Alternative

Alternative B would be the environmentally superior alternative among the three Alternatives analyzed in this EIR and the No Project Alternative. There would be fewer and/or less intense traffic impacts under the Alternative B compared to the other Alternatives; there would also likely be less noise and air quality impacts, due to less traffic. Alternative B would also require less water and would generate less wastewater and fewer school children. Finally, this Alternative would have fewer impacts to the City's Police and Fire Departments.

6.0 Analysis of Long-Term Effects

This section of the DEIR addresses the potential long-term effects of implementing the proposed Project, as required by CEQA.

6.1 Significant Irreversible Environmental Changes and Irretrievable Commitment of Resources

Approval of the proposed Project and associated subsequent construction of proposed land uses and facilities would indirectly result in irretrievable commitment and use of energy and non-renewable resources for construction and operation of future office and residential uses, including such resources as sand and gravel, lumber and other forest products, asphalt, petrochemicals and metals. The level and amount of commitment of such resources is commensurate with similar development projects undertaken in the Bay Area and throughout California and the nation. In the long-term, future residences and other facilities constructed as part of the proposed Project would also use electrical and natural gas energy for heating and cooling. Again, this use of energy resources would be subject to current building regulations mandating energy conservation and would be similar in nature to other development projects in the Bay Area.

6.2 Growth Inducing Impacts of the Proposed Project

All EIRs must consider the potential growth inducement of projects. A project is generally considered to be growth inducing if it will foster economic or population growth or will cause the construction of new housing, either directly or indirectly, within a given geographic area. Projects which remove obstacles to population growth are also deemed to be growth-inducing. Increases in population may strain existing community services or utility systems, so consideration must be given to this impact. The characteristics of a Project that may encourage or facilitate other growth activities that could significantly affect the environment, either individually or cumulatively, must also be discussed.

In regards to the proposed Project, approval and implementation of the proposed Project under any of the Land Use Alternatives would not be growth-inducing, since the proposed Alternative that includes the greatest amount of development, Alternative A, would be generally consistent with land uses currently allowed under the Hayward General Plan. Development in the Project area would also occur in or near currently developed portions of the community near existing urban services and facilities.

6.3 Cumulative Impacts

Cumulative impacts are those which taken individually may be minor but, when combined with similar impacts associated with existing development, proposed development projects and

planned but not built projects, have the potential to generate more substantial impacts. CEQA requires that cumulative impacts be evaluated when they are significant and that the discussion describe the severity of the impacts and the estimated likelihood of their occurrence. CEQA also states that the discussion of cumulative impacts contained in an EIR need not be as detailed as that provided for the project alone. Cumulative impacts may be addressed using one of two methods:

- a listing of past, present and reasonable anticipated future and probable projects, within or adjacent to the community containing the project site, which could produce related or cumulative impacts; or
- a summary of projections contained in the adopted General Plan or related planning documents, such as a previously certified EIR, that evaluated regional environmental impacts of a number of projects within a given geographic area.

For purposes of this EIR the second approach has been chosen to address cumulative impacts. Cumulative impacts identified in the certified City of Hayward 2002 General Plan Update EIR were used as the basis of cumulative impacts in this DEIR. Additional cumulative impacts related to traffic and transportation impacts and air quality impacts are addressed within the body of the DEIR.

6.4 Significant and Unavoidable Environmental Impacts

Unavoidable significant adverse impacts are those impacts that cannot be mitigated to a less-than-significant level. CEQA requires decision-makers to balance the benefits of a proposed project against its unavoidable impacts in considering whether to approve the underlying project. If the benefits of the proposed project outweigh the anticipated unavoidable impacts, the adverse environmental impacts may be considered acceptable by the Lead Agency. To approve the project without significantly reducing or eliminating an adverse impact, the Lead Agency must make a Statement of Overriding Consideration supported by the information in the record.

The General Plan Update EIR, certified by the City of Hayward in 2002, identified three significant and unavoidable impacts: regional traffic and roadway congestion, construction noise and seismic ground-shaking. A statement of overriding considerations was adopted for these three impacts.

This EIR has identified one significant and unavoidable impact, which would be a ten second increase in vehicular delay in the PM peak hour at the intersection of Foothill Boulevard and D Street (Impact 4.11-1). Due to existing physical constraints at this intersection, roadway improvements to increase vehicular capacity are not feasible.

7.1 Persons and Organizations

EIR Preparers

The following individuals participated in the preparation of this document.

Jerry Haag, Urban Planner (project manager)
Damian Stefanakis, Dowling Associates, traffic and transportation
Donald Ballanti, air quality
Alan Rosen, acoustics

City of Hayward Staff

Sara Buizer, AICP, Project Manager
David Rizk, AICP, Development Services Department Director
Robert Bauman, Public Works Director
Roxy Carmichael Hart, Transportation Manager
Alex Ameri, Utilities Division
Mark Bennett, Deputy Chief, Fire Department
Hugh Murphy, Hazardous Materials Bureau, Hayward Fire Department
Lt. Weldon, Police Department
Robert Palmerini, Captain, Police Department

Other Agencies and Organizations Contacted

Hayward Area Recreation and Parks Department-Larry Lepore
Hayward Unified School District-Dr. Barry Schmimmel
Alameda County Fire Department-Bonnie Terra
Alameda County Planning Department-Cindy Horvath
Alameda County Sheriff Department-Lt. Hotelling

7.2 References

The following documents, in addition to those included in the Appendix, were used in the preparation of this DEIR.

238 Bypass Land Use Study, Fiscal Impact Analysis, Strategic Economics, October 2008

Castro Valley Plan, Alameda County, 1985

District Recreation and Parks Master Plan, Hayward Area Recreation and Parks District, 2006

Draft Environmental Impact Report, Hayward General Plan Update, Lamphier-Gregory Associates, 2001

Eden Area Plan, (a part of the County of Alameda General Plan), Alameda County, updated through 1995

Fairway Park Neighborhood Plan, City of Hayward, 1996

Final Environmental Impact Report/Statement and Final Section 4(f) Evaluation, Proposed Route 238 Hayward Bypass, U.S. Department of Transportation and State Department of Transportation, 2000

Geotechnical Report to Construct A 4/6 Lane Expressway/Freeway, State of California Department of Transportation, 1986

Hayward General Plan, City of Hayward, 2002

Hayward Highlands Neighborhood Plan, City of Hayward, 1998

Hayward Landscape Beautification Plan, City of Hayward, 1987

Hillside Design and Urban/Wildland Interface Guidelines, City of Hayward, 1993

Mission Foothills Neighborhood Plan, City of Hayward, 1992

Mission-Garin Neighborhood Plan, City of Hayward, 1987

North Hayward Neighborhood Plan, City of Hayward, 1994

South Hayward BART/Mission Boulevard Concept Design Plan EIR, Jerry Haag, Urban Planner, April 2006

Route 238 Corridor Improvement Project Environmental Impact Report. Jones and Stokes Associates November 2007.

Upper "B" Street Neighborhood Plan, City of Hayward, 1992