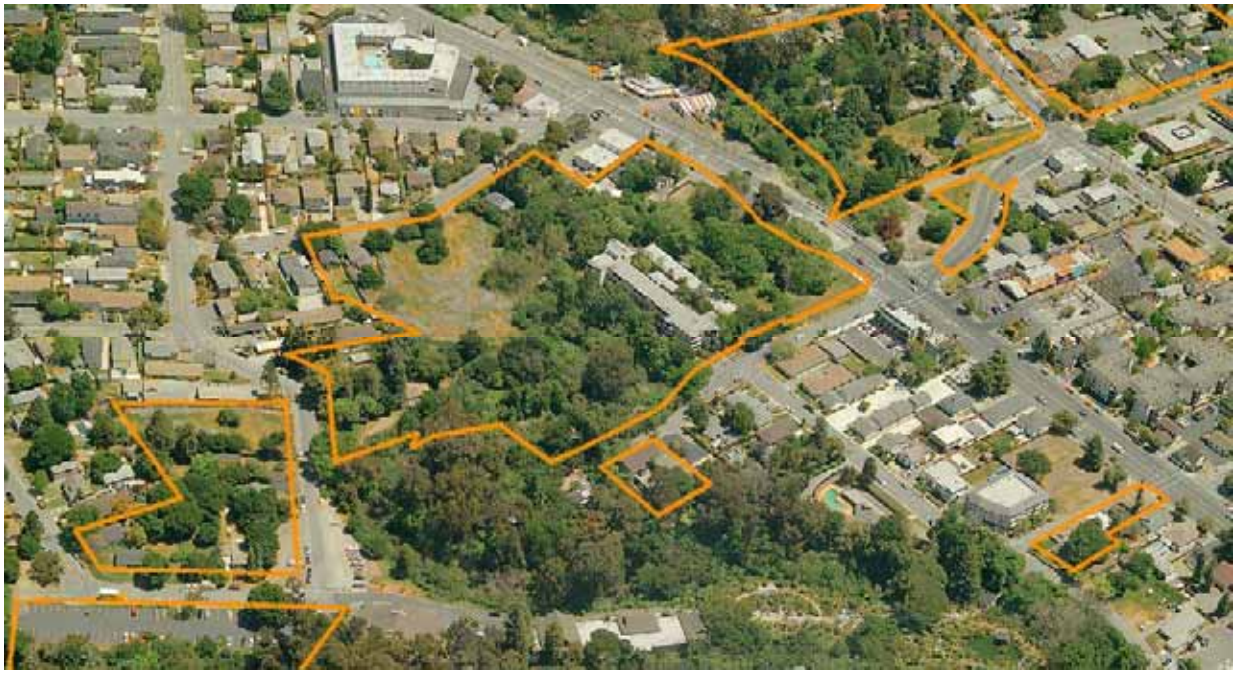
Route 238 Bypass Land Use Study



Draft
Program Environmental Impact Report

SCH# 2008072066

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1.0 Project Summary

1.1 Introduction

This chapter consists of a summary of the proposed Project, a list of environmental issues to be resolved and a summary identification of each environmental impact and associated mitigation measure.

A discussion of the applicability of the California Environmental Quality Act (CEQA) and implementing Guidelines to the proposed Project is outlined in Chapter 2. Chapter 3 contains a detailed discussion of the proposed Project, which is three Land Use Alternatives for the Project area. Chapter 4 includes a thorough analysis of Project impacts and mitigation measures. Chapter 5 describes the No Project Alternative. Chapter 6 contains all other CEQA-mandated sections. Finally, Chapter 7 includes the names of the DEIR preparers, individuals and agencies contacted in the preparation of this document and references. Appendices are included as Chapter 8.

1.2 Summary of Project Description

The Project area comprises a large number of vacant and developed parcels totaling approximately 355 acres that extend in an "arcing" north-south direction from the east side of Foothill Boulevard just south of I-580 freeway in the north, to Industrial Boulevard in the south. Some, but not all properties are contiguous to each other.

Properties in the Project area were acquired by Caltrans as right-of-way for the planned Route 238 Bypass Freeway. This freeway project is no longer being pursued and this Land Use Study is being undertaken to guide future planning of these properties in the absence of the freeway. A majority of properties (over 90 percent) are within the City of Hayward, although some properties in the northerly portion of the Project area are in the unincorporated portion of Alameda County.

The Route 238 Bypass Land Use Study proposes three alternatives to guide the long-term, future potential development and redevelopment for properties within the Project area. An overall circulation pattern for the Project area is also provided, linked to the various alternative scenarios. Each of the Alternatives includes a different land use pattern, including various types and densities of residential uses, commercial and office uses, open spaces and public/quasi-public uses.

Features common to all three Alternatives include proposing Public and Quasi-Public land use designations for freeway right-of-way lands just south of the I-580 freeway and east of Foothill Boulevard, providing an interconnected public trail throughout the entire Project area, indicating a secondary new access via a new roadway to/from the Carlos Bee quarry, providing an open space corridor on both sides of San Lorenzo Creek, generally located on the north side of A Street, providing an open space corridor along both sides of Dobbel Creek, located south and

west of Highland Boulevard and north of the Carlos Bee quarry and proposing a park and open space area on a large, steep parcel located south and west of Harder Road.

Alternative A represents the highest intensity land use of the three Alternatives. It includes a mix of medium and higher density housing on flatter properties adjacent to or near Foothill Boulevard, E Street, Second Street, Carlos Bee Boulevard, Tennyson Avenue and along Mission Boulevard. General Commercial sites would be located along other portions of Foothill and Mission Boulevards, with lower density residential and parks and open space uses assigned to steeper properties more remote from major access roads. Also, based on direction from the Hayward City Council, Alternative A includes a new General Plan land use designation to accommodate a proposed high-density mixed use, transit-reliant conceptual development that minimizes reliance on the automobile, called "Quarry Village," at the Carlos Bee quarry site. That new designation is entitled, "Sustainable Mixed Use" and requires residential densities of 27-55 units per net acre.

At buildout, this Alternative would allow up to 234,872 square feet of commercial and office use, a range of 2,222 to 4,450 dwellings mostly at low density, detached housing types, approximately 22.9 acres of public and quasi-public land uses, approximately 74.8 acres of limited open space and approximately 27.5 acres of parks and recreation open space uses. This Alternative is based primarily on a market and fiscal analysis prepared by the City's fiscal consultant for the Project, Strategic Economics, Inc., dated February 15, 2008.

Alternative B includes the lowest land use intensity of the three Alternatives, based on input received primarily during community meetings in February of 2008. Additional input was received at a community meeting on June 18, 2008. Land uses would include lower overall density, primarily Limited Medium Density Residential (8.7-12.0 units per net acre) and more parks and open space on steeper properties. Land uses near the South Hayward BART station would include higher density residential development, commercial development and parks. As part of the June community meeting, a new General Plan land use designation is identified for lands to the northeast of the A and Fourth Streets intersection, entitled "Preservation Park." The "Preservation Park" designation is proposed as a land use that is designed to accommodate relocation of historic structures that are required to be removed as part of other developments.

Alternative B would provide for up to 219,920 square feet of commercial and office land use, a mid-range development potential of 1,182 dwellings, with a dwelling unit range of between 874 to 1,615 dwellings, primarily higher density, attached types, approximately 23.5 acres of public and quasi-public land use, approximately 102.2 acres of limited open space and approximately 49.06 acres of parks and recreation open space.

Alternative C. is based on input from local and State regulatory agencies, including Alameda County, and existing City of Hayward General Plan and applicable Neighborhood Plan policies. This Alternative would maximize land use density and intensity on the properties comprising the Project area and would include General Commercial and Medium Density Residential (8.7-17.4 units per net acre) designations along Foothill Boulevard, Medium Density Residential (8.7-12.0 units per net acre) designations along A Street, B Street, Carlos

Bee Boulevard, Tennyson Road and adjacent to Mission Boulevard near the South Hayward BART station. Properties interior from major roads and located on steeper properties would be designed for Low and Limited Medium Density Residential (up to 12.0 units per net acre) designations, and Parks and Open Space designations. Unlike the other two Alternatives, Alternative C includes designations for unincorporated lands that reflect recommendations of the County's Eden Area and Castro Valley Draft General Plans, which are anticipated to be adopted in 2009

Land uses proposed as part of Alternative C at buildout would include approximately 245,653 square feet of commercial and office land use, a range of 1,497 to 2,903 dwellings with a mix of Residential Estate (less than 1.0 unit per net acre), Low (1.0-4.3 units per net acre), Medium (8.7-17.4 units per net acre) and High (17.4-34.8 units per net acre) density housing types, approximately 26 acres of public and quasi-public land uses, approximately 75.4 acres of limited open space and approximately 31.7 acres of parks and recreation open space.

1.3 Summary of Environmental Issues

As provided by the California Environmental Quality Act statues and implementing Guidelines, the focus of this Draft EIR (DEIR) will be on those issues identified in the Initial Study and responses from other public agencies received in response to the Notice of Preparation issued by the City of Hayward (see DEIR Appendices 8.1 and 8.2). These areas of environmental concern include:

4.1	Aesthetics and Light and Glare
4.2	Air Quality
4.3	Biological Resources
4.4	Cultural Resources
4.5	Geology and Soils
4.6	Hazards and Hazardous Materials
4.7	Hydrology, Drainage and Water Quality
4.8	Land Use and Planning
4.9	Noise
4.10	Population and Housing
4.11	Public Services and Utilities
4.12	Transportation and Circulation
4.13	Parks and Schools

1.4 Summary of Impacts and Mitigation Measures

Each potentially significant impact and associated mitigation measure (if required) identified in this DEIR is summarized in Table 1.1 on the following pages. The summary chart has been organized to correspond with the more detailed impact and mitigation measure discussions found in Chapter 4. Table 1.1 is arranged in three columns. The first column identifies supplemental environmental impacts by topic area and level of impact (i.e. significant impact, less-than-significant impact or no impact) prior to implementation of any mitigation measures. The second column includes mitigation measures. The third column identifies the level of significance after implementation of each mitigation measure.

For a complete description of the environmental setting, summary of impacts from previous EIRs, supplemental impacts associated with this proposed Project and supplemental mitigation measures, refer to Chapter 4 of this DEIR.

1.5 Summary of Alternatives

Chapter 4 analyzes three alternative land use scenarios for the Project area as described above; however, Chapter 5 also discusses the No Project Alternative.

1.6 Areas of Known Controversy

There are known areas of major environmental controversy with the proposed Project.

1.0 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Table 1.1, below, summarizes the environmental impacts and mitigation measures which are discussed in detail in the remainder of this Draft Environmental Impact Report.

Impact	Topic/ Impact	Mitigation Measure	Net Impact After Mitigation
4.1-1	**Aesthetics/Views, scenic resources, landforms and visual character**. Implementation of any of the three Alternatives would impact existing views, scenic resources and the scenic character of the Project area by allowing development on properties that are currently vacant or underdeveloped. Existing natural hillsides would be converted to dwellings, roads or other non-open space areas with associated grading and reconturing of the existing topography and loss of trees and other native vegetation. Development that could be allowed in the Project area would be visible from adjacent major roadways and public gathering places; however, future development would be generally consistent with existing development patterns. Impacts to views, scenic resources, landform and visual character would be the greatest under Alternative A and the least under Alternative B.	**Mitigation Measure 4.1-1**. Development projects submitted to either the City of Hayward or County of Alameda within the Project area shall be subject to design review to ensure: a) Adherence to General Plan policies, Design Guidelines, Hillside Design Guidelines and applicable Neighborhood Plans to minimize the grading, appropriate siting of new roads and structures and planting of replacement vegetation to ensure that hillside development integrates into the existing appearance of hillside properties. b) Appropriate use of building material and colors to minimize reflection of windows and roofs to the community to the west. c) Design of future buildings within flatter portions of the Project area to include "stepping down" of taller buildings, appropriate siting of windows and balconies to maximize privacy and establishment of view corridors to	**Less-than-Significant**

Impact	Topic/ Impact	Mitigation Measure	Net Impact After Mitigation
		nearby hills.	
4.1-2	**Aesthetics/Light and glare impacts**. Additional sources of light and glare would be added to the Project area under all three alternatives. New sources of lights would include street lights for new roadways, porch and yard lights for single family dwellings, balcony and deck lights in the upper levels of multi-story buildings and parking lots lights for commercial and office buildings. New light sources would be visible from vistas inside and outside the Project area.	**Mitigation Measure 4.1-2**. Lighting Plans shall be submitted to the Alameda County Planning Department and the City of Hayward Development Services Department as part of all future development projects. Lighting Plans shall include specific measures to reduce future lighting to a less-than-significant level, including but not limited to limiting the number of intensity of lighting fixtures to the minimum required for safety and security purposes, directing lighting fixtures downward so that light and glare will be minimized, turning off unneeded lights and similar features.	**Less-than-significant**
4.3-1	**Biological Resources/Impacts to special-status plants.** Potentially significant impacts would result to two special-status plant species (western leatherwood and Diablo helianthella) under all three Alternatives. Impacts would be greatest under Alternative A and C with fewer impacts likely occurring under Alternative B.	**Mitigation Measure 4.3-1**.The following steps shall be taken to protect special-status plant species within the Project area. These steps shall be added as conditions of approval for individual development proposals for vacant or substantially vacant properties within the Project area and for any development proposal adjacent to any wetland area, creek or other body of water: a) Rare plant surveys shall be undertaken by a qualified biologist (as approved by the City of Hayward) for all areas that are not mapped as developed or	**Less-than-Significant**

Impact	Topic/ Impact	Mitigation Measure	Net Impact After Mitigation
		disturbed/ruderal, including riparian forest, oak woodland, non-native annual grassland, coastal scrub, and wetland areas. Surveys should focus on those species with a moderate potential to occur in the Project area, and should include protocol-level surveys in February and May of riparian areas and other suitable habitats for western leatherwood and Diablo helianthella. General protocol-level rare plant surveys are necessary in early spring (February-April), late spring (May-June), and late summer (July-September) to determine the presence or absence of any other plant species with potential to occur in undeveloped habitats of the Project area. b) If species are identified, development activities shall avoid these areas and appropriate buffer areas established around such species. The size and location of any buffer shall be determined by a qualified biologist. c) If avoidance is not feasible, as determined by the City of Hayward, rare plants or their seeds, shall be transplanted to a suitable alternative protected habitat. Such transplantation shall occur pursuant to permits and approvals from appropriate biological	

Impact	Topic/ Impact	Mitigation Measure	Net Impact After Mitigation
		regulatory agencies. A monitoring program shall be established to ensure that transplanted species will thrive.	
4.3-2	**Biological Resources/Impacts to special-status wildlife species**. Potentially significant impacts would result to several special-status wildlife species (California red-legged frog, nesting birds, bats and steelhead) under all three Alternatives. Impacts would be greatest under Alternative A and C with fewer impacts likely occurring under Alternative B.	**Mitigation Measure 4.3-2a.** The following steps shall be taken to protect California red-legged frog species within the Project area: a) Protocol-level surveys shall be performed in all perennial creeks, reservoirs, and deep pools of water before development occurs in or near these areas within the Project area. b) If red-legged frogs are found, development activities shall avoid these areas and appropriate buffer areas established around such species. The size and location of any buffer shall be determined by a qualified biologist. c) If avoidance is not feasible, as determined by the City of Hayward, red-legged frogs shall be relocated to a suitable alternative protected habitat. Such relocation shall occur pursuant to permits and approvals from appropriate biological regulatory agencies. A monitoring program shall be established to ensure that relocated species will thrive.	**Less-than-Significant**
		Mitigation Measure 4.3-2b. Clearing of	**Less-than-Significant**

Impact	Topic/ Impact	Mitigation Measure	Net Impact After Mitigation
		vegetation and the initiation of construction shall be restricted to the non-breeding season between September and January of each year. If these activities cannot be done in the non-breeding season, a qualified biologist (as approved by the City of Hayward) shall perform pre-construction bird surveys within 30 days of the onset of construction or clearing of vegetation. If nesting birds are discovered in the vicinity of a development site, a buffer area shall be established around the nest(s) until the nest is vacated. The size of the buffer would be dependent on the particular species of nesting bird and shall be determined by a qualified biologist.	
		Mitigation Measure 4.3-2c. Pre-construction bat surveys shall be undertaken prior to grading, tree removal or other construction occurring between November 1 and August 31 of the year. Pre-construction bat surveys shall be undertaken by a qualified biologist (as approved by the City of Hayward) involve surveying trees, rock outcrops, bridges, and buildings subject to removal or demolition for evidence of bat use (guano accumulation, or acoustic or visual detections). If evidence of bat use is found, the biologists shall conduct a minimum of three acoustic surveys between April and	**Less-than-Significant**

Impact	Topic/ Impact	Mitigation Measure	Net Impact After Mitigation
		September under appropriate conditions using an acoustic detector, to determine whether a site is occupied. If bats are found, they should be excluded from occupied roosts in the presence of a qualified biologist during the fall prior to construction.	
		Mitigation Measure 4.3-2d. a) The Stormwater Pollution Prevention Plan prepared for individual development projects shall include specific measures to avoid sedimentation in San Lorenzo Creek and its tributaries. b) A riparian corridor shall be created and preserved around San Lorenzo Creek to minimize impacts to steelhead. The precise location, width and activities within such corridors shall be approved by a qualified biologist approved by the City of Hayward.	**Less-than-Significant**
4.3-3	**Biological Resources/Impacts to wetlands and other waters**. Development activities on properties within the Project area could have potentially significant direct and indirect impacts on jurisdictional wetlands and other waters of the United States under each of the Alternatives. Direct impacts would include grading and other disturbances of wetlands and indirect impacts	**Mitigation Measure 4.3-3**. The following steps shall be taken to protect wetlands and other waters of the U.S. a) The amendment to the Hayward General Plan shall include a policy or policies requiring retention of appropriate riparian and wildlife corridors adjacent to major creeks that flow through the	**Less-than-Significant**

Impact	Topic/ Impact	Mitigation Measure	Net Impact After Mitigation
	would include flows of polluted stormwater runoff into wetlands and other waters.	Project area. The width of corridors shall be based on site-specific biological assessments of each creek. b) In order to ensure that all jurisdictional wetlands and other waters are identified, formal jurisdictional delineations of wetlands and other waters shall be conducted on a project specific basis as part of the normal environmental review process for specific development projects. Jurisdictional delineations should follow the methodology set forth in the 1987 *U.S. Army Corps of Engineers Wetlands Delineation Manual* and should be submitted to the Corps for verification prior to project development. c) Future development proposals within the Project area should avoid development on and impacts on identified wetlands and other waters. d) If avoidance of wetlands or other waters is not possible, then impacts should be minimized to the maximum extent that is practicable. If impacts to wetlands or other waters cannot be minimized and are unavoidable, these impacts should be compensated for by developing and implementing a comprehensive mitigation plan,	

Impact	Topic/ Impact	Mitigation Measure	Net Impact After Mitigation
		acceptable to the Corps, CDFG, and RWQCB to offset these losses. It is recommended that mitigation be conducted within the Project area. If this is not possible, then an off-site mitigation area should be selected that is as close to the Project area as possible and acceptable to the resource agencies. Necessary state and federal permits shall be obtained prior to any work within or in close proximity to wetlands or other waters of the U.S.	
4.3-4	**Biological Resources/Impacts to tree resources.** Development activities within the Project area could result in loss of heritage and non-heritage trees. Loss of heritage trees would be a violation of the City's Tree Protection Ordinance unless necessary permits are first obtained.	**Mitigation Measure 4.3-4**. Tree surveys shall be conducted by a certified arborist on all properties proposed for development and under the jurisdiction of the tree ordinances. Impacts to trees will require removal permits pursuant to the Hayward Tree Preservation Ordinance or the Alameda County Tree Ordinance in County rights-of-way. Replacement trees shall be provided based on the replacement value of protected trees that are removed.	**Less-than-Significant**
4.4-1	**Cultural Resources/Impacts to historic resources**. Future development that could be allowed under any of the Alternatives could result in removal of historic dwellings and/or other historic structures or by allowing incompatible land uses near such resources.	**Mitigation Measure 4.4-1**. a) Specific development proposals that involve any structure older than 45 years shall be reviewed by the Hayward Planning Division to ensure consistency with the City's Historic Preservation	**Less-than-Significant**

Impact	Topic/ Impact	Mitigation Measure	Net Impact After Mitigation
		Program and applicable CEQA Guideline provisions. If substantial changes to a historic resource is proposed, modifications may be required in the design of such project to ensure consistency with the Historic Preservation Program. b) Future construction adjacent to any identified historic structure shall be complementary to the historic structure in terms of providing appropriate setbacks, consistent design and use of colors, as determined by the Hayward Planning Division.	
4.5-1	**Geology & Soils/Seismic fault rupture and fault creep.** A major earthquake on the Hayward Fault or other nearby faults could result in ground fault rupture within the Project area with the potential to damage or destroy existing and future dwelling units, roads, utilities and other structures constructed within the project area. The potential for damage to structures roads and utilities related to fault creep around the Hayward Fault has been determined to be significant in the General Plan EIR on a citywide basis.	**Mitigation Measure 4.5-1.** Site-specific geologic fault investigations shall be undertaken for all new individual development projects under any of the Alternatives within the State-defined Earthquake Fault Zone. Each investigation shall include a confirmation that new habitable structures would not be placed on or within 50 feet of an active fault trace, as defined by state and local regulations. Additionally, all new dwellings, roads and utility lines shall be subject to site-specific geotechnical evaluations with a requirement that all future utility lines that cross faults be fitted with shut-off valves. Implementation of these evaluations shall	**Less-than-Significant**

Impact	Topic/ Impact	Mitigation Measure	Net Impact After Mitigation
		be required to ensure consistency with the Uniform Building Code and all other applicable seismic safety requirements.	
4.5-2	**Geology & Soils/Seismic ground shaking**. During a major earthquake along a segment of the Hayward Fault or one of the other nearby faults, moderate to strong ground shaking can be expected to occur within the Project area. Strong shaking during an earthquake could result in damage to buildings, roads, utility lines and other structures with associated risk to residents, employees and visitors in the area.	**Mitigation Measure 4.7-1**. Site-specific geotechnical investigations shall be required for each building or group of buildings (such as in a subdivision), roads and utility lines constructed in the Project area. Investigations shall be completed by a geotechnical engineer registered in California or equivalent as approved by the City. Design and construction of structures shall be in accordance with the recommendations contained in the reports. Generally, such recommendations will address compaction of foundation soils, construction types of foundations and similar items. Implementation of these evaluations shall be required to ensure consistency with the California Building Code and all other applicable seismic safety requirements.	**Less-than-Significant**
4.5-3	**Geology & Soils/Ground failure and landslides**. Damage to structures and other improvements within the Project area could occur from landslides and seismically induced ground failure, resulting in damage to improvements and harm to project area residents and visitors.	**Mitigation Measure 4.5-3**. Site-specific geotechnical investigations required as part of Mitigation Measure 4.5-2 shall also address the potential for landslides, including seismically induced landslides and include specific design and construction recommendations to reduce	**Less-than-Significant**

Impact	Topic/ Impact	Mitigation Measure	Net Impact After Mitigation
		landslides and other seismic ground failure hazards to less-than-significant levels. Recommendations included within site-specific geotechnical investigations shall be incorporated into individual grading and building plans for future development.	
4.6-1	**Hazards/Demolition and hazardous air emissions**. Demolition and deconstruction of existing buildings, utility facilities and other older structures could release hazardous and potentially hazardous material into the atmosphere including asbestos containing materials, lead-based paints and other hazardous substances, potentially resulting in health hazards to construction employees and local visitors and residents. These is also a potential for naturally occurring asbestos within the portions of the project area east of Mission Boulevard and south of Tennyson Road.	**Mitigation Measure 4.6-1a**. Prior to commencement of demolition or deconstruction activities within the project area, project developers shall contact the Alameda County Environmental Health Department, Bay Area Air Quality Management District, Department of Toxic Substances Control and the Hazardous Materials Division of the Hayward Fire Department, for required site clearances, necessary permits and facility closure with regard to demolition and deconstruction and removal of hazardous material from the site. All work shall be performed by licensed contractors in accord with State and Federal OSHA standards. Worker safety plans shall be included for all demolition or deconstruction plans.	**Less-than-Significant**
		Mitigation Measure 4.6-1b. Prior to commencement of grading activities within the project area, project developers shall	**Less-than-Significant**

Impact	Topic/ Impact	Mitigation Measure	Net Impact After Mitigation
		conduct investigations by qualified hazardous material consultants to determine the presence or absence of asbestos containing material in the soil. If such material is identified that meets actionable levels from applicable regulatory agencies, a remediation plan shall be prepared to remediate any hazards to acceptable levels, including methods of removal and disposal of hazardous material, worker safety plans and obtaining necessary approvals and clearances from appropriate regulatory agencies, including but not limited to the Hayward Fire Department, Department of Toxic and Substances Control and Bay Area Air Quality Management District.	
4.6-2	**Hazards/Potential soil and groundwater contamination**. Development and redevelopment of the properties in the project area could uncover deposits of petroleum products, underground tanks and other substances that could contaminate soil and/or groundwater. Contamination impacts would be greatest under Alternative A with the least impact associated with Alternative B.	Mitigation Measure 4.6-2. **Prior to approval of building or demolition permits, project developer(s) shall prepare a Phase I environmental site analysis and, if warranted by such analysis as determined by the Hazardous Materials section of the Hayward Fire Department or other regulatory agency, a Phase II environmental site analysis shall also be conducted.** Recommendations included in the Phase II analysis for remediation of hazardous conditions shall be followed, including	**Less-than-Significant**

Impact	Topic/ Impact	Mitigation Measure	Net Impact After Mitigation
		contact with appropriate regulatory agencies to obtain necessary permits and clearances. No construction (including grading) shall be allowed on a contaminated site until written clearances are obtained from appropriate regulatory agencies.	
4.7-1	**Hydrology/Drainage impacts**. Construction of land uses under all of the Land Use Alternatives would increase the amount of stormwater leaving the Project area that would impact the ability of downstream local and regional drainage facilities to safely accommodate increased amounts of stormwater resulting in localized flooding.	**Mitigation Measure 4.7-1**. Site-specific drainage plans shall be prepared for all future construction within the Project area prior to approval of a grading permit, or a building permit in the event a grading permit is not required. Each report shall include a summary of existing (pre-project) drainage flows from the project site, anticipated increases in the amount and rate of stormwater flows from the site and an analysis of the ability of downstream facilities to accommodate peak flow increases. The analysis shall also include a summary of new or improved drainage facilities needed to accommodate stormwater increases. Each drainage plan shall be reviewed and approved by the Hayward Public Works Department staff and Alameda County Flood Control and Water Conservation District staff prior to approval of a grading or building permit.	**Less-than-Significant**
4.7-2	**Hydrology/Flooding Impacts**. Construction of	**Mitigation Measure 4.7-2**. Prior to	**Less-than-Significant**

Impact	Topic/ Impact	Mitigation Measure	Net Impact After Mitigation
	buildings or other improvements within that portion of the Project area within a 100-year flood hazard area could result in significant impacts to these improvements and to future residents, employees and visitors ,	construction within a 100-year flood hazard area, developers of site-specific projects shall either: a) Submit a hydrology and hydraulic study prepared by a California-registered civil engineer proposing to remove the site from the 100-year flood hazard area through increasing the topographic elevation of the site or similar steps to minimize flood hazards. The study shall demonstrate that flood waters would not be increased on any surrounding sites, to the satisfaction of City staff. b) Comply with Section 9-4.110, General Construction Standards, of the Hayward Municipal Code, which establishes minimum health and safety standards for construction in a flood hazard area. c) Apply to the City for a Conditional Letter of Map Revision (CLOMR) to remove the site from the FEMA Flood Insurance Rate Map 100-year flood hazard area.	
4.9-1	**Noise/ Land use noise compatibility**. Development of residential uses under all three of the Alternatives near major noise sources could exceed local and state noise exposure standards.	**Mitigation Measure 4.9-1**. A site-specific noise study shall be performed for future individual development proposals within the Project area adjacent to major roadways or other noise sources, as determined by the Development Services Director to determine compatibility with the existing	**Less-than-Significant**

Impact	Topic/ Impact	Mitigation Measure	Net Impact After Mitigation
		and future noise environment and applicable noise regulations. If noise levels exceed applicable standards, then noise reduction measures shall be incorporated into the project design to ensure consistency with local and state noise standards. Noise reduction measures could include but would not be limited to noise barriers and site orientation for outdoor spaces and sound rated building constructions for indoor spaces. The analysis must consider the following criteria and guidelines: • General Plan Policies for Noise including Appendix N of the General Plan which contains Noise Guidelines for Review of New Development) • General Plan EIR Mitigation Measure 7.3: Project-Specific Noise Analysis/Abatement State Building Code, Chapter 1207 (insulation from exterior noise in new residential construction).	
4.9-2	**Noise/Traffic noise impacts**. Noise generated by vehicular traffic associated with future individual development projects under all Alternatives could result in exceedances of local and state noise exposure standards.	**Mitigation Measure 4.9-2.** Consistent with Mitigation Measure 7.4 of the City of Hayward General Plan Update EIR, an acoustical study shall be performed for each development proposal within the Project area under all of the Alternatives that has potential to significantly increase existing	**Less-than-Significant**

Impact	Topic/ Impact	Mitigation Measure	Net Impact After Mitigation
		noise levels. If it is determined that a proposed development would result in a substantial increase in ambient noise levels along nearby roadways, the study shall identify and implement noise abatement measures which will reduce project-related noise effects to a level consistent with City and State standards. Such measures could include the installation of noise barriers such as berms or sound walls).	
4.9-3	**Noise/Operational noise impacts**. Noise generated by the day-to-day operation of land uses within the Project area could result in exceedances of local and state noise exposure levels. Operational noise impacts would be greatest under Alternatives A and C and less under Alternative B.	**Mitigation Measure 4.9-3.** Signalization of the South Mariposa Road/Dougherty Road intersection would improve operations to an acceptable level. Signalization would result in LOS C operations during the a.m. peak hour and LOS A operations during the p.m. peak hour.	**Less-than-Significant**
4.9-3	**Noise/Operational noise impacts**. Noise generated by the day-to-day operation of land uses within the Project area could result in exceedances of local and state noise exposure levels. Operational noise impacts would be greatest under Alternatives A and C and less under Alternative B.	**Mitigation Measure 4.9-3**. Consistent with Mitigation Measure 7.2 of the City of Hayward General Plan Update EIR, the City of Hayward shall review individual projects using the City's General Plan as guidance to determine whether or not an operational noise source would generate significant noise impacts. Noise reduction measures including but not limited to setbacks, site plan revisions, operational constraints,	**Less-than-Significant**

Impact	Topic/ Impact	Mitigation Measure	Net Impact After Mitigation
		buffering, and sound insulation shall be incorporated into final development plans to reduce operational noise to a less than significant level.	
4.9-4	**Noise/Construction noise impacts.** Noise generated by demolition of existing improvements and construction of new dwellings within the Project area could result in short-term, temporary noise levels that would exceed City noise standards. Construction noise impacts would be greatest under Alternatives A and C and less under Alternative B.	**Mitigation Measure 4.9-4.** The City shall require reasonable construction practices for individual development projects within the Project area, consistent with Mitigation Measure 7.1 of the City of Hayward General Plan Update EIR. Measures should include but are not limited to the following: • Requiring all equipment to have mufflers and be properly maintained; • Limiting the amount of time that equipment is allowed to stand idle with a running engine; • Shielding construction activity and equipment from nearby noise sensitive uses by appropriate construction phasing, using existing buildings and structures as noise shields, construction of temporary noise barriers and similar techniques; and • Providing advance notice to nearby residents of major noise activities.	**Less-than-Significant**
4.10-1	**Population & Housing/Population increase**. Approval of any of the Land Use Alternatives would exceed population estimates for the City of Hayward published by ABAG.	Mitigation Measure 4.10-1. The City of Hayward shall consult with ABAG to ensure that final buildout populations for the project area are included in future regional	**Less-than-Significant**

Impact	Topic/ Impact	Mitigation Measure	Net Impact After Mitigation
		population projections.	
4.11-1	**Transportation and Circulation/Cumulative traffic impacts**. 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.		**Significant and Unavoidable**
4.12-1	**Public Services/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	**Mitigation Measure 4.12-1.** 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	**Less-than-Significant**

Impact	Topic/ Impact	Mitigation Measure	Net Impact After Mitigation
	resources and 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.	
4.12-2	**Public Services/Police 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.	**Mitigation Measure 4.12-2**. 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.	**Less-than-Significant**

2.0 Introduction

2.1 Purpose and Overview of the Environmental Review Process

This document is a program-level Draft Environmental Impact Report (to be known hereafter in this document as the DEIR), prepared pursuant to the California Environmental Quality Act of 1970 (CEQA), as amended. This DEIR describes existing environmental conditions within and adjacent to the proposed Project area within the City of Hayward. The DEIR also includes measures which could be incorporated into the Project to mitigate (lessen) anticipated environmental impacts to a level of insignificance or eliminate them entirely. Finally, this DEIR identifies and analyzes feasible alternatives to the proposed Project, cumulative impacts of this and other projects on the environment, and other mandatory elements as required by CEQA.

Responses to comments received regarding this DEIR during the public review period will be included in the Final Environmental Impact Report (FEIR). Together, the DEIR and FEIR constitute the full Environmental Impact Report (EIR) for the Project.

As provided in CEQA and implementing guidelines, public agencies are charged with the responsibility of avoiding or minimizing environmental damage to the fullest extent feasible. In fulfilling this responsibility, public agencies must balance a variety of objectives, including economic, environmental and social factors. As an informational document to local officials, governmental agencies and members of the public, the purpose of the EIR is to serve as a disclosure document, identifying potential impacts, mitigation measures and alternatives.

Approval of the EIR by the lead agency does not constitute approval of the underlying Project, in this instance, the adoption of a preferred Land Use Alternative, General Plan amendment, Zoning Ordinance amendment and other related land use entitlements.

2.2 Lead Agency

The City of Hayward is the lead agency for preparation of the EIR, as defined by Section 21067 of CEQA. This means that the City of Hayward is designated as the public agency which has the principal responsibility for approving or carrying out the proposed Project and for assessing likely environmental effects of the proposal.

Preparation of this EIR is in accord with CEQA, including all amendments thereto, and Guidelines for Implementation of the California Environmental Quality Act.

Methodologies used for determining standards of significance for each impact category analyzed in the EIR are based on CEQA Guidelines and are described in Section 4 of this DEIR. By applying appropriate significance criteria, impacts under each environmental topic have been categorized as either "significant" or "less than significant." Methods used to determine the level of significance of potential impacts vary depending on the environmental topic, as described in the individual subsections.

2.3 Program EIR

This EIR is considered as a Program EIR, in that it describes general impacts and mitigation measures for the proposed Route 238 Land Use Study land use Alternatives, including related amendments to the General Plan and Zoning Ordinance. Since implementation of the proposed Project would require approval of subsequent land use actions, including, but not limited to site plan reviews, subdivision maps, conditional use permits and other entitlements, additional environmental reviews will be required pursuant to CEQA.

Use of Program EIRs are allowed pursuant to Section 15168 of the CEQA Guidelines. The scope of environmental analysis in a Program EIR is limited to those topics that can be identified at the time the EIR is prepared without being highly speculative. It is anticipated that additional environmental review would occur as individual requests for specific land use entitlements are requested in the future. It is further envisioned that this Program EIR would be used as the basis for any further environmental analyses and documentation.

2.4 Previous Environmental Documentation

This EIR relies on the environmental setting, impacts and mitigation measures contained in the following three CEQA documents:

"Environmental Impact Report for the Hayward General Plan Update" prepared by Lamphier-Gregory in 2001 (SCH #2001072069). The EIR was certified by the Hayward City Council via adoption of Resolution No. 02-025 on March 12, 2002.

“South Hayward BART/Mission Boulevard Concept Design Plan Program Environmental Impact Report” prepared by Jerry Haag, Urban Planner (SCH #2005092093). This EIR was certified by the Hayward City Council by adoption of Resolution No. 06-09 on June 27, 2006.

“Route 238 Corridor Improvement Project Environmental Impact Report” prepared by Jones and Stokes (SCH #2005112116). This document was certified by the Hayward City Council by adoption of Resolution No. 07-165 on November 27, 2007.

These documents are hereby incorporated by reference into this DEIR and copies are available for review at the City of Hayward Development Services Department, Planning Division, 777 "B" Street, Hayward, during normal business hours.

2.5 Content and Organization of the Document

Sections 15122 through 15132 of the CEQA Guidelines describe the content requirements of EIRs. EIRs must include the information noted below. The specific sections of this document where such information is found are also noted below.

- A table of contents;
- A summary of the project’s proposed actions and their consequences (Section 1.0);
- A description of the proposed project, including objectives to be achieved by the project (Section 3.0);
- Section 4.0, to include an analysis of environmental topics:

- A description of existing environmental conditions or setting;
- An analysis of the anticipated impacts on the environment should the project be built or carried out as proposed, including significance criteria;
- Feasible measures which can be taken by the proponent or the City to lessen or mitigate identified environmental impacts;
- Project alternatives, including the "no project" alternative (Sections 5.0 and 5.1);
- Significant irreversible environmental changes (Section 6.1);
- Growth inducing impacts (Section 6.2);
- Cumulative impacts, including environmental impacts of the proposed project viewed over time in conjunction with related past, present and reasonably foreseeable probable future projects whose potential impacts may compound or interrelate with the proposed project (Section 6.3); and
- Significant and unavoidable environmental impacts (Section 6.4).

2.6 Notice of Preparation and Scoping Meeting

The City of Hayward has completed a Notice of Preparation (NOP) for the proposed Project and has circulated the NOP to all Responsible Agencies, other public agencies and interested citizens as required by CEQA. The NOP included the Initial Study for this Project (also included as Appendix 8.1). Copies of the NOP and responses received by the Lead Agency during the NOP review period are included within the appendix of this document (Appendices 8.2 and 8.3).

A Scoping Meeting was held for this Project at Hayward City Hall on July 30, 2008.

3.0 Project Characteristics

3.1 Project Location and Context

Figure 3.1-1 shows the location of Hayward in relation to surrounding communities and other major features. **Figure 3.1-2** depicts the location of the proposed Project area in relationship to major community features, streets and major transportation corridors.

The Project area comprises a large number of vacant and developed parcels totaling approximately 355 acres that extend in an "arcing" north-south direction from the east side of Foothill Boulevard just south of I-580 freeway in the north, to Industrial Boulevard in the south. Some, but not all properties are contiguous to each other.

Properties in the Project area have been acquired by Caltrans as right-of-way for the planned Route 238 Bypass Freeway. This freeway project is no longer being pursued and this Land Use Study is being undertaken to guide future planning of these properties in the absence of the freeway. A majority of properties (over 90 percent) are within the City of Hayward, although some properties in the northerly portion of the Project area are in the unincorporated portion of Alameda County.

The Project area contains approximately 355 acres of land, of which approximately 80% are vacant. Approximately 240 single-family residences exist in the Area as well as a number of multi-family dwellings and commercial buildings. A number of these are vacant.

Topographically, the Project area is generally flat adjacent to major east-west roadways, such as Foothill and Mission Boulevards, transitioning to moderate to steeply sloping properties to the east. A number of perennial and annual creeks flow through the area, including San Lorenzo Creek, Castro Valley Creek, Ward Creek, and Zeile Creek

The land uses surrounding the Project area include commercial uses adjacent to Foothill and Mission Boulevards, with predominantly single-family residential neighborhoods and some mixed multi-family uses east of Foothill and Mission Boulevards. Other major uses in the area include Hayward High School between East Avenue and Second Street, Cal State University East Bay - Hayward campus at the terminus of Carlos Bee Boulevard and Harder Road, the Japanese Gardens/Little Theater complex operated by the Hayward Area Recreation and Park District at the confluence of San Lorenzo and Castro Valley creeks, two closed quarries, and open space.

3.2 Project Description

Overview
The Route 238 Bypass Land Use Study includes three alternatives to guide the long-term, future potential development and redevelopment for properties within the Project area. An overall circulation pattern for the Project area is also provided, linked to the various alternative scenarios. Each of the Alternatives includes a different land use pattern, including various types and densities of residential uses, commercial and office uses, open spaces and public/quasi-public uses.

No specific development applications for properties in the Project area have yet been submitted to the City of Hayward

Land use alternatives

Three land use alternatives are analyzed equally in the body of this DEIR. These alternatives have been chosen to explore effects of redeveloping portions of the Project area with land use types and densities on surrounding land use and circulation patterns. Consideration of the three land use alternatives also will allow decision makers maximum flexibility in selecting the optimum mix of land uses consistent with the desires of the community and other public agencies.

Features common to all three Alternatives include proposing Public and Quasi-Public land use designations for freeway right-of-way lands just south of the I-580 freeway and east of Foothill Boulevard, providing an interconnected public trail throughout the entire Project area, indicating a secondary new access via a new roadway to/from the Carlos Bee quarry, providing an open space corridor on both sides of San Lorenzo Creek, generally located on the north side of Street A, providing an open space corridor along both sides of Dobbel Creek, located south and west of Highland Boulevard and north of the Carlos Bee quarry and proposing a park and open space area on a large, steep parcel located south and west of Harder Road.

The Alternatives are summarized as follows.

Alternative A represents the highest intensity land use of the three Alternatives. It includes a mix of medium and higher density housing on flatter properties adjacent to or near Foothill Boulevard, E Street, Second Street, Carlos Bee Boulevard, Tennyson Avenue and along Mission Boulevard. General Commercial sites would be located along other portions of Foothill and Mission Boulevards, with lower density residential and parks and open space uses assigned to steeper properties more remote from major access roads. Also, based on direction from the Hayward City Council, Alternative A includes a new General Plan land use designation to accommodate a proposed high-density mixed use, transit-reliant conceptual development that minimizes reliance on the automobile, called "Quarry Village," at the Carlos Bee quarry site. That new designation is entitled, "Sustainable Mixed Use" and requires residential densities of 27-55 units per net acre. The land uses and development potential for Alternative A are depicted on **Figure 3.1-3**.

At buildout, this Alternative would allow up to 234,872 square feet of commercial and office use, a range of 2,222 to 4,450 dwellings mostly at low density detached housing types, approximately 22.9 acres of public and quasi-public land uses, approximately 74.8 acres of limited open space and approximately 27.5 acres of parks and recreation open space uses. The EIR will assess impacts associated with potential development at the mid-range of the residential density ranges for all three Alternatives. This Alternative is based primarily on a market and fiscal analysis prepared by the City's fiscal consultant for the Project, Strategic Economics, Inc., dated February 15, 2008.

Alternative B includes the lowest land use intensity of the three Alternatives, based on input received primarily during community meetings in February of 2008. Additional input was received at a community meeting on June 18, 2008. Land uses would include lower overall density, primarily Limited Medium Density Residential (8.7-12.0 units per net acre), and more parks and open space on steeper properties. Land uses near the South Hayward BART station would include higher density residential development, commercial development and parks. As part of the June community meeting, a new General Plan land use designation is identified for lands to the northeast of the A and Fourth Streets intersection, entitled "Preservation Park." The "Preservation Park" designation is proposed as a land use that is designed to accommodate relocation of historic structures that are required to be removed as part of other developments. **Figure 3.1-4** shows land uses and development potential associated with Alternative B.

Alternative B would provide for up to 219,920 square feet of commercial and office land use, a mid-range development potential of 1,182 dwellings, with a dwelling unit range of between 874 and 1,615 dwellings, primarily higher density, attached types, approximately 23.5 acres of public and quasi-public land use, approximately 102.2 acres of limited open space and approximately 49.06 acres of parks and recreation open space.

Alternative C. is based on input from local and State regulatory agencies, including Alameda County, and existing City of Hayward General Plan and applicable Neighborhood Plan policies. This Alternative would maximize land use density and intensity on the properties comprising the Project area and would include General Commercial and Medium Density Residential (8.7-17.4 units per net acre) designations along Foothill Boulevard, Medium Density Residential (8.7-12.0 units per net acre) designations along A Street, B Street, Carlos Bee Boulevard, Tennyson Road and adjacent to Mission Boulevard near the South Hayward BART station. Properties interior from major roads and located on steeper properties would be designed for Low and Limited Medium Density Residential (up to 12.0 units per net acre) designations, and Parks and Open Space designations. Unlike the other two Alternatives, Alternative C includes designations for unincorporated lands that reflect recommendations of the County's Eden Area and Castro Valley Draft General Plans, which are anticipated to be adopted in 2009.

Land uses proposed as part of Alternative C at buildout would include approximately 245,653 square feet of commercial and office land use, a range of 1,497 to 2,903 dwellings with a mix of Residential Estate (less than 1.0 unit per net acre), Low (1.0-4.3 units per net acre), Medium (8.7-17.4 units per net acre) and High (17.4-34.8 units per net acre) density housing

types, approximately 26 acres of public and quasi-public land uses, approximately 75.4 acres of limited open space and approximately 31.7 acres of parks and recreation open space.

The attached Table 3.1 compares potential build-out land use summaries for each of the Alternatives, and identifies assumptions made in determining such development potential

The Project does not include condemnation or "take" of existing dwellings. Existing dwellings will remain, unless voluntarily removed by individual property owners, or future owners of such properties in association with specific development proposals. The impacts of such removals will be assessed in the future at a project-specific level, but the EIR for this Project will assess at a program level the potential impacts of removal of potentially historic structures.

Roads and infrastructure

Portions of the Project area are served by existing roads and utility systems. Depending on the alternative concept selected by the City of Hayward, existing roads may need to be widened or modified and other transportation system improvements installed. Also, if urban uses are selected as the appropriate use for large, currently vacant parcels such as the area south of Grove Way and east of Foothill Boulevard; the site south of the intersection of 2nd Street and Walpert Street; the site northeast of Carlos Bee Boulevard at the terminus of Overlook Avenue and the site south of Harder Road and east of Holy Sepulcher cemetery, may require construction of new interior roads.

Similarly, the Project area is served by a full array of utilities, including water, sewer, electrical, natural gas and telecommunication facilities. Depending on the type and density of land uses selected for implementation by the City of Hayward, new or upgraded utilities may need to be installed within the Project area.

Phasing of development

It is anticipated that, should this Project receive necessary approvals, individual property owners within the Project area would subsequently submit applications for development entitlements to the City of Hayward. Phasing of such development requests is not known at the time this DEIR is being prepared.

Funding mechanisms

It is anticipated that the City of Hayward may undertake one or more mechanisms to assist in financing or funding capital and/or ongoing operating costs of facilities and services required to support development anticipated as part of the proposed Project.

Regulatory changes

In order to implement the selected Alternative Concept Plan, the City of Hayward would undertake the following actions to ensures consistency between the Alternative and applicable land use regulatory documents:

- General Plan Amendment. The Project includes changing existing General Plan land use designations or other land use designations, depending on which Alternative Concept Plan is selected.
- Rezoning. Rezoning of properties would also occur to ensure consistency between zoning designations and General Plan land use designations.

3.3 Project Objectives

Objectives to be achieved through the approval and development of the Project include:

1) To identify appropriate future land use types, densities and locations to replace the former Route 238 Bypass freeway consistent with community desires, physical and environmental constraints and public agency interests.
2) To provide a degree of certainty regarding future land uses for residents and businesses within and adjacent to the former Route 238 Bypass right-of-way.
3) To assist the City of Hayward with meeting quantified housing objectives contained in the City's Housing Element of the General Plan.
4) To ensure that any future development within the more visible hillside areas is implemented in an environmentally sensitive manner.
5) To identify and provide protection for sensitive biological resources and their habitats.
6) To provide economic incentives to provide missing public infrastructure improvements or upgrade older such facilities, including but not limited to roads, water, wastewater and drainage facilities.
7) To provide locations for new public facilities, including a future school site.
8) To increase local jobs and economic return to the City of Hayward.
9) To ensure future development provides revenue mechanisms for funding additional service demands as a result of development.

3.4 Future Actions Using This DEIR

This Draft EIR analyzes the following anticipated future actions related to the proposed Project.

- City action on the General Plan Amendment and rezonings;
- City action on future Site Plan Reviews, subdivisions and other discretionary land use entitlements to implement site-specific development projects;
- Formation of funding mechanisms.

In addition to the above approvals, the Draft EIR may also be used by state or regional agencies in their review of other permits required for the Project (e.g. CDFG Streambed Alteration Agreements, Water Quality Certification or waiver by the Regional Water Quality Control Board under the Clean Water Act).

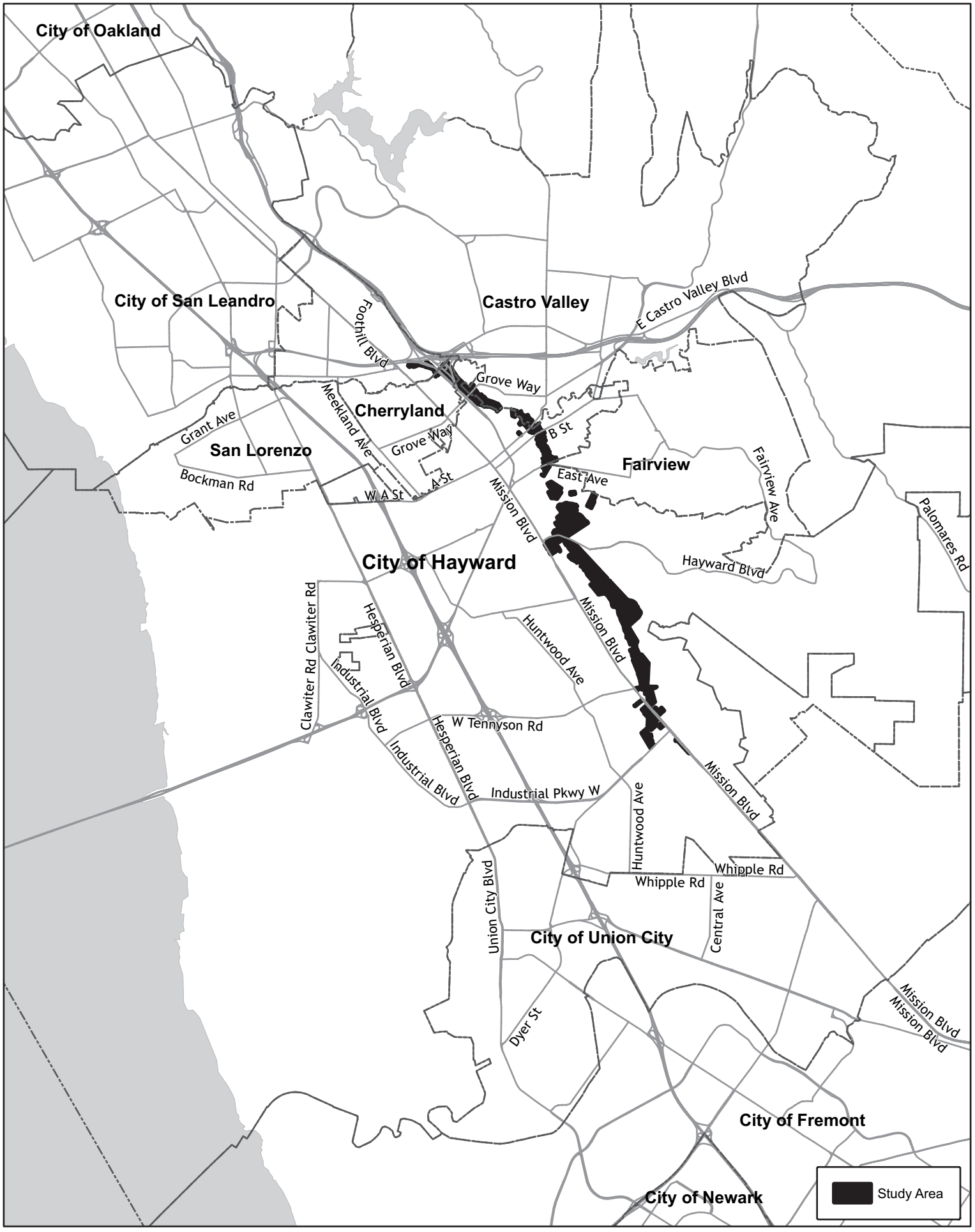
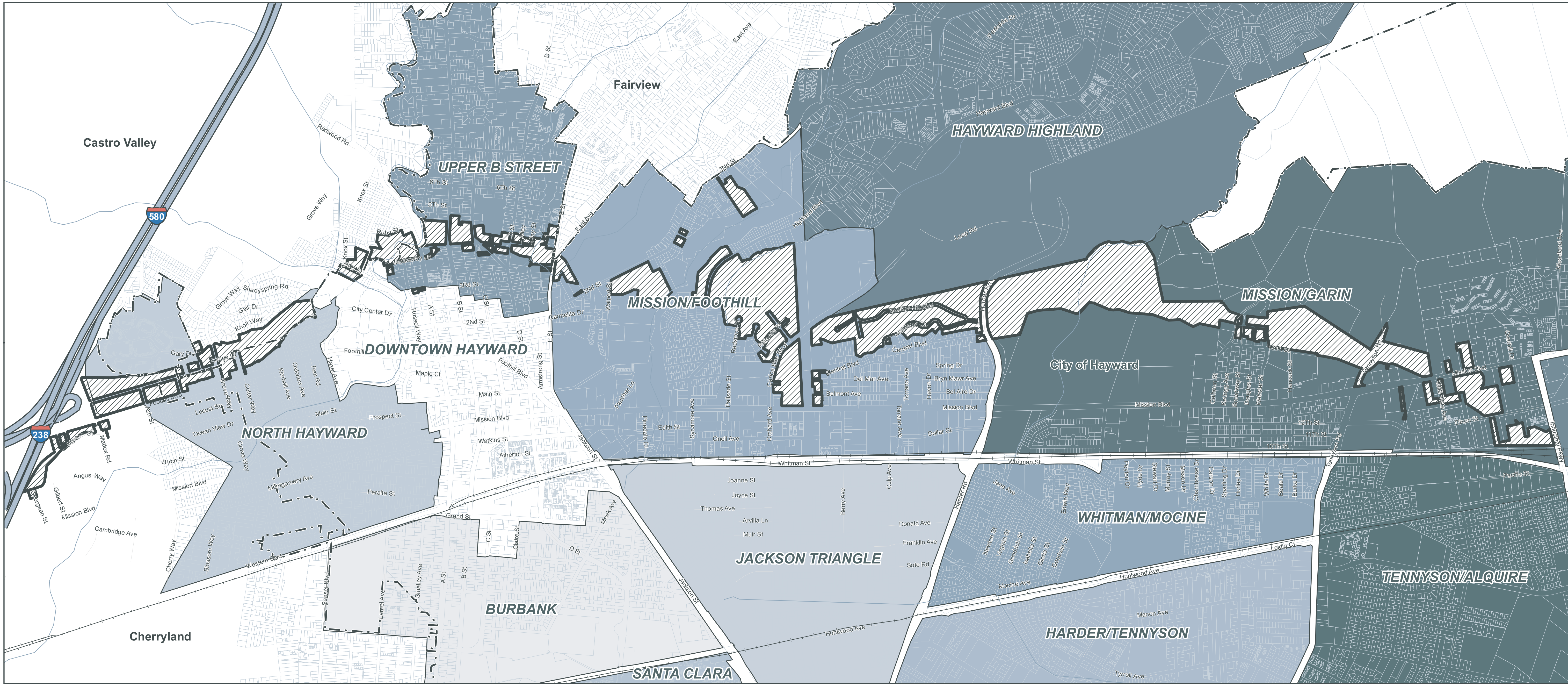


Figure 3.1-1 - Regional Location



CITY OF HAYWARD
ROUTE 238 BYPASS LAND USE STUDY
Draft Environmental Impact Report

LEGEND
City Limits
Streams
Caltrans Property

Figure 3.1-2 - Project Area Location

0 0.25 0.5 Miles

CITY OF HAYWARD
ROUTE 238 BYPASS LAND USE STUDY
Draft Environmental Impact Report

LEGEND

- Rural Estate Density Residential (0.2-1.0 du/ac)
- Suburban Density Residential (1.0-4.3 du/ac)
- Low Density Residential (4.3-8.7 du/ac)
- Limited Medium Density Residential (8.7-12.0 du/ac)
- Medium Density Residential (8.7-17.4 du/ac)
- High Density Residential (17.4-34.8 du/ac)
- Sustainable Mixed Use (25.0-55.0 du/ac)
- Mission Blvd Density Residential (34.8-55 du/ac)
- Station Area Density Residential (75-100 du/ac)
- Retail & Office Commercial
- General Commercial
- Commercial/High Density Residential
- Parks & Recreation
- Limited Open Space
- Public & Quasi-Public
- Caltrans Property
- Hayward Sphere of Influence
- City Limits
- Streams
- Open Space Trail Connection
- Potential Vehicular Connection

(1) Properties within the Fault Zone are subject to the terms of the Alquist Priolo Act. A fault study may be required before property is subdivided or any new construction occurs on the site, or the property is subdivided. Potential buyers of property within the Fault Zone must be notified before a sales transaction may occur.

Figure 3.1-3 - Alternative A Land Uses

0 0.125 0.25 0.5 Miles

CITY OF HAYWARD
ROUTE 238 BYPASS LAND USE STUDY
Draft Environmental Impact Report

LEGEND

- Rural Estate Density Residential (0.2-1.0 du/ac)
- Suburban Density Residential (1.0-4.3 du/ac)
- Low Density Residential (4.3-8.7 du/ac)
- Preservation Park (4.3-8.7 du/ac)
- Limited Medium Density Residential (8.7-12.0 du/ac)
- Medium Density Residential (8.7-17.4 du/ac)
- High Density Residential (17.4-34.8 du/ac)
- Mission Blvd Density Residential (34.8-55 du/ac)
- Station Area Density Residential (75-100 du/ac)
- Retail & Office Commercial
- General Commercial
- Commercial/High Density Residential
- Parks & Recreation
- Limited Open Space
- Public & Quasi-Public
- Caltrans Property
- Hayward Sphere of Influence
- City Limits
- Streams
- Open Space Trail Connection
- Potential Vehicular Connection

(1) Properties within the Fault Zone are subject to the terms of the Alquist Priolo Act. A fault study may be required before property is subdivided or any new construction occurs on the site, or the property is subdivided. Potential buyers of property within the Fault Zone must be notified before a sales transaction may occur.

Figure 3.1-4 - Alternative B Land Uses

0 0.125 0.25 0.5 Miles

CITY OF HAYWARD
ROUTE 238 BYPASS LAND USE STUDY
Draft Environmental Impact Report

Figure 3.1-5 - Alternative C Land Uses

LEGEND

- Rural Estate Density Residential (0.2-1.0 du/ac)
- Suburban Density Residential (1.0-4.3 du/ac)
- Low Density Residential (4.3-8.7 du/ac)
- Limited Medium Density Residential (8.7-12.0 du/ac)
- Medium Density Residential (8.7-17.4 du/ac)
- High Density Residential (17.4-34.8 du/ac)
- Mission Blvd Density Residential (34.8-55 du/ac)
- Station Area Density Residential (75-100 du/ac)
- Retail & Office Commercial
- General Commercial
- Commercial/High Density Residential
- Parks & Recreation
- Limited Open Space
- Public & Quasi-Public

Eden Area General Plan

- Low-Medium Density Residential (7-12 du/ac)
- High Density Residential (43-86 du/ac)
- General Commercial
- Public & Quasi Public

Castro Valley General Plan

- Single Family Residential (6-8 du/ac)
- Small Dwelling Residential (8-17 du/ac)
- Low Density Multifamily Residential (18-22 du/ac)
- Medium Density Multifamily Residential (23-29 du/ac)
- Neighborhood Commercial Mixed Use

- Caltrans Property
- Hayward Sphere of Influence
- City Limits
- Streams
- Open Space Trail Connection
- Potential Vehicular Connection

(1) Properties within the Fault Zone are subject to the terms of the Alquist Priolo Act. A fault study may be required before property is subdivided or any new construction occurs on the site, or the property is subdivided. Potential buyers of property within the Fault Zone must be notified before a sales transaction may occur.

Miles
0 0.125 0.25 0.5

Table 3.1-1 – Summary of Land Use Alternatives

Land Use Alternative A (Market Potential)

TOTAL						
Landuse	Acres	Floor Area Ratio[1]	Employment Sq. Ft.	Potential Number of Units[2]		
				Low	Avg.	High
Rural Estate Density Residential	**0.00**	**0.00**	**0**	**0**	**0**	**0**
Suburban Density Residential	**21.55**	**0.00**	**0**	**19**	**51**	**83**
Low Density Residential	**67.07**	**0.00**	**0**	**262**	**396**	**530**
Limited Medium Density Residential	**0.00**	**0.00**	**0**	**0**	**0**	**0**
Medium Density Residential	**33.80**	**0.00**	**0**	**270**	**398**	**539**
High Density Residential	**30.96**	**0.00**	**0**	**485**	**727**	**970**
Sustainable Mixed Use	**26.16**	**0.01**	**11,395**	**654**	**942**	**1,295**
Mission Blvd. Density Residential	**10.80**	**0.00**	**0**	**338**	**436**	**535**
Station Area Density Residential	**0.60**	**0.00**	**0**	**41**	**47**	**54**
Commercial/High Density Residential	**14.17**	**0.10**	**63,372**	**153**	**222**	**444**
General Commercial	**12.38**	**0.25**	**134,818**	**0**	**0**	**0**
Retail & Office Commercial	**1.29**	**0.45**	**25,287**	**0**	**0**	**0**
Public & Quasi-Public	**22.90**	**0.00**	**0**	**0**	**0**	**0**
Limited Open Space	**74.78**	**0.00**	**0**	**0**	**0**	**0**
Parks & Recreation Open Space	**27.46**	**0.00**	**0**	**0**	**0**	**0**
TOTAL	343.92		234,872	2,222	3,220	4,450

NOTES:
1) Floor Area Ratio is the total building square footage (building area) divided by the site size square footage (site area). The F.A.R.s for the non-residential uses were established in conjunction with the exiting market trends, retail capacity and location of the parcels.
2) Number of Units calculated on the basis of Net Acres. Net Acres are 10% less than Gross Acres to account for land utilized in providing access and utilities. Typically Net Acres are 20% less than Gross Acres, however in this project most properties are small and have established access and utilities.

Land Use Alternative B (Community Meetings)

TOTAL						
Landuse	Acres	Floor Area Ratio[1]	Employment Sq. Ft.	Potential Number of Units[2]		
				Low	Avg.	High
Rural Estate Density Residential	**38.64**	**0.00**	**0**	**7**	**21**	**35**
Suburban Density Residential	**2.07**	**0.00**	**0**	**8**	**12**	**16**
Low Density Residential	**35.43**	**0.00**	**0**	**140**	**211**	**283**
Preservation Park	**3.86**	**0.00**	**0**	**15**	**23**	**30**
Limited Medium Density Residential	**53.34**	**0.00**	**0**	**418**	**497**	**503**
Medium Density Residential	**5.56**	**0.00**	**0**	**44**	**60**	**154**
High Density Residential	**7.86**	**0.00**	**0**	**123**	**185**	**246**
Mission Blvd. Density Residential	**0.00**	**0.00**	**0**	**0**	**0**	**0**
Station Area Density Residential	**0.00**	**0.00**	**0**	**0**	**0**	**0**
Commercial/High Density Residential	**11.11**	**0.10**	**49,992**	**120**	**174**	**348**
General Commercial	**6.37**	**0.25**	**69,369**	**0**	**0**	**0**
Retail & Office Commercial	**5.13**	**0.45**	**100,558**	**0**	**0**	**0**
Public & Quasi-Public	**23.49**	**0.00**	**0**	**0**	**0**	**0**
Limited Open Space	**102.02**	**0.00**	**0**	**0**	**0**	**0**
Parks & Recreation Open Space	**49.06**	**0.00**	**0**	**0**	**0**	**0**
TOTAL	343.94		219,920	874	1,182	1,615

Land Use Alternative C (Existing Policies and Public Agencies)

TOTAL						
Landuse	Acres	Floor Area Ratio[1]	Employment Sq. Ft.	Potential Number of Units[2]		
				Low	Avg.	High
Eden High Density Residential	**1.40**	**0.00**	**0**	**54**	**81**	**108**
Eden General Commercial	**0.57**	**0.25**	**6,207**	**0**	**0**	**0**
Eden Public & Quasi-Public	**21.01**	**0.00**	**0**	**0**	**0**	**0**
Castro Valley Single Family Residential	**0.46**	**0.00**	**0**	**2**	**3**	**3**
Castro Valley Small Dwelling Residential	**1.47**	**0.00**	**0**	**11**	**17**	**22**
Castro Valley Low Density Multifamily Residential	**1.37**	**0.00**	**0**	**27**	**30**	**34**
Castro Valley Medium Density Multifamily Residential	**8.60**	**0.00**	**0**	**178**	**197**	**224**
Castro Valley Neighborhood Commercial Mixed-Use	**0.84**	**0.00**	**2,195**	**13**	**20**	**26**
Rural Estate Density Residential	**0.00**	**0.00**	**0**	**0**	**0**	**0**
Suburban Density Residential	**43.30**	**0.00**	**0**	**39**	**103**	**168**
Low Density Residential	**28.21**	**0.00**	**0**	**112**	**169**	**226**
Limited Medium Density Residential	**3.83**	**0.00**	**0**	**30**	**36**	**41**
Medium Density Residential	**42.31**	**0.00**	**0**	**285**	**399**	**572**
High Density Residential	**29.06**	**0.00**	**0**	**455**	**683**	**910**
Mission Blvd. Density Residential	**6.58**	**0.00**	**0**	**206**	**266**	**326**
Station Area Density Residential	**0.00**	**0.00**	**0**	**0**	**0**	**0**
Commercial/High Density Residential	**7.58**	**0.10**	**34,108**	**82**	**119**	**237**
General Commercial	**6.81**	**0.25**	**74,161**	**0**	**0**	**0**
Retail & Office Commercial	**6.58**	**0.45**	**128,981**	**0**	**0**	**0**
Public & Quasi-Public	**26.03**	**0.00**	**0**	**0**	**0**	**0**
Limited Open Space	**75.38**	**0.00**	**0**	**0**	**0**	**0**
Parks & Recreation Open Space	**31.73**	**0.00**	**0**	**0**	**0**	**0**
TOTAL	343.52		245,653	1,497	2,126	2,903

NOTE: The difference in acres between Alternative C and other alternatives is due to the addition of a road in Cluster 6.

Topics Addressed in the DEIR

This section of the DEIR identifies specific environmental areas which may be affected as a result of the implementation of the proposed Project. The impact areas are discussed individually in subsections 4.1 through 4.13:

4.1 Aesthetics and Light and Glare
4.2 Air Quality
4.3 Biological Resources
4.4 Cultural Resources
4.5 Geology and Soils
4.6 Hazards and Hazardous Materials
4.7 Hydrology, Drainage and Water Quality
4.8 Land Use and Planning
4.9 Noise
4.10 Population and Housing
4.11 Public Services and Utilities
4.12 Transportation and Circulation
4.13 Parks and Schools

Each topic area is covered in the following manner:

A. Environmental Issues
An overview of issues related to the topic area.

B. Environmental Setting
A discussion of existing conditions, facilities, services, applicable regulations (regulatory framework) on and around the project sites.

C. Standards of Significance
An identification of thresholds of environmental significance used to determine whether identified impacts are considered significant.

D. Environmental Impacts
An identification and evaluation of potential impacts on the environment, should the project be constructed as proposed. Standards of environmental significance will also be listed which set forth the basis on which the identification of environmental impacts will be made. Standards of significance for this DEIR are based on such standards listed in the California Environmental Quality Act.

Environmental impacts addressed in this document include the following:

- Potentially or significant impact, which means that the identified impact would exceed the environmental standards of significance.
- Less-than-significant impact, which means an impact would not exceed the minimum environmental thresholds of significance.
- No impact, means that no environmental impact would be expected for a particular environmental topic.

E. Mitigation Measures and Impacts After Mitigation
An identification of specific efforts and measures which can be incorporated into the project to eliminate or reduce identified environmental impacts to a level of insignificance.

4.1 AESTHETICS AND LIGHT AND GLARE

ENVIRONMENTAL ISSUES

Visual impacts would include causing an adverse impact on views and vistas, substantial damage to scenic resources, including adjacent to a state scenic highway, degradation of the existing visual character of a site or its surroundings. The potential effects of new light and glare sources are also addressed.

ENVIRONMENTAL SETTING

The Project area is primarily vacant, although a number of parcels within the area have been developed with single and multiple family dwellings. The area contains a mix of parcels with flatter land adjacent to Foothill and Mission Boulevards as well as parcels on relatively steep topography with scenic qualities. The area also contains a number of scenic resources, including stands of trees and major water courses.

Views, vistas and landforms

Portions of the Project area, generally located south of Grove Way and north of Tennyson Road, include the Hayward hills. Portions of the hills include westerly-facing slopes that are readily visible from roadways and other vantage points west of the Project area.

Scenic resources

The Project area contains a number of scenic resources. These include a mix of oak woodlands, riparian forests and major creeks. These are described and analyzed in Section 4.3, Biological Resources.

Scenic highways

No local or State scenic highways exist on or adjacent to the Project site (see http://www.dot.ca.gov/Land-Arch/scenic-highways/index.htm)

Light and glare

Portions of the Project area are developed with several sources of light and glare, including but not limited to street lights, parking lot lights and building lights. Other portions of the Project area, primarily hillside areas are undeveloped and contain no sources of light.

Regulatory framework

The City of Hayward has adopted the following land use regulations governing aesthetics and light and glare.

General Plan. The City of Hayward General Plan, adopted in 2002 contains land use polices and strategies relevant to the proposed Project. These include:

- Promote transit-oriented development in the Mission-Foothill Corridor in order to help relieve regional congestion and create a distinctively attractive commercial boulevard. (*Policy 5*)

- Seek to integrate greater intensity of development and enhance the surrounding neighborhood within 1/2-mile of the South Hayward BART Station. (*Policy 6*)

- Promote infill development that is compatible with the overall character of the surrounding neighborhood. (*Policy 8*)
  * Encourage visual integration of projects of differing types or densities through the use of building setbacks, landscaped buffers or other design features. (*Strategy 8.1*)
  * Ensure that design guidelines reflect concerns about the preservation of viewsheds. (*Strategy 8.3)*

- Design hillside development to be sensitive to the maintenance of a natural environment through retention of natural topographic features such as drainage swales, streams, slopes rock outcroppings and natural plant formations. (*Policy 9*)
  * Consider revisions to the grading ordinance in order to prohibit or limit development on slopes of specified gradients. (*Strategy 9.1*)
  * Avoid development on unstable slopes, wooded hillsides and creek banks. (*Strategy 9.2*)
  * Respect natural topography in street layouts and require streets to be only as wide as necessary for public safety and traffic flow in order to minimize grading and disruption of ground cover. (*Strategy 9.3*)
  * Respect natural contours in the siting of developments: structures on ridges should be landscaped so as to blend with the hill form and building height and location should be adjusted to retain views where feasible. (*Strategy 9.4*)
  * Densities of development in the hill area should feather out to very large lot development near the Urban Limit Line to provide for appropriate transition to permanent open space. (*Strategy 9.5*)

Conservation and Environmental Protection policies and strategies relating to aesthetics include:

- Retain open space where it is important to preserve natural ecology and to establish the physical setting of the city. (*Policy 1*)

    * Designate in the General Plan Land Use map those areas on he shoreline, in the hills, and along waterways to be protected as open space in coordination with the East Bay Regional Park District, Hayward Area Recreation and Park District, Alameda County and other affected agencies. (*Strategy 1.1*)

- Enhance the aesthetic and recreational values of open space resources in the hill and shoreline areas. (*Policy 2*)
    * Work with appropriate agencies to provide trail corridor links between the hill area and the Baylands, such as along San Lorenzo Creek and along Industrial Parkway with connections to Old Alameda Creek. (*Strategy 2.6*)

Design Guidelines. The City of Hayward adopted Design Guidelines in 1993 that establish standards for site planning, circulation, architectural design and landscape design for all development within the community. The Guidelines are available for review at the Planning Division of the City of Hayward Department of Development Services, and on the City's website (www.hayward-ca.gov).

Hillside Design and Urban/Wildland Interface Guidelines. Also in 1993, the City adopted the Hillside Design and Urban/Wildland Interface Guidelines that, among other items, implements General Plan hillside development policies, promotes quality architectural, landscape, site and street design, protects and preserves environmental resources and significant natural features in the hills. Policies included in this document related to visual and aesthetic features include:

B. Street Design

2. Streets should generally follow the natural contours of the lands and should not be placed perpendicular to contour lines, unless absolutely unavoidable.
7. A vertically of-set of split-level road designed along a hillside is desirable where it would minimize grading, preserve an important site feature, or enhance the hillside setting.

E. Ridgelines

1. Development located near or on a ridgeline must be sensitive to the surrounding environment.
2. Proper placement of homes is crucial for preserving the ridgeline and maintaining the natural scenic views.
3. Development along ridgelines should consist of larger lots with wider frontages and wider setbacks to allow for view corridors.
4. Dwellings should exhibit a low profile, and roof pitches should be angles to follow the slope.

F. Cluster Home Development

1. Preferred hillside development includes clusters of approximately 8-12 single-family dwellings or clusters of large multi-family structures separated by natural open space corridors.

2. Dwellings should be clustered to avoid geologic hazards and preserve natural features.
3. Dwellings should be clustered on gentle slopes.
4. Where new single-family lots will be created on steep terrain (25%+ slope), larger lots (10,000 sq. ft. minimum) and wider setbacks should be provided.
5. Greenbelts and fuel breaks should be created to separate clustered structures.

H. Grading

1. Grading within hillside areas shall be done according to City Guidelines and ordinances. Measures for protecting existing trees, native vegetation, rock outcroppings and other natural features should be indicated on grading plans.
2. Cut or fill slopes should be designed to blend into the existing slope.
3. Generally, a 3:1 slope or less shall be utilized for cut or fill slopes if it will not result in excessive grading or disturbance of natural features.
4. All developments should minimize grading and use of retaining walls.
7. Drainage ditches and structures hat will be highly visible from public view should be constructed with native rock or natural-looking material that will blend into the terrain.

I. Landscaping

1. Landscaping should be provided to minimize the visual impact of structures, walls and graded slopes, especially where the development abuts open space areas or is located on ridgelines or on highly visible hill faces.

K. Signing

1. An attractive and clear signing program should be developed for large developments.

<u>North Hayward Neighborhood Plan</u>

- Support neighborhood character in land use policies. (*Policy B*)
  * Extend Agricultural (pre-zoning) in the 238 right-of-way north of Apple Avenue for temporary agricultural or other dominantly landscaped uses. If freeway plans are abandoned, seek a gateway park. (*Strategy 5c*)
  - Encourage new development to be compatible with Mediterranean theme based on the existing olive trees, off-white stucco and natural tile roofs, Avoid post-modern designs with jagged edges, large sheets of glass or extensive use of metal. Encourage classic, well-proportioned details (*Strategy 5e)*

- Provide public facilities and amenities in North Hayward (*Policy E*)
  * Landscape key public rights-of-way (*Strategy E1*)
  * Development Foothill gateway park or entry landscape (*Strategy E3*)

Upper B Street Neighborhood Plan.

- Promote neighborhood pride through clean-up and beautification programs (*Policy 10*)
  * Maintain existing street trees on "B" Street (*Strategy A*)
  * Encourage the planting and proper maintenance of trees throughout the neighborhood (*Strategy B*)
  * Aggressively pursue Caltrans maintenance of Route 238 properties (*Strategy J*)

Mission Foothills Neighborhood Plan.

- Respect environmental limitations (*Policy A*)

- Preserve and enhance environmental features (*Policy B*)

Hayward Highlands Neighborhood Plan.

- Allow only infill development which is respectful of natural features including steeply sloped hillsides, creeks and riparian corridors, significant trees and rock outcrops (*Policy 2*)
  * Allow only new residential construction which features stepped-back building envelopes on sloped areas and minimal on-site grading, consistent with the City's Hillside Design Guidelines (*Strategy 2.1*)
  * In accordance with the City's Hillside Design Guidelines, clustering of residential development is strongly encouraged in order to preserve natural site features such as steep hillsides, rock outcroppings, significant trees or tree clusters and any creeks or natural waterways (*Strategy 2.2*)

Mission-Garin Neighborhood Plan. The Mission-Garin Plan, adopted in 1987, strongly recognizes a need to upgrade the appearance of the study area. Recommended actions include upgrading design standards, maintenance standards, sign ordinances, landscape standards and improving enforcement. Programs to provide monetary and personal recognition are encouraged for both residential and commercial properties.

The following design and appearance standards are included in the Mission-Garin Neighborhood Plan

  * Explore the continuation and expansion of a program to encourage upgrading/rehabilitation of substandard residential units. (*Strategy 45*)
  * Establish a street tree program which includes requiring the installation of street trees with new development consistent with the guidelines contained in the Landscape Beautification Plan. (*Strategy 46*)
  * Improve the appearance of the area to ensure high quality development by revising the undergrounding utilities master plan to include the following: undergrounding utilities along Mission Boulevard, moving Mission Boulevard higher on the undergrounding priority list and explore additional funding sources. (*Strategy 51*)

* Upgrading the appearance of Mission Boulevard by considering the following plans and programs: upgrade design standards for new development, adopt property maintenance standards, requiring upgraded landscaping and requiring deeper setbacks for uses requiring outdoor storage. (*Strategy 52*)

Fairway Park Neighborhood Plan. The Fairway Park Neighborhood Plan, which includes the triangular area at the south end of the Project area, was adopted in 1996 and contains the following goal relating to neighborhood character and appearance:

- Improve the quality of life while enhancing the positive perception of the neighborhood.

STANDARDS OF SIGNIFICANCE

The following standards of significance are used to assess potential environmental impacts related to view obstruction, aesthetics and light and glare.

- Have a substantial adverse impact on a scenic vista;
- Substantially damage scenic resources, including trees, rock outcroppings or historic buildings in a state scenic highway;
- Substantially degrade the visual character or quality of a site or its surroundings; or
- Create significant new sources of light or glare in the Project vicinity.

ENVIRONMENTAL IMPACTS

Views, scenic resources, landforms and visual character

The visual character of the Project area as seen from parks, playgrounds, schools, major roadways and other public gathering places west of and at lower topographic elevations would change should any of the Alternatives be implemented. Views of largely open space and natural landscaping would generally be replaced with views of urban structures and more formal landscaping; however, impacts to views and vistas would vary from Alternative to Alternative.

To assist in analyzing impacts to views and vistas, photosimulations have been prepared for key viewpoints for each of the Alternatives. **Figure 4.1-1** is a key map showing the location of the vantage points where the simulations have been taken. Simulations are intended to depict the overall approximate scale and massing of development that could occur under each of the Alternatives. They do not depict any pending or proposed specific development projects.

Photosimulations include:

- Views of development that could be allowed under Alternative A are depicted on **Figures 4.1-2** through **4.1-4**.

- Views of development that could be allowed under Alternative B are depicted on **Figures 4.1-5** through **4.1-7**.

- Views of development that could be allowed under Alternative C are shown on Figures **4.1-8** through **4.1-10**.

In the northern portion of the Planning Area, **Figure 4.1-2** depicts potential visual and aesthetic conditions looking north from Foothill Boulevard at Cotter Way within the unincorporated portion of Alameda County. Existing views of natural, undeveloped hillside open spaces would be replaced with single-family dwellings at higher elevations and additional commercial development would be allowed adjacent to Foothill Boulevard. Under Alternative B (**Figure 4.1-3**), existing visual characteristics of the area would remain essentially unchanged, while under Alternative C (**Figure 4.1-4**) future visual and aesthetic conditions would be generally similar to Alternative A. There would likely be grading and recontouring of existing hillsides to accommodate future dwellings, roads and utility extensions under Alternatives A and C.

Visual and aesthetic conditions in the approximate central portion of the Project area are shown on **Figures 4.1-5** through **4.1-7**. Simulations have been prepared from Mission Boulevard looking northeast at Devon Drive. **Figure 4.1-5** shows future development that could be allowed under Alternative A in this location. Under Alternative A, existing undeveloped hillside areas would be developed with single-family dwellings. Depending on the siting of future dwellings, existing trees could be removed to accommodate dwellings, although the precise species, number and size of trees is not known since no actual development is proposed. Under Alternative B (**Figure 4.1-6**), minimal changes to existing visual and aesthetic conditions would likely occur in this location, since Alternative B allows for the fewest number of new dwellings and other development. No loss of existing trees would occur. Under Alternative C (Figure 4.1-7), future development in this area would include primarily multi-story attached dwellings combined with open spaces. It is likely that less overall grading would be required under Alternative C than Alternative A, since more of the area would remain undeveloped. There would be some loss of existing trees under Alternative C to allow for future development, but not as many as under Alternative A.

Finally, simulations have been prepared to show visual and aesthetic conditions in the southerly portion of the Project area. **Figures 4.1-8** through **4.1-10** depict conditions as shown on the north side of Mission Boulevard near Valley Vista Avenue. **Figure 4.1-8** shows that the existing vacant area on the north side of Mission Boulevard would be replaced by a multi-story commercial building with vehicle parking under Alternative A. Existing undeveloped, natural hillside areas further to the east would be replaced by single family dwellings. Depending on the vantage points of passersby on Mission Boulevard, views of residential development on the hillsides could be largely blocked by commercial buildings on the east side of Mission Boulevard.

A similar type and scale of commercial building could also be constructed on the north side of Mission Boulevard under Alternative B (**Figure 4.1-9**) and single-family dwellings could be allowed on undeveloped hillsides to the east.

Under Alternative C (**Figure 4.1-10**) a smaller scale commercial building would be allowed in this area with single family residences allowed on upper elevations to the east.

Few existing trees grow in this portion of the Project area that would need to be removed, although future grading would be needed to accommodate roads. buildings and other facilities.

Overall, Alternative A would result in the greatest impact to views, scenic resources, landforms and visual character within and adjacent to the Project area by allowing the greatest amount of future development. The amount of development could result in the greatest replacement of existing natural hillsides with residential development, the greatest amount of grading and recontouring of existing hillside conditions and loss of tree resources. Future buildings and other improvements that could be allowed under Alternative A would be most visible to residents and visitors to Hayward from nearby roads, parks and other public gathering places west of the Project area. However, much of the development that could occur would be generally the same type and density that currently exist within the Project area or that are currently allowed under Hayward and Alameda County General Plan land use designations.

Impacts associated with Alternative B would be less than Alternative A, since less development would be allowed and the greatest amount of existing hillside areas would remain undeveloped. There would also be the least amount of grading of hillsides and loss of trees and other natural vegetation.

Visual and aesthetic impacts associated with Alternative C would be greater than Alternative B but less than Alternative A based on the amount and location of development that would be allowed. Future development that could be allowed under Alternative C would be visible to residents and visitors west of the Project area. Similar to Alternative A, future development within the Project area would be generally consistent with existing development patterns in the Project area.

No impacts would result regarding views from scenic highways, since no state or local scenic highways are present in or adjacent to the Project area.

Impact 4.1-1 (views, scenic resources, landforms and visual character). Implementation of any of the three Alternatives would impact existing views, scenic resources and the scenic character of the Project area by allowing development on properties that are currently vacant or underdeveloped. Existing natural hillsides would be converted to dwellings, roads or other non-open space areas with associated grading and reconturing of the existing topography and loss of trees and other native vegetation. Development that could be allowed in the Project area would be visible from adjacent major roadways and public gathering places; however, future development would be generally consistent with existing development patterns. Impacts to views, scenic resources, landform and visual character would be the greatest under Alternative A and the least under Alternative B *(potentially significant impact and mitigation required*).

The following mitigation measure is recommended to reduce potential aesthetic impacts to a less-than-significant level:

<u>Mitigation Measure 4.1-1 (views, scenic resources, landforms and visual character</u>). Development projects submitted to either the City of Hayward or County of Alameda within the Project area shall be subject to design review to ensure:

a) **Adherence to General Plan policies, Design Guidelines, Hillside Design Guidelines and applicable Neighborhood Plans to minimize the grading, appropriate siting of new roads and structures and planting of replacement vegetation to ensure that hillside development integrates into the existing appearance of hillside properties.**
b) **Appropriate use of building material and colors to minimize reflection of windows and roofs to the community to the west.**
c) **Design of future buildings within flatter portions of the Project area to include "stepping down" of taller buildings, appropriate siting of windows and balconies to maximize privacy and establishment of view corridors to nearby hills.**

Light and glare

The potential for light and glare within the Project area would be increased under all three alternatives over existing levels of light and glare since new buildings and other improvements with associated light sources would be allowed. Light and glare impacts would be particularly noticeable within hillside areas of the Project area, since hillside areas are primarily undeveloped.

There would also be additional light sources added within the Project area on properties located within the flatter portions of the Project area, near Foothill Boulevard, Mission Boulevard and other roadways.

Light and glare impacts would be greater under Alternative A, since a greater amount of development would be allowed, with the least impacts occurring under Alternative B. Light and glare impacts associated with Alternative C would be somewhat less than under Alternative A, but greater than Alternative B.

<u>Impact 4.1-2 (light and glare impacts).</u> Additional sources of light and glare would be added to the Project area under all three alternatives. New sources of lights would include street lights for new roadways, porch and yard lights for single family dwellings, balcony and deck lights in the upper levels of multi-story buildings and parking lots lights for commercial and office buildings. New light sources would be visible from vistas inside and outside the Project area (*significant impact and mitigation required*).

The following mitigation measure is recommended to reduce potential light and glare impacts to a less-than-significant level.

<u>Mitigation Measure 4.1-2 (light and glare impacts</u>). Lighting Plans shall be submitted to the Alameda County Planning Department and the City of Hayward Development Services Department as part of all future development projects. Lighting Plans shall include specific measures to reduce future lighting to a less-than-significant level, including but not limited to limiting the number of intensity of lighting fixtures to the minimum required for safety

and security purposes, directing lighting fixtures downward so that light and glare will be minimized, turning off unneeded lights and similar features.

CITY OF HAYWARD

CALTRANS OWNED PROPERTIES ALONG ROUTE 238

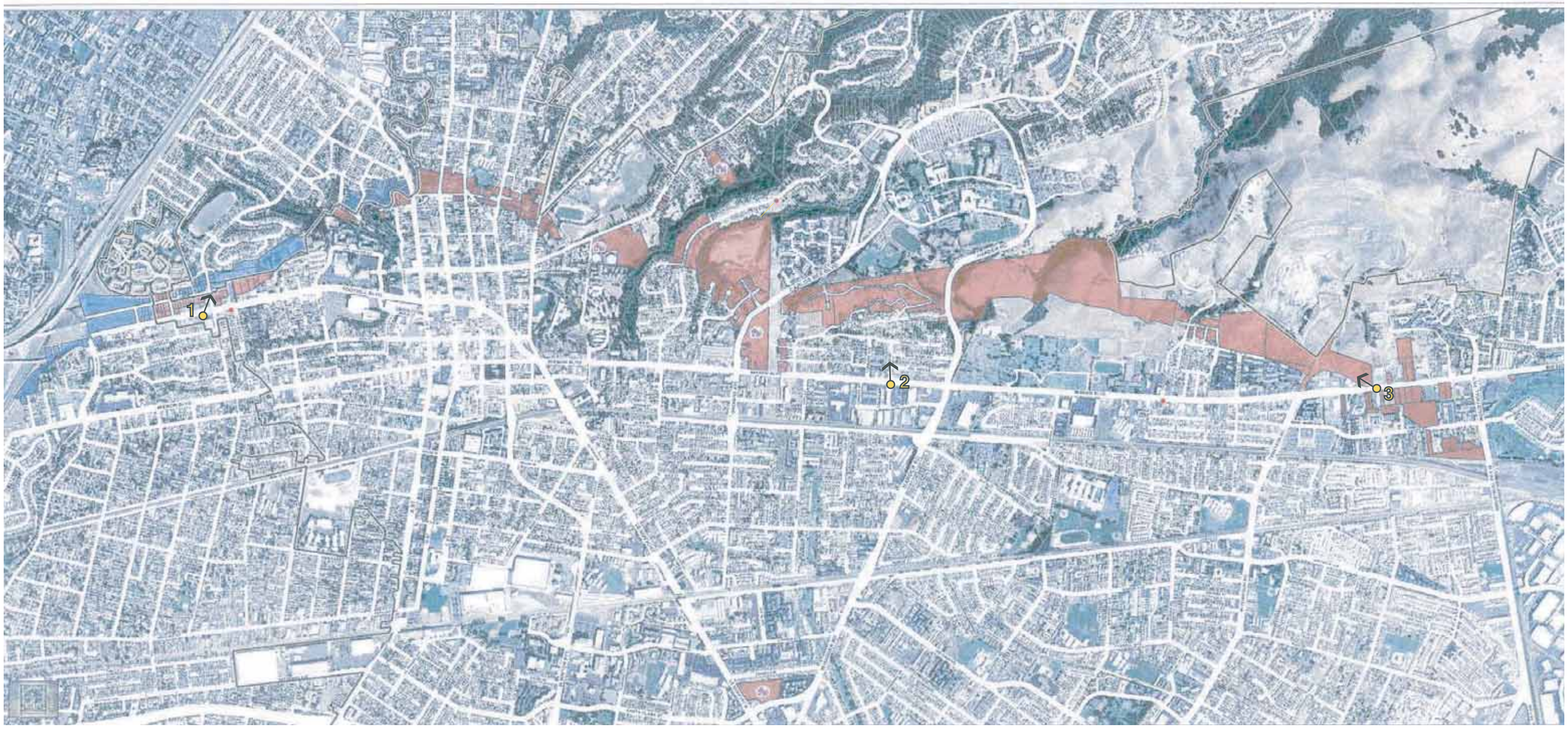
CITY OF HAYWARD STUDY AREA

UNINCORPORATED ALAMEDA COUNTY

CITY LIMITS

REPLACEMENT HOUSING SITES

0 0.25 0.5 1 1.5 Miles



1 Photo Viewpoint

Figure 4.1-1 - Photosimulation Vantage Points

Photo Viewpoint Locations

Hayward 238 Bypass Land Use Study

Figure 4.1-2 - Simulation of Alternative A from Foothill Blvd. Looking East

1A. Existing view from Foothill Boulevard near Cotter Way looking east

1A. Conceptual simulation of proposed project (Alternative A)

Note: This conceptual visual simulation is intended to portray building massing, not specific architectural design.

ENVIRONMENTAL VISION
120308

Visual Simulation
Hayward 238 Bypass Land Use Study

Figure 4.1-3 - Simulation of Alternative B from Foothill Blvd. Looking East

1B. Existing view from Foothill Boulevard near Cotter Way looking east

1B. Conceptual simulation of proposed project (Alternative B)

Note: This conceptual visual simulation is intended to portray building massing, not specific architectural design.

ENVIRONMENTAL VISION
120308

Visual Simulation
Hayward 238 Bypass Land Use Study

Figure 4.1-4 - Simulation of Alternative C from Foothill Blvd. Looking East

1C. Existing view from Foothill Boulevard near Cotter Way looking east

1C. Conceptual simulation of proposed project (Alternative C)

Note: This conceptual visual simulation is intended to portray building massing, not specific architectural design.

ENVIRONMENTAL VISION
120308

Visual Simulation
Hayward 238 Bypass Land Use Study

Figure 4.1-5 - Simulation of Alternative A from Mission Blvd. Looking Northeast

2A. Existing view from Mission Boulevard at Devon Drive looking northeast

2A. Conceptual simulation of proposed project (Alternative A)

Note: This conceptual visual simulation is intended to portray building massing, not specific architectural design.

ENVIRONMENTAL VISION
120408

Visual Simulation
Hayward 238 Bypass Land Use Study

Figure 4.1-6 - Simulation of Alternative B from Mission Blvd. Looking Northeast

2B. Existing view from Mission Boulevard at Devon Drive looking northeast

2B. Conceptual simulation of proposed project (Alternative B)

Note: This conceptual visual simulation is intended to portray building massing, not specific architectural design.

ENVIRONMENTAL VISION
120408

Visual Simulation
Hayward 238 Bypass Land Use Study

Figure 4.1-7 - Simulation of Alternative C from Mission Blvd. Looking Northeast

2C. Existing view from Mission Boulevard at Devon Drive looking northeast

2C. Conceptual simulation of proposed project (Alternative C)

Note: This conceptual visual simulation is intended to portray building massing, not specific architectural design.

ENVIRONMENTAL VISION
120408

Visual Simulation
Hayward 238 Bypass Land Use Study

Figure 4.1-8 - Simulation of Alternative A from Mission Blvd. Near Valle Vista

3A. Existing view from Mission Boulevard near Valle Vista Avenue looking north

3A. Conceptual simulation of proposed project (Alternative A)

Note: This conceptual visual simulation is intended to portray building massing, not specific architectural design.

ENVIRONMENTAL VISION
011209

Visual Simulation
Hayward 238 Bypass Land Use Study

Figure 4.1-9 - Simulation of Alternative B from Mission Blvd. Near Valle Vista

3B. Existing view from Mission Boulevard near Valle Vista Avenue looking north

3B. Conceptual simulation of proposed project (Alternative B)

Note: This conceptual visual simulation is intended to portray building massing, not specific architectural design.

ENVIRONMENTAL VISION
011209

Visual Simulation
Hayward 238 Bypass Land Use Study

Figure 4.1-10 - Simulation of Alternative C from Mission Blvd. Near Valle Vista

3C. Existing view from Mission Boulevard near Valle Vista Avenue looking north

3C. Conceptual simulation of proposed project (Alternative C)

Note: This conceptual visual simulation is intended to portray building massing, not specific architectural design.

ENVIRONMENTAL VISION
011209

Visual Simulation
Hayward 238 Bypass Land Use Study

4.2 AIR QUALITY/GREENHOUSE GAS EMISSIONS

ENVIRONMENTAL ISSUES

This EIR section describes the impacts of the proposed Project on local and regional air quality. The Project's contribution to greenhouse gases are also analyzed. This section of the DEIR is based on a greenhouse gas emission analysis prepared by Donald Ballanti, Certified Meteorologist, contained in Appendix 8.4.

ENVIRONMENTAL SETTING

Air pollution climatology

Hayward is located in western Alameda County, part of the 9-county San Francisco Bay Air Basin. Hayward Valley is indirectly affected by marine air flow. Marine air entering through the Golden Gate is blocked by the East Bay hills, forcing the air to diverge into northerly and southerly paths. The southern flow is directed down the bay, parallel to the hills, where it eventually passes over Hayward. These sea breezes are strongest in the afternoon. The further from the ocean the marine air travels, however, the ocean's effect is diminished. Thus, although the climate of Hayward is affected by sea breezes, it is affected less so than the regions of the Bay Area closer to the Golden Gate.

Hayward has a relatively high potential for air quality impacts during the summer and fall. When high pressure dominates, low mixing depths and bay and ocean wind patterns can concentrate and carry pollutants from other cities to Hayward, adding to the locally emitted pollutant mix. In winter and spring the air pollution potential in Hayward is moderate.

Ambient air quality standards

Criteria Pollutants. Both the U. S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have established ambient air quality standards for common pollutants. These ambient air quality standards are levels of contaminants that represent safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called "criteria" pollutants because the health and other effects of each pollutant are described in criteria documents. Table 4.2-1 identifies the major criteria pollutants, characteristics, health effects and typical sources. The federal and California state ambient air quality standards are summarized in Table 4.2-2.

Table 4.2.1. Major Criteria Pollutants

Pollutant	Characteristics	Health Effects	Major Sources
Ozone	A highly reactive photochemical pollutant created by the action of sunshine on ozone precursors (primarily reactive hydrocarbons and oxides of nitrogen. Often called photochemical smog.	Eye Irritation Respiratory function impairment.	The major sources ozone precursors are combustion sources such as factories and automobiles, and evaporation of solvents and fuels.
Carbon Monoxide	Carbon monoxide is an odorless, colorless gas that is highly toxic. It is formed by the incomplete combustion of fuels.	Impairment of oxygen transport in the bloodstream. Aggravation of cardiovascular disease. Fatigue, headache, confusion, dizziness. Can be fatal in the case of very high concentrations.	Automobile exhaust, combustion of fuels, combustion of wood in woodstoves and fireplaces.
Nitrogen Dioxide	Reddish-brown gas that discolors the air, formed during combustion.	Increased risk of acute and chronic respiratory disease.	Automobile and diesel truck exhaust, industrial processes, fossil-fueled power plants.
Sulfur Dioxide	Sulfur dioxide is a colorless gas with a pungent, irritating odor.	Aggravation of chronic obstruction lung disease. Increased risk of acute and chronic respiratory disease.	Diesel vehicle exhaust, oil-powered power plants, industrial processes.
Particulate Matter (PM_{10} and $PM_{2.5}$)	Solid and liquid particles of dust, soot, aerosols and other matter which are small enough to remain suspended in the air for a long period of time.	Aggravation of chronic disease and heart/lung disease symptoms.	Combustion, automobiles, field burning, factories and unpaved roads. Also a result of photochemical processes.

The federal and state ambient standards were developed independently with differing purposes and methods, although both processes attempted to avoid health-related effects. As a result, the federal and state standards differ in some cases. In general, the California state standards are more stringent. This is particularly true for ozone and particulate matter (PM_{10} and $PM_{2.5}$)

Table 4.2-2. Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Primary Standard	State Standard
Ozone	1-Hour 8-Hour	-- 0.075 PPM	0.09 PPM 0.07 PPM
Carbon Monoxide	8-Hour 1-Hour	9.0 PPM 35.0 PPM	9.0 PPM 20.0 PPM
Nitrogen Dioxide	Annual Average 1-Hour	0.053 PPM --	0.030 PPM 0.18 PPM
Sulfur Dioxide	Annual Average 24-Hour 1-Hour	0.03 PPM 0.14 PPM --	-- 0.04 PPM 0.25 PPM
PM_{10}	Annual Average 24-Hour	-- 150 $\mu g/m^3$	20 $\mu g/m^3$ 50 $\mu g/m^3$
$PM_{2.5}$	Annual 24-Hour	15 $\mu g/m^3$ 35 $\mu g/m^3$	12 $\mu g/m^3$ --
Lead	Calendar Quarter 30 Day Average	1.5 $\mu g/m^3$ --	-- 1.5 $\mu g/m^3$
Sulfates	24 Hour	--	25 $\mu g/m^3$
Hydrogen Sulfide	1-Hour	--	0.03 PPM
Vinyl Chloride	24-Hour	--	0.01 PPM

PPM = Parts per Million
$\mu g/m^3$ = Micrograms per Cubic Meter
Source: California Air Resources Board, Ambient Air Quality Standards (11/17/08)
http://www.arb.ca.gov.aqs/aaqs2.pdf

Toxic Air Contaminants. In addition to the criteria pollutants discussed above, Toxic Air Contaminants (TACs) are another group of pollutants of concern. There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Cars and trucks release at least forty different toxic air contaminants. The most important, in terms of health risk, are diesel particulate, benzene, formaldehyde, 1,3-butadiene and acetaldehyde.

Public exposure to TACs can result from emissions from normal operations, as well as accidental releases. Health effects of TACs include cancer, birth defects, neurological damage and death.

Ambient air quality

The Bay Area Air Quality Management District (BAAQMD) has for many years operated a multi-pollutant monitoring site in Hayward monitoring a single pollutant, ozone. The closest multi-pollutant monitoring site is located in nearby Fremont. Table 4.2-3 shows historical occurrences of pollutant levels exceeding the state/federal ambient air quality standards for the three-year period 2006-2008 at these two monitoring sites. The number of days that each standard was exceeded is shown.

Table 4.2-3 shows that all federal ambient air quality standards are met in the Hayward area with the exception of ozone and $PM_{2.5}$. Additionally, the state ambient standards of ozone and PM_{10} are regularly exceeded.

Table 4.2-3. Air Quality Data Summary for Hayward and Fremont, 2006-2008

Pollutant	Standard	Days Standard Exceeded During:		
		2006	2007	2008
Ozone (Hayward)	1-Hour State 8-Hour Federal	2 0	0 0	1 -
Ozone (Fremont)	1-Hour State 8-Hour Federal	4 0	0 0	1 0
Carbon Monoxide (Fremont)	8-Hour St. Fed. 1-Hour State	0 0	0 0	0 0
Nitrogen Dioxide (Fremont)	1-Hour State	0	0	0
PM_{10}	24-Hour State 24-Hour Federal	1 0	10 0	0 0
$PM_{2.5}$	24-Hour Federal	2	2	0

Source: Air Resources Board, Aerometric Data Analysis and Management (ADAM), 2009. (http: //www.arb.ca.gov./adam/cgi-bin/adamtop/d2wstart)

Attainment status and regional air quality plans

The Federal Clean Air Act and the California Clean Air Act of 1988 require that the State Air Resources Board, based on air quality monitoring data, designate portions of the state where the federal or state ambient air quality standards are not met as "nonattainment areas". Because of the differences between the national and state standards, the designation of nonattainment areas is different under the federal and state legislation.

The U. S. Environmental Protection Agency has classified the San Francisco Bay Area as a non-attainment area for the federal 8-hour ozone standard. The Bay Area was designated as unclassifiable/attainment for the federal PM_{10} and $PM_{2.5}$ standards.

Under the California Clean Air Act, Alameda County is a nonattainment area for ozone and particulate matter (PM_{10} and $PM_{2.5}$). The county is either attainment or unclassified for other pollutants.

Air districts periodically prepare and update plans to achieve the goal of healthy air. Typically, a plan will analyze emissions inventories (estimates of current and future emissions from industry, motor vehicles, and other sources) and combine that information with air monitoring data (used to assess progress in improving air quality) and computer modeling simulations to test future strategies to reduce emissions in order to achieve air quality standards. Air quality plans usually include measures to reduce air pollutant emissions from industrial facilities, commercial processes, motor vehicles, and other sources. Bay Area plans are prepared with the cooperation of the Metropolitan Transportation Commission, and the Association of Bay Area Governments. Ozone Attainment Demonstrations are prepared for the national ozone standard and Clean Air Plans are prepared for the California ozone standard.

Greenhouse gas emissions and climate change impacts.

Gases that trap heat in the atmosphere are referred to as greenhouse gases (GHGs) because they capture heat radiated from the sun as it is reflected back into the atmosphere, much like a greenhouse does. The accumulation of GHG's has been implicated as a driving force for global climate change. Definitions of climate change vary between and across regulatory authorities and the scientific community, but in general can be described as the changing of the earth's climate caused by natural fluctuations and anthropogenic activities which alter the composition of the global atmosphere.

Individual projects contribute to the cumulative effects of climate change by emitting GHGs during construction and operational phases. The principal GHGs are carbon dioxide, methane, nitrous oxide, ozone, and water vapor. While the presence of the primary GHGs in the atmosphere are naturally occurring, carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O) are largely emitted from human activities, accelerating the rate at which these compounds occur within earth's atmosphere. Carbon dioxide is the "reference gas" for climate change, meaning that emissions of GHGs are typically reported in "carbon dioxide-equivalent" measures. Emissions of carbon dioxide are largely by-products of fossil fuel combustion, whereas methane

results from off-gassing associated with agricultural practices and landfills. Other GHGs, with much greater heat-absorption potential than carbon dioxide, include hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, and are generated in certain industrial processes.

California State law defines greenhouse gases as:

Carbon Dioxide (CO_2)
Methane (CH_4)
Nitrous Oxide (N_2O)
Hydrofluorocarbons
Perfluorocarbons
Sulfur Hexafluoride

The overall approach to the GHG calculation is base upon the technical advisory of the Governor's Office of Planning and Research (OPR) embodied in the document *CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review*. According to the Governor's Office of Planning and Research, the most common GHG that results from human activity is carbon dioxide, followed by methane and nitrous oxide. The last 3 of the six identified GHGs are primarily emitted by industrial facilities. For this analysis, only carbon dioxide, methane and nitrous oxide emissions will be considered. These primary greenhouse gases are described below.

Carbon dioxide (CO_2) Carbon dioxide is primarily generated by fossil fuel combustion in stationary and mobile sources. Due to the emergence of industrial facilities and mobile sources in the past 250 years, the concentration of carbon dioxide in the atmosphere has increased 35 percent. Carbon dioxide is the most widely emitted GHG and is the reference gas (Global Warming Potential of 1) for determining GWPs for other GHGs.

Methane (CH_4) Methane is emitted from biogenic sources, incomplete combustion in forest fires, landfills, manure management, and leaks in natural gas pipelines. In the United States, the top three sources of methane are landfills, natural gas systems, and enteric fermentation. Methane is the primary component of natural gas, which is used for space and water heating, steam production, and power generation. The GWP of methane is 21.

Nitrous Oxide (N_20) Nitrous oxide is produced by both natural and human-related sources. Primary human-related sources include agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic acid production, and nitric acid production. The GWP of nitrous oxide is 310.

There is international scientific consensus that human-caused increases in GHGs have and will continue to contribute to global warming, although there is uncertainty concerning the magnitude and rate of the warming. Potential global warming impacts in California may include, but are not limited to, loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years.[1] Secondary effects are likely to include a

[1] California Air Resources Board (ARB). 2006. Climate Change website.

global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity.

Sources of Greenhouse Gas Emissions

Anthropogenic GHG emissions worldwide as of 2005 totaled approximately 30,800 CO_2 equivalent million metric tons ($MMTCO_2E$).[2] The United States was the top producer of greenhouse gas emissions as of 2005. The primary greenhouse gas emitted by human activities in the United States was CO_2, representing approximately 84 percent of total greenhouse gas emissions. Carbon dioxide from fossil fuel combustion, the largest source of US greenhouse gas emissions, accounted for approximately 80 percent of US GHG emissions.[3]

The primary contributors to GHG emissions in California are transportation, electric power production from both in state and out-of-state sources, industry, agriculture and forestry, and other sources, which include commercial and residential activities. These primary contributors to California's GHG emissions and their relative contributions are presented in Table 4.2-4.

Table 4.2-4. GHG Sources In California, 2004

Source Category	Annual GHG Emissions ($MMTCO_2E$)	Percent of Total
Agriculture	27.9	5.8
Commercial Uses	12.8	2.6
Electricity Generation	119.8	24.7
Forestry (Excluding sinks)	0.2	0.0
Industrial Uses	96.2	19.9
Residential Uses	29.1	6.0
Transportation	182.4	37.7
Other	16.0	3.3
Totals	484.4	100.0

Source*:* California Air Resources Board. 2007. *California 1990 Greenhouse Gas Emissions Level and 2020 Emissions Limit.*

Greenhouse Gas Programs

(http://www.arb.ca.gov/cc/120106workshop/intropres12106.pdf).

[2] The CO_2 equivalent emissions are commonly expressed as "million metric tons of carbon dioxide equivalent ($MMTCO_2E$)". The carbon dioxide equivalent for a gas is derived by multiplying the tons of the gas by the associated GWP, such that $MMTCO_2E$ = (million metric tons of a GHG) x (GWP of the GHG). For example, the GWP for methane is 21. This means that emissions of one million metric tons of methane are equivalent to emissions of 21 million metric tons of CO_2.

[3] US Environmental Protection Agency. 2008. *Inventory of US Greenhouse Gas Emissions and Sinks 1990-2006.*
http://www.epa.gov/climatechange/emissions/usinventoryreport.html.

International and Federal Legislation. While there has been increasing attention to GHG in recent years, the potential for global warming effects is not a new issue. In 1988, the United Nations and World Meteorological Organization established the Intergovernmental Panel on Climate Change (IPCC) to assess the risk of climate change. In 1994 the United States joined a number of countries in signing the United Nations Framework Convention on Climate Change (UNFCCC). A result of the UNFCCC efforts was a treaty known as the Kyoto Protocol that commits signees to reduce their emissions of GHG or engage in emissions trading. While more than 160 countries are participating in the Protocol, the United States has not ratified the treaty.

Federal legislation to address greenhouse gas emissions and climate change has been proposed. No federal legislation has been passed by Congress on this issue.

California Executive Orders, Legislation, and Regulatory Agency Action. The following actions have been taken regarding greenhouse gas analysis and impacts:

Executive Order S-03-05 - In 2005, in recognition of California's vulnerability to the effects of climate change, Governor Schwarzenegger issued Executive Order S-3-05, which sets forth a series of target dates by which statewide emission of GHGs would be progressively reduced, as follows: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels. Under the Order, the Climate Action Team (CAT) was created to develop information on climate change and its impacts, and GHG reduction programs. The CAT is comprised of members from various State agencies and commissions.

Assembly Bill 32 - In 2006, California passed the California Global Warming Solutions Act of 2006 (Assembly Bill No. 32; California Health and Safety Code Division 25.5, Sections 38500, et seq. (AB 32)). AB 32 requires the California Air Resources Board (ARB) to design and implement emission limits, regulations, and other measures, such that statewide GHG emissions are reduced to 1990 levels by 2020 (representing about a 30 percent reduction in emissions). AB 32 states that global warming poses a serious threat to the economic well being, public health, natural resources, and the environment of California.

AB 32 establishes a timetable for ARB to adopt emission limits, rules, and regulations designed to achieve the intent of the Act. On or before January 1, 2011, ARB must adopt regulations on GHG emission limits and emission reduction measures to achieve the maximum technologically feasible and cost-effective reductions in GHG emissions in furtherance of achieving the statewide GHG emissions limit. These regulations are to become effective beginning on January 1, 2012.

ARB staff is recommending a total of 44 early action measures. There are nine discrete early action measures that will be enforceable by January 1, 2010. Measures that could become effective during implementation of the proposed Project could pertain to construction-related equipment operations. Some proposed early action measures will require new regulations to implement, some will require subsidies, some have already been developed, and some will require additional effort to evaluate and quantify. Applicable early action measures that are

ultimately adopted will become effective during implementation of a proposed development project. The Project could be subject to these requirements, depending on its timeline.

AB 32 requires ARB to prepare a Scoping Plan that contains the main strategies California will reduce the GHGs that contribute to climate change. In October 2008, ARB released a Proposed Scoping Plan which was adopted by the Air Resources Board in December 2008. The Scoping Plan contains a series of recommended actions to reduce GHG emissions that will provide the framework for development of specific regulations that will be adopted by January 2011 and enforceable by January 2012. The key elements of the Scoping Plan include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewable energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related greenhouse gas emissions for regions throughout California, and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long term commitment to AB 32 implementation.

Senate Bill 97 - Senate Bill 97 (SB 97), enacted in 2007, amends the CEQA statute that directed the California Office of Planning and Research (OPR) to develop draft CEQA guidelines for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions by July 1, 2009. It directs the Resources Agency to certify and adopt the CEQA guidelines by January 1, 2010.

OPR CEQA and Climate Change Technical Advisory - In June 2008, OPR released a technical advisory document[4] providing a recommended approach to addressing climate change in CEQA documents. It recommends that lead agencies develop an approach that follows three basic steps for analysis: (1) identify and quantify GHG emissions; (2) assess the significance of the impact on climate change; and (3) if the impact is significant, identify mitigation measures and/or alternatives to reduce the impact to a less than significant level. OPR recommends that lead agencies undertake a good-faith effort, based on available scientific and technical information, to estimate GHG emissions from a project. OPR specifically identifies vehicle traffic, energy consumption, water usage, and construction as potential sources of GHG emissions. OPR recognizes that establishing a threshold of significance for GHG emissions is "perhaps the most difficult part of the climate change analysis." OPR has asked ARB technical staff to recommend a statewide threshold of significance for GHG emissions. While this statewide threshold is pending, OPR recommends that lead agencies "undertake a project-by-project analysis,

[4] Governor's Office of Planning and Research, CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review, June 19, 2008.

consistent with available guidance and current CEQA practice" to determine the significance of impacts. The Technical Advisory also notes that while "climate change is ultimately a cumulative impact, not every individual project that emits GHGs must necessarily be found to contribute to a significant cumulative impact on the environment." Most importantly, OPR advises that a significance threshold of no new GHG emissions is not required. OPR recognizes that a significance standard can be qualitative or quantitative. If a lead agency determines a project will have a significant impact due to GHG emissions, it should consider alternatives or mitigation measures to reduce or offset project emissions.

The OPR Technical Advisory notes that the most difficult part of a climate change analysis is the determination of significance since there are no established regulatory thresholds for GHGs from the state, air districts or any other source. On October 24, 2008, ARB staff released a document entitled: Preliminary Draft Staff Proposal - Recommended Approaches for Setting Interim Significance Thresholds for GHGs under CEQA. This Preliminary Draft document contained guidelines for the development of significance thresholds for certain types of project. The draft proposal identified types of approaches, but did not contain defined standards.

Senate Bill 375 – SB 375 took effect on January 1, 2009. SB 375 helps implement AB 32's GHG reduction goals by integrating planning for land use, regional transportation and housing. SB 375 requires regional transportation plans to include a "sustainable community strategy" (SCS) plan to meet GHG reduction targets for vehicle travel set by ARB. The deadline for ARB to establish the GHG reduction target for individual regional plans is September 30, 2010. A Regional Transportation Plan will need to incorporate a SCS after October 2010. Projects consistent with a SCS qualify for relief from some CEQA requirements (example, exemptions or streamlined review). The bill also provides significant changes to Housing Element law, especially the timing and requirements for Regional Housing Needs Allocation (RHNA) planning.

Assembly Bill 1493 - AB 1493 (Pavley) was enacted on July 22, 2002. AB 1493 requires ARB to set GHG emission standards for passenger vehicles and light duty trucks manufactured in 2009 and all subsequent model years. ARB adopted the standards in September 2004. When fully phased in, the near-term (2009 to 2012) standards would result in a reduction of approximately 22 percent in GHG emissions compared to the emissions from the 2002 fleet, while the mid-term (2013 to 2016) standards would result in a reduction of approximately 30 percent. To set its own GHG emissions limits on motor vehicles, California must receive a waiver from the EPA. However, in December 2007, the EPA denied the request from California for the waiver. In January 2008, the California Attorney General filed a petition for review of the EPA’s decision in the Ninth Circuit Court of Appeals; no decision on that petition has been made.

Senate Bill 1368 - SB 1368 requires the California Public Utilities Commission (CPUC) to establish a greenhouse gas emission performance standard for baseload generation. These standards cannot exceed the greenhouse gas emission rate from a baseload combined-cycle natural gas fired plant. The legislation further requires that all electricity provided to California, including imported electricity, must be generated from plants that meet the standards set by the CPUC and CEC.

Local Agency Regulations. The Bay Area Air Quality Management District (BAAQMD) has not adopted guidance or regulations for analysis of GHGs or climate change in CEQA documents. In June, 2005, the BAAQMD adopted a resolution establishing the Bay Area Air Quality Management District's Climate Change Program. The Climate Change Program is to address climate change and climate protection through District activities including outreach and education campaigns, data collection and analysis, technical assistance, hosting a regional conference on climate change, and support and leadership for local efforts in the Bay Area to reduce emissions that contribute to climate change. The BAAQMD also has prepared a GHG emissions inventory for the Bay Area using 2007 as the base year. The BAAQMD estimated that 102.6 million tons of CO_2-equivalent GHG gases were emitted from anthropogenic sources in the Bay Area in 2007. Fossil fuel consumption in the transportation sector (on-road motor vehicles) accounted for approximately 41 percent. Stationary sources, including industrial and commercial sources, power plants, oil refineries, and landfills, were responsible for approximately 34 percent. Electricity generation accounted for approximately 15%, and residential fuel usage accounted for about 7% of the total anthropogenic GHG emissions.

Regulatory framework

The adopted Hayward General Plan contains the following policies related to air quality in the Conservation and Environmental Protection Chapter. Specific strategies related to air quality are found in the full text of the General Plan document.

- Incorporate measures to improve air quality in the siting and design of new development. (*Policy 1)*

- Maintain improved air quality by creating efficient relationships between transportation and land use. (*Policy 11*)

- Support implementation of Transportation Control Measures adopted by the Bay Area Air Quality Management District. (*Policy 12*)

The City of Hayward has also prepared a draft Climate Action Plan to assist the City in quantifying and reducing local greenhouse gas emissions consistent with state mandates identified earlier in this DEIR section. The CAP is expected to be acted upon by the Hayward City Council in mid-2009.

STANDARDS OF SIGNIFICANCE

The Bay Area Air Quality Management District (BAAQMD) (the local air agency) has developed specific thresholds of significance to be used in the preparation of CEQA documents. BAAQMD guidance provides different thresholds of significance for development projects and local plans, defined as city and county general plans, redevelopment plans, specific area plans and other similar "program" documents or plans. The "program" threshold is consistency with the most recently adopted Clean Air Plan (CAP). According to the BAAQMD, the following criteria must be satisfied for a local plan to be determined to be consistent with the CAP and not have a significant air quality impact:

1. The local plan should be consistent with the CAP population and Vehicle Miles Traveled (VMT) assumptions. This is demonstrated if the population growth over the planning period will not exceed the values included in the current CAP, and the rate of increase in VMT for the jurisdiction is equal to or less than the rate of increase in population.

2. The local plan demonstrates reasonable efforts to implement the Transportation Control Measures (TCMs) included in the CAP that identify cities as implementing agencies.

Under CEQA Guidelines, implementation of a proposed project would have a significant air quality impact if it would:

- Conflict with or obstruct implementation of applicable air quality plans.
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- Result in a cumulative considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard, including release of emission which exceed quantitative thresholds for ozone precursors.

This section evaluates potential impacts to global climate change resulting from implementation of the proposed Project. The evaluation of environmental effects presented in this section focuses on potential climate change impacts associated with the Project's increase in GHG emissions.

There is no CEQA statute, regulation or judicial decision that requires an EIR to analyze the GHG emissions of a project or whether a project will have a significant impact on global warming. Senate Bill 97 directs OPR to develop CEQA Guidelines to address GHG emissions to be adopted by January 1, 2010. OPR had not issued any formal regulations at the time this Draft EIR was completed. OPR has issued informal guidance in the form of a Technical Advisory in June 2008 on how to address climate change through CEQA review.

The recommended approach for GHG analysis included in OPR's Technical Advisory is to (1) identify and quantify GHG emissions, (2) assess the significance of the impact on climate change, and (3) if significant, identify alternatives and/or mitigation measures to reduce the impact below significance. Neither the CEQA statute nor guidelines prescribe thresholds of significance or a particular methodology for performing a GHG impact analysis. No state agency or the BAAQMD have issued any final regulations or standards of significance for the analysis of GHGs under CEQA. Therefore, this issue is left to the judgment and discretion of the lead agency. Currently, there is significant uncertainty as to what constitutes a legally adequate GHG analysis under CEQA. The discussion and analysis contained in this chapter is provided in accordance with the purpose of CEQA to make a good faith disclosure to the public and decision makers of potential environmental impacts, so they can make informed decisions.

Whether there is a direct connection between GHG emissions from an individual land use project and global climate change is unknown. No scientific study has established a direct causal link between individual land use project impacts and global warming. Climate change is a global environmental

problem in which (a) any given development project contributes only an infinitesimally small portion of any net increase in GHGs and (b) growth throughout the world is continuing to contribute large amounts of GHGs. Therefore, this study addresses climate change as a potential cumulative impact of the project. The analysis of this issue as a cumulative impact is consistent with all proposed regulatory guidance. The issue is what is the appropriate significance threshold for determining whether the project has a cumulatively considerable contribution to the significant cumulative impact of global warming.

AB 32 requires statewide GHG emissions reductions to 1990 levels by 2020. However, AB 32 does not amend CEQA. No generally applicable significance threshold for GHG emissions has yet been established, nor is formal final State agency regulations on global climate change analysis in CEQA documents anticipated to be available until mid-2009 at the earliest.

State CEQA Guidelines Section 15064(b) provides that the "determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data". An "ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting." (CEQA Guidelines Section 15064(b)). Lead agencies have discretion under CEQA to establish significance thresholds. The State CEQA Guidelines further indicate that if thresholds are established, they may include an "identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency.]" (State CEQA Guidelines, Section 15064.7)

Some agencies have suggested that a zero emissions threshold would be appropriate when evaluating GHGs and their potential effect on climate change. However, most agencies believe that a "zero new emissions" threshold would be impractical to implement and would hinder any new development. Further, prior CEQA case law makes clear that the rule that "one additional molecule" could create a significant impact is not consistent with CEQA. Such a rule also appears inconsistent with the State's approach to addressing climate change impacts. AB 32 does not prohibit all new GHG emissions; rather, it requires a reduction in statewide emissions to a given level. Thus, AB 32 recognizes that new GHG emissions will continue to occur.

Bearing in mind that CEQA does not require "perfection" but instead "adequacy, completeness, and a good faith effort at full disclosure," the analysis below is based on methodologies and information available to the City at the time the study was prepared. Estimation of GHG emissions in the future does not account for all changes in technology that may reduce such emissions; therefore, the estimates are based on past performance and represent a scenario that is worse than that which is likely to be encountered. Additionally, as explained in greater detail below, many uncertainties exist regarding the precise relationship between specific levels of GHG emissions and the ultimate impact on the global climate. Significant uncertainties also exist regarding potential reduction strategies. Thus, while information is presented to assist the public and the City's decision makers in understanding the project's potential contribution to global climate change impacts, the information available to the City is not sufficiently detailed to allow a direct comparison between particular project characteristics and particular climate change impacts, nor between any particular proposed reduction measure and any corresponding reduction in climate change impacts.

Because no applicable numeric significance thresholds have yet been defined, and because the precise causal link between an individual project's emissions and global climate change has not been developed, it is reasonable to conclude that an individual development project cannot generate a high enough quantity of GHG emissions to affect global climate change. However, individual projects incrementally contribute toward the potential for global climate change on a cumulative basis in concert with all other past, present, and reasonably foreseeable future projects. This study identifies qualitative factors to determine whether this project's emissions should be considered cumulatively significant. Until the City or other regulatory agency devises a generally applicable climate change significance threshold or methodology for analysis, the analysis used in this study may or may not be applicable to other City projects.

In the absence of regulatory agency rules or guidance on thresholds of significance under CEQA, the City will analyze whether the project has a cumulatively considerable contribution to the significant cumulative impact of global warming under the following qualitative standard:

- Whether the proposed project conflicts with or obstructs the implementation of greenhouse gas reduction measures under AB 32 or other state regulations.

If a project does not conflict with or obstruct GHG reduction strategies identified in AB 32 or other state regulations, the project would result in a less than significant contribution to the cumulative impact of global climate change.

ENVIRONMENTAL IMPACTS

One potential air quality impact is identified: short term construction impacts related to dust generation during buildout of the plan area.

Short-term construction impacts

Construction dust would affect local and regional air quality at various times during the build-out period of the Project. The dry, windy climate of the area during the summer months combined with the fine, silty soils of the region create a high potential for dust generation. Emissions during the grading phase of construction are primarily associated with the exhaust of large earth moving equipment and the dust which is generated through grading activities. Emissions in later stages of construction are primarily associated with construction employee commute vehicles, asphalt paving, mobile equipment, stationary equipment, and architectural coatings.

The effects of construction activities would be increased dustfall and locally elevated levels of PM_{10} near the construction activity. Depending on the weather, soil conditions, the amount of activity taking place, and nature of dust control efforts, these impacts could affect existing or future residential areas within or near the project. Since additional development is anticipated in the Project area for all three Concept Plan alternatives, short-term air quality impacts would be approximately the same for all three. Short term air quality impacts would be a significant impact and would be reduced to a less than significant level by adherence to Mitigation Measure 8.1 contained in the General Plan EIR that requires all site-specific project applicants to comply with all City regulations and operating procedures prior to the issuance of building or grading permits.

This General Plan mitigation measure implements all dust control strategies currently recommended by the BAAQMD, and the document *BAAQMD CEQA Guidelines* provides that these measures would reduce dust impacts to a less-than-significant level.

Violation of air quality standards

Projects in the Bay Area are most likely to violate an air quality standard or contribute substantially to an existing or projected air quality violation through generation of vehicle trips. New vehicle trips add to carbon monoxide concentrations near streets providing access to the site. Carbon monoxide is an odorless, colorless poisonous gas whose primary source in the Bay Area is automobiles. Concentrations of this gas are highest near intersections of major roads.

The Bay Area is currently an attainment area for both the federal and state ambient air quality standards for carbon monoxide. Concentrations of this pollutant have been declining for the past 25 years due to emission control systems on vehicles. The last violation of any carbon monoxide standard measured in the Bay Area occurred in 1991.

The project would increase development and auto traffic, which would increase concentrations of carbon monoxide along streets affected by project traffic. However, the fact that current levels of this pollutant are well below the state/federal standards and future projected reductions in per-mile emissions from the vehicle fleet in the Bay Area indicate that the potential for project traffic causing an exceedance of the carbon monoxide standards is extremely unlikely. This impact would be *less-than-significant*.

Inconsistency with an air quality plan

The San Francisco Bay Area Air Basin is currently non-attainment for ozone (state and federal ambient standards) and particulate matter ($PM_{2.5}$ and PM_{10}) (state ambient standard). While air quality plans exist for ozone, none exists for particulate matter. The *Bay Area 2005 Ozone Strategy* is the current ozone air quality plan.

The plan contains mobile source controls, stationary source controls and transportation control measures to be implemented in the region to attain the state ozone standards within the Bay Area Air Basin.

A project would be judged to conflict with or obstruct implementation of the regional air quality plan if it would be inconsistent with the growth assumptions, in terms of population, employment or regional growth in Vehicle Miles Traveled. The Bay Area 2005 Ozone Strategy utilized the Association of Bay Area Governments (ABAG) *Projections 2003* forecasts of population and employment which are based on city/county general plans. These forecasts have been updated; the most recent version is *Projections 2007.*

Population retail development and employment projections with each Project alternative are compared to *Projections 2007* population, retail development and employment in Table 4.2-5 below. Also shown is the incremental new Vehicle Miles Traveled for each alternative, estimated by the URBEMIS-2007 program.

For Alternatives B and C, local population, retail development and jobs would be less under these Alternatives than included in *Projections* 2007and these Alternatives would clearly have a less-than-significant air quality impact. For Alternative A, the alternative with the most intensive development, local population at buildout would be higher by up to 1,133 persons than anticipated in Projections 2007, but both retail square footage and local employment would be less than included in regional projections. Buildout of residential, retail and employment land uses under Alternative A could be slightly higher than anticipated in Projections 2007 for this portion of Hayward, but this increase only represents a 0.02% increase in regional Vehicle Miles Traveled, and the rate of increase in VMT (10%) is less than the rate of increase in population (13%). Given the small magnitude of the population difference and the higher density, infill nature of this Alternative (both of which are consistent with the intent of the Clean Air Plan), Alternative A is also deemed to have a less-than-significant air quality impact.

Table 4.2-5. Project Consistency with Projections 2007 Forecasts of Population and Non-Residential Development

	Existing General Plan (Projections '07)	Alternative A Buildout	Alternative B Buildout	Alternative C Buildout
Population	8,285	9418 (+1,133)	3478 (-4,807)	6,704 (-1,581)
Employment (jobs)	644	587 (-57)	560 (-84)	601 (-43)
Non-Residential Sq. Ft.	257,707	234,872 (-22,835)	219,920 (-37,787)	240,360 (-17,347)
Vehicle Miles Traveled	287,047	315,815(+28,768)	167,300(-119,747)	244,487(-42,560)

Sources: ABAG Projections 2007
City of Hayward
URBEMIS-2007

Greenhouse gas emission impacts

This section evaluates the potential of the Project to directly and indirectly emit greenhouse gasses as well as the Project's contribution to cumulative greenhouse gas emissions.

Direct Emission of Greenhouse Gases. Estimates of carbon dioxide generated by Project traffic and area sources were made using a program called URBEMIS-2007 (Version 9.2.4). URBEMIS-2007 is a program used statewide that estimates the emissions that result from development projects. Land use projects can include residential uses such as single-family dwelling units, apartments and condominiums, and nonresidential uses such as shopping centers, office buildings, and industrial facilities. URBEMIS-2007 contains default values for much of the information needed to calculate emissions. However, project-specific, user-supplied information can also be used when it is available.

Inputs to the URBEMIS-2007 program include trip generation rates, vehicle mix, average trip length by trip type and average speed. The daily trip generation rate for the Project was provided by the Project

transportation consultant. Average trip lengths and speeds for Alameda County were used. URBEMIS-2007 utilizes a standard mix of vehicle types and ages for each county and it varies with the year specified. The emission rates for vehicles changes from year to year as newer, cleaner cars replace older, more polluting vehicles. A year 2025 vehicle mix was assumed for this analysis.

Area Source Emission of Greenhouse Gases. Area source emissions of carbon dioxide were also quantified by the URBEMIS-2007 program. The URBEMIS program identifies 5 categories of area source emissions:

Natural Gas Combustion
Hearth Emissions
Landscaping Emissions
Architectural Coating
Consumer Products

Natural gas emissions result from the combustion of natural gas for cooking, space heating and water heating. Estimates are based on the number of residential land uses and the number and size of nonresidential land uses.

Hearth emissions consist of emissions from wood stoves, wood fireplaces, and natural gas fireplaces related to residential uses.

URBEMIS calculates emissions from fuel combustion and evaporation of unburned fuel by landscape maintenance equipment. Equipment in this category includes lawn mowers, rotor tillers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers used in residential and commercial applications. This category also includes air compressors, generators, and pumps used primarily in commercial applications.

Consumer product emissions are generated by a wide range of product categories, including air fresheners, automotive products, household cleaners and personal care products. Architectural coating emissions result from the evaporation of solvents contained in paints, varnish, primers and other surface coatings associated with maintenance of residential and nonresidential structures. In URBEMIS-2007, these sources generate Reactive Organic Gases (ROG) emissions but not carbon dioxide.

The URBEMIS-2007 results for carbon dioxide are attached in Appendix 8.4. The output shows annual emissions of carbon dioxide.

While URBEMIS-2007 estimates carbon dioxide emissions from land use projects, there are other global warming gases that should be considered. Emissions of methane (CH_4) and nitrous oxide (N_2O) were estimated separately based on the URBEMIS-2007 estimates of carbon dioxide from vehicles and natural gas combustion. CH_4 and N_2O emission factors from Table B in BAAQMD's "Source Inventory of Bay Area Greenhouse Gas Emissions" were utilized in a spreadsheet to estimate Project emissions of these gases. Because these gases are more powerful global warming gases, the emissions were multiplied by a correction factor to estimate “carbon dioxide equivalents.” CH_4 was assumed to have a Global Warming Potential of 21 times that of CO_2, while N_2O was assumed to have a Global Warming Potential of 310 times that of CO_2. The spreadsheet printout included in Appendix 8.4 shows the

estimated calculation of CH_4 and N_2O carbon dioxide equivalents and the calculation of total estimated CO_2 equivalent emissions for the Project from all identified sources.

Indirect emissions of greenhouse gases. Indirect emissions are related to secondary emissions of global warming gases emitted away from the site and not directly related to Project activities. The most important of these is that portion of the electricity used by the Project that would be generated by fossil-fueled power plants that generate global warming gases.

Global warming gas emissions related to electricity use were estimated using average annual electrical consumption per residential unit and square foot of commercial space recommended by the California Energy Commission. Emission rates for CO_2, CH_4 and N_2O per megawatt hour were taken from the California Climate Action Registry General Reporting Protocol, Version 3.0. The number of project residential units and commercial square footage was multiplied by an electrical usage factor and emission rates per megawatt hour to obtain annual emissions for CO_2, CH_4 and N_2O. These emissions were converted to CO_2 equivalents. The calculation is shown in Appendix 8.4.

Estimated greenhouse gas emissions. Estimated daily operational emissions of greenhouse gases associated with the Project are shown in Table 4.2-6. Emissions are expressed in CO_2-equivalent metric tons per year.

Table 4.2-6. Project Greenhouse Gas Emissions in Metric Tons Per Year (CO_2 Eq.)

Alternative	Sources	Emissions (MT/Year)
No Project Alternative	Vehicles	44,557.4
	Area Sources	7,410.2
	Indirect Sources	9539.0
	Total	**61,506.6**
Alternative A	Vehicles	49,054.6
	Area Sources	8,804.5
	Indirect Sources	10,666.5
	Total	**68,525.6**
Alternative B	Vehicles	25,925.4
	Area Sources	3,409.1
	Indirect Sources	5,320.1
	Total	**24,654.6**
Alternative C	Vehicles	37,936.3
	Area Sources	6,046.9
	Indirect Sources	8,055.0
	Total	**52,038.2**

Source: Don Ballanti, 2009

Cumulative impacts of Project.

The California Climate Action Team (CAT) and the California Air Resources Board (ARB) have developed programs and measures to achieve the GHG reduction targets under AB 32 and Executive Order S-3-05. These include the CAT's 2006 "Report to Governor Schwarzenegger

and the Legislature," ARB's "Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California, " and ARB's "Climate Change Proposed Scoping Plan: a framework for change."

The reports identify strategies to reduce California's emissions to the levels proposed in Executive Order S-3-05 and AB 32. The strategies that apply to the Project are contained in Table 4.2-7, which discusses the extent to which the Project complies with the strategies to help California reach the GHG emission reduction targets.

Table 4.2-7. Project Compliance with Greenhouse Gas Emission Reduction Strategies

Strategy	Project Compliance
Vehicle Climate Change Standards.[5] AB 1493 (Pavley) required the state to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of climate change emissions emitted by passenger vehicles and light duty trucks. Regulations were adopted by the ARB in September 2004.	***Compliant.*** The vehicles from the Project will be in compliance with any vehicle standards that the ARB adopts.
Building Energy Efficiency Standards in Place and in Progress.[6] Public Resources Code 25402 authorizes the Energy Commission to adopt and periodically update its building energy efficiency standards (that apply to newly constructed buildings and additions to and alterations to existing buildings). **Energy Efficiency**.[7] Maximize energy efficiency building and appliance standards, and pursue additional efficiency efforts. Reductions could be achieved through enhancements to existing programs such as increased incentives and even more stringent building codes and appliance efficiency standards. Green buildings offer a comprehensive approach to reducing greenhouse gas emissions that cross-cut multiple sectors including Energy, Water, Waste, and Transportation.	***Compliant.*** Future buildings within the Project area will be required to comply with the updated Title 24 standards for building construction including exterior lighting requirements. Residential building constructed in 2011 would be required to comply with the 2007 California Green Building Code Standards. Adopted on September 16, 2008, the ordinance establishes performance standards for new City-owned buildings and for major renovations of existing city-owned buildings. The ordinance aims to improve water and energy efficiency and minimize construction and demolition waste. The ordinance requires all covered projects (those exceeding 20,000 square feet or $5 million or a Public-Private Partnership) to be Leadership in Energy and Environmental Design (LEED) Silver Certified
Appliance Energy Efficiency Standards in Place and in Progress. [8] Public Resources Code 25402 authorizes the Energy Commission to adopt and periodically update its appliance energy efficiency standards (that apply to devices and equipment using energy that are sold or offered for sale in California).	***Compliant.*** Appliances that are purchased for future individual dwellings within the Project area will be consistent with existing energy efficiency standards. Future dwellings within the Project area will include energy efficient heating and cooling systems, appliances and equipment, and control systems

[5] California Environmental Protection Agency. 2006. *Climate Action Team Report to Governor Schwarzenegger and the Legislature*. March.
[6] Ibid.
[7] California Air Resources Board. 2008. *Climate Change Draft Scoping Plan: a framework for change*. June.
[8] California Environmental Protection Agency. 2006. *Climate Action Team Report to Governor Schwarzenegger and the Legislature*. March.

Strategy	Project Compliance
Measures to Improve Transportation Energy Efficiency.[9] Builds on current efforts to provide a framework for expanded and new initiatives including incentives, tools, and information that advance cleaner transportation and reduce climate change emissions.	***Compliant.*** The proposed Project promotes programs which encourage walking, bicycling and public transportation use through site planning and design elements. The proposed Project includes pedestrian trails throughout Project area and incorporates access to sidewalks and pathways off site to ensure that destinations may be reached by walking or bicycling.
Smart Land Use and Intelligent Transportation Systems (ITS).[10] Smart land use strategies encourage jobs/housing proximity, promote transit-oriented development, and encourage high-density residential/commercial development along transit corridors. ITS is the application of advanced technology systems and management strategies to improve operational efficiency of transportation systems and movement of people, goods and services.	***Compliant.*** The Project would locate residential uses near transit stops on local transportation corridors, including BART and AC Transit lines, which can be considered smart land use. The City of Hayward has also planned bicycle facilities through the Project area. The proposed Project is an infill Project adjacent to existing development.
Water Use Efficiency.[11] Approximately 19% of all electricity, 30% of all natural gas, and 88 million gallons of diesel are used to convey, treat, distribute and use water and wastewater. Increasing the efficiency of water transport and reducing water use would reduce greenhouse gas emissions.	***Compliant.*** Future individual developments within the Project area will be required to incorporate water- conservation measures, including water efficient fixtures and appliances, water-efficient landscaping and design, the use of water efficient irrigation systems and devices, and will employ water conservation measures required by the City of Hayward Water Efficient Landscape Ordinance.
Waste reduction and recycling: Reduce amount of waste generated by projects and increase recycling of products.	***Compliant***. Future individual developments within the proposed Project will reuse and recycle construction and demolition waste including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard, as required by the Construction and Demolition Debris Waste Reduction and Recycling Requirements.

Source: Don Ballanti, 2009

[9] Ibid.
[10] Ibid.
[11] Ibid.

Based on the foregoing analysis, the proposed Project would not have a cumulatively considerable contribution to the significant cumulative impact of global warming because the Project does not conflict with or obstruct the implementation of greenhouse gas reduction measures under AB 32 or other state regulations.

4.3 BIOLOGICAL RESOURCES

ENVIRONMENTAL ISSUES

This section describes the methods used to assess biological resources within the project area, including regulatory requirements, plant and wildlife resources, the presence or potential presence of special-status species, and potential impacts to wetlands on the site and measures to mitigate these impacts.

This section is based on a biological resources reconnaissance of the project area conducted by WRA Inc. (WRA) in September, 2007. This report is incorporated by reference into this DEIR and is available for review at the Hayward Development Services Department during normal business hours.

ENVIRONMENTAL SETTING

Existing biological communities

The following biological communities have been observed within the Project area. These types are mapped in **Figure 4.3-1**.

Non-native annual grassland. Non-native annual grassland is present in the large, steep undeveloped parcels of the Project area. This community type is described as non-native grassland by Holland (1986) and California annual grassland by Sawyer and Keeler-Wolf (1995), and is dominated by exotic annual grasses with scattered native and non-native forbs. Project Area grasslands are generally dominated by wild oats (*Avena* spp.) and other common invasive grasses such as ripgut brome (*Bromus diandrus*) and Italian ryegrass (*Lolium multiflorum*). The exotic herbaceous species observed in this community included yellow star thistle (*Centaurea solstitialis*), rose clover (*Trifolium hirtum*), chicory (*Cichorium intybus*), and fennel (*Foeniculum vulgare*). Scattered native and exotic trees and shrubs are naturally-occurring or planted in the grasslands, but do not generally create more than five percent average canopy cover. It is likely that more native species would be observed in these areas during the spring and early summer, but they generally appear disturbed by invasive species and historic grazing impacts. Most portions of the Project area mapped as non-native annual grassland continue to be managed with mowing or goat and cattle grazing to reduce fuel loads. One valley needlegrass grassland community is recorded in the California Natural Diversity Data Base (CNDDB) in the vicinity of the Project Area, located two miles north along Fairmont Ridge above Lake Chabot (CDFG 2007). A few non-native annual grassland areas of the Project area, particularly between Carlos Bee Boulevard and Harder Road, include sparse to dense patches of native purple needlegrass (*Nassella pulchra*). However, none were large enough to identify as a distinct native grassland community.

Approximately 125 acres of non-native annual grassland is present in the Project area. Given the disturbed nature but relatively large size of these grassland areas, they represent moderate-value

habitat for special status and common plant and wildlife species. Wildlife species likely to be found in this or similar habitat include harvest mouse (*Reithrodontomys* sp.), shrew (Sorex sp.), Western Meadowlark (*Sturnella neglecta*), gopher snake (*Pituophis catenifer*), and others.

Coastal scrub. The coastal scrub community type is present in small patches on steep slopes scattered throughout the Project area. This community is a disturbed variation of the northern coastal scrub community described by Holland (1986), and the coyote brush series and California sagebrush series described by Sawyer and Keeler-Wolf (1995). Within the Project area, coastal scrub consists of sparse to dense coyote brush (*Baccharis pilularis*) or California sagebrush (*Artemisia californica*), with an understory similar to the non-native annual grassland community type. Most areas mapped as coastal scrub appear to be former ruderal or non-native annual grassland areas that have been colonized by native shrubs.

The coastal scrub community type covers approximately eight acres within the Project area, and is not considered sensitive. These areas are a minor component of the existing natural resources of the site, but provide valuable transitional habitat between the more common grasslands and forested areas. This community may support wildlife species such as coyote (*Canis latrans*), Savannah Sparrow (*Passerculus sandwichensis*), and western fence lizard (*Sceloporus occidentalis*).

Disturbed/ ruderal. Typical ruderal communities include areas that have been partially developed or have been used in the past for agriculture. In the Project area, the disturbed/ruderal communities consist primarily of vacant parcels that have been recently disced. Discing has occurred on almost all of the flat non-forested parcels owned by Caltrans, leaving highly disturbed vegetation and soils. At the time of this assessment, vegetation in disced areas was sparse and consisted almost exclusively of Italian ryegrass, bristly ox-tongue (*Picris echioides*), cheeseweed (*Malva parviflora*), and field bindweed (*Convolvulus arvensis*). Many other disturbed vacant parcels included in this community type have compacted soils that have been re-colonized primarily by ruderal species such as fennel, stinkwort (*Dittrichia graveolens*), pampas grass (*Cortaderia jubata*), and Russian thistle (*Salsola tragus*). An abandoned quarry near the center of the Project Area was also mapped as disturbed/ruderal due to a limited vegetation cover dominated by pampas grass, fennel, cotoneaster (*Cotoneaster* sp.), and other ruderal exotic species.

Approximately 109 acres of the disturbed/ruderal community type is present in the Project area, and these areas provide poor habitat for special status or even common native species. Wildlife species that can be found in such areas may include Rock Dove (*Columba livia*), Brewer's Blackbird (*Euphagus cyanocephalus*), gophers (*Thomomys bottae*), and voles (*Microtus* sp).

Exotic woodland. Many undeveloped parcels within the Project area have relatively dense tree and/or shrub canopies consisting almost entirely of exotic species. The understory in these parcels is similar to non-native annual grassland or the disturbed/ruderal community type where grading or other soil disturbance has occurred. These parcels do not appear to be regularly maintained except for mowing or grazing to reduce fuel loads. While some of the trees and shrubs may be historic plantings, many of the species are naturalized and some are invasive. These areas provide a somewhat natural open woodland habitat beneficial to wildlife, so this

community was mapped separately from urban areas with maintained landscaping. Exotic woodlands within the Project area range from contiguous patches of blue gum eucalyptus (*Eucalyptus globulus)* to small lots covered with a diverse mix of typical weedy urban trees and shrubs including eucalyptus, acacias (*Acacia* spp.), cotoneaster, and tree of heaven (*Ailanthus altissima*). These exotic woodlands also support scattered native species including coast live oak (*Quercus agrifolia*), toyon (*Heteromeles arbutifolia*), coyote brush, and willows (*Salix* spp.).

Approximately 67 acres of exotic woodland are present in the Project area. Hayward Memorial Park was mapped under this community type because of the somewhat natural habitat of a weedy understory with a mix of large native and naturalized exotic trees and shrubs. Wildlife species that may be found in this community include striped skunk (*Mephitis mephitis*), Great Horned Owl (*Bubo virginianus*), Mourning Dove (*Zenaida macroura*), and Wild Turkey (*Megeagris gallopavo*).

Development (urban/landscaping) Development consists of all portions of the Project area not mapped as a natural community type, and includes commercial and residential uses, roads, and other areas dominated by human uses. Much of these developed areas contain planted exotic vegetation and casually- to intensively-maintained landscaping. Scattered native trees, primarily coast live oak, persist as street trees, in residential yards, and on larger landscaped grounds such as schools.

These areas are not likely to provide habitat for special status species due to noise and light pollution, invasive plants and repeated disturbance, and exotic predators such as feral cats. The primary habitat value of these areas lies in the trees, which may be utilized by both birds and bats. Species that may be found here include Rock Dove (*Columba livia*), European Starling (*Sturnella vulgaris*), House Sparrow (*Passer domesticus*), Yuma myotis bat (*Myotis yumanensis*), and roof rat (*Rattus rattus*).

Sensitive biological communities

Waters of the U.S, Approximately 5.6 miles (19,100 linear feet) of waters are present in the Project area, comprised primarily of perennial to semi-perennial creeks. Most creeks were still flowing with several inches of water at the time of the assessment visit, which was conducted in early fall following a relatively dry winter season. The creeks are generally two to eight feet wide with a gravelly substrate, with San Lorenzo Creek being the largest watercourse crossing the Project Area. Many fish barriers and other structures that reduce wildlife habitat values are present, especially to the west of the Project area where most waters flow through concrete channels or underground culverts.

Creeks within the Project area have the potential to support special status species, particularly San Lorenzo Creek and large pools in Castro Valley Creek. Steelhead or rainbow trout (*Oncorhynchus mykiss*) (FT, CSC) are believed to be present in San Lorenzo Creek (Leidy et al. 2003), which passes through the northern portion of the Project area near A Street. Short lengths of adjoining smaller creeks may also be used as rearing habitat by juvenile *O. mykiss* during certain times of the year. Perennial creeks, riparian corridors, and relatively undisturbed upland areas nearby may also provide habitat for California red-legged frog (*Rana aurora draytonii*,

CRLF), a federal threatened and CDFG species of special concern, which has been documented to occur in the vicinity. A small reservoir in Hayward Memorial Park may also provide habitat for CRLF. More common species that may occur near creeks include Black Phoebe (*Sayornis nigricans*), Mallard (*Anas platyrhynchos*), garter snake (*Thamnophis* sp.), and crayfish (*Pacifasticus leniusculus*).

Wetlands. Although a formal wetland delineation has not been conducted as a part of this assessment, several wetlands with potential to be jurisdictional "Waters of the U.S." were identified within the Project area based primarily upon the presence of wetland vegetation. Four general types of wetlands were identified: freshwater marsh, vegetated ditches, seep wetlands, and seasonal wetlands, although all are relatively disturbed communities and most appear to be inadvertently created by human activities, as described below. Wetland areas total approximately eight acres, although the scale of mapping results in a higher acreage estimate than is likely to be identified in a jurisdictional wetland delineation. Due to the time of year and highly disturbed nature of many of the mowed and disced undeveloped parcels, it is likely that not all seasonal wetlands were identified during the assessment.

Freshwater marsh communities are present near urban development and were mapped in the Project area based upon the dominance of cattail (*Typha* sp.) and/or common reed (*Arundo donax*). Several small patches of freshwater marsh vegetation abut commercial or residential lots and may rely on unintentional irrigation or leaks from water tanks and underground pipes. Holland (1986) describes Coastal and Valley Freshwater Marsh communities as permanently flooded by fresh water, without significant current. Perennial, emergent monocots up to four meters tall typically dominate these marshes, including cattails (*Typha* spp.), bulrushes (*Scirpus* spp.), and a variety of sedges (*Carex* spp., *Cyperus* spp., *Eleocharis* spp.). All freshwater marsh communities in the Project area are small, disturbed, and surrounded by development.

Two man-made ditches cross the southern end of the Project area. One is located between Valle Vista Avenue and Industrial Parkway, extending from Mission Boulevard to Dixon Street, where it then flows southwest in an underground culvert until it empties into the second canal paralleling the BART tracks and the Project area boundary. These ditches are largely vegetated with a freshwater marsh community, but are clearly man-made channels that carry stormwater. The ditches still held approximately an inch of water at the time of this assessment. Common wetland vegetation in these ditches include cattail, water cress (*Rorippa nasturtium-aquaticum*), barnyard grass (*Echinochloa crus-galli*), and rabbitfoot grass (*Polypogon monspeliensis*).

Several freshwater seep wetlands exhibit similar vegetation communities to freshwater marsh, dominated by perennial, emergent vegetation, but are located in sloped drainages that conduct a small amount of flow. Holland (1986) describes Freshwater Seep communities as dominated by perennial herbs, growing in permanently moist or wet soil and usually forming complete cover. Dominant vegetation in seep-like wetlands of the Project area includes wetland species such as iris-leaf rush (*Juncus xiphioides*), common tule (*Scirpus acutus* var. *occidentalis*), Himalayan blackberry, cattail, tall flatsedge (*Cyperus eragrostis*), and red willows (*Salix laevigata*). The water source of these wetlands was often unclear during the assessment, although some are clearly positioned downhill from large water tanks, culverts, or quarry operations.

Seasonal wetland plant communities are not described in Holland (1986), but occur in swales and depressions that are ponded during the rainy season for sufficient duration to support vegetation adapted to wetland conditions. Seasonal wetlands in California are highly variable in plant composition, depending on the length of ponding or inundation. They also generally lack the plant community assemblage typical of defined marshes and vernal pools. Potential seasonal wetlands in the Project area are generally found on flat or slightly sloped ground in very disturbed non-native annual grassland, disturbed/ruderal areas, and in small un-maintained areas of urban development. The only seasonal wetlands identifiable during the assessment exhibited dry soils but strong wetland vegetation or hydrology indicators such as hoof prints and a clearly different community from the surrounding vegetation. Vegetation in these wetlands includes typical weedy species such as Italian ryegrass, narrow-leaved milkweed (*Asclepias fascicularis*), heliotrope (*Heliotropium curassavicum*), and stinkwort. Seasonal wetlands in the Project area include features apparently fed by leaking water tanks, leaking underground pipes, and irrigation from a large neighboring garden and greenhouse.

Seasonal wetlands generally provide food, cover, and water for over 100 species of birds, and can provide foraging habitats for bats. In addition, amphibian species such as the federal-listed California tiger salamander (*Ambystoma californiense*) and California red-legged frog (*Rana aurora draytonii*) may utilize them as part of their migratory corridor. However, the seasonal wetlands in the Project Area support disturbed exotic vegetation, are surrounded by urban development or other intensive uses, and are unlikely to provide valuable habitat for special status species.

Riparian forest. Riparian forests line all of the creeks in the Project area, and range from completely native tree canopies to a mix of urban plantings with invasive and native trees. The largest corridors of riparian forest within the Project Area are dominated by coast live oak and California bay (*Umbellularia californica*), with scattered Californica buckeye (*Aesculus californica*) and big leaf maple (*Acer macrophyllum*). These forests are typical of oak/bay forests in the San Francisco Bay Area, and are similar to the coast live oak forest and southern coast live oak riparian forest communities described by Holland (1986) and the coast live oak series and California bay series described by Sawyer and Keeler-Wolf (1995). A dense tree canopy results in minimal understory vegetation, including scattered toyon, snowberry (*Symphoricarpos albus*), poison oak (*Toxicodendron diversilobum*), California blackberry (*Rubus ursinus*), and blue elderberry (*Sambucus mexicana*).

A few creeks have significantly narrower riparian corridors remaining due to surrounding urban development, along with a more disturbed species composition of mixed natives and exotic trees and shrubs, namely San Lorenzo Creek, Castro Valley Creek, and the small seasonal creek segments directly west of Hayward High School. Some of the riparian forests, most notably Ward Creek in Hayward Memorial Park, have moderate to severe infestations of invasive plants such as English ivy (*Hedera helix*), Himalayan blackberry (*Rubus discolor*), and cape ivy (*Delairea odorata*).

Riparian forest covers approximately 74 acres, providing the primary remaining native plant habitat within the Project Area and valuable wildlife corridors connecting to larger natural areas to the east and south. All contiguous forest canopies on the steep slopes lining perennial and

seasonal creeks were considered riparian forest, although the actual delineation of riparian corridors under the jurisdiction of CDFG may result in narrower corridors more directly influenced by the creek channels. Wildlife species that may be found in riparian forest include black-tail deer (*Odocoileus hemionus*), raccoon (*Procyon lotor*), dusky-footed woodrat (*Neotoma fuscipes*), Lesser Goldfinch (*Carduelis psaltria*), Spotted Towhee (*Pipilo maculatus*), and chorus frog (*Pseudacris regilla*).

Oak woodland. Oak woodland is present in disturbed, remnant patches in the Project area, often adjacent to more intact riparian forested corridors. This community is similar to the coast live oak woodland community described by Holland (1986) and the coast live oak series described by Sawyer and Keeler-Wolf (1995). This community is typically dominated by coast live oak with an understory of non-native annual grasses and both native and non-native shrubs. It is usually found on steep slopes, raised stream banks, and stream terraces. Within the Project area, oak woodland persists in small remnant patches, often in or surrounded by areas of graded, disturbed soils and ruderal vegetation or non-native annual grassland species. Many of the oak woodland areas appear to be regularly mowed or grazed by cattle or goats. The native species diversity in this community type is lower than most riparian forest in the Project area, and the native tree canopy cover ranges from approximately 10 to 100 percent.

The oak woodland community type covers approximately 14 acres within the Project area, and is considered sensitive for the purposes of this report because of the concentration of native oak trees protected by local tree ordinances. However, these areas are mostly very disturbed and fragmented compared to a typical coast live oak woodland community in less urban areas. They are not as valuable as the riparian forest within the Project Area in terms of habitat, total acreage, or connectivity to other native habitats in the vicinity. Oak woodland areas adjacent to riparian forest provide the most valuable habitat because they enhance wildlife corridors and transitional habitats between forest and grassland areas. Wildlife species that may utilize these areas include Northern Flicker (*Colaptes auratus*), Western Scrub-Jay (*Aphelocoma californica*), fox squirrel (*Sciurus niger*), and raccoon (*Procyon lotor*).

Special-status species

Plants. Based upon a review of the resources and databases, 44 special-status plant species have been documented in the vicinity of the Project area. Plant species occurrences documented in the CNDDB within five miles of the Project area are shown in **Figure 4.3-2**. The Project area has the potential to support 21 of these species. Table 4.3-1 (contained in Appendix 8.5 of this document) summarizes the potential for occurrence for each special status plant species occurring in the Hayward USGS 7.5 minute quadrangle and eight surrounding quadrangles. No special status plant species were observed in the Project area during the assessment site visit, nor are any known to have been observed in previous studies. No special status plant species have a high potential to occur in the Project area, because the remaining natural areas are disturbed by historic uses, grazing, discing, mowing, homeless encampments, and surrounding urban development. Two special status plant species have a moderate potential to occur in the Project area, and are discussed below. The remaining species documented to occur in the vicinity of the Project area are unlikely or have no potential to occur.

The site assessment occurred during the blooming period of four of the 21 special status plant species with potential to occur in the Project area; none of the potentially blooming species were observed. However, the assessment was not a protocol-level rare plant survey, so presence of any special status species cannot be ruled out. Plants observed during this reconnaissance-level survey were identified to the species level when possible given the two-day time frame and late phenology of many plants, and are listed in Table 4.3-1 (see Appendix 8.5).

*Western leatherwood (Dirca occidentalis). CNPS List 1B***.** Western leatherwood is a deciduous shrub in the Mezereum family (Thymelaeaceae) that typically occurs in riparian areas in broadleafed upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, and North Coast coniferous forest, from 160 to 1,300 feet in elevation. The species is known from the San Francisco Bay Area and blooms from January to March. Populations in the vicinity of the Project Area are located primarily in the Oakland Hills. This species has a moderate potential to occur in most riparian forest corridors in the Project area.

*Diablo helianthella (Helianthella castanea). CNPS List 1B***.** Diablo helianthella is a perennial herb in the sunflower family (Asteraceae) that occurs over a very limited geographic area, primarily in Contra Costa and Alameda counties. It occurs in a variety of habitats including broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, and valley and foothill grassland, at elevations from 200 to 4,270 feet. Diablo helianthella blooms from March to June, and has a moderate potential to occur in less disturbed grasslands and openings or edges of oak woodland and riparian forests in the Project area.

Wildlife. Forty-nine special status species of wildlife have been recorded in the vicinity of the Project area. Table 4.3-2 summarizes the potential for each of these species to occur in the Project area. Wildlife species occurrences documented in the CNDDB within five miles of the Project area are shown in **Figure 4.3-2**. One special status wildlife species was observed in the Project area during the site assessment, and two additional species are believed to be present. Five special status wildlife species have a high potential to occur in the Project area, and twelve special status wildlife species have a moderate potential to occur in the Project area. Special status wildlife species of particular interest are discussed below.

The following non-listed special status species have a high to moderate potential for occurrence within the Project area due to the presence of suitable habitat and/or proximity to accepted range and documented occurrences.

San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*)
Townsend's big-eared bat (*Corynorhinus townsendii*)
western mastiff bat *(Eumops perotis californicus*)
Cooper's Hawk (*Accipiter cooperi*)
Sharp-shinned Hawk *(Accipiter striatus*)
Golden Eagle (*Aquila chrysaetos*)
Ferruginous Hawk (*Buteo regalis*)
Northern Harrier (*Circus cyaneus)*

White-tailed Kite (*Elanus leucurus*)
Long-eared Owl (*Asio otus*)
California Horned Lark (*Eremophila alpestris actia*)
Yellow Warbler (*Dendroica petechia brewsteri*)
Saltmarsh Common Yellowthroat (*Geothlypis trichas sinuosa*)
monarch butterfly (*Danaus plexippus*) (roost site)
western pond turtle (*Actinemys marmorata*)
coast horned lizard (*Phrynosoma coronatum frontale*)

California red-legged frog (Rana aurora draytonii). Federal Threatened, CDFG Species of Concern. The California red-legged frog (CRLF) is dependent on suitable aquatic, estivation, and upland habitat. During periods of wet weather, starting with the first rainfall in late fall, red-legged frogs disperse away from their estivation sites to seek suitable breeding habitat. Aquatic and breeding habitat is characterized by dense, shrubby, riparian vegetation and deep, still or slow-moving water. Breeding occurs between late November and late April. CRLF estivate (undergo a period of prolonged inactivity) during the dry months in small mammal burrows, moist leaf litter, incised stream channels, and large cracks in the bottom of dried ponds.

CRLF has a moderate potential for occurrence within the Project area. Marginal habitat for CRLF is present in a number of creeks that traverse the property moving from east to west. Adjacent riparian areas and upland habitat provide opportunities for dispersal and estivation. Deeper pools within perennial creeks and a small reservoir near Hayward Memorial Park may provide breeding habitat for CRLF. Surveys for this species were performed throughout the Project Area in 1996, but negative findings are only considered valid for 1-2 years, and multiple findings of CRLF have been reported just east of Hayward in subsequent years. Since CRLF is a federally listed species, it is likely to be the species of greatest concern with regard to development within the Project area. Development in disced or previously-developed land surrounded by urban land uses should not impact this species. However, protocol-level surveys may be necessary in many areas near creeks and undisturbed land to ensure absence of CRLF before construction can take place.

*Alameda Whipsnake (Masticophis lateralis euryxanthus). Federal Threatened Species, State Threatened Species***.** Alameda whipsnake (AWS) is associated with scrub communities, including mixed chaparral, chamise-redshank chaparral, coastal scrub, and annual grassland and oak woodlands that lie adjacent to scrub habitats that contain areas of rock outcrops. Rock outcrops are important as they are a favored location for lizard prey. Whipsnakes frequently venture into adjacent habitats, including grassland, oak savanna, and occasionally oak-bay woodland.

The Alameda whipsnake is unlikely to occur within the Project area. While small areas of marginal habitat for this species may exist within the site, whipsnakes are likely to stay mostly within higher-quality habitat areas to the east. Extensive trapping done within the Project area in 1996 and 1997 resulted in no findings of AWS. The USFWS agreed during a 2006 technical assistance meeting that no impacts to AWS or CRLF would result from development of the La Vista Quarry, a heavily disturbed land parcel abutting the Project area to the southeast (J. Dreier, pers. communication). The City of Hayward also agreed that no impacts to CRLF or AWS would result from development of La Vista Quarry or development near Garin Regional Park to the

north (Patenaude 2006). These areas had previously been identified as the only areas with potential to support AWS during habitat assessments in 1991 and 1993. These locations also have similar habitat values to many parts of the Project area, as they are disturbed, invaded by non-native plants, and adjacent to or nearly surrounded by urban development. In the time since the 1991-93 assessments, the area has likely decreased in habitat value due to further development, fragmentation, and land management practices such as discing. AWS is therefore unlikely to occur in the project area, although some potential still exists, especially in the mixed grassland and woodland slopes between Calhoun Street and Harder Road. However, previous assessments and surveys for this species appear sufficient to conclude that no significant impacts to AWS should occur from development within the Project area.

Steelhead-Central California Coast (Oncorhynchus mykiss irideus). Federal Threatened. The Central California Coast ESU includes all naturally spawned populations of steelhead (and their progeny) in California streams from the Russian River to Aptos Creek, and the drainages of San Francisco and San Pablo Bays eastward to the Napa River (inclusive), excluding the Sacramento-San Joaquin River Basin. Steelhead typically migrate to marine waters after spending two years in freshwater, though they may stay up to seven. They then reside in marine waters for 2 or 3 years prior to returning to their natal stream to spawn as 4-or 5-year-olds. Steelhead adults typically spawn between December and June. In California, females typically spawn two times before they die. Preferred spawning habitat for steelhead is in perennial streams with cool to cold-water temperatures, high dissolved oxygen levels and fast flowing water. Abundant riffle areas (shallow areas with gravel or cobble substrate) for spawning and deeper pools with sufficient riparian cover for rearing are necessary for successful breeding.

The fish species *O. mykiss* is present within the Project Area, having been recently documented in San Lorenzo Creek (Leidy *et al.* 2003). The USFWS would likely consider these fish to be the protected oceangoing subspecies. However, barriers to movement and spawning as well as minimal and degraded habitat make San Lorenzo Creek and adjoining tributaries only marginal habitat. While *O. mykiss* may technically be present within a small portion of the Project Area, it is unlikely that this species will be impacted by development. In general, human activities that would impact this species include removal of shade trees in the riparian corridor, installation of barriers in the creek channel, and creation of sediment runoff that would accumulate in the creek. Sedimentation from modern construction projects is avoided through the use of Best Management Practices (BMPs) and Storm Water Pollution Prevention Plans (SWPPPs), so sedimentation in San Lorenzo Creek as a result of development is unlikely. Construction activities in the riparian corridor and creek channel would require consultation with the CDFG, at which time impacts to *O. mykiss* could be addressed. Therefore, with regard to the remaining Project area and development plans, this species should not be impacted.

Loggerhead Shrike (Lanius ludovicianus). CDFG Species of Special Concern, USFWS Bird of Conservation Concern. The loggerhead shrike is a common resident and winter visitor in lowlands and foothills throughout California. It prefers open habitats with scattered trees, shrubs, posts, fences, utility lines or other perches. Nests are usually built on a stable branch in a densely foliaged shrub or small tree and are usually well-concealed. The highest densities occur in open-canopied valley foothill hardwood, valley foothill hardwood-conifer, valley foothill riparian pinyon-juniper, juniper, and desert riparian habitats. While this species eats mostly Arthropods,

they also take amphibians, small to medium-sized reptiles, small mammals and birds. They are also known to scavenge on carrion.

Loggerhead Shrike is present within the Project area. WRA biologists observed a single shrike in agricultural grassland north of East 16th Street. Mixed grassland and open areas provide foraging habitat for this species, and nesting habitat is present in trees and shrubs throughout the region.

Pallid bat (Antrozous pallidus). CDFG Species of Special Concern, WBWG High Priority. The pallid bat is found in a variety of low elevation habitats throughout California. It selects a variety of day roosts including rock outcrops, mines, caves, hollow trees, buildings, and bridges. Night roosts are usually found under bridges, but also in caves, mines, and buildings. Pallid bats are sensitive to roost disturbance. Unlike most bats, pallid bats primarily feed on large ground-dwelling arthropods, and many prey are taken on the ground (Zeiner, et al. 1990).

Pallid bat is believed to be present within the Project area. CNDDB records show an occurrence of this species that covers the central Hayward area. Suitable roost habitat is present throughout the site in tree cavities and structures such as bridges and vacant buildings. Foraging habitat is available in open areas over fields and near creeks or other water sources. Presence of this species may also indicate suitable habitat for other sensitive bats including such species as Townsend's big-eared bat (*Corynorhinus townsendii*), western mastiff bat (*Eumops perotis californicus*), and others

Regulatory framework

Federal Species Protection

The Federal Endangered Species Act (FESA) protects listed species from harm or "take," which is broadly defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct. Take can also include habitat modification or degradation that results in death or injury to a listed species. An activity can be defined as a "take" even if it is unintentional or accidental. Listed plant species are provided less protection than listed wildlife species. Listed plant species are legally protected from take under FESA, if they occur on federal lands or if the project requires a federal action, such as a wetland fill permit.

Proposed and Candidate Species. The U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) have jurisdiction over federally-listed threatened and endangered species under the FESA. Both services maintain a list of proposed species and candidate species that are not legally protected under the FESA, but which may become listed in the future and are often included in their reviews of projects.

Consultation. Pursuant to the requirements of the FESA, an agency reviewing a proposed project within its jurisdiction must determine whether any federally-listed threatened or endangered species may be present in the project area and determine whether the proposed project could impact such species. Any activities that could result in the take of a federally-listed species will require consultation with the USFWS (for terrestrial species) or NMFS (for marine species) under either Section 7 or Section 10 of FESA before project activities commence.

Critical Habitat. Under Section 4 of the FESA, the USFWS or NMFS must designate critical habitat for listed species. If insufficient information is available on the habitat needs of the listed species, the USFWS or NMFS may designate the critical habitat to be "not determinable." Critical habitat provisions apply only to federal projects or projects with a federal nexus. However, projects on private or non-federal lands may be affected by critical habitat designation if the proposed action is subject to federal permitting; e.g., filling of wetlands under Section 404 of the Clean Water Act or if the proposed action receives federal funds. If a proposed action has the potential to affect the habitat of a listed species within designated critical habitat for that species, even if the species is not present, consultation with the USFWS or NMFS (as appropriate) will be required.

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

Bald and Golden Eagle Protection Act. This 1940 law as amended provides for the protection of the bald eagle (Haliaeetus leucocephalus) and the golden eagle (Aquila chrysaetos) by prohibiting, except under certain specified conditions, the taking, possession, and commerce of such birds.

California Species Protection

California Endangered Species Act. The California Endangered Species Act (CESA) prohibits the take of any plant or animal listed or proposed for listing as rare (plants only), threatened, or endangered. In accordance with the CESA, California Department of Fish and Game (CDFG) has jurisdiction over state-listed species (California Fish and Game Code 2070).

California Species of Special Concern. Additionally, the CDFG maintains lists of "species of special concern" that are defined as species that appear to be vulnerable to extinction because of declining populations, limited ranges, and/or continuing threats. Pursuant to the requirements of CESA, a state agency reviewing a proposed project within its jurisdiction must determine whether any state-listed or proposed endangered or threatened species may be present in the project area and determine whether the proposed project will have a potentially significant impact on such species.

Fully Protected Species. Prior to passage of CESA, the State of California passed the Fully Protected Species Act. This is still an active list. Animal species on this list are legally protected and there is no allowable incidental take for fully protected species.

California Department of Forestry and Fire Protection. The Board of Forestry classifies species as sensitive if they warrant special protection during timber operations.

California Environmental Quality Act

Section 15380(b) of the California Environmental Quality Act (CEQA) Guidelines provides that a species not listed on the federal or state lists of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definitions in FESA and CESA and the section of the California Fish and Game Code dealing with rare or endangered plants or animals. This section was included in the guidelines primarily to deal with situations in which a public agency is reviewing a project that may have a significant effect on a species that has not yet been listed. Thus, CEQA provides an agency with the ability to protect a species from a project's potential impacts, if it finds that the species meets the criteria of a threatened or endangered species.

Clean Water Act

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

In general, a Corps permit must be obtained before placing fill in wetlands or other waters of the U.S. The type of permit depends on the acreage involved and the purpose of the proposed fill. Minor amounts of fill can be covered by a Nationwide Permit. An Individual Permit is required for projects that result in more than a “minimal” impact on jurisdictional areas. Individual Permits require evidence that jurisdictional fill has been avoided to the extent possible and a review of the project by the public.

Waters of the U.S. and their lateral limits are defined in 33 CFR Part 328.3(a) and include streams that are tributaries to navigable waters and their adjacent wetlands. The lateral limits of jurisdiction for a non-tidal stream are measured at the line of the Ordinary High Water Mark (OHWM) or the limit of adjacent wetlands. Any permanent extension of the limits of an existing water of the U.S., whether natural or man-made, results in a similar extension of Corps jurisdiction.

Waters of the U.S. fall into two categories, wetlands and non-wetland waters. Non-wetland waters include waterbodies and watercourses such as rivers, streams, lakes, springs, ponds, coastal waters, and estuaries. Wetlands include marshes, meadows, seep areas, floodplains, basins, and other areas experiencing extended seasonal soil saturation and dominated by wetland plant cover.

Wetlands and non-wetland waters where a continuous hydrological connection cannot be traced to a navigable water of the United States are not tributary to waters of the United States. These are termed “isolated waters.” Isolated waters are jurisdictional when their destruction or degradation can affect interstate or foreign commerce. Up until 2001, the Corps asserted jurisdiction over isolated waters based on the “Migratory Bird Rule” and other interstate commerce connections. The Migratory Bird Rule refers to waters that are or may be used as habitat for migratory birds, and whose use, degradation, or destruction could affect interstate or

foreign commerce. Based on a January 9, 2001, U.S. Supreme Court decision known as the Solid Waste Agency of Northern Cook County (SWANCC), the Corps can no longer use the "Migratory Bird Rule" as its basis of jurisdictional authority over non-navigable, isolated, intrastate waters. Consequently, the scope of regulatory jurisdiction over isolated waters has been significantly narrowed by the SWANCC decision. (However, California state agencies such as the Regional Water Quality Control Board and CDFG may still claim jurisdiction over features as "state waters" even if the Corps has determined the same features to be isolated under the federal definition.)

California Water Quality and Related Programs

Pursuant to Section 401 of the federal Clean Water Act and the state's Porter-Cologne Act, projects that are regulated by the Corps must obtain water quality certification from the Regional Water Quality Control Board (RWQCB). This certification ensures that the project will uphold state water quality standards. The RWQCB may impose mitigation requirements even if the Corps does not.

The CDFG also exerts jurisdiction over the bed and banks of watercourses and waterbodies according to provisions of Sections 1601 to 1603 of the Fish and Game Code. The Fish and Game Code requires a Streambed Alteration Permit for the fill or removal of material within the bed and banks of a watercourse or waterbody.

The City of Hayward has adopted the Alameda County Flood Control and Water Conservation District's 20-foot setback from top of bank for development in stream corridors.

Other regulations

California Native Plant Society List. The California Native Plant Society (CNPS), a non-governmental conservation organization, has developed lists of special-status plant species of concern in California. Vascular plants included on these lists are defined as follows:

List 1A	Plants considered extinct.
List 1B	Plants rare, threatened, or endangered in California and elsewhere.
List 2	Plants rare, threatened, or endangered in California but more common elsewhere.
List 3	Plants about which more information is needed - review list.
List 4	Plants of limited distribution - watch list.

Although the CNPS is not a governmental regulatory agency and plants on these lists have no formal regulatory protection, plants appearing on List 1B or List 2 are, in general, considered to meet CEQA's Section 15380 criteria and adverse effects to these species are considered "significant."

City of Hayward Tree Preservation Ordinance. The City of Hayward adopted a tree preservation ordinance in October 2002 to protect and preserve trees within its jurisdiction. The Ordinance encourages preservation of trees and avoiding removal of trees in development projects. Pursuant to the City of Hayward Municipal Code, Chapter 10, Article 15 it is unlawful to remove, destroy, perform cutting of branches measuring over one-inch in diameter, disfigure or cause to be

removed or destroyed any "protected" tree on any parcel within the City without first obtaining a permit. A "protected tree" tree is defined in Article 15 as any tree with a trunk diameter of 8 inches or more, measured 54 inches above the ground, a street tree or any other tree required as a condition of approval of a discretionary approval, any memorial tree dedicated by a City-recognized entity as a specimen tree that defines a neighborhood or community, any tree of specified species (such as oak species) that has a trunk diameter of 4 inches or more, and any tree planted to replace a protected tree. Trees located on a developed single family residential lot that cannot be further subdivided are exempt from the ordinance, unless such trees have been required or are protected as a condition of discretionary permit approval.

Hayward General Plan

Applicable policies contained in the Conservation and Environmental Protection Chapter of the Hayward General Plan include:

- Protect and enhance vegetative and wildlife habitat throughout the Hayward planning area. (*Policy 4*)
  - * Avoid development that would encroach into important wildlife habitats, limit normal range areas, or create barriers that cut off access to food, water or shelter *(Strategy 1).*
  - * Utilize drought tolerant plant material in city landscaping *(Strategy 6).*
  - *· Encourage the planting of native vegetation to preserve the visual character of the area and reduce the need for toxic sprays and groundwater supplements *(Strategy 7)*.
  - * Preserve mature vegetation where possible to provide shade, break unwanted wind and enhance the appearance of development *(Strategy 8)*.

STANDARDS OF SIGNIFICANCE

Project effects on biological resources would be considered significant if it results in any of the following:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a special-status species in local or regional plans, policies or regulations, or by the CDFG or USFWS.
- Have a substantial adverse effect on any riparian habitat or other sensitive or special-status natural community identified in local or regional plans, policies, or regulations, or by the CDFG or USFWS.
- Have a substantial adverse effect on federally regulated wetlands or other waters of the U.S., as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological alteration, or other means.
- Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or substantially impede the use of native wildlife breeding or roosting sites.
- Conflict with any local policies or ordinances protecting biological resources such as a tree preservation policy or ordinance.

ENVIRONMENTAL IMPACTS

The following discussion addresses potential impacts to biological resources that could occur in the Project area as a result of the proposed alternatives. Mitigation measures to minimize or compensate for these impacts are also recommended.

Impacts to special-status plant species

Of the 44 special status plant species known to occur in the vicinity of the Project area, only two species, western leatherwood and Diablo helianthella, were determined to have a moderate potential to occur in the Project area. Twenty-one species were determined to have a low potential to occur, and the other 21 were determined to have no potential. Riparian forest corridors provide the most intact native habitat remaining in the Project area that could support special status plants. Oak woodlands and non-native grasslands have heavily disturbed understory vegetation and soils due to grazing, mowing, discing, and surrounding urban development, and are less likely to support special status plants.

Impacts to special-status species would be the greatest under Alternative A and C, which have approximately the same amount of developed properties with lesser impacts to these species likely to occur under Alternative B that contains the greatest amount of open space uses which would allow more habitat for special-status plants.

Impact 4.3-1 (impacts to special-status plants). Potentially significant impacts would result to two special-status plant species (western leatherwood and Diablo helianthella) under all three Alternatives. Impacts would be greatest under Alternative A and C with fewer impacts likely occurring under Alternative B (*potentially significant impact and mitigation is required*).

The following measures shall be taken to reduce impacts to special-status plants to a less-than-significant level. This measure shall apply to all Alternatives.

Mitigation Measure 4.3-1 (impacts to special-status plants). The following steps shall be taken to protect special-status plant species within the Project area. These steps shall be added as conditions of approval for individual development proposals for vacant or substantially vacant properties within the Project area and for any development proposal adjacent to any wetland area, creek or other body of water:

a) **Rare plant surveys shall be undertaken by a qualified biologist (as approved by the City of Hayward) for all areas that are not mapped as developed or disturbed/ruderal, including riparian forest, oak woodland, non-native annual grassland, coastal scrub, and wetland areas. Surveys should focus on those species with a moderate potential to occur in the Project area, and should include protocol-level surveys in February and May of riparian areas and other suitable habitats for western leatherwood and Diablo helianthella. General protocol-level rare plant surveys are necessary in early spring (February-April), late spring (May-June), and late summer (July-September) to determine the presence or absence of any**

other plant species with potential to occur in undeveloped habitats of the Project area.

b) If species are identified, development activities shall avoid these areas and appropriate buffer areas established around such species. The size and location of any buffer shall be determined by a qualified biologist.

c) If avoidance is not feasible, as determined by the City of Hayward, rare plants or their seeds, shall be transplanted to a suitable alternative protected habitat. Such transplantation shall occur pursuant to permits and approvals from appropriate biological regulatory agencies. A monitoring program shall be established to ensure that transplanted species will thrive.

Impacts to special-status wildlife species

While a number of special status wildlife species have potential to occur within portions of the Project area, the majority of the area surveyed is unsuitable as habitat for these species. The majority of the Project area is urban, having been disturbed, graded, developed, landscaped, paved, and otherwise modified and occupied by humans. However, due to the large size of the Project area covered and the variation in land use and vegetative communities, some areas of suitable habitat are present. In general, wooded ravines along creeks and minimally disced grasslands contiguous with large areas of open space to the east cannot be ruled out as habitat for a number of species. However, most open fields and vacant lots have been disced, apparently regularly, and this management greatly reduces the possibility for most species to utilize these areas for foraging, nesting, or other activities. Most woodlands are disturbed and in close proximity to areas of development or human activity. Therefore, habitats for special-status species within the Project area are sub-optimal, but hold potential for the occurrence of some species nonetheless.

Potential impacts to special status wildlife species that could occur as a result of development within the Project area can be summarized as follows. Similar to impacts to special-status plants, impacts to special-status wildlife species would be greater under Alternatives A and C and less under Alternative B.

- California red-legged frog (CRLF) may be impacted by construction activity in relatively undisturbed riparian and upland areas adjacent to creeks.
- Nesting birds, including a number of special status birds, may be impacted by construction during the breeding season from February to August.
- Bats, including some special status bats, may be impacted by construction activity during critical life stages from November through August.
- The federally listed fish *O. mykiss* may be impacted by development in or near San Lorenzo Creek, near A Street.

<u>Impact 4.3-2 (impacts to special-status wildlife species)</u>. Potentially significant impacts would result to several special-status wildlife species (California red-legged frog, nesting birds, bats and steelhead) under all three Alternatives. Impacts would be greatest under Alternative A and C with fewer impacts likely occurring under Alternative B (*potentially significant impact and mitigation is required*).

The following measures shall be undertaken to reduce impacts to special-status wildlife species to a less-than-significant level. These measures shall apply to all of the Alternatives.

Mitigation Measure 4.3-2a (California red-legged frog). The following steps shall be taken to protect California red-legged frog species within the Project area:

a) **Protocol-level surveys shall be performed in all perennial creeks, reservoirs, and deep pools of water before development occurs in or near these areas within the Project area.**
b) **If red-legged frogs are found, development activities shall avoid these areas and appropriate buffer areas established around such species. The size and location of any buffer shall be determined by a qualified biologist.**
c) **If avoidance is not feasible, as determined by the City of Hayward, red-legged frogs shall be relocated to a suitable alternative protected habitat. Such relocation shall occur pursuant to permits and approvals from appropriate biological regulatory agencies. A monitoring program shall be established to ensure that relocated species will thrive.**

Mitigation Measure 4.3-2b (nesting birds). Clearing of vegetation and the initiation of construction shall be restricted to the non-breeding season between September and January of each year. If these activities cannot be done in the non-breeding season, a qualified biologist (as approved by the City of Hayward) shall perform pre-construction bird surveys within 30 days of the onset of construction or clearing of vegetation. If nesting birds are discovered in the vicinity of a development site, a buffer area shall be established around the nest(s) until the nest is vacated. The size of the buffer would be dependent on the particular species of nesting bird and shall be determined by a qualified biologist.

Mitigation Measure 4.3-2c (pallid bats). Pre-construction bat surveys shall be undertaken prior to grading, tree removal or other construction occurring between November 1 and August 31 of the year. Pre-construction bat surveys shall be undertaken by a qualified biologist (as approved by the City of Hayward) involve surveying trees, rock outcrops, bridges, and buildings subject to removal or demolition for evidence of bat use (guano accumulation, or acoustic or visual detections). If evidence of bat use is found, the biologists shall conduct a minimum of three acoustic surveys between April and September under appropriate conditions using an acoustic detector, to determine whether a site is occupied. If bats are found, they should be excluded from occupied roosts in the presence of a qualified biologist during the fall prior to construction.

Mitigation Measure 4.3-2d (steelhead trout).

a) **The Stormwater Pollution Prevention Plan prepared for individual development projects shall include specific measures to avoid sedimentation in San Lorenzo Creek and its tributaries.**
b) **A riparian corridor shall be created and preserved around San Lorenzo Creek to minimize impacts to steelhead. The precise location, width and activities within such**

corridors shall be approved by a qualified biologist approved by the City of Hayward.

Impacts to wetlands and "other waters"

The Project area contains approximately 6 acres of wetland areas and approximately 3.6 linear miles of perennial to seasonal creeks potentially within the jurisdiction of the Corps under Section 404 of the Clean Water Act and RWQCB under the Porter Cologne Act and Section 401 of the Clean Water Act. The Project area also contains approximately 74 acres of riparian oak/bay forest, some or all of which is potentially within the jurisdiction of CDFG under Section 1602 of the State Fish and Game Code. Jurisdictional wetland delineations and mapping of riparian vegetation under jurisdiction of CDFG will be necessary to establish more precise locations and acreage of these sensitive communities.

Depending on the proposed impacts, permits may be required from the Corps and RWQCB for impacts to wetlands and waters. A 1602 Streambed Alteration Agreement (SAA) is required from CDFG for impacts to creeks, creek banks, and riparian areas. Mitigation plans including success criteria and long-term monitoring requirements will also likely be required.

Due to the extensive disturbances that have occurred to all streams and wetland seeps downstream in more urban areas, it is recommended that the riparian and wildlife corridors be the highest priority for protection in future land use plans for the Project area. Although non-native annual grasslands are not considered a sensitive community, several grassland areas in the Project Area provide valuable transitional habitat and buffers around riparian corridors. The areas listed below are also less disturbed by fuel reduction and grazing management and have a higher potential to support native and special status plants and wildlife. These grasslands include the area from Harder Road to Calhoun Street, which surround the Zeile Creek riparian corridor as well as a smaller unnamed creek directly south of Harder Road.

In addition, the few remaining open spaces between Ward Creek and 2nd Street provide opportunities to enhance this riparian corridor. Several transitional habitat areas of woodland, coastal scrub, and grassland species remain in this zone, although several areas have been disced or invaded by blue gum eucalyptus. The Ward Creek corridor therefore offers opportunities for mitigation and restoration projects, in particular the removal of invasive species that currently threaten the creek and adjoining habitats, including eucalyptus groves and extensive infestations of English ivy, Himalayan blackberry, and cape ivy. The eroding trail along Ward Creek in Hayward Memorial Park also offers an opportunity for mitigation for any proposed impacts to streams in the Project Area, as trail improvements and exotic species removal could reduce current impacts to water quality and the native riparian forest species.

Although each of the three Alternatives depict open space corridors adjacent to major creeks within the Project area, impacts to wetlands and other waters of the U.S. would be greater under Alternatives A and C that include more residential and non-residential development and less open spaces than Alternative B.

<u>Impact 4.3-3 (wetlands and other waters).</u> Development activities on properties within the Project area could have potentially significant direct and indirect impacts on jurisdictional wetlands and other waters of the United States under each of the Alternatives. Direct impacts would include grading and other disturbances of wetlands and indirect impacts would include flows of polluted stormwater runoff into wetlands and other waters (*potentially significant impact and mitigation is required*).

The following measure is recommended to reduce this impact to a less-than-significant level.

<u>Mitigation Measure 4.3-3 (wetlands and other waters)</u>. The following steps shall be taken to protect wetlands and other waters of the U.S.

a) The amendment to the Hayward General Plan shall include a policy or policies requiring retention of appropriate riparian and wildlife corridors adjacent to major creeks that flow through the Project area. The width of corridors shall be based on site-specific biological assessments of each creek.
b) In order to ensure that all jurisdictional wetlands and other waters are identified, formal jurisdictional delineations of wetlands and other waters shall be conducted on a project specific basis as part of the normal environmental review process for specific development projects. Jurisdictional delineations should follow the methodology set forth in the 1987 *U.S. Army Corps of Engineers Wetlands Delineation Manual* and should be submitted to the Corps for verification prior to project development.
c) Future development proposals within the Project area should avoid development on and impacts on identified wetlands and other waters.
d) If avoidance of wetlands or other waters is not possible, then impacts should be minimized to the maximum extent that is practicable. If impacts to wetlands or other waters cannot be minimized and are unavoidable, these impacts should be compensated for by developing and implementing a comprehensive mitigation plan, acceptable to the Corps, CDFG, and RWQCB to offset these losses. It is recommended that mitigation be conducted within the Project area. If this is not possible, then an off-site mitigation area should be selected that is as close to the Project area as possible and acceptable to the resource agencies. Necessary state and federal permits shall be obtained prior to any work within or in close proximity to wetlands or other waters of the U.S.

Wildlife and fish corridors

As identified in the Environmental Setting section of the DEIR, a number of major creeks traverse the Project area in an east-west direction. These include Chabot Creek, Castro Valley Creek, San Lorenzo Creek, Sulphur Creek, Ward Creek and Zeile Creek.

These creeks, and bordering creek banks, provide for migratory corridors for wildlife and fish species.

Development adjacent to creeks could block historic migratory patterns of wish and/or wildlife species. Adherence to Mitigation Measure 4.3-3(a) will ensure that impacts related to blockage or interference with fish and wildlife migratory corridors will be less-than-significant.

Tree impacts

Portions of the Project area contain potentially significant tree resources, including trees that may be protected under the City's Tree Protection Ordinance. In addition to potential violations of City ordinances, loss of heritage trees would impact nesting and roosting special-status bird species that are discussed above.

Impacts to trees would be greater under Alternatives A and C, that would allow a greater amount of development and would provide less open space. Tree impacts under Alternative B would be less, since this Alternative would have less development and more permanent open space.

Impact 4.3-4 (tree resources). Development activities within the Project area could result in loss of heritage and non-heritage trees. Loss of heritage trees would be a violation of the City's Tree Protection Ordinance unless necessary permits are first obtained (*potentially significant impact and mitigation is required*).

The following measure is recommended to reduce this impact to a less-than-significant level.

Mitigation Measure 4.3-3 (tree resources). Tree surveys shall be conducted by a certified arborist on all properties proposed for development and under the jurisdiction of the tree ordinances. Impacts to trees will require removal permits pursuant to the Hayward Tree Preservation Ordinance or the Alameda County Tree Ordinance in County rights-of-way. Replacement trees shall be provided based on the replacement value of protected trees that are removed.

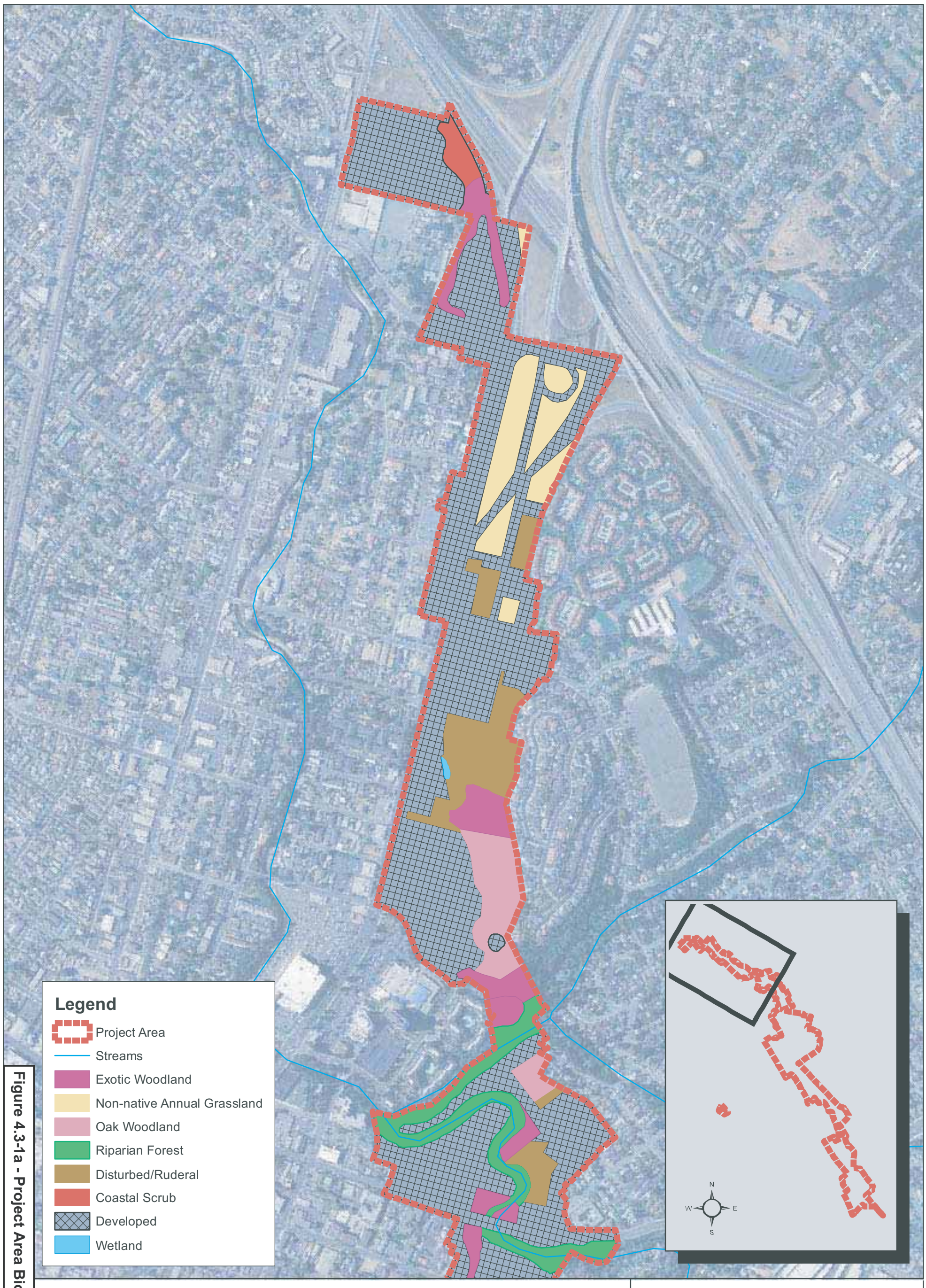


Figure 4.3-1a - Project Area Biological Communities

Figure 4.3-1a - Project Area Biological Communities
Route 238 Bypass Land Use Study

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ENVIRONMENTAL CONSULTANTS

Date: September 2007
Aerial Photo: TerraServer
Map By: Derek Chan
Filepath: L:\Acad 2000 Files\17000\17072\gis\arcmap\VegMaps\VegMap1.mxd

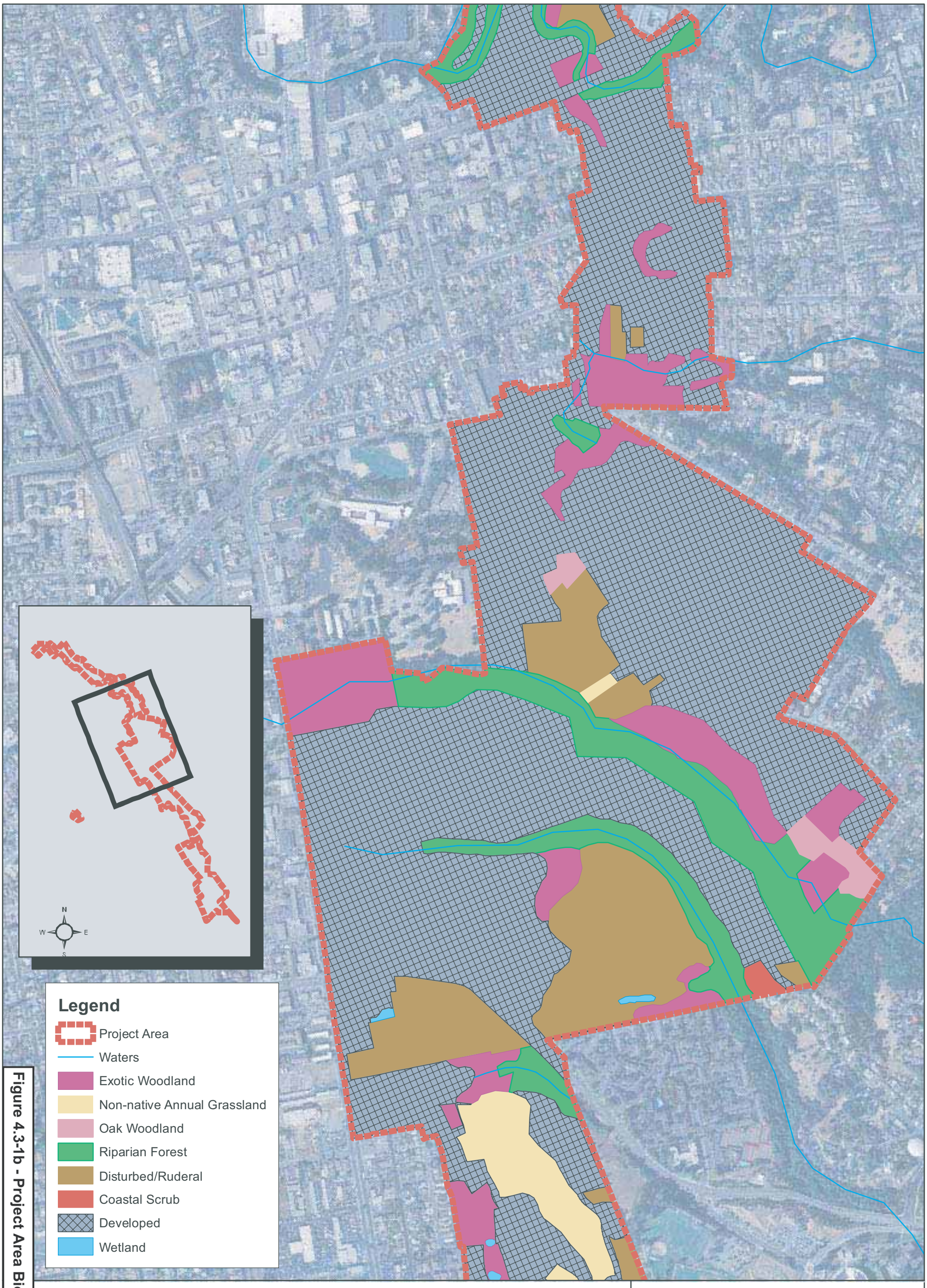

Figure 4.3-1b - Project Area Biological Communities

Figure 4.3-1b - Project Area Biological Communities
Route 238 Bypass Land Use Study

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ENVIRONMENTAL CONSULTANTS

Date: September 2007
Aerial Photo: TerraServer
Map By: Derek Chan
Filepath: L:\Acad 2000 Files\17000\17072\gis\arcmap\VegMaps\VegMap2.mxd

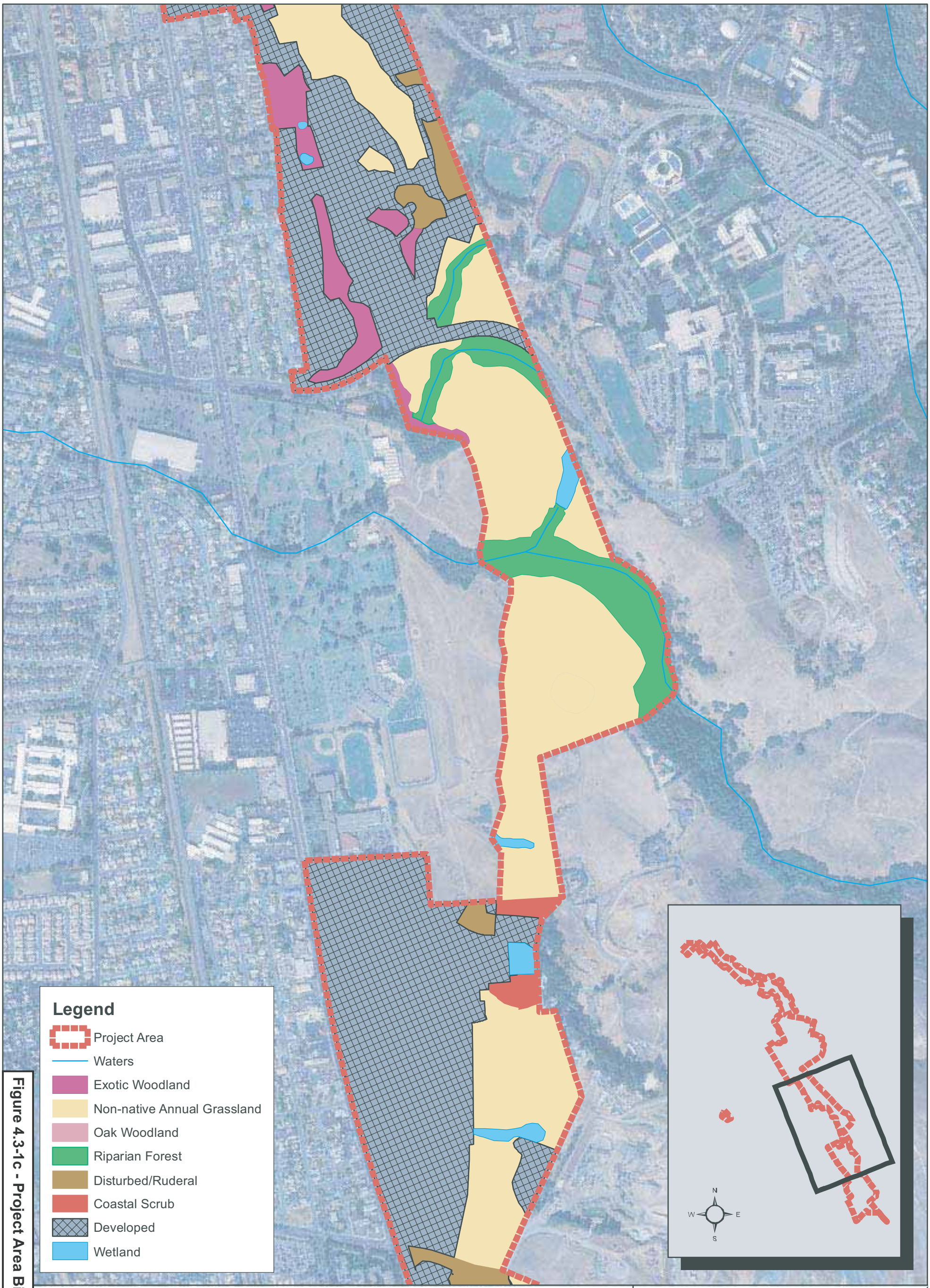

Figure 4.3-1c - Project Area Biological Communities

Figure 4.3-1c - Project Area Biological Communities
Route 238 Bypass Land Use Study

N

0 500 1,000 2,000 Feet

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ENVIRONMENTAL CONSULTANTS

Date: September 2007
Aerial Photo: TerraServer
Map By: Derek Chan
Filepath: L:\Acad 2000 Files\17000\17072\gis\arcmap\VegMaps\VegMap3.mxd

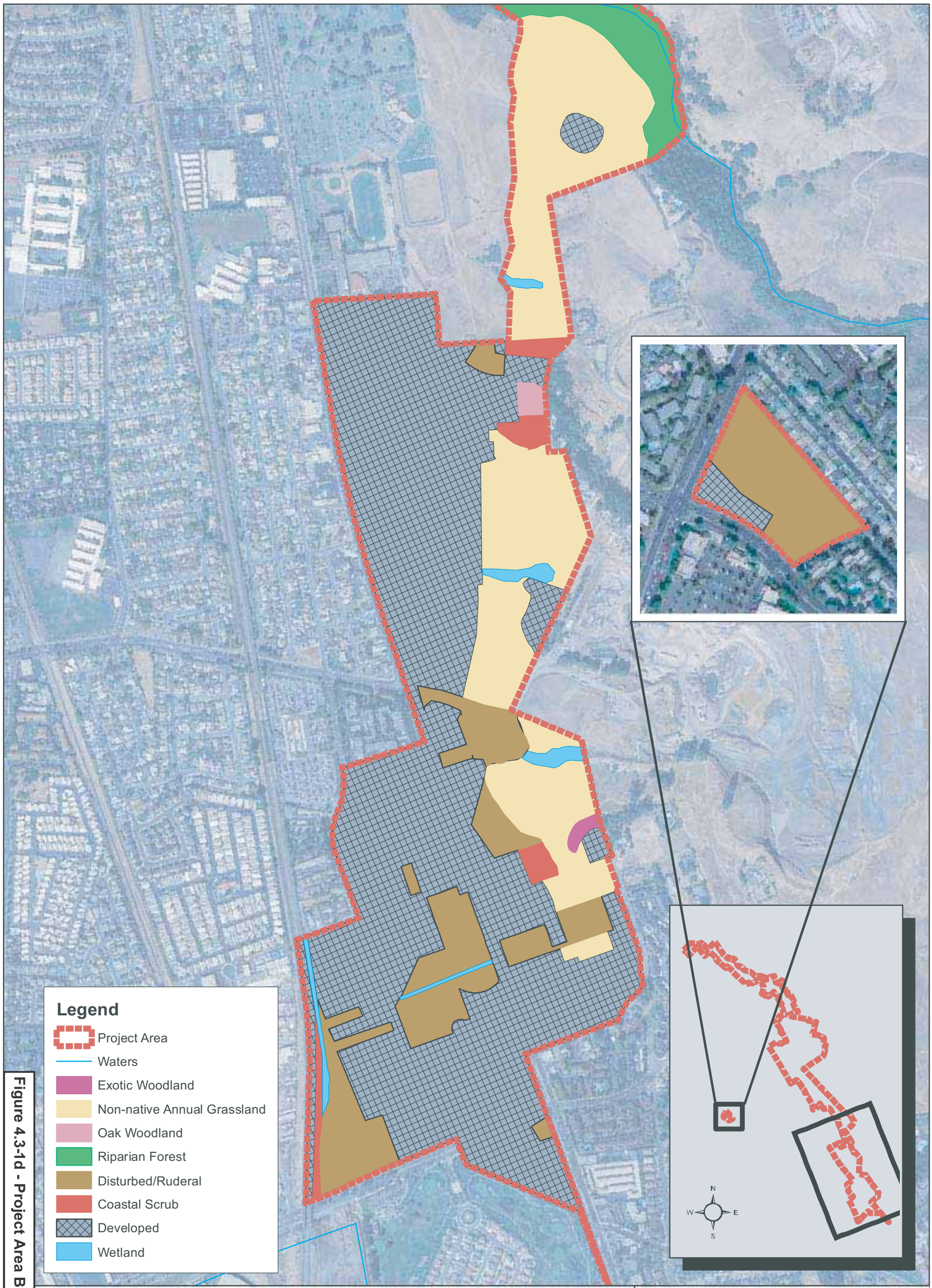

Figure 4.3-1d - Project Area Biological Communities

Figure 4.3-1d - Project Area Biological Communities
Route 238 Bypass Land Use Study

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ENVIRONMENTAL CONSULTANTS

Date: September 2007
Aerial Photo: TerraServer
Map By: Derek Chan
Filepath: L:\Acad 2000 Files\17000\17072\gis\arcmap\VegMaps\VegMap4.mxd

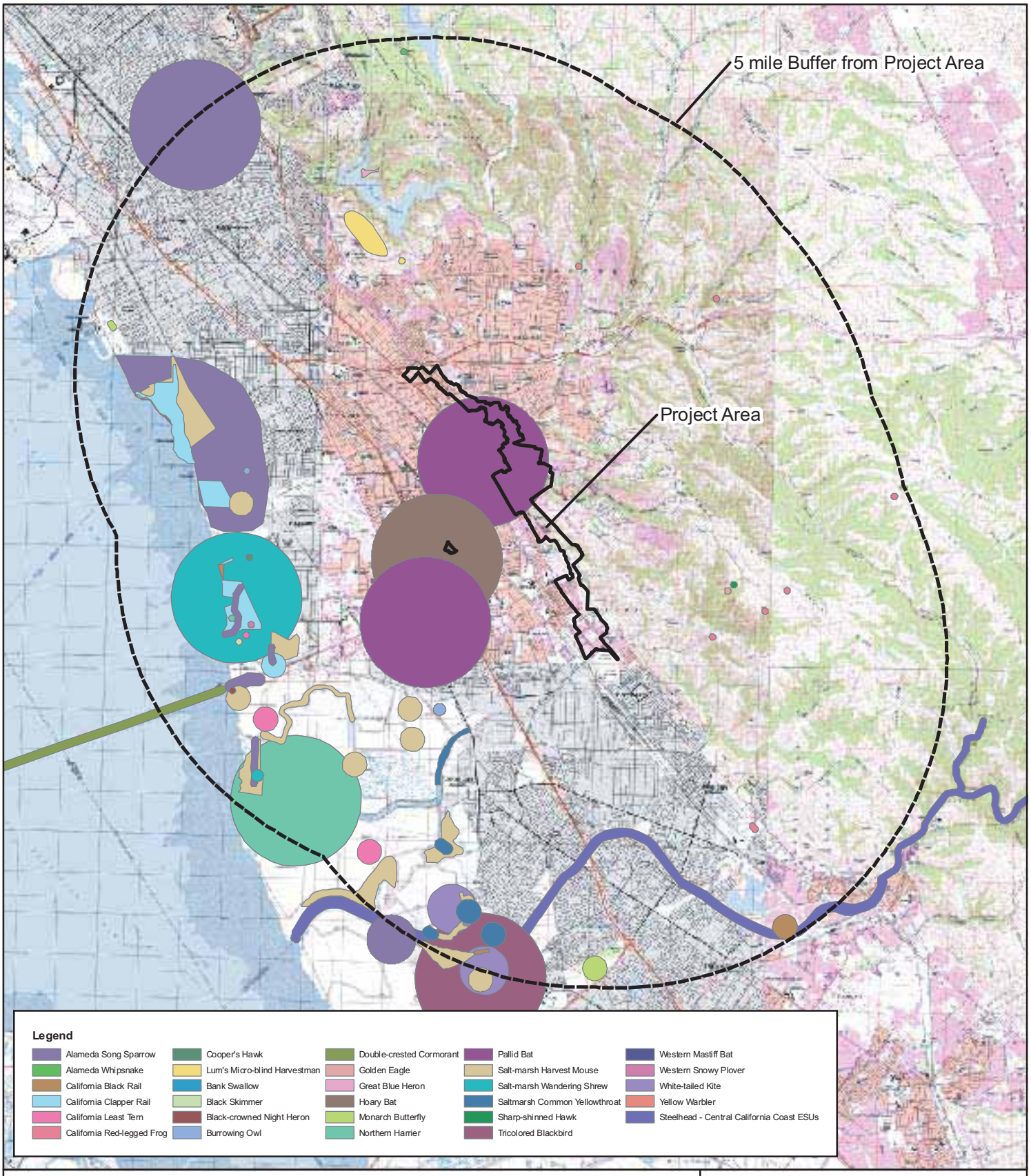

Figure 4.3-2a – Special Status Wildlife Species Within Five Miles of Project Area Route 238 Bypass Land Use Study

N

0 1 2 4 Miles

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ENVIRONMENTAL CONSULTANTS

Date: September 2007
Basemap: USGS Topo Quad
Map By: Derek Chan
Filepath: L:\Acad 2000 Files\17000\17072\gis\arcmap\CNDDB_animals_20070925.mxd

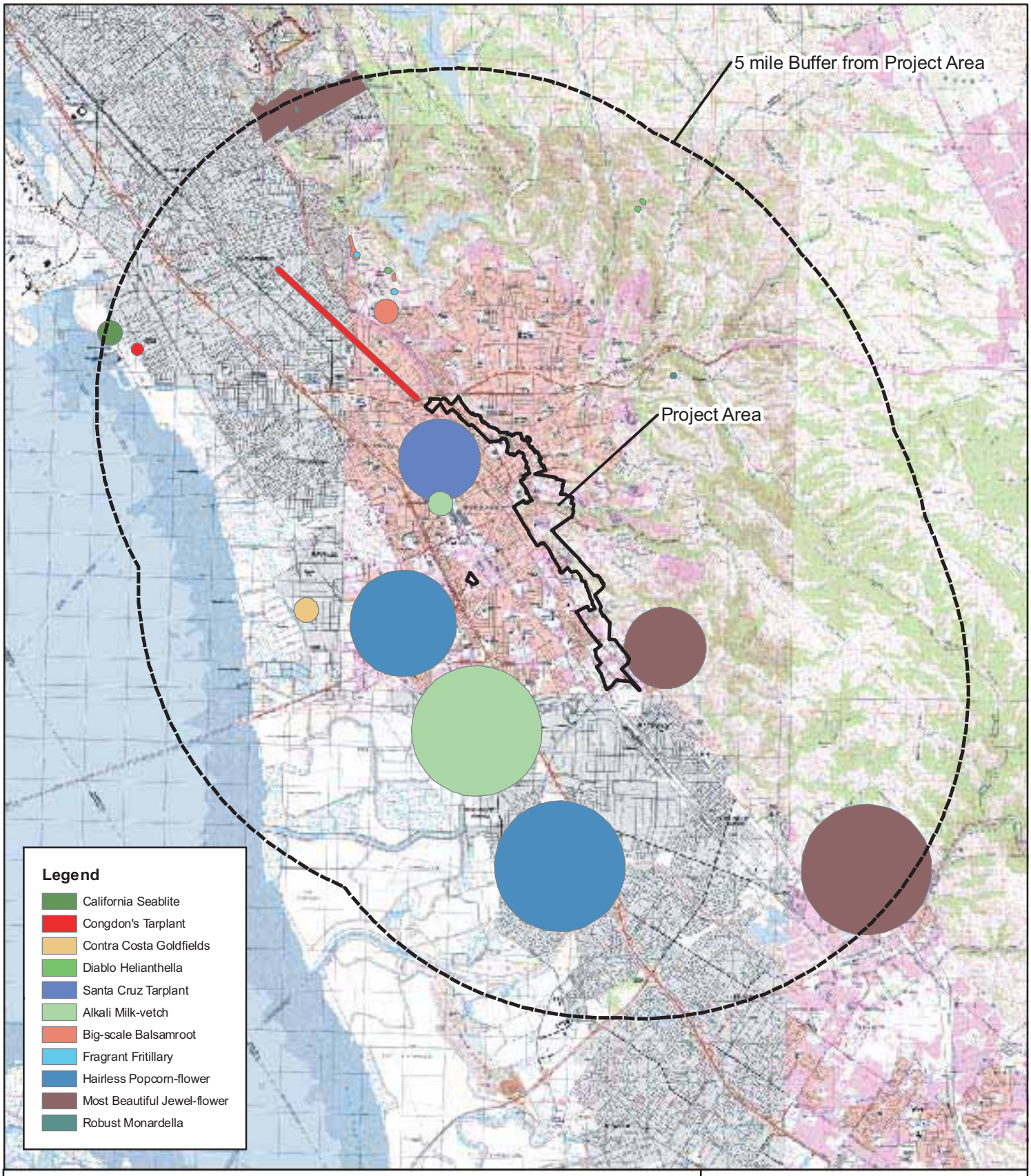

Figure 4.3-2b – Special Status Plant Species Within Five Miles of Project Area
Route 238 Bypass Land Use Study

N

0 1 2 4 Miles

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ENVIRONMENTAL CONSULTANTS

Date: September 2007
Basemap: USGS Topo Quad
Map By: Derek Chan
Filepath: L:\Acad 2000 Files\17000\17072\gis\arcmap\CNDDB_plants_20070925.mxd

4.4 CULTURAL RESOURCES

ENVIRONMENTAL ISSUES

This section of the EIR addresses potential impacts to historical, archeological, Native American and similar cultural resources.

ENVIRONMENTAL SETTING

Background

Before the arrival of Spanish explorers, Hayward and much of the surrounding region was occupied by a Native American group known as the Costanoan. These people lived along the coast and bays as well as the coastal valleys of central northern California. The coastal environment served as a major source for a variety of food and building materials. In the Hayward area, main Costanoan settlements were located where streams emerged from the hills on plains adjacent to the Bay, including the site of downtown Hayward.

Archeological evidence suggests that there has been sustained human use of the general area for at least 5,000 years.

A number of buildings and associated structures from the Victorian era and early 20th century remain, including within the downtown area. Hayward's agricultural and recreational past also manifests itself in the remaining grazing land, equestrian trails, community gardens and nurseries.

Cultural resource records search

As part of this Program EIR, the Northwest Information Center at Sonoma State University was contacted to identify recorded archeological, historical, Native American and other cultural resource sites.

Northwest Information Center records indicate the presence of one Native American archeological site within the Project area. This is P-01-001795, a large former settlement that includes burials. Given the size and number of properties included in the Project area and the presence of a number of intermittent and perennial creeks transecting the area, there is a high potential that other unrecorded Native American and/or cultural resource sites may exist within or adjacent to the area.

Standard measures are set forth in the Hayward General Plan and other City project procedures to protect buried archeological, historic and/or Native American resources should these be discovered during grading and construction activities. These measures require that if such resources are found, grading operations shall be halted and the resources are evaluated by a qualified professional. If necessary and based on recommendations of the professional, a detailed

site-specific mitigation plan is required to be formulated and implemented prior to recommending grading.

Historic structures

Based on the historic records search completed by the Northwest Information Center and the Final Environmental Impact Statement/Report for the Route 238 Hayward Bypass Project (2000), the following recognized historic structures exist within or near the Project area:

- 1436 B Street (residence)
- 1465 B Street (residence)
- 1444 C Street (residence)
- 22588 Chestnut Street (residence)
- 22589 Chestnut Street (residence)
- 1233 D Street (residence)
- 1329 D Street (residence)
- 22824 2nd Street (residence)
- 24077 2nd Street (residence)

The Draft EIR for the General Plan Update ((2001) identified potentially significant architectural resources in two areas within or adjacent to the Project area. One of the areas is located north of E Street and west of Foothill Boulevard. This area contains the remnants of the historic core of Hayward and contains the largest concentration of Victorian houses in the City as well as numerous houses from the early 20th century, including colonial revival, craftsman, bungalow, Spanish colonial revival and others. These houses are located on A, B, C and D Streets and nearby side streets.

A second area containing historic houses is located east of Mission Boulevard south of E Street. A subdivision of view homes has been constructed south of the Cal State East Bay campus and several streets branching off of Highland Boulevard near Mission Boulevard.

No sites within the Project area are listed in the National Register of Historic Places or are listed on the California Register of Historic Resources.

Regulatory framework

Hayward General Plan. The Hayward General Plan contains the following policy and related strategies related to cultural resources.

- The city's image through identification and preservation of historic resources (*Community Facility and Amenities Policy 7*)
  * Seek landmark status for valued structures and sites where preservation is deemed feasible and promote the acquisition of historic sites and parks where appropriate (*Strategy 3*)`

* Encourage rehabilitation of valued buildings and sites and provide information on architectural styles, renovation techniques, federal and state tax benefits and other financing sources (*Strategy 4*)
* Encourage adaptive reuse of Victorians and other vintage buildings as professional offices, galleries, shops, lodgings or venues for special events (*Strategy 5*)
* Utilize zoning regulations, design guidelines and other development review standards to protect the character of historic districts and sites, and increase the visibility of these sites with appropriate signage and landscaping and alignment of roads and paths where appropriate (*Strategy 7*)

Upper B Street Neighborhood Plan.

- Protect and enhance the neighborhood's historic character (*Policy 11*)

City of Hayward Historic Preservation Program

The City adopted an Historic Preservation Ordinance in 1989. This Ordinance provides for the designation of historic structures, sites or districts and outlines procedures for approval of alterations and demolition of significant structures.

The City of Hayward is presently updating this Ordinance. It is anticipated that the update will include policies and procedures for officially designating historic structures. As a part of the update process, a new list of potentially historic structures and resources in the community will be identified. It is expected that the program will be completed in September 2009. The Historic Preservation Program will include amendments to the Ordinance that will provide for the preservation and acceptable removal of historic structures.

STANDARDS OF SIGNIFICANCE

The Project, or follow-on construction based on the approved project, would have a significant impact if it would cause a substantial adverse change in the significance of a historical resources, as defined in Section 15064.5 of the CEQA Guidelines.

ENVIRONMENTAL IMPACTS

Historic resources

Based on information contained in the General Plan EIR, the Northwest Information Center records search and the 2000 Route 238 Bypass EIR/EIS, approval and development of more intensive land uses within the Project area under any other Alternatives could affect identified historic resources or resources which may be eligible for state or federal listing. These resources are identified in the Environmental Setting section of this DEIR. Impacts could include removal of potentially significant dwellings and/or allowing incompatible land uses adjacent to such resources.

These potentially significant impacts would occur under all of the three Alternatives.

<u>Impact 4.4-1 (historic resources)</u>. Future development that could be allowed under any of the Alternatives could result in removal of historic dwellings and/or other historic structures or by allowing incompatible land uses near such resources *(potentially significant and mitigation is required).*

The following measure shall be undertaken to reduce this impact to a less-than-significant level.

<u>Mitigation Measure 4.4-2 (historic resources)</u>.

a) **Specific development proposals that involve any structure older than 45 years shall be reviewed by the Hayward Planning Division to ensure consistency with the City's Historic Preservation Program and applicable CEQA Guideline provisions. If substantial changes to a historic resource is proposed, modifications may be required in the design of such project to ensure consistency with the Historic Preservation Program.**

b) **Future construction adjacent to any identified historic structure shall be complementary to the historic structure in terms of providing appropriate setbacks, consistent design and use of colors, as determined by the Hayward Planning Division.**

4.5 GEOLOGY AND SOILS

ENVIRONMENTAL ISSUES

This section of the DEIR addresses the potential for seismic-related hazards and landslides.

Information contained in this section is based on information contained in the General Plan Update EIR, the 2003 Mission-Garin Annexation EIR, the 2000 Route 238 Bypass EIR/EIS and other information presented to the City of Hayward.

ENVIRONMENTAL SETTING

Regional geologic and topographic conditions

Hayward is located on the eastern side of San Francisco Bay, a region of varied geographic composition and topographic elevations. Hayward contained three distinct geologic zones: properties near the Bay in the western portion of the community (the baylands), the major urbanized portion of the community below the elevation of 500 feet above sea level (Bay plain) and the Hayward Hills, which are part of the Diablo Range and have elevations up to 1,500 feet in the eastern portion of Hayward.

The Project area is generally located above the Bay plain area of the community in the foothills. The area exhibits minimal slope conditions in the northerly portion of the area, adjacent to Foothill Boulevard, but transitions to moderate to steep topography south of Grove Way. Between Grove Way immediately south of 2nd Street to approximately 2nd Street, the Project area is generally flat; however, a former large quarry north of Carlos Bee Boulevard contains steep slopes. South of Carlos Bee Boulevard, the Project area has moderate to steep western facing slopes extending to Mission Boulevard. West of Mission, the Project site is generally flat.

Seismic hazards

The Project is located within the seismically active San Francisco Bay Region. A number of major earthquake faults in the region are capable of generating strong earthquakes (magnitudes of 6.0 + on the Richter scale). Major earthquake faults include the San Andreas (approximately 20 miles to the west), Hayward (within portions of the Project area) and Calaveras (approximately 10 miles to the east). A moderate to strong seismic event on the Hayward fault is expected to generate the strongest ground shaking in the project and surrounding area. The East and West Chabot fault traces, located east of the Project area, are currently defined as inactive and are believed to be of ancient local faulting.

Recent data gathered by the United States Geological Survey suggest a 32 percent probability of a 6.7-magnitude earthquake on the Hayward fault by the year 2030. A major earthquake with an 8.0 + magnitude on the Bay area segments of the San Andreas Fault is expected every 100 years. **Figure 4.5-1** indicates the presence of a portion of the Hayward Fault through the Project area, in

an approximate north-south direction. In the northerly portion of the Project area, the Hayward Fault is adjacent to Mission Boulevard. South of Jackson Street, the fault extends in a westerly direction. The Hayward Fault extends through three portions of the Project area. These include portions of the north, central and southern portions of the Project area, which are mapped on **Figure 4.5-1**.

The Figure also shows the boundaries of the State Earthquake Fault Zone, which is one of several zones established around active faults throughout California. An active fault is defined as a fault that has ruptured within the last 11,000 years. The zones were established as required by the Alquist-Priolo Earthquake Fault Zoning Act, whose main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults.

Potential seismic hazards within the Project area include moderate to strong groundshaking and ground rupture. The degree of hazard depends on the location of the seismic epicenter, the magnitude and duration of groundshaking, the nature of topography, the type of building construction and groundwater conditions.

Landslide potential

Portions of the Project area are relatively steep and may be prone to landsliding or seismically induced slope instability. Based on information shown in draft Seismic Hazard Zone maps prepared by the State of California (see **Figure 4.5-1**), several portions of the Project area are shown in areas subject to earthquake-induced landslides. However, no portions of the Project area are identified as being subject to liquefaction. Construction of residential projects of four or more units will be required to investigate and mitigate such hazards identified on the Seismic Hazard Maps.

The General Plan Update EIR notes that the rate of soil creep along the Hayward Fault is approximately 2 inches per every 10 years, which is one of the highest rates of fault creep in the world. Fault creep results in damage to roads, sidewalks, curbs and other permanent structures.

Regulatory framework

General Plan. The following General Plan policies and strategies from the Conservation and Environmental Protection Chapter deal with minimizing seismic and geotechnical risk.

- Seek to minimize risks from geologic and seismic hazards in the siting and design of development. (*Policy 5*)

    * Continue enforcement of the seismic safety provisions of the Alquist-Priolo Act and the Building Code to minimize earthquake-related hazards in new development, particularly as they relate to high occupancy structures or buildings taller than 50 feet in height. (*Strategy 5.1*)
    * Work with other agencies to ensure that electric transmission lines, water supply systems, wastewater collection systems, gas mains and oil transmission lines crossing fault lines include provision for automated shut-off valves, switches and equipment

needed to restore service in the event of a major fault displacement. (*Strategy 5.3*)

* Assume that any site within 50 feet of any fault zone is underlain by an active fault trace until proven otherwise, and prohibit placement of structures for human occupancy across such trace. (*Strategy 5.4*)

The Land Use Element contains the following goals and strategies.

- Design hillside development to be sensitive to the maintenance of a natural environment through retention of natural topographic features such as drainage swales, streams, slopes, rock outcroppings and natural plant formations. (*Policy 9*)
  * Avoid development on unstable slopes, wooded hillsides and creek banks. (*Strategy 2*)
  * Respect natural topography in street layouts and require streets to be only as wide as necessary for public safety and traffic flow in order to minimize grading and disruption of ground cover. (*Strategy 3*)

STANDARDS OF SIGNIFICANCE

The following standards of significance are used to assess potential environmental impacts related to geological, landform and topographic issues of the proposed project:

- Exposure of people and/or property to the risk of harm from geological hazards and/or soil or seismic conditions. This would include surface rupture, strong seismic ground shaking and seismic-related ground failure, including liquefaction and landslides;
- Presence of an Earthquake Fault Zone (formerly Alquist-Priolo Seismic Study Zone), an active fault or an area characterized by surface rupture that could be related to fault activity;
- Development on a soil type that is unstable, or that would become unstable as a result of project implementation, and/or that could potentially result in on- or off-site landslides, subsidence, liquefaction or collapse.

ENVIRONMENTAL IMPACTS

Should the proposed Project be approved and implemented, the following environmental impacts are anticipated: seismic hazards related to ground displacement due to rupture, ground deformation due to fault creep and seismic ground shaking and the potential for landslide impacts of future dwellings and related improvements.

Seismic fault rupture and creep

As noted in the Environmental Setting section, the Bay area is one of the most seismically active areas in the world. The Project area contains a portion of the Hayward Fault running in a north-south direction through the area. Development within the Project area would expose additional people and improvements to seismic risk. Two types of potential fault-related impacts could be expected: ground displacement due to fault rupture and ground deformation due to fault creep.

The risk of ground displacement due to seismic fault rupture to future buildings and residents and visitors to the Project area is anticipated to be a significant impact, given the presence of the Hayward fault through a portion of Project area. A related hazard is fault creep, which is a slow, persistent movement of the ground that results in breakage or bending of buildings, fences, utility lines, roads and other structures.

Although the Hayward Fault trace has been extensively investigated and mapped through a portion of the Project area, including much of the La Vista Quarry property and the McKenzie property, the precise location of the Hayward Fault throughout the remaining properties that constitute the Project area are estimated but the precise locations not specifically known. Impacts related to seismic fault rupture and creep would be greatest under Alternative A, which includes the highest number of dwellings and non-residential square footages. Land uses proposed under Alternative A also includes Medium Density Residential land uses on the south of Carlos Bee Boulevard and north of Eden Greenway that includes a portion of the Hayward Fault and a Low Density Residential land use designation on the easterly terminus of Calhoun Street that is also underlain by a portion of the Hayward Fault and/or suspected fault traces.

Impacts related to seismic hazards would be slightly less for Alternative C than Alternative A, since fewer dwellings and non-residential square footage is proposed under this Alternative. Alternative C includes Medium Density Residential development on the south side of Carlos Bee Boulevard at the Eden Greenway, similar to Alternative A. Also, similar to Alternative A, Alternative C proposed Low Density Residential uses at the eastern terminus of Calhoun Street.

Alternative B would have the fewest and least severe impacts with regard to seismic hazards. This Alternative proposes the fewest number of dwellings and non-residential development in comparison to the other two Alternatives. Alternative B proposes Limited Open Space for the site on the south side of Carlos Bee Boulevard and north of Eden Greenway and a combination of Limited Open Space and Low Density Residential uses for the parcels at the eastern terminus of Calhoun Street.

In addition to impacts to structures, ground fault displacement due to fault rupture could damage future roadways and utility facilities constructed within the Project area to serve new development. Depending on the need during emergency conditions for future roads and/or utilities to serve residents within the project area lying east of the Hayward Fault, this would be a potentially significant impact.

Similarly, fault creep in this portion of Hayward has been identified in the General Plan Update EIR as a significant impact. Fault creep could cause gradual, but potentially significant, damage to a wide range of structures built within the Project area.

It is commonly acknowledged and recognized by State law that maintaining a 50 foot setback from fault traces for habitable structures will reduce risks to human life associated with fault rupture and creep to acceptable levels.

Impact 4.5-1 (seismic fault rupture and fault creep). A major earthquake on the Hayward Fault or other nearby faults could result in ground fault rupture within the Project area

with the potential to damage or destroy existing and future dwelling units, roads, utilities and other structures constructed within the project area. The potential for damage to structures roads and utilities related to fault creep around the Hayward Fault has been determined to be significant in the General Plan EIR on a citywide basis (*potentially significant impact and mitigation required*).

The following mitigation measure is proposed to reduce significant effects of fault rupture and fault creep to an acceptable level.

Mitigation Measure 4.5-1 (seismic fault rupture and fault creep). Site-specific geologic fault investigations shall be undertaken for all new individual development projects under any of the Alternatives within the State-defined Earthquake Fault Zone. Each investigation shall include a confirmation that new habitable structures would not be placed on or within 50 feet of an active fault trace, as defined by state and local regulations. Additionally, all new dwellings, roads and utility lines shall be subject to site-specific geotechnical evaluations with a requirement that all future utility lines that cross faults be fitted with shut-off valves. Implementation of these evaluations shall be required to ensure consistency with the Uniform Building Code and all other applicable seismic safety requirements.

Seismic ground shaking

Future movement along the Hayward Fault or other faults within the region would result in the exposure of people and structures to potentially significant adverse impacts, such as the risk of loss, injury or death caused by strong ground shaking.

The impact of seismically induced ground shaking within the Project area would range in severity depending on the number of structures and associated resident population and visitors to the project area as well as the magnitude and type of seismic event. Alternative A would result in the highest potential impact since the greatest number of residential dwellings and non-residential square footage would be allowed. Alternative C would have slightly less impacts with respect to seismic ground shaking since fewer residences and non-residential development is proposed. Alternative B would result in the least impacts with regard to seismic ground shaking, since the fewest number of dwellings and non-residential space would be constructed with the greatest amount of undeveloped land remaining.

Impact 4.5-2 (seismic ground shaking). During a major earthquake along a segment of the Hayward Fault or one of the other nearby faults, moderate to strong ground shaking can be expected to occur within the Project area. Strong shaking during an earthquake could result in damage to buildings, roads, utility lines and other structures with associated risk to residents, employees and visitors in the area (*potentially significant impact and mitigation required*).

The following mitigation measure is recommended to reduce this impact to a less-than-significant level.

<u>Mitigation Measure 4.5-2 (seismic ground shaking).</u> Site-specific geotechnical investigations shall be required for each building or group of buildings (such as in a subdivision), roads and utility lines constructed in the Project area. Investigations shall be completed by a geotechnical engineer registered in California or equivalent as approved by the City. Design and construction of structures shall be in accordance with the recommendations contained in the reports. Generally, such recommendations will address compaction of foundation soils, construction types of foundations and similar items. Implementation of these evaluations shall be required to ensure consistency with the California Building Code and all other applicable seismic safety requirements.

Seismic ground failure and landslides

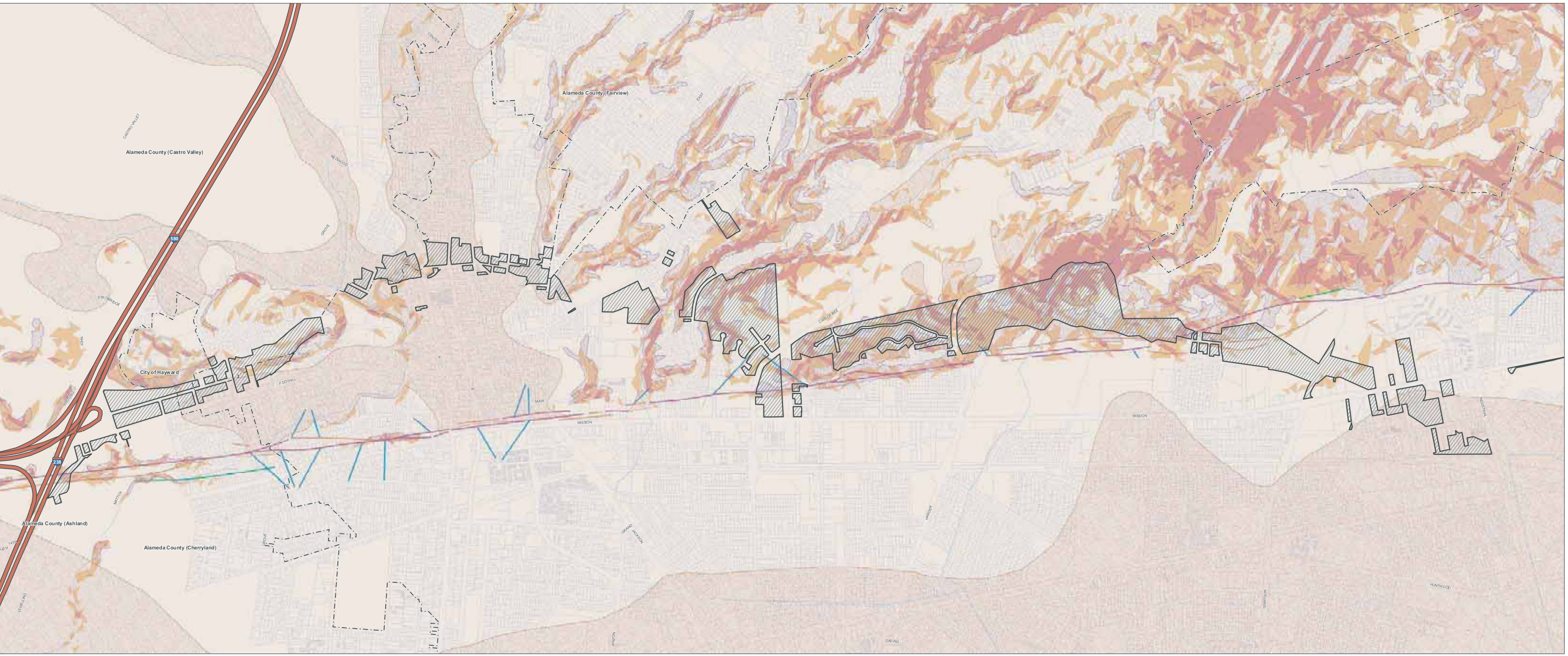
Seismically-induced ground failures, which are secondary seismic effects related to soil and bedrock conditions, could occur near buildings and other facilities, such as roads, resulting in injury to people and damage to structures and other improvements.

In addition, given the relatively steep slopes in portions of the Project area, including areas within the former quarry site north of Carlos Bee Boulevard and other moderate to steeply sloping properties within the Project area there is a possibility of landslides, even under non-seismic conditions. Such non-seismic landslides could result in damage to dwellings, roads and other improvements. Similar to anticipated impacts for seismic ground shaking, impacts related to ground failure, both seismic and non-seismic, would be most severe under Alternative A, which proposes the highest number of dwellings and non-residential square footage, and the least severe under Alternative B, which has the most open space and the least number of dwellings located on moderate to steeply sloping terrain.

<u>Impact 4.5-3 (ground failure and landslides</u>). Damage to structures and other improvements within the Project area could occur from landslides and seismically induced ground failure, resulting in damage to improvements and harm to project area residents and visitors (*potentially significant impact and mitigation required*).

The following mitigation measure is recommended to reduce this impact to a less-than-significant level

<u>Mitigation Measure 4.5-3 (ground failure and landslides</u>). Site-specific geotechnical investigations required as part of Mitigation Measure 4.5-2 shall also address the potential for landslides, including seismically induced landslides and include specific design and construction recommendations to reduce landslides and other seismic ground failure hazards to less-than-significant levels. Recommendations included within site-specific geotechnical investigations shall be incorporated into individual grading and building plans for future development.



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

LEGEND

- Liquefaction Zone
- Landslide Zone
- Caltrans Property
- City Limits
- I-238 Freeway
- Streams

Hayward Fault Traces

- Accurately Located Fault Traces
- Approximately Located Fault Traces
- Concealed Fault Traces
- Inferred Fault Traces

Slope Grade

- 0%-15%
- 15%-25%
- >25%

Figure 4.5-1 - Slope Characteristics and Fault Traces

Route 238 Bypass Land Use Study

Date: 10/1/2007

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

0 500 1,000 2,000 Feet

4.6 HAZARDS AND HAZARDOUS MATERIALS

ENVIRONMENTAL ISSUES

This section of the EIR addresses potential soil, groundwater and structural contamination. Information contained in this section is based on data taken from case file documents of the Hayward Fire Department and the California Department of Toxic Substances Control.

ENVIRONMENTAL SETTING

Identified hazardous sites

A recent review of the listing of hazardous sites maintained by the State Department of Toxic Substances Control (DTSC) for Alameda County (the "Cortese List") revealed no such sites within the Project area as of September 12, 2008.

The Hazardous Materials Office of the Hayward Fire Department lists the following open site contamination cases within or adjacent to the Project area:

Table 4.6-1.Identified Contaminated Sites Near Project Area

Address	Site Name
1391 B Street	AT &T
21494 Foothill Blvd.	Union 76 station
21501 Foothill Blvd.	Beacon Station (closed)
21995 Foothill Blvd.	Chevron
28806 Mission Blvd.	La Vista Quarry
29234 Mission Blvd.	Pestana Property

Source: Hayward Fire Department, 2008

Other sites within or adjacent to the Project site may also contain contaminants but have not been reported to the Hayward Fire Department or other appropriate regulatory agencies.

Other sources of hazardous materials

Other sources of potential hazardous materials within the project area are anticipated to include lead based paints that may have been used for existing buildings, petroleum products and/or other solvents that are associated with previous land uses and businesses located in the project area. Also, typical building material for many older structures included asbestos for heating and ventilation insulation which are classified as a hazardous material.

Regulatory framework

Storage, handling and documentation of hazardous materials and waste material are governed by federal, state and local regulations designed to protect human health and the environment.

Agencies involved in the enforcement of these regulations include the U.S. Environmental Protection Agency (EPA), the State of California Department of Toxic Substances Control (DTSC), the California Regional Water Quality Control Board (RWCQB), the Bay Area Air Quality Management District (BAAQMD), the Alameda County Department of Environmental Health and the Hazardous Materials Bureau of the Hayward Fire Department.

Federal regulations are contained primarily in the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). State regulations pertaining to hazardous materials are generally equivalent to or more stringent than federal requirements and are regulated in the California Hazardous Waste Control Act and the California Hazardous Substances Account Act.

The Hayward General Plan contains the following policies and strategies dealing with hazardous materials.

- Work with other agencies to minimize risks associated with the use, storage and transport of hazardous materials. (*Policy 9*)

    * Continue implementation of the Hazardous Materials Program and enforcement of ordinances on use and storage of hazardous materials. (*Strategy 9.1*)
    * Maintain a suitable buffer zone between industrial firms involved with hazardous materials and residential uses (*Strategy 9.2*)
    * Continue collection programs for household hazardous toxic wastes and small business generators. (*Strategy 9.4*)

STANDARDS OF SIGNIFICANCE

The proposed project would be considered to result in a potentially significant impact if it would directly or indirectly create a significant hazard to the public or the environment through reasonably foreseeable upset and accident involving the release of hazardous material into the environment.

ENVIRONMENTAL IMPACTS

Demolition and hazardous air emission impacts

Potential impacts could include the release of asbestos containing materials, lead based paints and other hazardous materials during demolition of existing structures, as older buildings and related improvements are removed to allow for new development.

Impacts related to demolition of existing structures would be greatest under Alternative A, which proposes the greatest number of dwellings and non-residential construction and the smallest amount of open spaces. The fewest impacts related to demolition would result with regard to Alternative B which proposes the fewest number of dwellings and non-residential floor space and would contain the greatest amount of open space.

Demolition of existing structures could potentially result in a health hazard to construction employees and visitors to the area. Removal of older utility installations within the project area could also release potentially hazardous materials into the atmosphere. As identified in the South Hayward BART/Mission Boulevard Concept Design Plan EIR, there is a possibility of naturally occurring asbestos in the soil.

These would be potentially significant impacts.

Impact 4.6-1 (demolition and hazardous air emissions). Demolition and deconstruction of existing buildings, utility facilities and other older structures could release hazardous and potentially hazardous material into the atmosphere including asbestos containing materials, lead-based paints and other hazardous substances, potentially resulting in health hazards to construction employees and local visitors and residents. These is also a potential for naturally occurring asbestos within the portions of the project area east of Mission Boulevard and south of Tennyson Road (*potentially significant impact and mitigation required).*

The following mitigation measure is recommended to reduce potential demolition activities and release of hazardous air-borne substances to a less-than-significant level.

Mitigation Measure 4.6-1a (demolition and hazardous air emissions). Prior to commencement of demolition or deconstruction activities within the project area, project developers shall contact the Alameda County Environmental Health Department, Bay Area Air Quality Management District, Department of Toxic Substances Control and the Hazardous Materials Division of the Hayward Fire Department, for required site clearances, necessary permits and facility closure with regard to demolition and deconstruction and removal of hazardous material from the site. All work shall be performed by licensed contractors in accord with State and Federal OSHA standards. Worker safety plans shall be included for all demolition or deconstruction plans.

Mitigation Measure 4.6-1b (release of asbestos). Prior to commencement of grading activities within the project area, project developers shall conduct investigations by qualified hazardous material consultants to determine the presence or absence of asbestos containing material in the soil. If such material is identified that meets actionable levels from applicable regulatory agencies, a remediation plan shall be prepared to remediate any hazards to acceptable levels, including methods of removal and disposal of hazardous material, worker safety plans and obtaining necessary approvals and clearances from appropriate regulatory agencies, including but not limited to the Hayward Fire Department, Department of Toxic and Substances Control and Bay Area Air Quality Management District.

Soil and groundwater contamination

Based on information contained in the Environmental Setting section, above, a number of identified contaminated sites exist near the project area (see Table 4.6-1). Future development within the project area could uncover deposits of petroleum products, underground storage tanks, chemicals used by previous site activities and other sources of soil or groundwater pollution.

If these are found in significant quantities at thresholds that exceed state and federal standards, this would be a potentially significant impact to existing and future area residents, employees and visitors. This impact would be greater under Alternative A, since a greater number of residents and visitors would be present within the project area under buildout. Potential soil and groundwater impacts would be somewhat less under Alternative C, which includes less development at buildout and least under Alternative B, which includes the least amount of development.

Impact 4.6-2 (potential soil and groundwater contamination). Development and redevelopment of the properties in the project area could uncover deposits of petroleum products, underground tanks and other substances that could contaminate soil and/or groundwater. Contamination impacts would be greatest under Alternative A with the least impact associated with Alternative B (*potentially significant impact and mitigation required).*

The following mitigation is proposed to reduce this impact to a less-than-significant level.

Mitigation Measure 4.6-2 (potential soil and groundwater contamination). Prior to approval of building or demolition permits, project developer(s) shall prepare a Phase I environmental site analysis and, if warranted by such analysis as determined by the Hazardous Materials section of the Hayward Fire Department or other regulatory agency, a Phase II environmental site analysis shall also be conducted. Recommendations included in the Phase II analysis for remediation of hazardous conditions shall be followed, including contact with appropriate regulatory agencies to obtain necessary permits and clearances. No construction (including grading) shall be allowed on a contaminated site until written clearances are obtained from appropriate regulatory agencies.

4.7 HYDROLOGY AND DRAINAGE

ENVIRONMENTAL ISSUES

This section of the EIR addresses potential impacts related to changes in drainage patterns that could result in on- or off-site flooding, exceed the capacity of downstream drainage facilities or place housing within a 100-year flood hazard area.

ENVIRONMENTAL SETTING

Local and regional drainage

The Project area is located both within and west of the Hayward hills. Several natural drainage channels convey stormwater from upper elevations, from and through the Project area and into larger, regional Alameda County Flood Control and Water Conservation District (ACFCWCD) engineered channels in western Hayward for ultimate discharge into San Francisco Bay. A number of regional drainage facilities exist in the Project area, primarily within creeks and streams.

In addition, since portions of the Project area as well as surrounding properties are urbanized, the City of Hayward maintains localized storm drain facilities within the Project area to collect stormwater for conveyance to regional ACFCWCD facilities.

Flood hazards

Portions of the Project area lie within a 100-year flood zone, including several properties lying east of the BART tracks and along Dixon Street south of Valle Vista Avenue and north of Industrial Parkway are identified as lying within Flood Zone A2, which is within a 100-year flood zone (Flood Insurance Rate Map-FIRM Panel Map No. 065033 0020 E, effective February 9, 2000). The FIRM map also shows that the channelized creeks fall within the 100-year flood hazard area; however, none of the creeks are developed.

Figure 10.1 contained in the General Plan DEIR depicts citywide drainage and flooding conditions. This figure is generally the same as shown on the FIRM map.

Figure 4.7-1 shows those portions of the Project area lying within a 100-year flood zone.

Water quality

New construction in the City of Hayward is subject to water quality requirements imposed as a condition of construction. These regulations implement regional water quality regulations imposed by the San Francisco Bay Regional Water Quality Control Board and are consistent with the National Pollution Elimination Discharge System (NPDES) permit granted to al jurisdictions in Alameda County pursuant to the Alameda County Clean Water Program. New

development projects are required to implement Best Management Practices for both construction and post-construction periods that limit periods during which grading occurs, filtration of stormwater prior to entering public drainage systems and similar requirements.

Regulatory framework

General Plan. The City of Hayward General Plan contains the following applicable policies and strategies related to water quality.

The following policies and strategies relate to flood hazards.

- Cooperate with federal, state and county agencies to develop short- and long-term programs that reduce flood hazards in the city. (*Policy 8*)
  * Implement federal requirements relating to new construction in flood plain areas to ensure that future flood risks to life and property are minimized. (*Strategy 2*)
  * Work with the Alameda County Flood Control and Water Conservation District to ensure that flood control channels are regularly cleaned and maintained. (*Strategy 3*)

STANDARDS OF SIGNIFICANCE

Based on CEQA Guidelines and the Initial Study prepared for this proposed project, development would have a significant impact with regard to hydrology and water quality if it would result in:

- Substantial alteration of the existing drainage pattern in such a manner that would result in substantial erosion or siltation on or off-site, or in flooding on or off-site;
- Substantial increase in the rate or amount of surface water runoff in a manner that would result in flooding on or off the site and that could exceed existing or planned downstream drainage systems;
- Placement of housing within a 100-year flood hazard area (as mapped by the Federal Emergency Management Agency or per similar flood delineation map);
- Placement of structures within a 100-year flood hazard area which would impede or redirect flood flows.

ENVIRONMENTAL IMPACTS

Should the Project be approved and implemented there could be potential increases in the rate and amount of stormwater runoff from the Project area that could exceed the capacity of existing or planned storm drain facilities to safely accommodate such increases. A portion of the Project area lies within a 100-year flood zone that could cause damage to future building and improvements constructed within a flood zone.

Local and regional drainage

Approval of the proposed Project would increase the amount of stormwater runoff generated from the Project area, since approximately eighty percent of the Project area is vacant and stormwater can percolate into the soil.

Intensification of land uses under any of the Land Use Alternatives would add to the amount of impervious surfaces that could increase both the rate and amount of stormwater leaving the site. The ability of downstream drainage facilities to safely accommodate increased flows, especially during intense storm events when the rate of stormwater flows would be the greatest, could be significantly impacted and would be a potentially significant impact.

Impact 4.7-1 (drainage impacts). Construction of land uses under all of the Land Use Alternatives would increase the amount of stormwater leaving the Project area that would impact the ability of downstream local and regional drainage facilities to safely accommodate increased amounts of stormwater resulting in localized flooding (*significant and mitigation required*).

This impact will be reduced to a level of insignificance through adherence to the following mitigation measure.

Mitigation Measure 4.7-1 (drainage impacts). Site-specific drainage plans shall be prepared for all future construction within the Project area prior to approval of a grading permit, or a building permit in the event a grading permit is not required. Each report shall include a summary of existing (pre-project) drainage flows from the project site, anticipated increases in the amount and rate of stormwater flows from the site and an analysis of the ability of downstream facilities to accommodate peak flow increases. The analysis shall also include a summary of new or improved drainage facilities needed to accommodate stormwater increases. Each drainage plan shall be reviewed and approved by the Hayward Public Works Department staff and Alameda County Flood Control and Water Conservation District staff prior to approval of a grading or building permit.

Flood hazards

Portions of the Project area lie within a 100-year flood zone. Construction of future buildings within a 100-year flood hazard zone could result in substantial damage to future buildings and building occupants in the event of a 100-year storm event. This would be a significant impact.

Impact 4.7-2 (flooding impacts). Construction of buildings or other improvements within that portion of the Project area within a 100-year flood hazard area could result in significant impacts to these improvements and to future residents, employees and visitors (*significant and mitigation required*).

This impact will be reduced to a level of insignificance through adherence to the following mitigation measure.

<u>Mitigation Measure 4.7-2 (flooding impacts</u>). Prior to construction within a 100-year flood hazard area, developers of site-specific projects shall either:

a) **Submit a hydrology and hydraulic study prepared by a California-registered civil engineer proposing to remove the site from the 100-year flood hazard area through increasing the topographic elevation of the site or similar steps to minimize flood hazards. The study shall demonstrate that flood waters would not be increased on any surrounding sites, to the satisfaction of City staff.**
b) **Comply with Section 9-4.110, General Construction Standards, of the Hayward Municipal Code, which establishes minimum health and safety standards for construction in a flood hazard area.**
c) **Apply to the City for a Conditional Letter of Map Revision (CLOMR) to remove the site from the FEMA Flood Insurance Rate Map 100-year flood hazard area.**

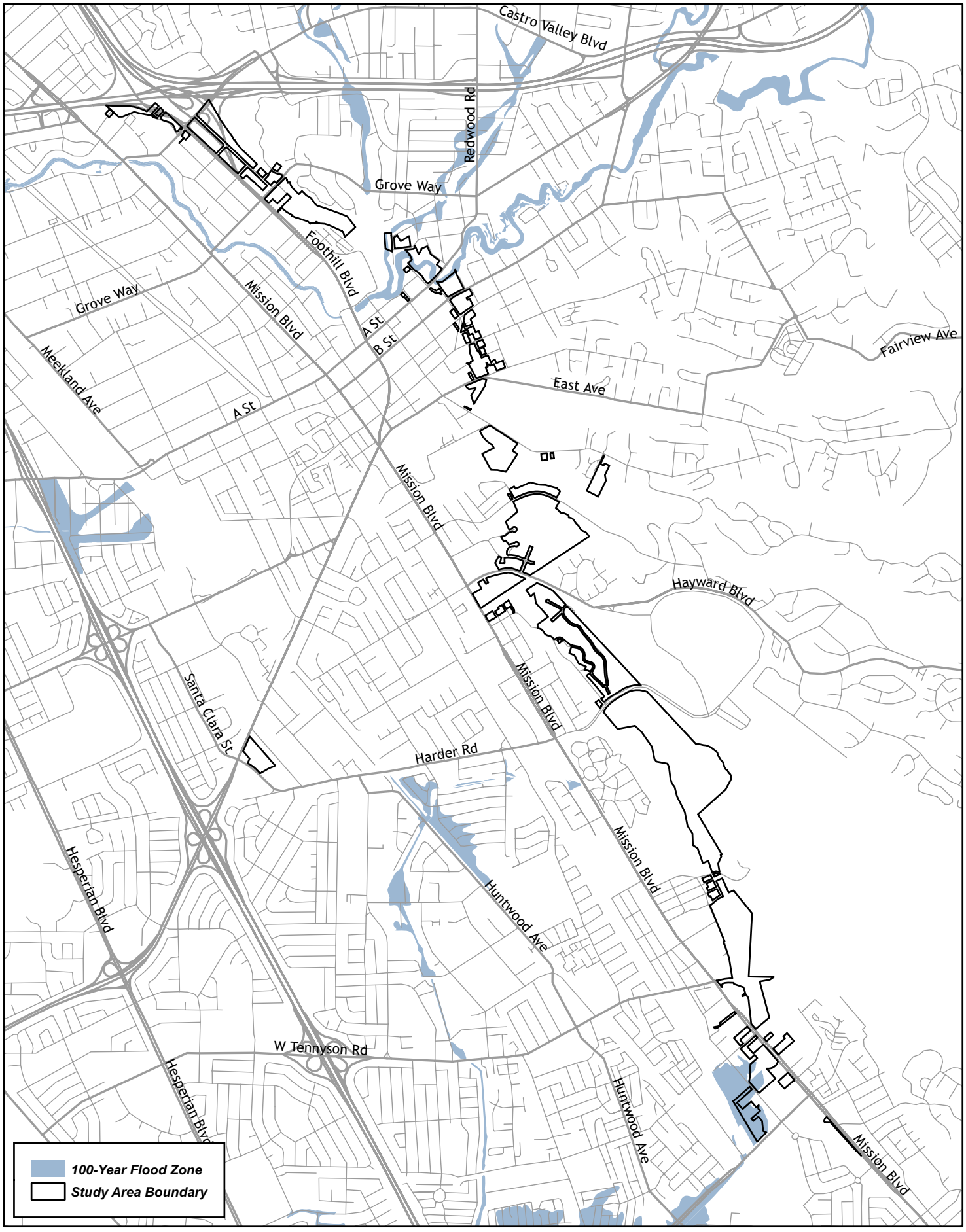


Figure 4.7-1 Flood Hazard Areas

4.8 LAND USE

ENVIRONMENTAL ISSUES

This section addresses potential impacts related to conflicts or inconsistencies with applicable land use plans and policies.

Regulatory framework

Land uses within the project area are governed by a combination of the Alameda County General Plan and Zoning Ordinance, for unincorporated properties, and the City of Hayward General Plan and Zoning Ordinance, for those properties lying within the incorporated limits of Hayward.

Alameda County General Plan. Unincorporated properties located in the northeastern portion of the Project Area are governed by two components of the County's General Plan: The Eden Area Plan and the Castro Valley Plan. These are described below.

> *Eden Area Plan*. The Eden Area Plan was adopted in 1983 and amended through June 1995 to regulate land uses generally located on the east side of Foothill Boulevard north of Grove Way. This component of the County General Plan encompasses unincorporated areas known as Ashland and Cherryland. Properties in this area are owned by Caltrans and planned for the future 238 freeway. The Eden Plan designates this area for "Highway Interchange."
>
> *Castro Valley Plan*. The Castro Valley Plan was adopted in 1985 to govern uses within the unincorporated portion of Castro Valley, generally located northwest of the Project Area. A number of properties located northwest of San Lorenzo Creek along A Street are governed by this Plan. The Plan designates these properties for Medium and High Density residential uses.

Both of the above portions of the Alameda County General Plan are currently being updated. Land Use designations shown in Alternative A reflect proposed County General Plan land use designations.

Alameda County Zoning Ordinance. The County Zoning Ordinance establishes permitted and conditionally permitted land uses for each individual zoning district within the unincorporated portion of Alameda County. The Zoning Ordinance also includes development standards for each district, regulating building intensity, height, setbacks and similar requirements, as well as requiring on-site parking and loading, signs and similar development provisions.

Hayward General Plan: The Hayward City Council adopted an updated General Plan in 2002. Although the General Plan Land Use Map does show future land uses outside of current City limits, these land use designations and associated policies and strategies are only applicable upon annexation to the City of Hayward.

The General Plan is the officially adopted guide for making decisions concerning the development of the community according to desired goals. The General Plan addresses location of various land uses, density and intensity of land use types, location and widths of roads, community appearance standards, health and safety considerations and similar requirements.

Figure 4.8-1 depicts existing City General Plan land use designations within the Project Area. Current General Plan land use designations would allow development of 2,512 dwellings at the mid-point of respective designations and 257,700 square feet of non-residential (commercial, office and similar uses).

Applicable land use policies contained in the Hayward General Plan include:

- Employ sound planning principles to promote a balance of land uses and achieve a vibrant urban development pattern that enhances the character of the city. (*Policy 1*)

- Support higher intensity and well designed quality developments in areas within 1/2-mile of transit stations and 1/4-mile of major bus routes in order to encourage non-automotive modes of transit. (*Policy 2*)

- Promote transit-oriented development in the Mission/Foothill Corridor in order to help relieve regional congestion and create a distinctively attractive commercial boulevard. (*Policy 5*)

- Design hillside development to be sensitive to the maintenance of a natural environment through retention of natural topographic features such as drainage swales, streams, slopes, rock outcroppings, and natural plant formations. (*Policy 9*)

- Maintain Urban Limit Lines in order to retain an attractive, natural setting and foster a distinctive sense of place. (*Policy 10*)

- Seek to achieve more contiguous boundaries to provide for efficient delivery of public services and create a greater sense of community. (*Policy 11*)

Additional land use strategies have also been adopted as part of the General Plan and can be reviewed as part of the full text of the General Plan document.

<u>North Hayward Neighborhood Plan</u>
The North Hayward Neighborhood Plan contains the following land use policies and strategies:

- Request city-wide policies for neighborhood safety and stability. (*Policy A*)

- Support neighborhood character in land use policies. (*Policy B*)
  * Build street appeal of Mission Blvd. (*Strategy B.3*)
  * Establish more consistent Foothill Blvd. land use pattern and theme. (*Strategy B.5)*

- Seek more logical boundaries for City limits *(Policy D)*

Upper B Street Neighborhood Plan
This Neighborhood Plan contains the following polices and strategies relating to land use:

- Recognize existing development in establishing a transition from downtown high intensity areas to low density residential areas. (*Policy 1*)

- Maintain a predominantly single-family residential character with recognition of existing multifamily residential. (*Policy 2*)
  * East of the Route 238 right-of-way, redesignate Medium and High density areas to Low density and zone for single-family development, with the exception of those properties along "B" Street and properties with multifamily development (*Strategy A.2*)

- Recognize the benefit of the mixed residential/commercial corridor along "B" Street. (*Policy 3*)

Mission Foothills Neighborhood Plan
The Mission Foothills Neighborhood Plan contains the following land use policies and strategies:

- Respect environmental limitations. (*Policy A*)
  * Restrict development in unstable hill areas south of Second Street and on Bunker Hill, zoning some unbuilt areas Residential-Natural Preservation. (*Strategy A1*)
  * Setback new development from Ward Creek and Highland Creek to maintain wooded areas and conform with the Alameda County Watercourse Ordinance. (*Strategy A2*)

- Shape residential development for long-term livability. (*Policy C*)
  * Rezone along Mission Boulevard to allow apartment complex development to provide breaks in strip commercial development and t allow residential development and office use. (*Strategy C1*)

- Foster neighborly commercial development (*Policy E*)

Hayward Highlands Neighborhood Plan
This Neighborhood Plan contains the following policy relating to land use:

- Retain the single family character of the Hayward Highlands area by allowing only appropriate residential infill development which is consistent in size, scale and appearance with existing residential structures, and encourage owner-occupied housing (*Policy 1*)

Mission-Garin Neighborhood Plan:
Applicable land use policies contained in this Neighborhood Plan include:

- Encourage a mixture of housing types in the study area. (*Policy 1*)

- A mixture of dwelling units for homeownership and renter occupancy should be encouraged in the study area. (*Policy 2*)

- Consider executive type housing in the study area. (*Policy 3*)

- Residential development should be encouraged to be processed under the Planned Development (PD) District provisions of the Zoning Ordinance. (*Policy 4*)

- Require high quality design and compatibility with natural and man made surroundings during site plan review of new development. (*Policy 5*)

- Multiple family developments should be required to provide buffering when proposed adjacent to single family developments through the use of lower profile structures, open space buffers, and other barriers and screening materials. (*Policy 6*)

- In order to maximize the open space qualities of the study area, encourage future development to be clustered. (*Policy 7*)

- Residential clusters in the hill area should be placed on slopes under 25 percent to preserve the hillsides and to minimize development hazards. Residential clusters in the hill area should be located so as to preserve natural site features such as tree clusters and natural creeks. (*Policy 8*)

- Within Planned Developments, all open space areas including those that are kept in a natural state will be required to be maintained and kept free of litter, debris and/or vandalism. (*Policy 9*)

- Development approvals will be evaluated based on the impact of additional traffic on key intersections in the study area and surrounding areas. (*Policy 10*)

- During environmental review of future development in the hill area, require an archeological/historic resource component which contains research specific to each site. (*Policy 18*)

Mission Boulevard Specific Plan. The City of Hayward plans to commence the Mission Boulevard Specific Plan in the latter part of 2009. This plan will regulate land uses, circulation and similar items consistent with state law.

Hayward Zoning Ordinance: Similar to the County Zoning Ordinance, the City of Hayward Zoning Ordinance regulates land use developments within the incorporated portion of Hayward.

Copies of all the documents referenced above are available at the Hayward Development Services Department during normal business hours. Copies of documents related to Alameda County General Plan designations and policies and the Alameda County Zoning Ordinance are

available for review at the Alameda County Planning Department, 224 West Winton Avenue, Hayward.

STANDARDS OF SIGNIFICANCE

The following criteria have been used to define instances of a significant land use impact if a project would conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project, including but not limited to a general plan, specific plan, zoning ordinance or similar document, adopted for the purpose of avoiding or mitigating an environmental impact.

ENVIRONMENTAL IMPACTS

This EIR analyzes consistency of the proposed project with respect to appropriate regulatory plans.

The proposed project includes consideration of three land use Alternatives that, if adopted by the City of Hayward would replace existing General Plan land use designations with designations as depicted on the Alternative selected by the Hayward City Council.

As noted in the Environmental Setting section current General Plan land use designations allow a mix of low, medium and high density residential uses, commercial, retail and office uses, public and quasi-public and open space uses. At build out, the amount of development at the mid-point of the various designations would be 2,512 dwellings and 257,707 square feet of non-residential square feet. The amount of development that could be allowed at buildout under existing General Plan land use designations would be greater than the amount of development designated on Alternatives B and C. In regard to Alternative A, this would allow the most intensive amount of residential development (3,220 dwellings), and would represent an increase of 705 dwellings at buildout. The amount of non-residential development would be the same as currently allowed under the General Plan.

The anticipated increase of 705 dwellings that could be allowed under Alternative A has been evaluated in other sections of this EIR, including but not limited to traffic and circulation, noise, air quality, use of public services, utilities and others. Impacts related to land use consistency with regard to the residential component of Alternative is therefore anticipated to be less-than-significant.

Prior to final approval and construction of individual development projects within the project area, additional land use entitlements would need to be obtained from the City of Hayward and Alameda County. Such entitlements are anticipated to include subdivision maps, site plan approvals, conditional use permit approvals, and design and/or architectural review approvals. Approvals from other local, state and federal regulatory agencies may also be required, depending on the type and location of each proposed project.

City of Hayward
GENERAL PLAN LAND USE MAP
July, 2008

Route 238 Land Use Study
Study_Area_Boundary

Downtown Hayward
Hayward Executive Airport
Southland Mall
Chabot College
CSU
Garin Regional Park

LEGEND

LAND USE

Residential
- Rural Estate Density (0.2-1.0 units/net acre)
- Suburban Density (1.0-4.3 units/net acre)
- Low Density (4.3-8.7 units/net acre)
- Mobile Home Park (8.7-12.0 units/net acre)
- Limited Medium Density (8.7-12.0 units/net acre)
- Medium Density (8.7-17.4 units/net acre)
- High Density (17.4-34.8 units/net acre)
- Mission Blvd Density (34.8-55.0 units/net acre)
- Station Area Density (75.0-100.0 units/acre)

Commercial
- Retail and Office
- General
- Commercial/High Density Residential

Downtown-City Center
- High Density Residential
- Retail and Office Commercial

Industrial
- Industrial Corridor
- Mixed Industrial

Open Space
- Parks and Recreation
- Limited Open Space
- Baylands

Public and Quasi-Public

CIRCULATION

Rail Transportation
- Railroads
- Rapid Transit
- A Amtrak Station
- B BART Station

Streets and Highways
- Freeways
- Major Arterials
- Minor Arterials

OTHER

Urban Limit Line

0 0.25 0.5 1 Miles

0 1,375 2,750 5,500 Feet

SOURCE:
City of Hayward Community and Economic Development Department

Figure 4.8-1 - City of Hayward General Plan Land Use Designations

4.9 NOISE

ENVIRONMENTAL ISSUES

This section addresses potential noise impacts of the project, including short-term construction noise, and long-term permanent noise as well as potential impacts from existing noise sources. This section is based on an acoustic report for the proposed Project prepared by the firm of Rosen, Goldberg, Der & Lewitz dated February 3, 2009. This report is included in Appendix 8.6 and is incorporated by reference into this DEIR.

ENVIRONMENTAL SETTING

Overview of noise concepts

Noise can be defined as unwanted sound and is commonly measured with an instrument called a sound level meter. The sound level meter "captures" sound with a microphone and converts it into a number called a sound level. Sound levels are expressed in units of decibels (dB).

To correlate the microphone signal to a level that corresponds to the way humans perceive noise, the A-weighting filter is used. A-weighting de-emphasizes low-frequency and very high-frequency sound in a manner similar to human hearing. The use of A-weighting is required by most local agencies as well as other federal and state noise regulations (e.g. Caltrans, EPA, OSHA and HUD). The abbreviation dBA is often used when the A-weighted sound level is reported.

Because of the time-varying nature of environmental sound, there are many descriptors that are used to quantify the sound level. Although one individual descriptor alone does not fully describe a particular noise environment, taken together, they can more accurately represent the noise environment. There are four descriptors that are commonly used in environmental studies; the L_{max}, L_{eq}, L_{90} and DNL (or CNEL).

The maximum instantaneous noise level (L_{max}) is often used to identify the loudness of a single event such as a car pass-by or airplane flyover. To express the average noise level, the L_{eq} (equivalent noise level) is used. The L_{eq} can be measured over any length of time but is typically reported for periods of 15 minutes to 1 hour. The background noise level (or residual noise level) is the sound level during the quietest moments. It is usually generated by steady sources such as distant freeway traffic. It can be quantified with a descriptor called the L_{90} which is the sound level exceeded 90 percent of the time.

To quantify the noise level over a 24-hour period, the Day/Night Average Sound Level (L_{dn}/DNL) or Community Noise Equivalent Level (CNEL) is used. These descriptors are averages like the L_{eq} except they include a 10 dBA penalty for noises that occur during nighttime hours (and a 5 dBA penalty during evening hours in the CNEL) to account for peoples increased

sensitivity during these hours.

In environmental noise, a change in the noise level of 3 dBA is considered a just noticeable difference. A 5 dBA change is clearly noticeable, but not dramatic. A 10 dBA change is perceived as a halving or doubling in loudness.

Existing noise levels

The Project area consists of a series of parcels of land that stretch between Interstate 580 to the north and Industrial Parkway to the south. Most of the parcels are east of Mission and Foothill Boulevards. The existing noise environment varies across the Area. The primary noise source in the project area is vehicular traffic on roadways but other sources include BART and occasional aircraft flyovers.

To quantify the existing noise environment, five long-term, 24-hour noise measurements and nine, short-term, 15–minute measurements were made throughout the Project Area. **Figure 4.9-1** depicts each of the measurement locations.

The following discusses each of the measurement locations in greater detail:

> Long-term and Short-term Measurement Location 1: The long-term measurement was made along the north side of Foothill Boulevard, between Apple Avenue and Grove Way. The dominant noise source was traffic on Foothill Boulevard, especially traffic utilizing the on-ramp to Interstate 580. The short-term measurement was adjacent to the long-term measurement, 20 feet from the centerline of the near lane of Foothill Boulevard.
>
> Measurement Location 2: The measurement was made inside the Japanese Tea Gardens, near the intersection of Crescent Avenue and 3rd Street. This location represents a quieter area of the City. The dominant noise sources at this location were distant traffic, airplanes, birds and wind noise.
>
> Measurement Location 3: The measurement was located on a utility pole at the intersection of Clay Street and D Street. This location quantifies a typical noise environment in the downtown area of Hayward. The dominant noise source was traffic along D Street. Short-term Measurement 3 was located further south on Clay Street and 50 feet from the centerline of the near lane of D Street.
>
> Measurement Location 4: Measurement was located at the intersection of 2nd Street and Walpert Street, adjacent to Hayward High School. This location quantifies noise generated by traffic on 2nd Street and by Hayward High School. The dominant noise source at this location was traffic on 2nd Street.
>
> Measurement Location 5: The measurement was made on a utility pole 12 feet east of the centerline of the near lane of Mission Boulevard, between Carlos Bee Boulevard and Central Boulevard. The dominant noise source at this location was traffic on Mission Boulevard. An automobile service center that generated intermittent loud noises was

located across Mission Boulevard from Long-term Measurement 5. Two Short-term Measurements were conducted adjacent to the Long-term Measurement: Short-term Measurement 5A was located 50 feet from centerline of the near lane of the north side of Mission Boulevard and Short-term Measurement 5B was located 100 feet from centerline of the near lane of the north side of Mission Boulevard.

Measurement Location 6: The long-term measurement was made on a utility pole along Bunker Hill Boulevard. This location is near a possible vehicular connection between Carlos Bee Boulevard and Bunker Hill Boulevard. Bunker Hill Boulevard currently ends in a cul-de-sac near the measurement location. The existing traffic along Bunker Hill Boulevard is light and the local noise environment is dominated by noise from traffic on Mission Boulevard to the west since there is a clear view of Mission Boulevard from the measurement location. Short-term Measurement 6 was located directly beneath Long-term Measurement 6.

Measurement Location 7: The measurement was located 50 feet south of Harder Road, between Mission Boulevard and West Loop Road. The dominant noise source was traffic on Harder Road. Noise from traffic on nearby Mission Boulevard was reduced by terrain that blocked the line-of-sight from Mission Boulevard to the measurement location.

Measurement Location 8: The long-term measurement was made on a utility pole along the east side of Mission Boulevard between Valle Vista Avenue and Industrial Parkway. The dominant noise source at the measurement location was traffic on Mission Boulevard. The short-term measurement was adjacent to the long-term measurement, 50 feet from the centerline of the near lane of Mission Boulevard.

Measurement Location 9: Short-term Measurement 9 consisted of two simultaneous measurements. Both measurements were located at the southern end of the project site along Industrial Parkway between Huntwood Avenue and Dixon Road. Measurement 9A was 50 feet from the centerline of the near lane of Industrial Parkway and about 310 feet from the BART Tracks.

A typical BART passby generated an L_{max} of 71 dBA at 9A. There was some acoustical shielding provided by the edge of the elevated BART track structure. Measurement 9B was distant from Industrial Parkway and therefore dominated by noise from BART, which was located 210 feet away from location 9B. A typical BART passby generated an L_{max} of 79 dBA at location 9B.

Short-term measurements were correlated with the simultaneous measurement at the nearby long-term measurement locations to determine the L_{dn} at the short-term measurement locations. Table 4.9-1 shows the results of the short-term measurements.

Table 4.9-1. Short-term Measurement Results

Location		Time	A-weighted Sound Level, dBA				
			L_{eq}	L_8	L_{25}	L_{50}	L_{dn}*
1	20' to centerline of near lane of Foothill Blvd between Apple Ave. and Grove Way	5:45 P.M. - 6:00 P.M. (9/16/08)	75	75	73	71	74
2	Center of Japanese Tea Gardens, near intersection of Crescent Ave and 3rd St	3:00 P.M. - 3:15 P.M. (9/17/08)	50	53	48	46	54
3	50' to centerline of the near lane of D Street at the intersection Clay St and D St	3:30 P.M. - 3:45 P.M. (9/17/08)	63	66	63	61	65
4	25 feet to centerline of the near lane of 2nd St, near Intersection 2nd St and Walpert St and Hayward High School	4:00 P.M. - 4:15 P.M. (9/16/08)	65	70	65	61	67
5A	50 ft to centerline of the near lane of Mission Blvd between Carlos Bee Blvd and Central Blvd	1:00 P.M. - 1:15 P.M. (9/16/08)	66	69	68	66	70
5B	100 ft to centerline of the near lane of Mission Blvd between Carlos Bee Blvd and Central Blvd	1:15 P.M. - 1:30 P.M. (9/16/08)	61	64	62	60	64
6	On Bunker Hill Blvd. near cul-de-sac	1:45 P.M. - 2:00 P.M. (9/16/08)	55	57	55	54	56
7	50 ft to centerline of near lane of Harder Rd between Mission Blvd and West Loop Rd	2:15 P.M. - 2:30 P.M. (9/16/08)	59	65	58	52	63
8	50' to centerline of near lane of Mission Blvd between Valle Vista Ave and Industrial Pkwy	2:45 P.M. - 3:00 P.M. (9/16/08)	71	74	73	70	72
9A	50 ft to centerline of near lane of Industrial Pkwy, between Huntwood Ave and Dixon Rd	11:42 A.M. - 12:00 P.M. (9/16/08)	64	68	65	61	68
9B	Adjacent to BART Tracks near southern end of project site	11:45 A.M. - 12:13 P.M. (9/16/08)	62	58	48	45	68

* L_{dn} at short-term measurement locations calculated using simultaneous measurement at long-term locations.

Regulatory Framework

Hayward General Plan. The Conservation and Environmental Protection Chapter of the General Plan contains the following policy and strategies regarding noise:

- The City will seek to protect the public health, safety and welfare against the adverse effects of excessive noise. (*Policy 13*)

* Provide educational material and assistance to the community regarding noise mitigation, and promote the full disclosure of potential noise impacts within new infill development. (*Strategy 1*)
* Continue to review new development to assure compatibility with surrounding land uses and compliance with accepted noise standards. (*Strategy 2)*
* Encourage mitigation of noise through appropriate site planning, building orientation, and building materials. (*Strategy 3*)
* Cooperate with adjacent jurisdictions and other agencies involved in noise mitigation and work with transportation companies and/or agencies to mitigate noise impacts. (*Strategy 4*)
* Continue to consider potential noise impacts in evaluating proposals for new transportation facilities, including streets and highways. (*Strategy 5)*
* Encourage the California Department of Transportation to construct attractive noise barriers along State highways adjacent to noise-sensitive uses.(*Strategy 6*)
* Investigate methods for decreasing local street noise, such as modification of paving materials, removal of surface irregularities, and synchronization of signals to facilitate smooth traffic flow. (*Strategy 7*)
* Continue to monitor the effectiveness of noise control programs at the Hayward Executive Airport. (*Strategy 8*)

Appendix N of the Noise Element of the General Plan contains the following noise/land use compatibility standards:

Table 4.9-2. Exterior Noise and Land Use Compatibility Standards

Land Use	Community Noise Level Ldn or CNEL (dB)			
	Normally Acceptable	**Conditionally Acceptable**	**Normally Unacceptable**	**Clearly Unacceptable**
Residential: low density, single family homes, duplex, mobile homes	Under 60	55-70	70-75	75+
Residential: multiple family	Under 65	60-70	70-75	75+
Transient lodging	Under 65	60-70	70-80	80+
Schools, libraries, churches, hospitals	Under 70	60-70	70-80	80+
Auditoria, concert halls	--	Under 70	--	65+
Sports arenas, outdoor sports	--	Under 75	--	70+
Playgrounds and neighborhood parks	Under 70	--	67.5-75	72.5+
Golf courses, riding stables, water recreation, cemeteries	Under 75	--	70-80	80+
Office buildings, businesses, commercial and professional	Under 70	67.5-77.5	75+	--
Industrial. Manufacturing, utilities	Under 75	70-80	75+	--

Source: Hayward General Plan, Appendix N

The interior residential noise exposure level is 45 dBA per the City's noise standards, as established by the state building code.

Appendix N of the City's General Plan indicates acceptable adjustments to ambient exterior noise levels on residential uses for periodic, short-term noise events from commercial or industrial activities. For example, for an event that generates 15 decibels (dbA) of noise above the ambient daytime noise level, the maximum cumulative duration of such event allowed during any one-hour period is five minutes

Hayward Noise Ordinance. The Municipal Code for the City of Hayward contains restrictions on construction noise at residential properties. The Noise Ordinance states that construction noise levels should not exceed a "level 6 dB above the local ambient level at any point outside the property plane before the hour of 7:00 AM or after the hour of 7:00 PM daily except on Sundays and holidays. On Sundays and holidays, the restrictions of this subsection shall apply before 10:00 AM and after 6:00 PM."

California Building Code. The California Building Code requires that new multi-family housing exposed to noise levels in excess of an L_{dn} of 60 dBA have an acoustical study prepared to show how indoor levels will achieve an L_{dn} of 45 dBA. A ventilation or air-conditioning system will be required to provide a habitable indoor environment if windows must be closed to meet the indoor noise requirement.

STANDARDS OF SIGNIFICANCE

A noise impact would be considered significant if it would result in:

- exposure of persons or generation of noise in excess of standards established in the General Plan, municipal code or applicable standards of other agencies; or
- a substantial temporary or permanent increase in ambient noise levels in the project vicinity above ambient levels (considered an increase of 3 dB over existing levels).

ENVIRONMENTAL IMPACTS

The following impacts have been identified with respect to noise.

Land use noise compatibility

Proposed land uses within the Project area would include various types and densities of residential uses, commercial and office uses, open spaces and public/quasi-public uses. Implementation of the proposed land uses in all three Alternatives could lead to new development in areas with ambient noise levels that are or would be in excess of acceptable levels.

Under alternatives A and C, for example, there are proposed residential land uses adjacent to Foothill Boulevard near Measurement Location 8. These proposed residential uses could be exposed to an L_{dn} of 70 dBA or greater which is considered "normally unacceptable" for residential development (see Table 4.9-1). According to the City's General Plan "normally unacceptable" means that construction would generally be discouraged at these locations but may proceed with a detailed acoustical analysis including specific noise mitigation measures included in the design.

Exposure of future development projects within the Project Area to noise levels that are greater than "normally acceptable" for the proposed land use is considered a potentially significant impact.

<u>Impact 4.9-1 (land use noise compatibility)</u>. Development of residential uses under all three of the Alternatives near major noise sources could exceed local and state noise exposure standards (*potentially significant impact and mitigation is required*).

The following measures shall be undertaken to reduce this impact to a less-than-significant level. These measures shall apply to all of the Alternatives.

<u>Mitigation Measure 4.9-1 (land use noise compatibility)</u>. A site-specific noise study shall be performed for future individual development proposals within the Project area adjacent to major roadways or other noise sources, as determined by the Development Services Director to determine compatibility with the existing and future noise environment and applicable noise regulations. If noise levels exceed applicable standards, then noise

reduction measures shall be incorporated into the project design to ensure consistency with local and state noise standards. Noise reduction measures could include but would not be limited to noise barriers and site orientation for outdoor spaces and sound rated building constructions for indoor spaces. The analysis must consider the following criteria and guidelines:

- **General Plan Policies for Noise including Appendix N of the General Plan which contains Noise Guidelines for Review of New Development)**
- **General Plan EIR Mitigation Measure 7.3: Project-Specific Noise Analysis/Abatement State Building Code, Chapter 1207 (insulation from exterior noise in new residential construction).**

Increased traffic noise due to Project

There would be increased traffic activity along local and arterial roads from the development of various land uses associated with the Project and future growth in other portions of Hayward and the larger region. According to Table 4.9-3, a majority of the increase in noise due to traffic (up to 2.8 dBA) would occur as a result of future growth in other areas. The Project would contribute less than 0.2 dBA to the future traffic noise levels, assuming maximum development under Alternative A. These relatively small increases would not cause a significant impact since they would be less than the 3 dBA threshold of significance.

Table 4.9-3. Existing and Future Noise Levels

Street	Segment	L_{dn} in dBA 50 feet from Roadway Centerline			Future Traffic Increase, L_{dn} in dBA (Project Contribution)
		Existing	Future Without Project	Future With Project	
Foothill Blvd.	North of Mattox Rd	68.4	69.9	69.9	1.5 (0.0)
	Mattox Rd to Grove Way	70.9	72.9	72.9	2.0 (0.0)
	Grove Way to A St	71.4	73.2	73.2	1.9 (0.0)
	A St to B St	71.2	72.2	72.2	1.0 (0.0)
	B St to D St	71.7	72.8	72.9	1.1 (0.0)
	D St to Jackson St	72.6	72.5	72.6	0.0 (0.0)
Mission Blvd	Foothill Rd to Fletcher Ln	71.1	72.5	72.7	1.4 (0.1)
	Fletcher Ln to Highland Blvd	71.3	73.0	73.1	1.7 (0.1)
	Highland Blvd to Carlos Bee Blvd	71.0	72.7	72.8	1.6 (0.1)
	Carlos Bee Blvd to Berry Ave	72.1	73.8	73.9	1.7 (0.1)
	Berry Ave to Harder Rd	71.9	73.5	73.6	1.6 (0.0)
	Harder Rd to Sorenson Rd	72.6	74.1	74.2	1.5 (0.1)
	Sorenson Rd to Jefferson St/Calhoun St	72.6	73.9	74.0	1.3 (0.1)
	Jefferson St/Calhoun St to Hancock St	72.5	73.7	73.7	1.2 (0.0)
	Hancock St to Tennyson Rd	72.5	74.0	74.0	1.4 (0.0)
	Tennyson Rd to Valle Vista Ave	72.0	73.4	73.5	1.4 (0.0)
	Valle Vista Ave to Industrial Pkwy West	72.1	73.6	73.6	1.5 (0.0)
	South of Industrial Pkwy West	72.0	73.5	73.5	1.5 (0.0)
Dixon Rd	North of Tennyson Rd	57.4	59.3	59.5	1.9 (0.2)
	Tennyson Rd to Valle Vista Ave	60.0	62.1	62.3	2.1 (0.2)
	Valle Vista Ave to Industrial Pkwy West	58.7	61.1	61.3	2.4 (0.2)
	South of Industrial Pkwy West	54.6	55.9	55.9	1.3 (0.0)
Tennyson Rd	Mission Blvd to Dixon Rd	64.9	66.6	66.7	1.7 (0.0)
Valle Vista Ave	Mission Blvd to Dixon Rd	53.5	56.4	56.6	2.8 (0.2)
Industrial Pkwy West	Mission Blvd to Dixon Rd	65.5	66.8	66.8	1.3 (0.0)

Source: RGDL, 2009

Depending upon the type and intensity of development that could occur at individual parcels, there may be instances where the future traffic noise increase due to an individual project would be greater than 3 dBA. This is more likely to occur on parcels of land located farther from the

major arterials than at parcels along Mission and Foothill Boulevard, since these areas are generally quieter. Future traffic noise increases due to the project are considered a potentially significant impact.

Impact 4.9-2 (traffic noise impacts). Noise generated by vehicular traffic associated with future individual development projects under all Alternatives could result in exceedances of local and state noise exposure standards (*potentially significant impact and mitigation is required*).

The following measures shall be undertaken to reduce this impact to a less-than-significant level. These measures shall apply to all of the Alternatives.

Mitigation Measure 4.9-2 (traffic noise impacts). Consistent with Mitigation Measure 7.4 of the City of Hayward General Plan Update EIR, an acoustical study shall be performed for each development proposal within the Project area under all of the Alternatives that has potential to significantly increase existing noise levels.

If it is determined that a proposed development would result in a substantial increase in ambient noise levels along nearby roadways, the study shall identify and implement noise abatement measures which will reduce project-related noise effects to a level consistent with City and State standards. Such measures could include the installation of noise barriers such as berms or sound walls).

Operational noise impacts

Activities at proposed residential, commercial, public and other project developments have the potential to generate noise that would impact adjacent land uses. Examples of operational noise sources include loading docks, heating and cooling equipment and outdoor recreation. Operational impacts would be greater under Alternatives A and C that include more dwellings and a greater amount of non-residential use than under Alternative B that includes fewer dwellings that could be impacted by operational noise. Operational noise affecting existing and proposed land uses is considered to be a potentially significant impact.

Impact 4.9-3 (operational noise impacts). Noise generated by the day-to-day operation of land uses within the Project area could result in exceedances of local and state noise exposure levels. Operational noise impacts would be greatest under Alternatives A and C and less under Alternative B (*potentially significant impact and mitigation is required*).

The following measures shall be undertaken to reduce this impact to a less-than-significant level. These measures shall apply to all of the Alternatives.

Mitigation Measure 4.9-3 (operational noise impacts). Consistent with Mitigation Measure 7.2 of the City of Hayward General Plan Update EIR, the City of Hayward shall review individual projects using the City's General Plan as guidance to determine whether or not an operational noise source would generate significant noise impacts. Noise reduction measures including but not limited to setbacks, site plan revisions, operational constraints,

buffering, and sound insulation shall be incorporated into final development plans to reduce operational noise to a less than significant level.

Temporary construction noise impacts

Construction noise has the potential to generate significant, temporary noise increases at adjacent noise sensitive land uses. Typically, construction generally occurs in four phases. These are grading, foundation work, framing and building construction. In some instances, existing structures or other site improvements may be demolished to accommodate new land uses. Generally, the noisier phases are demolition, grading and foundation work where heavy diesel machines such as front end loaders or bulldozers are used. Table 4.9-4 summarizes some typical construction noise levels.

Table 4.9-4. Typical Construction Equipment Noise Levels

Equipment	L_{max} (dBA) at 50 feet
Backhoe	78
Compactor	83
Compressor	78
Concrete Mixer Truck	79
Concrete Pump Truck	81
Crane	81
Bulldozer	82
Dump Truck	76
Excavator	81
Front End Loader	79
Generator	81
Grader	85
Hoe Ram	90
Jackhammer	89
Paver	77
Pneumatic Tools	85
Impact Pile Driver	101
Roller	80
Scraper	84
Tractor	84
Warning Horn	83
Welder/Torch	74

Source: FHWA Roadway Construction Noise Model, 2006

Many of the future individual development projects that would be allowed under the Alternatives would be located near or adjacent to other developed parcels and there is the potential for significant short term and temporary noise increases. Impacts from construction activities would be greatest under Alternative A which includes the highest number of dwellings and least under Alternative B that includes the fewest amount of development.

<u>Impact 4.9-4 (construction noise impacts)</u>. Noise generated by demolition of existing improvements and construction of new dwellings within the Project area could result in short-term, temporary noise levels that would exceed City noise standards. Construction noise impacts would be greatest under Alternatives A and C and less under Alternative B (*potentially significant impact and mitigation is required*).

The following measures shall be undertaken to reduce this impact to a less-than-significant level. These measures shall apply to all of the Alternatives.

<u>Mitigation Measure 4.9-4 (construction noise impacts)</u>. The City shall require reasonable construction practices for individual development projects within the Project area, consistent with Mitigation Measure 7.1 of the City of Hayward General Plan Update EIR. Measures should include but are not limited to the following:

- **Requiring all equipment to have mufflers and be properly maintained;**
- **Limiting the amount of time that equipment is allowed to stand idle with a running engine;**
- **Shielding construction activity and equipment from nearby noise sensitive uses by appropriate construction phasing, using existing buildings and structures as noise shields, construction of temporary noise barriers and similar techniques; and**
- **Providing advance notice to nearby residents of major noise activities.**

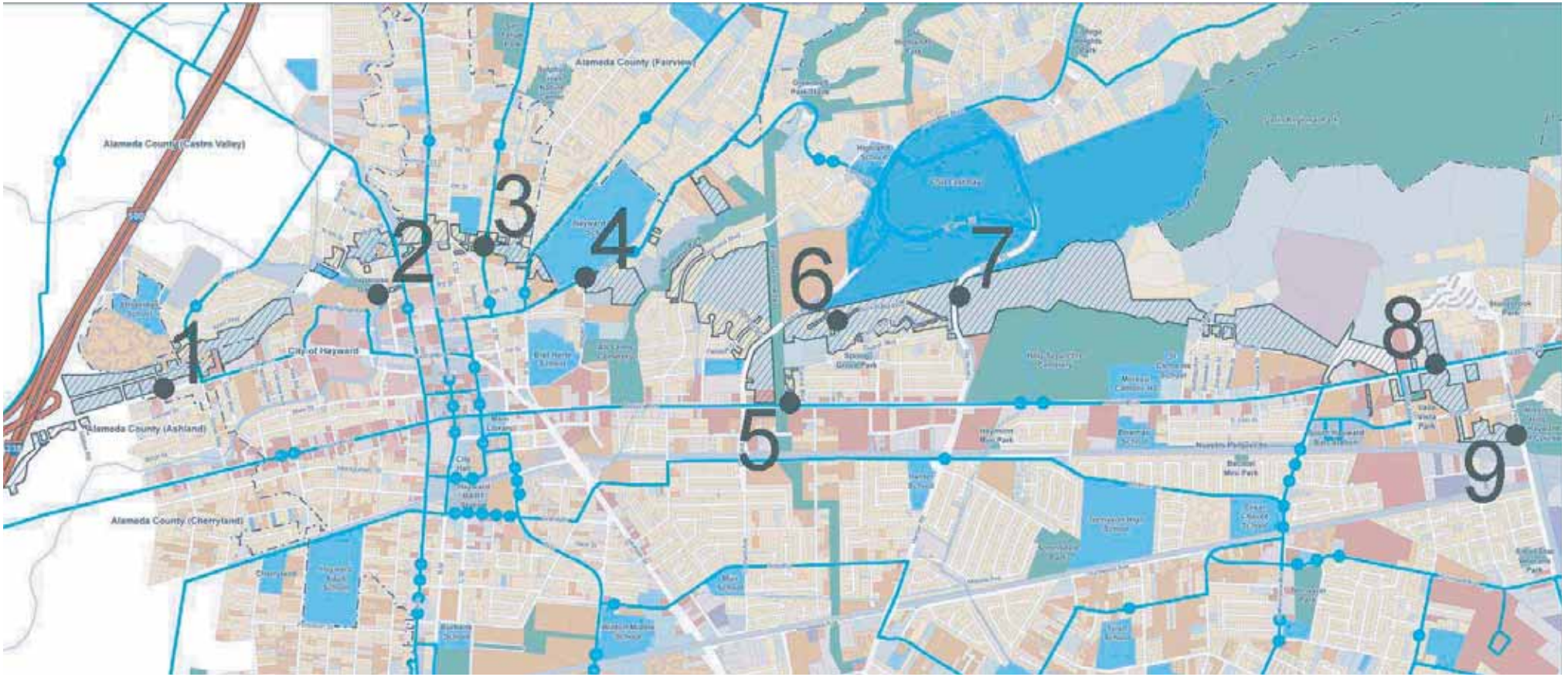


Figure 4.9-1 – Noise Monitoring Locations

Route 238 Bypass Land Use Study

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.

Existing Pedestrian Conditions. 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					PM Peak Hour Traffic				
							Rate	% In	% Out	In	Out	Rate	% In	% Out	In	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

Dowling Associates, Inc, 2009

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.

Impact 4.11-1 (cumulative traffic impacts). 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.

Baseline Conditions plus Project Alternative A. 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.

Cumulative Conditions plus Project Alternative A. 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		

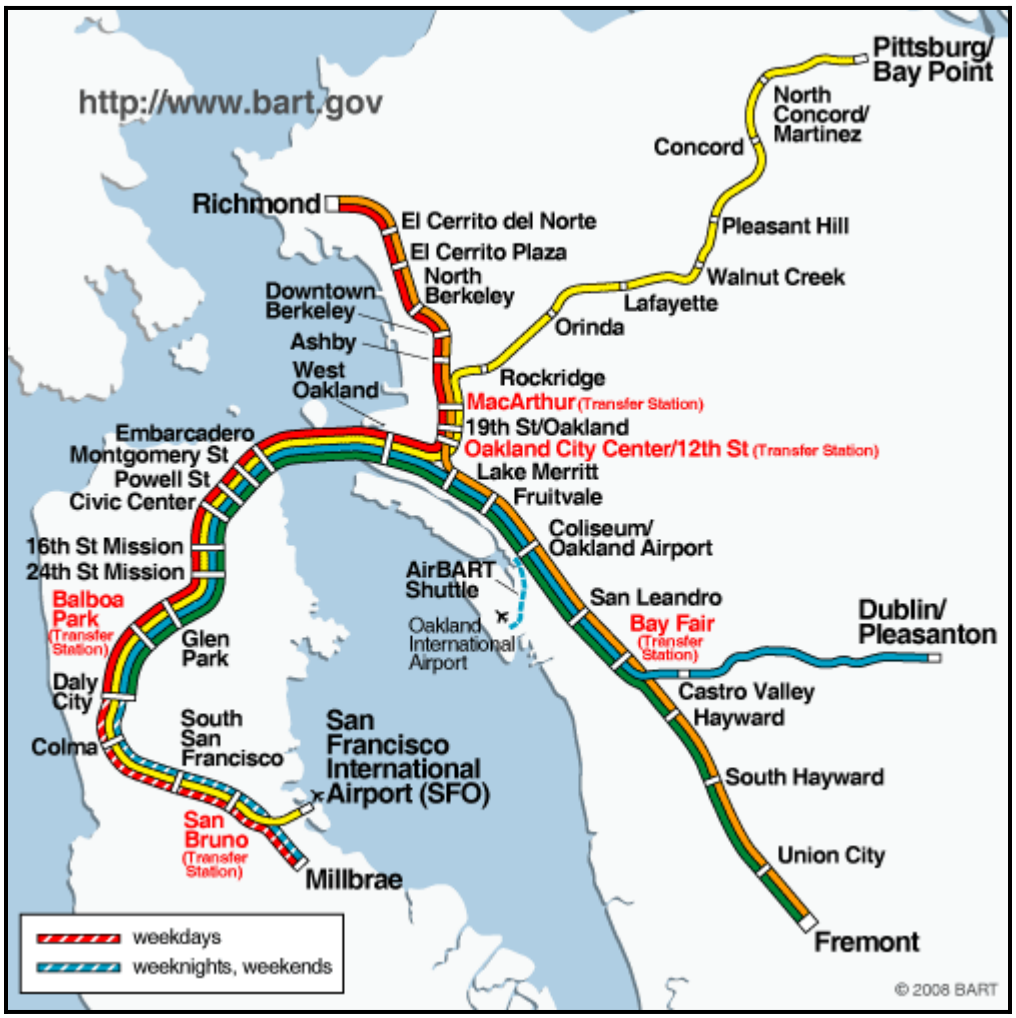
Note: Ridership difference between no-project & project are attributed to the project
Source: Dowling Associates, Inc. 2009

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		

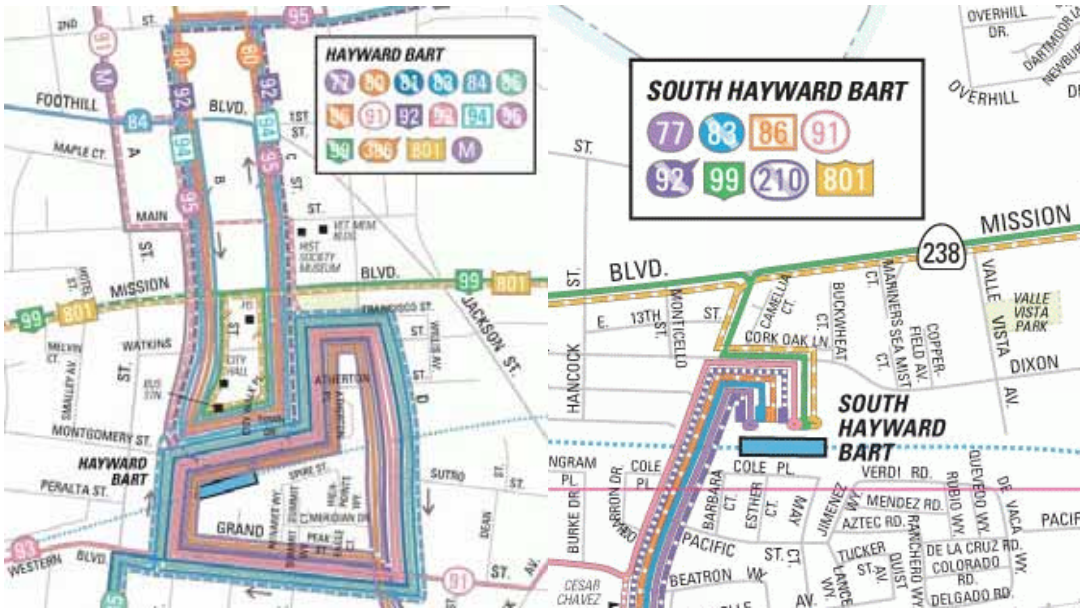
Note: Ridership difference between no-project & project are attributed to the project
Source: Dowling Associates, Inc. 2009

Figure 4.11-1: BART System Map



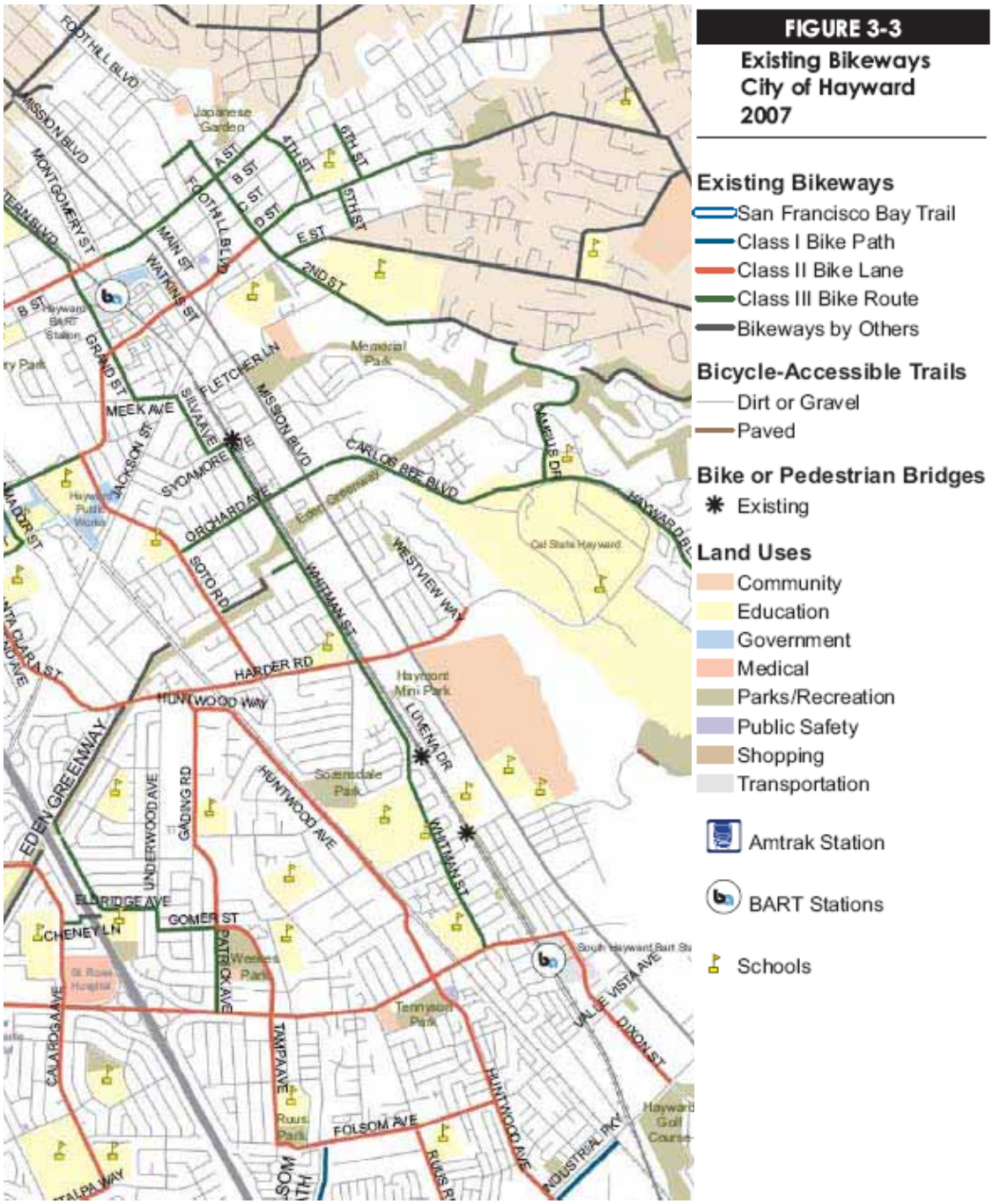
Source: Bay Area Rapid Transit District, www.bart.gov, accessed January 23, 2009.

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.

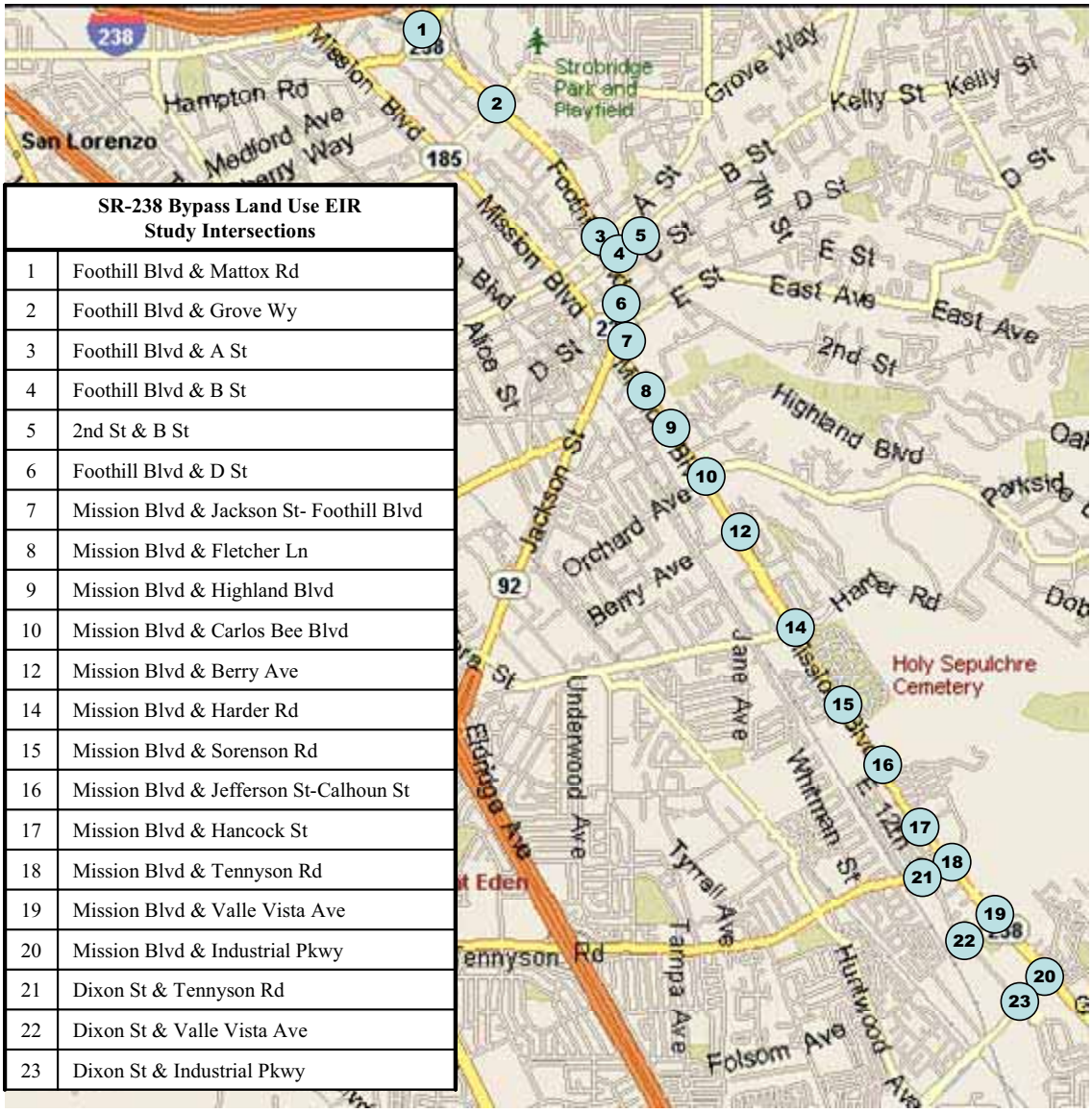
Figure 4.11-5: Bike Parking and Showers at Selected Hayward Employers

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*)

Mission-Garin Neighborhood Plan

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*)

Fairway Park Neighborhood Plan

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.

<u>Impact 4.12-2 (police services).</u> 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.

<u>Mitigation Measure 4.12-2 (police services).</u> 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

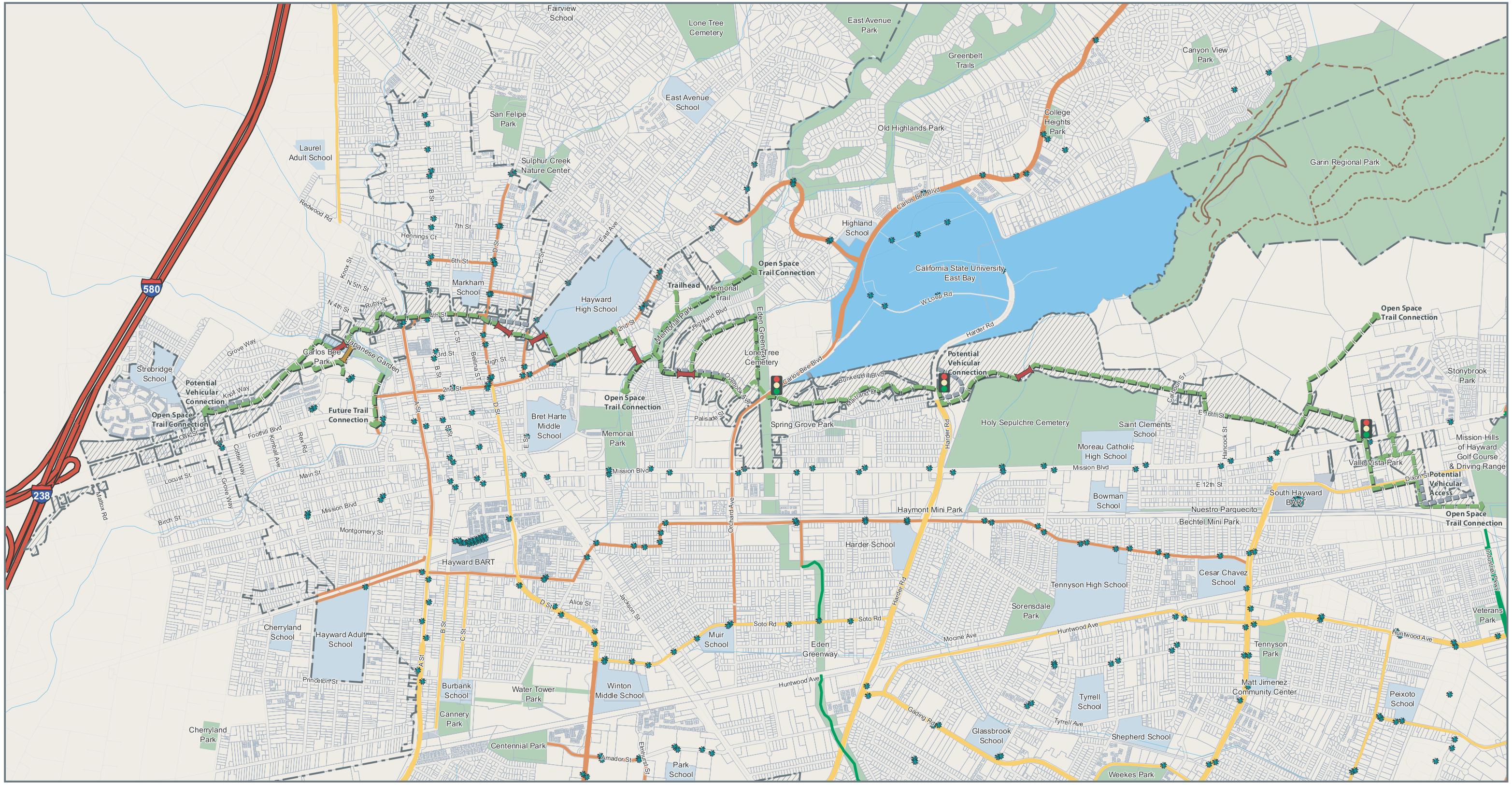
Based on the information provided in Table 4.13-3, below, approval and implementation of the concept alternatives would generate a range of 1,610 new students associated with Alternative A to 577 new students associated with Alternative B.

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

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.

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.

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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