

San Pablo Avenue

Specific Plan



Draft Environmental Impact Report

SCH#: 2010112062

Public Review Draft

MARCH 2011

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CITY OF SAN PABLO

City of New Directions

PREPARED BY

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Executive Summary

This Draft Environmental Impact Report (EIR) evaluates the potential impacts of the proposed San Pablo Avenue Specific Plan.¹ The proposed Plan was developed in response to policy direction provided by the City Council and the Planning Commission as well as community concerns identified through an extensive public participation and outreach program, including newsletters, community workshops and public meetings in 2008-2010. The City of San Pablo is the lead agency for this EIR, as defined by the California Environmental Quality Act (CEQA). As the lead agency, the City is required to evaluate the potential effects of the Plan in an EIR.

An EIR is intended to inform decision-makers and the public of the potential significant environmental impacts of a proposed project. The EIR also identifies mitigation measures to minimize significant impacts and evaluates reasonable alternatives to the proposed project that may reduce or avoid one or more significant environmental effects. These alternatives must include a “No Project” alternative that represents the result of not implementing the project and a range of reasonable alternatives to the project, which would feasibly attain most of the basic objectives but would avoid or substantially lessen any of the significant effects of the project.² Based on the alternatives analysis, an environmentally superior alternative is identified.

This EIR is a Program EIR that examines the potential effects resulting from implementing designated land uses and policies in the proposed Plan. The impact assessment evaluates the proposed Plan as a whole and identifies the broad regional and area-wide effects that may occur with its implementation. As a programmatic document, this EIR does not assess site-specific impacts. Any future development project made possible by the Specific Plan will be subject to individual, site-specific environmental review, as required by State law.

PROPOSED PROJECT

Plan Objectives

The broad objective of the Plan is to foster revitalization of San Pablo Avenue into a pedestrian- and transit-oriented boulevard, with amenities that draw residents from the entire city and the surrounding region. It establishes the area as a key regional and community destination that is active and accessible,

¹ Throughout this document, the term “proposed San Pablo Avenue Specific Plan” is used interchangeably with “proposed Specific Plan,” “proposed Plan” or “the proposed Project.”

² CEQA Guidelines 15126.6(a)

with mixed-use higher intensity development that will bolster transit ridership and promote vital street life. The Plan also provides a framework for development on major opportunity sites, and helps integrate new development with key activity centers, including Contra Costa College, City Hall, Doctors Medical Center, and the San Pablo Lytton Casino. It seeks to strengthen economic activity in the city, facilitate access to the Avenue and its various destinations through public transit, and enhance existing communities along and near San Pablo Avenue. The area is well served by bus routes, has easy access to I-80, and is within close reach of BART stations. **Figure 2.1-1** shows the regional location and **Figure 2.1-2** shows the Planning Area.

Funding for the Plan has been provided primarily by the Metropolitan Transportation Commission (MTC) as part of the FOCUS Priority Development Area (PDA) program, a region-wide effort to revitalize major transit corridors throughout the Bay Area.

Guiding Principles

The Planning Area presents a tremendous opportunity for quality medium to high-intensity development. It includes several major destinations, including City Hall, Doctors Medical Center, Contra Costa College, and San Pablo Lytton Casino. Given its proximity to transit and the presence of several large underutilized parcels, the area can be transformed into a “signature area” of San Pablo, with high quality development and vital pedestrian areas that add to the city’s quality of life. The following Guiding Principles emerged from community and decision-maker input throughout the planning process and are included in the proposed Specific Plan. Taken together, these ideas establish an overall vision for the corridor that is reflected in the land use pattern, policies, and implementation measures of this Specific Plan:

1. **Walkability and a High-Intensity Mix of Uses.** Development along this major transportation corridor must have a synergistic mix of uses. The Plan locates higher density residential neighborhoods adjacent to neighborhood-serving retail, employment centers, and amenities such as the Contra Costa College. Retail, restaurants and entertainment uses are grouped to create walkable destinations. The Plan encourages service uses like supermarkets, pharmacies, laundries, community centers, and uses supporting the existing medical employment base. In several areas along the corridor, vertical mixes of uses is encouraged or required in an effort to create self-supporting districts.
2. **Destinations and Amenities for All Ages.** Activities that serve as citywide and regional draws will be critical to the future of the corridor. Shopping, dining, theaters, event venues and other attractions will bring the community together, encourage visitors, and establish needed activity nodes along the corridor. The success of the San Pablo Lytton Casino, the ample acreage of opportunity sites near the Casino, and the dearth of existing entertainment uses all suggest that an entertainment district near the Casino would enliven the corridor. This district, established as an “overlay” in the Plan, would help to create jobs, destinations for families, and a recognizable and marketable image for the city.
3. **A Variety of Housing Options.** A variety of housing options are needed to attract new residents to the San Pablo Avenue corridor, provide options for the ageing San Pablo population, and house the anticipated growth in enrollment at Contra Costa College and workers at establishments such as the Doctors Medical Center. The Specific Plan allows for a variety of housing options for all potential residents, including families, students, and professionals.

Planned residential uses vary in density and in proximity to commercial uses. The Plan includes policies to ensure that density does not compromise livability.

4. **Community Facilities and Open Space.** Community-oriented facilities are an essential component of new development along the corridor. The Plan provides a new community plaza along San Pablo Avenue as part of redevelopment of the former Circle S site. Additionally, one major public open space along the improved Wildcat Creek and a number of smaller and more programmed open spaces (e.g. pocket parks, trails, exercise stations, and playgrounds) are integrated into the corridor. Candidate uses for additional community facilities include a cultural center, a community theater, sports fields and courts, a community swimming pool, trade schools, senior centers, bilingual service centers, and preschools. While it may not be physically feasible to include all of these amenities, key opportunity areas will have designations that accommodate these types of uses. In a high-density infill setting, well-designed public open spaces are also essential—not just to residents, but to pedestrians between destinations.
5. **Improved Accessibility.** The corridor is well-served by bus lines, but increasing ridership will be achieved only through improvements to complementary modes of travel, such as walking and biking. The Plan necessitates that future development and street improvements be more conscious of the pedestrian and bicycle experience and employ universal design throughout. The Plan includes policies to ensure that parking is hidden from view from the public right-of-way, and façades improved in a style that projects a consistent image along the corridor. Within the right-of-way, the pedestrian realm is designed to create more comfortable and inviting paths that diminish perceived walking distances, and continuous, convenient, and safe bicycle routes are established

These themes and the policies proposed to implement them are described in greater detail in Section 2 of this EIR.

Estimated Buildout

Full development under the proposed Specific Plan is referred to as “buildout.” Although the proposed Plan applies a 20-year planning horizon, the Plan is not intended to specify or anticipate when buildout will actually occur; nor does the designation of a site for a certain use necessarily mean the site will be built/redeveloped for that use within the next 20 years.

New development is expected to occur on “land use opportunity sites” which consist of vacant and underutilized sites. These sites have been identified through a combination of techniques, including evaluation using land use and economic data, mapping with Geographic Information Systems, field reconnaissance, consultation with City staff, interviews with stakeholders, and research into individual parcels. A total of 86.1 acres of opportunity sites have been identified. Acreages by proposed land use on opportunity sites are shown separately from non-opportunity sites in **Table ES-1**.

TABLE ES-1 SAN PABLO AVENUE SPECIFIC PLAN LAND USES BY ACRE

	PROPOSED LAND USE OPPORTUNITY SITES	PROPOSED LAND USE NON- OPPORTUNITY SITES	TOTAL	PERCENT OF TOTAL
Residential				
Low Density Residential	-	4.2	4.2	2%
Medium Density Residential	0.6	23.3	23.8	11%
High Density Residential	5.7	31.4	37.0	17%
Mixed Use				
Mixed Use Center North	2.7	-	2.7	1%
Mixed Use Center South	16.1	-	16.1	8%
Commercial Mixed Use	12.6	5.1	17.7	8%
Residential Mixed Use	9.6	3.2	12.8	6%
Commercial				
Neighborhood Commercial	0.3	17.3	17.6	8%
Regional Commercial	24.2	2.5	26.7	12%
Entertainment District	10.1	12.0	22.1	10%
Public				
Public Institutional	-	24.1	24.1	11%
Parks/Recreation	4.2	5.6	9.8	5%
Total¹	86.1	128.7	214.8	100%

¹Totals may not add up due to rounding, and does not include roads and other rights-of-way.

Source: Dyett & Bhatia, 2010.

Table ES-2 shows a detailed breakdown of the potential residential units, non-residential development and jobs that could result from buildout of the Specific Plan. This table summarizes the net total buildout within the Planning Area (the sum of existing development and net new development). This total represents development that could be expected in 2030 if the Specific Plan is implemented according to the Land Use Diagram and land use classifications described in Chapter 2.

TABLE ES-2 SAN PABLO AVENUE SPECIFIC PLAN POTENTIAL BUILDOUT SUMMARY

	EXISTING	NEW DEVELOPMENT						NET NEW	TOTAL
		CIRCLE-S	MISSION PLAZA	WEST SAN PABLO AVENUE	TOWNE CENTER	SOUTH SAN PABLO AVENUE	OTHER AREAS		
Population (residents)	4,000	379	276	182	91	279	965	2,173	6,173
Residential units	1,360	129	94	62	31	95	328	740	2,100
Commercial Square Feet	1,600,000	459,000	12,000	19,840	181,500	106,000	36,660	815,000	2,415,000
Jobs	4,090	938	41	97	312	238	364	1,990	6,080

Source: Dyett & Bhatia, 2010.

ALTERNATIVES TO THE PROPOSED SPECIFIC PLAN

This EIR evaluates the No Project alternative as required by CEQA, as well as two other alternatives developed through the screening process. The alternatives described below represent ways to accomplish increased transit ridership, physical and economic revitalization, and community objectives along the San Pablo Avenue corridor. The anticipated horizon year of the alternatives, like the proposed Specific Plan, is 2030. The alternatives have much in common; however, they take different approaches in terms of density, the proportion of mixed-use development, and the character of commercial development. Common characteristics include:

- Both alternatives call for an entertainment district, designated by the new Entertainment District land use, along both sides of San Pablo Avenue near the intersection with San Pablo Dam Road. Anchored by the San Pablo Lytton Casino, this new district establishes a regional destination for entertainment uses such as movie theatres, performing arts facilities, restaurants, nightclubs and bars. The size and extent of the Entertainment District varies between the two alternatives.
- The College Center Shops commercial development and the Abella Paseo multifamily residential development at San Pablo Avenue and Road 20 are recent developments are integral parts of both alternative plans. These recently-developed projects will intensify activity along San Pablo Avenue and will help establish a retail center for the college community.
- Both alternatives propose that the city's creeks, and trails alongside them, be enhanced to serve as natural and recreational resources. Both plans also call for increased park and open space to meet the recreation needs of current and future residents.

- Both alternatives share similar opportunity sites, which are sites identified by the lead agency as suitable for development or eventual redevelopment. These sites include vacant and underutilized sites, totaling 86 acres.

Variations in densities, land use designations, and mix of use (for mixed-use designations) were considered before those in the alternative plans were finally selected. It is important to note that even if the same land use appears on both alternative plans, the buildout density may be different in each case due to different design intentions and project objectives.

Alternative A

In Alternative A, areas designated as mixed-use are greatest in intensity. The highest-intensity mixed-use designation, Mixed Use Center, is contained within the Circle-S site and the Mission Plaza block—a total of 17.2 acres. Heights on these sites may reach over four stories, with housing that is typically between 25 and 60 dwelling units per acre. About 400 new units would be accommodated in the Circle-S site alone. Similarly, the Residential Mixed Use designation is limited to the western half-block of the West San Pablo Avenue focus area, but typical densities are high—about 24 units per acre. Outside of these high-intensity areas, non-residential uses predominate. Non-residential designations occupy almost the entire street frontage within the West San Pablo Avenue focus area and key opportunity sites at the intersection of San Pablo Avenue and Church Lane. Heights in commercial areas in the southern end of the corridor would be two to four stories. The Entertainment District in Alternative A is unique in that it extends from the casino all the way to the Circle-S site. It bridges destinations along the whole southern portion of the corridor to create one continuous active zone.

One component unique to Alternative A is its lack of a Regional Commercial designation. Areas that are designated regional commercial in the proposed Specific Plan and Alternative B are designated as Neighborhood Commercial in this plan. An additional difference is the number of sites dedicated to pure residential land use. Alternative A would accommodate a greater number of households because it designates more sites to residential development, and higher-intensity for areas of mixed-use with residential. New park locations suggested in Alternative A are somewhat different to those in the proposed Specific Plan. The buildout projections under Alternative A are shown in **Table ES-3**.

Alternative B

In Alternative B, residential and commercial uses are more mixed than in Alternative A. The Mixed-Use Center designation occupies 24 acres in this alternative, including some opportunity sites outside of the Mission Plaza and Circle-S sites highlighted in Alternative A. The Residential Mixed-Use designation covers the entire West San Pablo Avenue focus area as well as other nearby opportunity sites. These areas, however, are lower in intensity than in Alternative A; the Mixed Use Center allows a maximum of five stories and only up to 50 units per acre. The Entertainment District in Alternative B is both larger and more nodal than in Alternative A, with the use surrounding the entire intersection of San Pablo Avenue and San Pablo Dam Road, including the small block where Nation's Hamburger currently sits and parts of both the Towne Center and Big Lots sites. Wrapping around the east side of the Entertainment District is a Regional Commercial designation, which is carried over into the proposed Specific Plan. This land use includes uses that have a regional draw, like retail outlet centers, and will benefit from the focus area's "gateway" location alongside I-80.

New park locations in Alternative B are generally similar to those in the proposed Specific Plan. Unlike the proposed Specific Plan, Alternatives A and B designate Entertainment District as a stand-alone land use designation rather than an overlay. Alternative B accommodates fewer households and more jobs than the proposed Specific Plan. The buildout projections under Alternative B are shown in **Table ES-3**.

No Project Alternative

The purpose of evaluating the No Project Alternative is to allow decision makers to compare the potential impacts of approving the proposed Project with the potential impacts of not approving the proposed Project. The No Project analysis discusses both the existing conditions at the time the NOP is published as well as what would be reasonably expected to occur in the foreseeable future if the proposed Project were not approved. The No Project alternative is depicted in **Figure 4.3-3**.

Although much of the analysis in this EIR shows new General Plan characteristics assumed to be in place before adoption of the Specific Plan, a future alternatives comparison between the new General Plan and the Specific Plan would be unhelpful because their land use implications for the Planning Area are essentially the same, with the specific Plan providing more implementation and policy guidance. This alternatives analysis thus shows a scenario representing the continuation of the City of San Pablo 1996 General Plan land use designations within the Specific Plan Planning Area as the No Project scenario, assuming neither the General Plan nor the Specific Plan are put into place. It assumes that the 1996 General Plan and Zoning Ordinance would continue to guide development in the Planning Area through 2030. There are many differences between the proposed Specific Plan and the No Project Alternative. As compared to the proposed Specific Plan, the No Project Alternative:

- Has different land uses;
- Buildout assumes full development of vacant sites only (the proposed Specific Plan opportunity sites include vacant and underutilized sites);
- Offers no mechanism for developing new parks or open space areas in the Planning Area.

The buildout projections under the No Project Alternative are shown in **Table ES-3**.

TABLE ES-3 BUILDOUT COMPARED TO EXISTING (2010) CONDITIONS

	HOUSEHOLDS		JOBS		HOUSING		POPULATION	
	EXISTING	BUILDOUT	EXISTING	BUILDOUT	EXISTING	BUILDOUT	EXISTING	BUILDOUT
Specific Plan	1,290	1,990	4,090	6,080	1,360	2,100	4,000	6,170
Alternative A	1,290	2,150	4,090	6,650	1,360	2,260	4,000	6,650
Alternative B	1,290	1,810	4,090	6,800	1,360	1,910	4,000	5,620
No Project	1,290	1,860	4,090	4,400	1,360	1,970	4,000	5,780

Note: Numbers rounded to nearest tenth and are only approximate projections. Totals may not add up due to rounding.

Source: Dyett & Bhatia, 2010.

AREAS OF CONTROVERSY

Although there are no areas of controversy, impacts classified as significant and unavoidable have been identified in the issue areas of transportation and air quality, and in as much as they may be considered controversial to agencies or stakeholders, they are described briefly here.

Traffic Generation

Implementation of the proposed Plan would contribute to population and job growth resulting in higher amounts of traffic generation and congestion in San Pablo. More specifically, it would contribute to a significant impact related to level of service at the intersection of San Pablo Avenue and San Pablo Dam Road during the PM peak hour. Increasing road capacity by adding lanes would not be feasible because of the lack of space, negative impacts on bicycle circulation, and other factors. Ramp improvements to I-80 planned by Caltrans may reduce or increase this impact, but its effects are currently unknown.

The San Pablo 2030 General Plan (assumed to be adopted) contains a policy proposed specifically to reduce the impact at this intersection as measured by current Contra Costa Transportation Authority (CCTA)-based modeling. Further, the Specific Plan includes numerous other policies to mitigate traffic impacts to the greatest extent feasible throughout the Planning Area. It encourages the use of transit and provides bicycle lanes to encourage alternative modes of travel. The emphasis is on enhancing and supporting multimodal solutions, and seeking Caltrans assistance for ramp widening over the planning horizon for this Specific Plan.

Air Quality and Emissions

Implementation of the proposed Specific Plan will result in a significant and unavoidable impact associated with vehicle miles traveled increasing faster than population growth, in accordance with the thresholds of significance for criteria pollutants defined in the BAAQMD CEQA guidelines. It should be noted that without additional housing and mixed-use development as proposed in the project, the air quality impacts will be even worse as per BAAQMD criteria. Any plan designed to accommodate population growth in this way is likely to result in this unavoidable significant impact until such time as transportation models better account for trip reductions associated with mixed use, transit access, infill, and other proximity efforts. The multimodal level of service impact analysis included in this EIR begins to tell the larger story.

The proposed Specific Plan is being offered despite these significant impacts because the proposed Specific Plan is consistent with MTC's and ABAG's transit oriented development goals in which urban development is directed toward existing urban infill sites near transit corridors in order to avoid the loss of open space and to achieve greenhouse gas reductions as required by AB32 and SB375. The proposed Specific Plan overall seeks to achieve this goal through growth management tools and policies that give high priority to density, connectivity, jobs-housing balance, and community character. The significant impacts related to the proposed Specific Plan would not be considerably different under any other likely growth scenario for the San Pablo Avenue corridor that accommodates residential and non-residential development proposed for the city, as well as San Pablo's anticipated share of regional growth and development.

ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA Guidelines require the identification of an environmentally superior alternative among the alternatives analyzed in an EIR. The Guidelines also require that if the No Project Alternative is identified as the environmentally superior alternative, then another environmentally superior alternative must be identified.

Based on a comparison of the alternatives' overall environmental impacts and their compatibility with Specific Plan goals and objectives, Alternative B appears to be the environmentally superior alternative for this EIR. Although the No Project Alternative would create lower numbers of housing and jobs and consequently would result in fewer vehicles and place a lower demand on utility services, it would not enjoy the benefits of proposed Specific Plan environmental protection policies, nor would the safety and health benefits associated with redevelopment under the latest building code be realized as fully under the No Project Alternative. Also importantly, the No Project Alternative does not meet the proposed Specific Plan goals related to promoting walkability, creating destinations and amenities for all ages, improving access to community facilities, and providing residents with more parks and open space.

Alternative B would result in lower population and more jobs than the proposed Specific Plan. Its impacts are expected to be similar to those in the proposed Plan for most of the environmental impact categories analyzed in this EIR—land use, hydrology and flooding, biology, geology and seismicity, cultural resources, air quality, and visual resources. However, the lower population generated under Alternative B means it would likely result in fewer impacts in relation to population-related externalities such as police and fire services, schools, and demand for water supply and wastewater services. Because it would generate more jobs than the proposed Specific Plan, it would likely result in greater job-related impacts such as generating more: solid waste, vehicle miles travelled, energy use, greenhouse gas emissions, noise, and hazardous materials. Also, by proposing more jobs relative to housing, the ratio of VMT growth to population growth under the Air District's criteria would show a poorer performance than the proposed Project.

However, there are tradeoffs associated with Alternative B. It would be less successful in meeting the City's identified long-term objectives, such as expanding housing opportunities. The urban form created under the proposed Specific Plan is also potentially more pleasing, with higher density developments at important junctions and lower density developments elsewhere. These are the reasons why Alternative B was not selected for the project even though it is environmentally superior to the proposed Specific Plan.

IMPACT SUMMARY

Table ES-3 presents the summary of the proposed Specific Plan impacts identified in the EIR and the proposed Specific Plan policies and mitigation measures that reduce these impacts. Detailed discussions of the impacts and proposed policies that would reduce impacts are in Chapter 3. The significance of each impact with implementation of the proposed Specific Plan policies is also shown in **Table ES-3**. The level of significance is determined by comparing the impact to the significance criteria described in Chapter 3.

TABLE ES-3 SUMMARY OF IMPACTS AND PROPOSED POLICIES THAT REDUCE THE IMPACT

IMPACT	INCORPORATED GENERAL PLAN AND PROPOSED SPECIFIC PLAN GOALS, POLICIES, PROGRAMS AND MITIGATIONS THAT REDUCE THE IMPACT (GP POLICIES BEGIN WITH A LETTER; SPECIFIC PLAN POLICIES WITH A NUMBER)	SIGNIFICANCE AFTER MITIGATION
Land Use		
3.1-I Implementa tion of the proposed San Pablo Avenue Specific Plan would lead to increased population and jobs through the development of new housing and commercial uses.	None required.	Less than Significant
Transportation		
3.2-I Implementa tion of the proposed San Pablo Avenue Specific Plan, in conjunction with anticipated citywide and regional growth and development, could cause conflicts with MTSOs for Routes of Regional Significance presented in the West County Action Plan.	<i>Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan</i> C-I-7 Apply traffic Level of Service (LOS) standards to signalized intersections on Routes of Regional Significance to be consistent with the Contra Costa Transportation Authority's West County Action Plan. (See Policy GME-I-17 in Chapter 4, Growth Management Element) C-I-8 Accept LOS F at the intersection of San Pablo Dam Road and San Pablo Avenue opposite Lytton Casino and at I-80 ramps at El Portal Drive and San Pablo Dam Road/Amador Street during two hour peak periods (a.m. and p.m.) as an interim standard until feasible traffic improvements can be designed, funded, and constructed. C-I-9 Design, evaluate, and implement improvements to the intersection of San Pablo Avenue and San Pablo Dam Road, upon collection of more specific data from Caltrans on anticipated (or measured) changes to traffic volumes related to their I-80 ramp improvement projects. Based solely on the CCTA model assumptions, a set of improvements that would mitigate regional growth and proposed project impacts include: • Converting the southbound through lane on San Pablo Avenue to a left-or-through lane to provide a total of one left-turn-only lane, one left-or-through lane and one through-or-right lane; and	Significant Cumulative Impact; Project Contribution Not Cumulatively Considerable

IMPACT	INCORPORATED GENERAL PLAN AND PROPOSED SPECIFIC PLAN GOALS, POLICIES, PROGRAMS AND MITIGATIONS THAT REDUCE THE IMPACT (GP POLICIES BEGIN WITH A LETTER; SPECIFIC PLAN POLICIES WITH A NUMBER)	SIGNIFICANCE AFTER MITIGATION
	• Modifying the traffic signal timing to allow “split phases” for the northbound and southbound movements. C-I-11 Require new development to provide traffic improvements necessary to accommodate trips generated by the project without violating traffic LOS standards established by Policy C-I-8 or increasing the travel delay index above that established for Interstate 80 unless the City adopts Findings of Special Circumstances. C-I-13 Continue cooperative efforts with CCTA to identify streets and intersections with unacceptable traffic LOS standards and implement programs to upgrade them, consistent with the Complete Streets policy. See Growth Management Element for additional details. <i>Proposed Specific Plan Policies that Reduce the Impact</i> 3-G-13 Encourage use of Transportation Demand Management strategies to minimize traffic contributions from new and existing development. 3-G-14 Promote public- and privately-run alternative modes of transit, such as shuttles, along the San Pablo Avenue corridor. 3-I-45 Encourage and support carpooling and vanpooling by providing preferential parking at employment sites for carpools and vanpools. 3-I-46 Explore the feasibility of shuttles. This could include: • As part of a comprehensive transportation demand management strategy, employer-based shuttles that provide service to and from the Richmond and El Cerrito Del Norte BART stations for new large developments. At a minimum, employer shuttles should operate during the morning and evening peak periods. Shuttle schedules should be timed to facilitate transfer from northbound BART trains in the morning and southbound BART trains in the evening. • A shuttle program to serve San Pablo Avenue that links Mission Plaza to South San Pablo Avenue as well as Contra Costa College, College Center, City Hall, Circle S, the Casino, and Doctor’s Medical Center. This could be similar to the free shuttle in Oakland along Broadway that connects portions of Downtown Oakland and is funded by contributions from recent developments and a grant from the Bay Area Air Quality Management District. • A shuttle that runs between commercial centers located in neighboring cities, including Pinole, El Cerrito, and Richmond (to the Hilltop Mall, for example). 3-I-47 Work with the West Contra Costa Transportation Advisory Committee TDM Program Manager to promote the ridesharing and	

IMPACT	INCORPORATED GENERAL PLAN AND PROPOSED SPECIFIC PLAN GOALS, POLICIES, PROGRAMS AND MITIGATIONS THAT REDUCE THE IMPACT (GP POLICIES BEGIN WITH A LETTER; SPECIFIC PLAN POLICIES WITH A NUMBER)	SIGNIFICANCE AFTER MITIGATION
	Guaranteed Ride Home Program provided through 511 Contra Costa, the comprehensive transportation demand management program for Contra Costa County. 3-I-48 Work with Contra Costa College to develop transportation demand management strategies to reduce single-occupancy vehicle trips to the campus, through use of improved bus and shuttle services, as well as improved pedestrian and bicycle connectivity from nearby student housing. 3-I-49 As development occurs within the Planning Area, require transportation demand management strategies as part of the approval process, including: • Provisions for transit passes • Carsharing • Parking cash out 3-I-50 Provide incentives to existing employers to develop transportation demand management programs. 3-I-51 Draft and adopt a Commuter Benefit Ordinance to allow employers and workers citywide to tap into an existing federal program to pay for transit passes and vanpool. This would be similar to ordinances in cities of Richmond, San Francisco, and Berkeley.	
3.2-2 Implementa tion of the proposed San Pablo Avenue Specific Plan could conflict with the adopted Countywide Bicycle Master Plan.	<i>Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan</i> C-G-1 Develop a transportation system that meets the needs of all segments of the community, including residents, businesses, visitors, and the region. C-G-4 Maintain acceptable levels of service for all modes of travel. C-G-5 Develop a safe and comprehensive bicycle and pedestrian network. C-G-6 Encourage the expansion of public transportation systems. C-G-7 Facilitate the use of public transportation in San Pablo by making it more comfortable and convenient. C-G-8 Promote efficient use of existing transportation facilities through the implementation of transportation demand management concepts. C-I-1 Design and operate city streets based on a “Complete Streets” concept that enables safe, comfortable, and attractive access and travel for pedestrians, bicyclists, motorists, and transit users of all ages and abilities. C-I-2 Include “Complete Street” considerations in the design of all circulation improvement projects. C-I-13 Expand and maintain a safe and comprehensive bicycle system that	Less than Significant

IMPACT	INCORPORATED GENERAL PLAN AND PROPOSED SPECIFIC PLAN GOALS, POLICIES, PROGRAMS AND MITIGATIONS THAT REDUCE THE IMPACT (GP POLICIES BEGIN WITH A LETTER; SPECIFIC PLAN POLICIES WITH A NUMBER)	SIGNIFICANCE AFTER MITIGATION
	connects the city's neighborhoods to regional bicycle routes. C-I-15 Require the provision of bicycle parking and related facilities in new employment-generating development to facilitate multi-modal commute choices. <i>Proposed Specific Plan Policies that Reduce the Impact</i> 3-G-4 Provide continuous pedestrian sidewalks and safe bike travel routes throughout the Planning Area and within development projects. 3-G-5 Improve pedestrian and bicycle amenities throughout the Planning Area to encourage walking and bicycle trips along the corridor. 3-G-6 Ensure that private development integrates pedestrian and bicycle connections to transit, open space, and key destinations. 3-I-12 Create internal streets within new mixed-use developments that maximize safe and efficient pedestrian circulation by incorporating design elements such as wider landscaped sidewalks, reduced vehicular speed limits, pedestrian-oriented lighting, bulb-outs, curb extensions at intersections, high visibility crosswalks, and on-street parking to buffer pedestrians from moving vehicles. 3-I-13 Provide mid-block connections through new developments that accommodate bicyclists and pedestrians, or all modes, to facilitate access to transit stops and major public destinations. 3-I-14 Consider connections and extensions to future bike and walking trails in anticipation of future amenities and improvements at Wildcat, San Pablo, and Rheem creeks, and potential park sites. 3-I-15 Enhance pedestrian connections and amenities and prioritize pedestrian access and circulation in Pedestrian Priority Zones. Additional policies relating to the pedestrian network are also included in the Specific Plan under Chapter 4, Section 4.1: Streetscape Design. 3-I-16 Provide signage that clearly and explicitly indicates connections to local and regional bicycle facilities. 3-I-17 Provide secure short- and long-term bicycle parking at transit stops. 3-I-18 Encourage provision of bike racks and locking systems in all multi-family residential developments, multi-tenant retail and office developments, and government and institutional uses. 3-I-19 Incorporate a one-foot buffer, distinguished through color or paving, between the bicycle lane and the adjacent travel lane along the length of San Pablo Avenue, to enhance visibility and safety for bicyclists. 3-I-20 Maintain bike lanes along San Pablo Avenue, including pavement condition as well as clearing of debris.	
3.2-3	<i>Public Review Draft General Plan Policies (November 2010) Assumed to be</i>	Less than

IMPACT	INCORPORATED GENERAL PLAN AND PROPOSED SPECIFIC PLAN GOALS, POLICIES, PROGRAMS AND MITIGATIONS THAT REDUCE THE IMPACT (GP POLICIES BEGIN WITH A LETTER; SPECIFIC PLAN POLICIES WITH A NUMBER)	SIGNIFICANCE AFTER MITIGATION
Implementa tion of the proposed San Pablo Avenue Specific Plan could conflict with San Pablo 2030 General Plan multimodal level of service policies.	<i>Adopted Prior to Adoption of the Proposed Specific Plan</i> C-I-17 Evaluate multimodal level of service (MMLOS) qualitatively, consistent with the criteria in Table 5.2-4, for the following routes: <i>For bicyclists, evaluate the routes shown on Figure 5-4, to determine necessary improvements. Bicycle LOS “C” standard is the goal for these streets. For pedestrians, evaluate streets within Pedestrian Priority Zones (e.g. San Pablo Avenue, 23rd Street). As shown on Figure 5-1, to determine necessary improvements. In these zones, the Pedestrian LOS “C” is the goal.</i> C-I-25 Continue coordination efforts with public transit providers to maintain transit service that is safe and efficient with convenient connections to high use and activity intersections in the city. <i>On the key transit corridors, such as San Pablo Avenue, a higher level of satisfied riders, at Transit LOS “B” standard, is the goal. This means achieving a combination of frequent service (4 to 5 buses per hour), good on-time performance and good travel speed, and having bus stop amenities such as benches and shelters, at more than half of the bus stops.</i> <i>Proposed Specific Plan Policies that Reduce the Impact</i> 3-G-1 Establish the San Pablo Avenue transit hub as a major transit destination, with improved pedestrian and streetscape facilities, safety measures, and visibility. 3-G-2 Improve the quality, visibility, and safety of transit stops along the San Pablo Avenue corridor. 3-G-3 With new construction, ensure access to transit is provided for seniors, families with children, and persons with disabilities throughout the Planning Area. 3-I-1 Work with AC Transit and West CAT to establish a station of consolidated bus stops that best serves Contra Costa College and existing and planned high-density residential development. This may be located at College Lane, El Portal Drive, or along San Pablo Avenue. Formalize the Transit Hub by consolidating stops to one location, installing shelters, signage with system information and next-bus updates, bus pull-out areas, and expanded pedestrian furnishings and pedestrian-scaled lighting for visibility and security. 3-I-2 Coordinate with AC Transit and West CAT to implement bus service modifications to improve service and increase accessibility to transit for new higher-intensity development in the Planning Area. 3-I-3 Identify direct paths to bus stops for pedestrians and bicyclists, and identify opportunities for implementation—either new connections through redevelopment or improvements to existing development.	Significant

IMPACT	INCORPORATED GENERAL PLAN AND PROPOSED SPECIFIC PLAN GOALS, POLICIES, PROGRAMS AND MITIGATIONS THAT REDUCE THE IMPACT (GP POLICIES BEGIN WITH A LETTER; SPECIFIC PLAN POLICIES WITH A NUMBER)	SIGNIFICANCE AFTER MITIGATION
	3-I-4 Work with Contra Costa College to develop and improve connections to the proposed Transit Hub near the college, by designating paths and improving signage. 3-I-5 Provide way finding signage to indicate pathways to and location of major bus stops. 3-I-6 Improve the pedestrian crosswalks at El Portal Drive and Rumrill Boulevard to ensure accessibility for persons with disabilities and provide greater connectivity near high density mixed-use development, such as the potential student housing at Mission Plaza. 3-I-7 Provide signalized pedestrian crosswalks at mid-block crossings and countdown signals at wide crosswalks or near bus stop locations. 3-I-8 Improve streetscape design to establish greater pedestrian comfort and access to transit stations. See Chapter 4, Section 4.2: Streetscape Design for specific measures. 3-I-9 Provide bus shelters, seating, lighting, trash receptacles, signage and kiosks, lighting and enhanced landscaping (for shade and aesthetics) at all bus stops. 3-I-10 Employ technologies such as “next-bus” to provide real-time system updates to increase user convenience at all bus stops. 3-I-11 Allow advertisements on bus shelters in cooperation with transit providers, as a means of cost recovery. 3-G-7 Maximize connectivity in the Planning Area through creation of finer street grid patterns in new development. 3-G-8 Provide sufficient capacity on the Planning Area roadway network to efficiently and safely serve local traffic needs. 3-G-9 Support roadway improvement efforts to establish San Pablo Avenue as a Complete Street. Balance the needs of cars with those of pedestrians, bicyclists, and transit. 3-I-25 Ensure that new developments provide fine grain street grids, creating shorter blocks and more route options that emphasize pedestrian connectivity to and from San Pablo Avenue, transit, and key destinations. 3-I-26 Establish a street grid that covers the entire site and allows visual access into the development from San Pablo Avenue. The grid should organize all development within the site, provide a direct connection to Church Lane to the north, and provide a potential connection through to Vale Road to the south and potentially to the Casino. 3-I-27 Establish a central pedestrian-oriented street that provides a direct link from San Pablo Avenue to improved open space along Wildcat Creek.	

IMPACT	INCORPORATED GENERAL PLAN AND PROPOSED SPECIFIC PLAN GOALS, POLICIES, PROGRAMS AND MITIGATIONS THAT REDUCE THE IMPACT (GP POLICIES BEGIN WITH A LETTER; SPECIFIC PLAN POLICIES WITH A NUMBER)	SIGNIFICANCE AFTER MITIGATION
	3-I-28 As part of any redevelopment of Towne Center, establish a street grid for the site that provides access points to San Pablo Dam Road, San Pablo Avenue, and Willow Road. 3-I-29 Establish a pedestrian-only axis that leads directly from the Casino through the site in order to create a single, cohesive entertainment district. 3-I-30 Provide vehicular access to off-street parking from San Pablo Avenue via a new pedestrian-oriented roadway through the site. In addition, policies listed under Impact 3.2-2 related to the bicycle and pedestrian systems also help to reduce this impact.	
Air Quality		
3.3-I Implementa tion of the proposed San Pablo Avenue Specific Plan could result in an increase in VMT at a rate that would exceed the rate of population increase within the City.	Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan OSC-I-17 Prepare a Greenhouse Gas Emissions Reduction Plan that focuses on feasible actions the City can take to minimize the adverse impacts of growth and development on climate change and air quality. The plan would include, but not be limited to: • A baseline inventory of all known or reasonably discoverable sources of greenhouse gases (GHGs) that currently exist in the city and sources that existed in 1990. • A projected inventory of the GHGs that can reasonably be expected to be emitted in the city in the year 2030 in accordance with discretionary land use decisions pursuant to this General Plan update and foreseeable communitywide and municipal operations. • A target for the reduction of emissions from those identified sources reasonably attributable to the City's discretionary land use decisions and municipal operations, in line with site goals and targets established by the Air Resources Board. • A list of feasible GHG reduction measures whose purpose shall be to meet the established local reduction target, including energy conservation and "green building" requirements in municipal buildings and private development. OSC-I-20 Require developers to use best management practices (BMPs) to reduce particulate emissions and dust associated with construction activities as a condition for approval of subdivision maps, site plans, and grading permits. These BMPs include, but are not limited to, regular materials and vehicle tire watering, covering, and dust prevention measures during clearing, grading, earth-moving, or excavation operations. OSC-I-21 Provide incentives for the installation of EPA-certified wood heaters	Significant, Unavoidable

IMPACT	INCORPORATED GENERAL PLAN AND PROPOSED SPECIFIC PLAN GOALS, POLICIES, PROGRAMS AND MITIGATIONS THAT REDUCE THE IMPACT (GP POLICIES BEGIN WITH A LETTER; SPECIFIC PLAN POLICIES WITH A NUMBER)	SIGNIFICANCE AFTER MITIGATION
	or approved wood-burning appliances; list permitted and prohibited fuels, and create a “no burn” policy on days when air quality is particularly poor. OSC-I-22 Support CCTA’s efforts to address climate change and air quality issues on a regional basis as reflected in the ‘Principles for Collaborative Development of Sustainable Communities Strategies in Contra Costa County’. OSC-I-23 Continue to support the Bay Area Air Quality Management District’s efforts to monitor and control air pollutants from stationary sources. OSC-I-24 Continue to work with surrounding jurisdictions and agencies to establish parallel air quality programs and implementation measures, as necessary, to improve air quality standards. OSC-I-25 Support non-polluting transportation modes and opportunities (i.e. pedestrian, bike, carpooling opportunities and public transit improvements) as specified in the Circulation Element. OSC-I-26 Promote energy efficiency in architectural design for new construction including building orientation to take advantage of wind and sun, and site design features (such as clustering of uses), pre-wiring for optional photovoltaic or solar heating systems, etc. C-G-10 Promote efficient use of existing transportation facilities through the implementation of transportation demand management concepts. C-I-37 Establish travel demand management programs to reduce peak-hour traffic congestion and help reduce regional vehicle miles traveled. HEA-I-6 Establish an incentive system to encourage land dedication and park development beyond the minimum City requirements. Incentives may include density bonuses, and increased building height at appropriate locations. Tie incentive program to priority areas for parks development. HEA-I-11 Support the use of clean fuel, “climate friendly” vehicles in order to reduce energy use, energy costs, and greenhouse gas emissions by residents, businesses, and city government activities. HEA-I-12 Use zoning and redevelopment programs to establish incentives for locating healthy food grocery stores at the center of neighborhoods and to increase communitywide healthy food access. Approaches may include: • Within the Zoning Ordinance, clearly define “healthy food grocery stores” in order to ensure that businesses meeting that description have access to incentives developed with them in mind. Recommended criteria include: 1) dedicates at least 50 percent of retail space for a general line of food and non-food grocery products intended for home preparation, consumption, and use; 2) dedicates at least 30 percent of retail space for	

IMPACT	INCORPORATED GENERAL PLAN AND PROPOSED SPECIFIC PLAN GOALS, POLICIES, PROGRAMS AND MITIGATIONS THAT REDUCE THE IMPACT (GP POLICIES BEGIN WITH A LETTER; SPECIFIC PLAN POLICIES WITH A NUMBER)	SIGNIFICANCE AFTER MITIGATION
	perishable goods that include dairy, fresh produce, fresh meats-poultry-fish, and frozen foods; and 3) dedicates at least 500 square feet of its retail space for fresh produce; • Ensure sites are made available that could be developed as healthy food grocery stores (with a focus on neighborhood areas with little or no access); • Provide expedited permit processing for healthy food grocery store development; • Leverage City staff time, redevelopment funds, and other economic development grant money to help potential new healthy food grocers to consolidate parcels and/or make necessary improvements; • Encourage large healthy food grocers to offer shuttle service and home delivery; and • Develop standards and incentives flexible enough to accommodate “alternative” grocery stores which use less space, require less parking, and focus on the day-to-day needs of nearby residents. C-I-13 Expand and maintain a safe and comprehensive bicycle system that connects the City’s neighborhoods to regional bicycle routes. C-I-14 Acquire land for new bicycle routes along Wildcat Creek, as shown in Figure 5-4 of the General Plan, only if land owners are willing to sell such land or provide easements for public access. If landowners object to route designations, seek alternative routes and amend Bicycle Map accordingly. C-I-15 Require the provision of bicycle parking and related facilities in new employment-generating development to facilitate multi-modal commute choices. C-I-16 Evaluate multimodal level of service (MMLOS) qualitatively, consistent with the criteria in Table 5.2-4, for the following routes: • For bicyclists, evaluate the routes shown on Figure 5-4 of the General Plan, to determine necessary improvements. Bicycle LOS “C” standard is the goal for these streets. • For pedestrians, evaluate streets within Pedestrian Priority Zones (e.g. San Pablo Avenue, 23rd Street). As shown on Figure 5-1 of the General Plan, to determine necessary improvements. In these zones, the Pedestrian LOS “C” is the goal. C-I-17 Adopt a Bicycle Master Plan to enhance bicycle circulation and planning, based on the route network in Figure 5-4 of the General Plan and the Contra Costa Countywide Bicycle and Pedestrian Plan. C-I-18 Use brightly-colored paint or a one-foot buffer strip along bicycle	

IMPACT	INCORPORATED GENERAL PLAN AND PROPOSED SPECIFIC PLAN GOALS, POLICIES, PROGRAMS AND MITIGATIONS THAT REDUCE THE IMPACT (GP POLICIES BEGIN WITH A LETTER; SPECIFIC PLAN POLICIES WITH A NUMBER)	SIGNIFICANCE AFTER MITIGATION
	routes to provide a visual signal to drivers to watch out for bicyclists and nurture a “share the lane” ethic. Start with areas of town where automobile-bicycle collisions have occurred in the past, based on data from the Statewide Integrated Traffic Records System maintained by the California Highway Patrol. C-I-19 Work with the City of Richmond and Contra Costa County to develop safe and clearly marked pedestrian and bicycle linkages from downtown San Pablo to the Bay Trail. Improvements should connect Contra Costa College to the Wildcat Creek bikeway west of Davis Park, and also connect the bikeway at Davis Park to Alvarado Park east of the city. (See Figure 8-1 of the General Plan.) C-I-20 Complete and enhance the pedestrian network with an interconnected system of walkways, continuous sidewalks on both sides of the street, and pedestrian crossings. C-I-21 To maintain walkability and pedestrian safety, consider reducing curb-to-curb road widths and employing roadway design features such as islands, pedestrian refuges, and pedestrian count-down signals. C-I-22 Provide pedestrian facilities that are accessible to persons with disabilities and ensure that roadway improvement projects address accessibility and universal design concepts. C-I-23 In mixed-use areas or other areas with high pedestrian traffic, provide mid-block pedestrian crossings, where feasible, to create more direct walking routes and slow vehicle speeds. C-G-9 Foster practical parking solutions to serve community needs while avoiding excessive amounts of surface parking that disrupt the urban fabric of the city. C-I-31 Amend the Zoning Ordinance to establish “green” parking design standards that have multiple benefits, such as shared parking for mixed use projects, photovoltaic panels on parking structures to generate energy for parking lot lighting, landscaping and trees in surface parking, and pervious paving to improve groundwater recharge and promote innovative surface parking design that avoids the appearance of a “sea of asphalt” and reduces environmental impacts. Strategies will include, but are not limited to: • Require parking to be provided behind buildings, wherever feasible; • Promote the use of time, motion-sensing, and/or solar powered parking lot lights or security lights, wherever feasible; • Establish specific standards for perimeter landscaping, including the type and coverage required along the edges of surface parking areas adjacent to streets;	

IMPACT	INCORPORATED GENERAL PLAN AND PROPOSED SPECIFIC PLAN GOALS, POLICIES, PROGRAMS AND MITIGATIONS THAT REDUCE THE IMPACT (GP POLICIES BEGIN WITH A LETTER; SPECIFIC PLAN POLICIES WITH A NUMBER)	SIGNIFICANCE AFTER MITIGATION
	• Require a minimum number of trees per parking stall in surface parking areas (e.g. 1 per 8 stalls for double-loaded bays) to provide shade, and reduce urban heat island effects; • Separate pedestrian pathways from car lanes where possible; • Promote the use of porous paving and a variety of drainage features according to the site; and • Restrict use of vacant lots as vehicle parking and outdoor storage of commercial equipment, construction equipment, and similar items unless screened from view from adjacent streets. <i>The following policies and programs are from the Housing Element:</i> H-4: Promote the development of energy efficient homes to help protect the environment and lower energy costs for San Pablo residents. Program H-2.1.8: Provide by right reductions from the standard parking requirements for new residential projects that are located on San Pablo Avenue and have frequent transit service. H-4.1: Encourage the incorporation of energy conservation design features in existing and future residential developments to conserve resources and reduce housing costs. Program H-4.1.1: Create an “Energy Improvement and Weatherization Program” to offer rehabilitation loans to extremely low- to moderate-income homeowners and seniors to improve the energy efficiency of their residence and/or replace existing energy inefficient appliances. Program H-4.1.2: Promote the use of solar energy and other environmentally sound, energy efficient methods for heating and cooling homes, consistent with adopted building, mechanical and plumbing codes. Program H-4.1.3: Require developers to complete a GreenPoint Checklist, Leadership in Energy and Environmental Design Checklist (LEED) or equivalent, as part of their submittal to the Planning Division and encourage them to attain the equivalent of LEED Silver certification or better. Program H-4.1.4: Consider a Green Building Design Ordinance that offers density, FAR, and height bonuses for private projects that meet certain green building thresholds. Program H-4.1.5: Facilitate environmentally sensitive construction practices by: • Restricting the use of chloroflourocarbons (CFCs), hydrochloroflourocarbons (HCFCs), and halons in mechanical equipment and building materials; • Promoting the use of products that are durable and allow efficient	

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	end-of-life disposal (recyclable); • Requiring large project applicants to submit a construction waste management plan for City approval; • Promoting the use of locally or regionally available materials; and • Promoting the use of cost-effective design and construction strategies that reduce resource and environmental impacts. <i>Proposed Specific Plan Policies that Reduce the Impact</i> 3-G-4 Provide continuous pedestrian sidewalks and safe bike travel routes throughout the Planning Area and within development projects. 3-G-5 Improve pedestrian and bicycle amenities throughout the Planning Area to encourage walking and bicycle trips along the corridor. 3-G-6 Ensure that private development integrates pedestrian and bicycle connections to transit, open space, and key destinations. 3-I-12 Create internal streets within new mixed-use developments that maximize safe and efficient pedestrian circulation by incorporating design elements such as wider landscaped sidewalks, reduced vehicular speed limits, pedestrian-oriented lighting, bulb-outs, curb extensions at intersections, high visibility crosswalks, and on-street parking to buffer pedestrians from moving vehicles. 3-I-13 Provide mid-block connections through new developments that accommodate bicyclists and pedestrians, or all modes, to facilitate access to transit stops and major public destinations. 3-I-14 Consider connections and extensions to future bike and walking trails in anticipation of future amenities and improvements at Wildcat, San Pablo, and Rheem creeks, and potential park sites. 3-I-15 Enhance pedestrian connections and amenities and prioritize pedestrian access and circulation in Pedestrian Priority Zones. Additional policies relating to the pedestrian network are also included in the Specific Plan under Chapter 4, Section 4.1: Streetscape Design. <i>Proposed Specific Plan Policies that Reduce the Impact</i> 3-I-16 Provide signage that clearly and explicitly indicates connections to local and regional bicycle facilities. 3-I-17 Provide secure short- and long-term bicycle parking at transit stops. 3-I-18 Encourage provision of bike racks and locking systems in all multi-family residential developments, multi-tenant retail and office developments, and government and institutional uses. 3-I-19 Incorporate a one-foot buffer, distinguished through color or paving, between the bicycle lane and the adjacent travel lane along the length of San Pablo Avenue, to enhance visibility and safety for	

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	bicyclists. 3-I-20 Maintain bike lanes along San Pablo Avenue, including pavement condition as well as clearing of debris. 3-G-13 Encourage use of Transportation Demand Management strategies to minimize traffic contributions from new and existing development. 3-G-14 Promote public and privately-run alternative modes of transit, such as shuttles, along the San Pablo Avenue corridor. 3-I-45 Encourage and support carpooling and vanpooling by providing preferential parking at employment sites for carpools and vanpools. 3-I-46 Explore the feasibility of shuttles. This could include: • As part of a comprehensive transportation demand management strategy, employer-based shuttles that provide service to and from the Richmond and El Cerrito Del Norte BART stations for new large developments. At a minimum, employer shuttles should operate during the morning and evening peak periods. Shuttle schedules should be timed to facilitate transfer from northbound BART trains in the morning and southbound BART trains in the evening. • A shuttle program to serve San Pablo Avenue that links Mission Plaza to South San Pablo Avenue as well as Contra Costa College, College Center, City Hall, Circle S, the Casino, and Doctor's Medical Center. This could be similar to the free shuttle in Oakland along Broadway that connects portions of Downtown Oakland and is funded by contributions from recent developments and a grant from the Bay Area Air Quality Management District. • A shuttle that runs between commercial centers located in neighboring cities, including Pinole, El Cerrito, and Richmond (to the Hilltop Mall, for example). 3-I-47 Work with the West Contra Costa Transportation Advisory Committee TDM Program Manager to promote the ridesharing and Guaranteed Ride Home Program provided through 511 Contra Costa, the comprehensive transportation demand management program for Contra Costa County. 3-I-48 Work with Contra Costa College to develop transportation demand management strategies to reduce single-occupancy vehicle trips to the campus, through use of improved bus and shuttle services, as well as improved pedestrian and bicycle connectivity from nearby student housing. 3-I-49 As development occurs within the Planning Area, require transportation demand management strategies as part of the approval process, including:	

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	• Provisions for transit passes • Carsharing • Parking cash out 3-I-50 Provide incentives to existing employers and/or developers to develop transportation demand management programs, such as reduced parking requirements. 3-I-51 Draft and adopt a Commuter Benefit Ordinance to allow employers and workers citywide to tap into an existing federal program to pay for transit passes and vanpool. This would be similar to ordinances in cities of Richmond, San Francisco, and Berkeley. <i>Mitigation Measures</i> In terms of mitigation measures identified by the BAAQMD in its CEQA Guidelines, both the assumed to be adopted General Plan and the proposed Specific Plan are premised on infill development, as opposed to new development in areas not currently built upon. The proposed Specific Plan designates mixed-use centers and corridors, primarily in the central portion of San Pablo and at key arterial intersections along San Pablo Avenue, which provides the best transit access in the city. The proposed Specific Plan offers numerous policies to support a stronger pedestrian and bicycle network, taking cars off the streets, and the proposed Specific Plan also lays out a policy foundation for implementation of a strong TDM program in the future. In short, the proposed Plan, in conjunction with the assumed to be adopted San Pablo 2030 General Plan and Housing Element, includes many of the measures identified by the BAAQMD as applicable to reduce air quality impacts of land use plans. Based strictly on the transportation modeling conducted for the proposed Project in accordance with BAAQMD CEQA Guidelines, vehicle travel is forecast to increase at a faster rate than population, and therefore this impact would be considered significant and unavoidable.	
3.3-2 Implementa tion of the proposed San Pablo Avenue Specific Plan could result in an implementing document that is inconsistent with the goals and control measures of the Clean Air	See Table 3.3-5 for Specific Plan Consistency with Control Strategies of the 2010 Clean Air Plan.	Less than Significant

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Plan.		
3.3-3 Implementa tion of the proposed San Pablo Avenue Specific Plan could result in an increase in VMT at a rate that would exceed the rate of population increase within the City.	<i>Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan</i> OSC-I-18 Work with the Bay Area Air Quality Management District to develop and implement a Community Risk Reduction Plan (CRRP) to address the exposure of sensitive populations to toxic air contaminant emissions in San Pablo. OSC-I-19 Maintain a 500-foot Air Quality Health Risk Overlay Zone on either side of Interstate 80 within the Planning Area to protect sensitive receptors from toxic air emissions. Within this overlay, avoid approval of new sensitive land uses, and for those projects permitted, require site-specific project design improvements (such as higher performance windows and HVAC systems) in order to reduce public health risks associated with poor air quality in these locations. <i>Proposed Specific Plan Policies that Reduce the Impact</i> 8-G-4 <i>Ensure that infill and redevelopment in the San Pablo Avenue Specific Plan corridor minimize exposure to hazardous materials and toxic air contaminants.</i> 8-I-8 Require new residential projects within the Specific Plan Planning Area, and other potential projects in the area which may also be categorized as sensitive receptors (such as nursing home facilities, retirement living facilities, school or daycare facilities), to be located an adequate distance from existing and potential sources of TACs and odors, in accordance with the BAAQMD's Air Quality and Land Use Handbook (2005) recommendations, or the latest resource the air district has available. Existing stationary TAC sources in the Planning Area are mapped in Figure 8-1; however, project proponents are expected to check BAAQMD databases for the latest data on stationary TAC sources. 8-I-9 Require proponents of projects within 100 feet of existing hazardous materials case sites or TAC sources (as mapped on Figure 8-1) to investigate use compatibility at the location in question (some kinds of uses might be at lower risk than others), as well as potential feasible design-related risk mitigation measures. Project proponents must provide evidence to the City of consultation with the BAAQMD and the RWQCB in making refinements to project designs to reduce applicable hazardous materials and/or toxic air contaminant risk.	Less than Significant
Energy and Greenhouse Gases		
3.4.1 Implementa	<i>Public Review Draft General Plan Policies (November 2010) Assumed to be</i>	Less than

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tion of the proposed Specific Plan would result in an increase in per service population (residents + jobs) energy consumption as measured citywide.	<i>Adopted Prior to Adoption of the Proposed Specific Plan</i> C-I-6 In consultation with PG&E, study the feasibility of a program for converting City-owned street lights to light-emitting diode (LED) technology, and take advantage of rate reductions and rebates, as applicable. C-I-14 Expand and maintain a safe and comprehensive bicycle system that connects the city's neighborhoods to regional bicycle routes. C-I-16 Require the provision of bicycle parking and related facilities in new employment-generating development to facilitate multi-modal commute choices. C-I-21 Complete and enhance the pedestrian network with an interconnected system of walkways, continuous sidewalks on both sides of the street, and pedestrian crossings. C-I-26 Continue coordination efforts with public transit providers to maintain transit service that is safe and efficient with convenient connections to high use and activity intersections in the city. C-I-27 Work with public transit providers to advocate the expansion of transit service to underserved areas in the City. C-I-33 Amend the Zoning Ordinance to establish "green" parking design standards that have multiple benefits, such as shared parking for mixed use projects, passive solar on parking structures to generate energy for parking lot lighting, landscaping and trees in surface parking, and pervious paving to improve groundwater recharge and promote innovative surface parking design that avoids the appearance of a "sea of asphalt" and reduces environmental impacts. OSC-I-26 Promote energy efficiency in architectural design for new construction including building orientation to take advantage of wind and sun, and site design features (such as clustering of uses), pre-wiring for optional photovoltaic or solar heating systems, etc. HEA-I-4 Act as a model to other large employers by selecting and implementing a suite of transportation demand management (TDM) programs designed to reduce single-occupant vehicle trips and overall vehicle emissions generated by trips that start or end in San Pablo. Programs may include, but are not limited to: installation of showers, lockers, and secure bike parking facilities in city-owned buildings; designation of preferred parking spaces for carpools, carshare programs, and clean fuel vehicles; and provision of transit benefits that reduce direct employee public transportation costs. HEA-I-11 Support the use of clean fuel, "climate friendly" vehicles in order to reduce energy use, energy costs, and greenhouse gas emissions by residents, businesses, and City government activities. <i>Proposed Specific Plan Policies that Reduce the Impact</i>	Significant

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	3-G-1 <i>Establish the San Pablo Avenue transit hub as a major transit destination, with improved pedestrian and streetscape facilities, safety measures, and visibility.</i> 3-G-2 <i>Improve the quality, visibility, and safety of transit stops along the San Pablo Avenue corridor.</i> 3-G-3 <i>With new construction, ensure access to transit is provided for seniors, families with children, and persons with disabilities throughout the Planning Area.</i> 3-I-1 Work with AC Transit and West CAT to establish a station of consolidated bus stops that best serves Contra Costa College and existing and planned high-density residential development. This may be located at College Lane, El Portal Drive, or along San Pablo Avenue. Formalize the transit hub by consolidating stops to one location, installing shelters, signage with system information and next-bus updates, bus pull-out areas, and expanded pedestrian furnishings and pedestrian-scaled lighting for visibility and security. 3-I-2 Coordinate with AC Transit and West CAT to implement bus service modifications to improve service and increase accessibility to transit for new higher-intensity development in the Planning Area. 3-I-3 Identify direct paths to bus stops for pedestrians and bicyclists, and identify opportunities for implementation—either new connections through redevelopment or improvements to existing development. 3-I-4 Work with Contra Costa College to develop and improve connections to the proposed Transit Hub near the college, by designating paths and improving signage. 3-I-5 Provide way finding signage to indicate pathways to and location of major bus stops. 3-I-6 Improve the pedestrian crosswalks at El Portal Drive and Rumrill Boulevard to ensure accessibility for persons with disabilities and provide greater connectivity near high density mixed-use development, such as the potential student housing at Mission Plaza. 3-I-7 Provide signalized pedestrian crosswalks at mid-block crossings and countdown signals at wide crosswalks or near bus stop locations. 3-I-8 Improve streetscape design to establish greater pedestrian comfort and access to transit stations. See Chapter 4, Section 4.2: Streetscape Design for specific measures. 3-I-9 Provide bus shelters, seating, lighting, trash receptacles, signage and kiosks, lighting and enhanced landscaping (for shade and aesthetics) at all bus stops. 3-G-4 <i>Provide continuous pedestrian sidewalks and safe bike travel routes throughout the Planning Area and within development projects.</i>	

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	3-G-5 <i>Improve pedestrian and bicycle amenities throughout the Planning Area to encourage walking and bicycle trips along the corridor.</i> 3-G-6 <i>Ensure that private development integrates pedestrian and bicycle connections to transit, open space, and key destinations.</i> 3-I-12 Create internal streets within new mixed-use developments that maximize safe and efficient pedestrian circulation by incorporating design elements such as wider landscaped sidewalks, reduced vehicular speed limits, pedestrian-oriented lighting, bulb-outs, curb extensions at intersections, high visibility crosswalks, and on-street parking to buffer pedestrians from moving vehicles. 3-I-13 Provide mid-block connections through new developments that accommodate bicyclists and pedestrians, or all modes, to facilitate access to transit stops and major public destinations. 3-I-14 Consider connections and extensions to future bike and walking trails in anticipation of future amenities and improvements at Wildcat, San Pablo, and Rheem creeks, and potential park sites. 3-I-15 Enhance pedestrian connections and amenities and prioritize pedestrian access and circulation in Pedestrian Priority Zones. 3-I-16 Provide signage that clearly and explicitly indicates connections to local and regional bicycle facilities. 3-I-17 Provide secure short- and long-term bicycle parking at transit stops. 3-I-18 Encourage provision of bike racks and locking systems in all multi-family residential developments, multi-tenant retail and office developments, and government and institutional uses. 3-I-19 Incorporate a one-foot buffer, distinguished through color or paving, between the bicycle lane and the adjacent travel lane along the length of San Pablo Avenue, to enhance visibility and safety for bicyclists. 3-I-20 Maintain bike lanes along San Pablo Avenue, including pavement condition as well as clearing of debris. 3-G-13 <i>Encourage use of Transportation Demand Management strategies to minimize traffic contributions from new and existing development.</i> 3-G-14 <i>Promote public and privately-run alternative modes of transit, such as shuttles, along the San Pablo Avenue corridor.</i> 3-I-45 Encourage and support carpooling and vanpooling by providing preferential parking at employment sites for carpools and vanpools. 3-I-46 Explore the feasibility of shuttles. This could include: • As part of a comprehensive transportation demand management strategy, employer-based shuttles that provide service to and from the Richmond and El Cerrito Del Norte BART stations for new large developments. At a minimum, employer shuttles should	

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	operate during the morning and evening peak periods. Shuttle schedules should be timed to facilitate transfer from northbound BART trains in the morning and southbound BART trains in the evening. • A shuttle program to serve San Pablo Avenue that links Mission Plaza to South San Pablo Avenue as well as Contra Costa College, College Center, City Hall, Circle S, the Casino, and Doctor's Medical Center. This could be similar to the free shuttle in Oakland along Broadway that connects portions of Downtown Oakland and is funded by contributions from recent developments and a grant from the Bay Area Air Quality Management District. • A shuttle that runs between commercial centers located in neighboring cities, including Pinole, El Cerrito, and Richmond (to the Hilltop Mall, for example). 3-I-47 Work with the West Contra Costa Transportation Advisory Committee TDM Program Manager to promote the ridesharing and Guaranteed Ride Home Program provided through 511 Contra Costa, the comprehensive transportation demand management program for Contra Costa County. 3-I-48 Work with Contra Costa College to develop transportation demand management strategies to reduce single-occupancy vehicle trips to the campus, through use of improved bus and shuttle services, as well as improved pedestrian and bicycle connectivity from nearby student housing. 3-I-49 As development occurs within the Planning Area, require transportation demand management strategies as part of the approval process, including: • Provisions for transit passes • Carsharing • Parking cash out 3-I-50 Provide incentives to existing employers to develop transportation demand management programs. 3-I-51 Draft and adopt a Commuter Benefit Ordinance to allow employers and workers citywide to tap into an existing federal program to pay for transit passes and vanpool. This would be similar to ordinances in cities of Richmond, San Francisco, and Berkeley. In addition, these policies related to sustainable building design would also help to reduce energy use. DG-41 Incorporate the adaptive reuse of existing materials, façades, and buildings. Use sustainable surface materials for paving, such as reclaimed pavers, locally-produced materials, or concrete and	

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	asphalt with fly ash content. DG-42 Utilize materials which have low embodied energy, are rapidly renewable, locally available, and do not give off harmful vapors. DG-43 Install water saving appliances and systems such as gray water systems, moisture-sensitive irrigation rainwater cisterns, low-flow toilets and faucets. DG-44 Use water-pervious materials for parking areas, driveways and pathways to the extent such that they reduce runoff and do not cause damage to public streets or other infrastructure. DG-45 Manage stormwater on-site through green roofs and/or rooftop gardens or water catchment systems to be used for irrigation. DG-46 Use energy-efficient and low emission heating, ventilation and air conditioning (HVAC) systems, if mechanical systems are necessary. DG-47 Provide operable windows that allow natural ventilation and potentially eliminate the need for mechanical ventilation. DG-48 Divert waste from landfills by promoting reduction, reuse, recycling, and composting of materials during construction and through building materials selection. DG-49 All development is subject to Alameda County's StopWaste.Org waste diversion, recycling, and composting standards, as adopted by City Council.	
3.4-2 Implementa tion of the proposed Specific Plan, combined with citywide and regional growth, could cause the City of San Pablo to exceed the per service population (residents + jobs) GHG emissions threshold of 6.6 MT CO₂e/year established by BAAQMD for	See detailed reductions and policy measures table in Section 3.4. Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan OSC-I-17 Prepare a Greenhouse Gas Emissions Reduction Plan that focuses on feasible actions the City can take to minimize the adverse impacts of growth and development on climate change and air quality. The plan would include, but not be limited to: • A baseline inventory of all known or reasonably discoverable sources of greenhouse gases (GHGs) that currently exist in the city and sources that existed in 1990. • A projected inventory of the GHGs that can reasonably be expected to be emitted in the city in the year 2030 in accordance with discretionary land use decisions pursuant to this Specific Plan update and foreseeable communitywide and municipal operations. • A target for the reduction of emissions from those identified sources reasonably attributable to the City's discretionary land use decisions and municipal operations, in line with site goals and targets established by the Air Resources Board. • A list of feasible GHG reduction measures whose purpose shall	Less than Significant

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plan level impacts, or the 4.6 MT CO ₂ e/year threshold established for project level impacts.	be to meet the established local reduction target, including energy conservation and “green building” requirements in municipal buildings and private development. • Furthermore, all policies listed above under Impact 3.4-I would also reduce GHG emissions as they reduce energy use. <i>Proposed Specific Plan Policies that Reduce the Impact</i> All Specific Plan policies listed under Impact 3.4-I would help to reduce GHG emissions associated with the proposed Project, just as they reduce energy use.	
Hydrology, Flooding, and Water Quality		
3.5-1 Implementation of the proposed San Pablo Avenue Specific Plan could adversely affect water quality and drainage patterns in the short term due to erosion and sedimentation during construction activities.	None required.	Less than Significant
3.5-2 Implementation of the proposed San Pablo Avenue Specific Plan could result in degradation of water quality and depletion of groundwater supplies by increasing nonpoint source pollutants	<i>Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan</i> PSCU-G-5 Continue to ensure the successful provision, maintenance, and operation of City-owned public infrastructure and utilities. PSCU-G-6 Support the efficient use and conservation of water. PSCU-G-7 Maintain a comprehensive storm drainage system to protect life and property. OSC-G-3 Protect and enhance wetlands, creek systems, and rare and endangered species and their habitats. OSC-G-4 Ensure both access and ecological functionality of the creek system in San Pablo. OSC-G-5 Protect water supply and quality through conservation and good stormwater management practices.	Less than Significant

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including sedimentation in stormwater runoff through creation of new impervious surfaces in new development.	PSCU-I-34 Update zoning standards to minimize storm water runoff rates and volumes, control water pollution, and maximize recharge of local groundwater aquifers. New development will be required to include features that reduce impermeable surface area and increase infiltration. Such features may include, but are not limited to: • Canopy trees or shrubs to absorb rainwater; • Grading that lengthens flow paths and increases runoff travel time to reduce the peak hour flow rate; • Removing curbs and gutters from parking areas where appropriate to allow stormwater sheet flow into vegetated areas; • Permeable paving and parking area design; • Stormwater detention and retention basins to facilitate infiltration; and • Integrated or subsurface water retention facilities to capture rainwater for use in landscape irrigation and other non-potable uses. <i>Detailed recommendations are provided in the Bay Area Stormwater Management Agency's "Start at the Source Design Guidance Manual for Stormwater Quality Protection."</i> OSC-I-10 Maintain, protect, and enhance San Pablo's creeks, including Rheem, San Pablo, and Wildcat creeks, as local environmental and aesthetic resources, with approaches including, but not limited to: • Establishing a Creek Improvement Program to widen, day-light, and improve San Pablo and Wildcat creeks for the enjoyment of residents; • Strengthening stormwater management requirements for properties adjacent to the creek areas by applying techniques that maintain or restore nature character; • Enforcing restrictions on the planting of invasive species near creek areas; • Identifying and working with property owners to take advantage of unique opportunities where human active use (e.g. through trail development) would enhance creek appreciation without disrupting ecological function; • Working with developers to "daylight" portions of creeks that have historically been channelized underground under existing paved areas (e.g. parking lots); and • Requiring minimum setbacks from the top of the creek bank for development proposed adjacent to creeks, in keeping with City regulations and Best Management Practices.	

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	OSC-I-11 Require property owners with properties adjacent to creeks to pay for creek improvement maintenance. OSC-I-12 Continue to work with the Regional Water Quality Control Board (RWQCB) to protect and improve ground- and surface-water quality in the region. <i>Proposed Specific Plan Policies that Reduce the Impact</i> 8-G-1 Use development in the San Pablo Avenue corridor to improve local hydrology and water quality. 8-I-1 Require development in the San Pablo Avenue Specific Plan Planning Area to include low impact development features to reduce stormwater pollutant loads and increase on-site infiltration, consistent with General Plan policy PSCU-I-34. Features should be drawn from the Bay Area Stormwater Management Agency's "Start at the Source Design Guidance Manual for Stormwater Quality Protection." Ensure the update of zoning stormwater management standards pursuant to General Plan policy PSCU-I-34 includes provisions for stronger stormwater management on sites within 300 feet of creeks in the Planning Area, with an emphasis on maintaining or restoring the natural character of the water feature. 8-I-2 In accordance with the San Pablo Avenue Specific Plan Land Use Diagram, and General Plan policy OSC-I-10, ensure that redevelopment plans are designed to restore natural ecological systems wherever possible, including such techniques as "daylighting" Wildcat Creek immediately east of San Pablo Avenue in accordance with the Specific Plan Land Use Diagram, and integrating natural features and processes in the public experience throughout the Planning Area. These design efforts up front will improve both the ecological and aesthetic values of local hydrological resources.	
3.5-3 Implementa tion of the proposed San Pablo Avenue Specific Plan could result in additional runoff exceeding the capacity of existing stormwater facilities and increasing potential	<i>Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan</i> PSCU-I-31 Require, as a condition of project approval, stormwater drainage and sewer improvements in proportion to a project's impacts, including upgrades, replacements, or repairs to older stormwater collection systems, as necessary. PSCU-I-32 Maintain master storm drain system maps that identify locations where easements should be reserved for eventual installation of pipes and structures to ensure appropriate storm drainage management. PSCU-I-33 Coordinate with the West County Wastewater District to address planning capacity and identify deficiencies in the waste water collection system.	Less than Significant

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flooding of receiving waters and areas in downstream.	<i>Proposed Specific Plan Policies that Reduce the Impact</i> Proposed policies listed under Impact 3.5-2 also help to reduce this potential impact.	
3.5-4 Implementa tion of the proposed San Pablo Avenue Specific Plan could result in the placement of housing in the 100-year floodplain or structures that would impede flood flows exposing people to injury or death.	<i>Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan</i> SN-G-2 Minimize the risks to property, life, and the environment due to flooding hazards. SN-I-7 Continue to minimize the risk of flooding to development through the development review process. Require new development within a flood plain to comply with the City's Floodplain Management and Flood Damage Prevention Ordinance and to submit hydrologic studies, identify site development and construction methods, and implement appropriate mitigation measures to minimize surface water run-off. Developers will be required to provide an assessment of a project's potential impacts on the local storm drainage system as part of the development review process. If development is found to have a negative impact on storm drainage, mitigation measures, such as the creation of permanent or temporary detention or retention basins, provision of additional landscaped areas and green roofs, installation of pump stations, and the use of permeable paving in driveways, walkways and parking areas, may be required. SN-I-8 Annually review the Land Use Element to identify whether any additional areas subject to flooding have been defined in updated flood plain maps prepared by the Federal Emergency Management Agency (FEMA) or the State Department of Water Resources (DWR) and adopt amendments to the General Plan or the Zoning Ordinance, as warranted. SN-I-9 Continue to participate in the National Flood Insurance Program and ensure that local regulations are in full compliance with Federal. SN-I-10 Periodically review National Flood Insurance Program maps to ensure that the City's zoning and building regulations reduce potential risks from flooding pursuant to the National Flood Insurance Program of 1968. SN-I-11 Inform households and businesses located in flood-prone areas about opportunities to purchase flood insurance. The City will regularly remind residents of the value of flood insurance for vulnerable properties through newsletters and other educational materials. Purchase of flood insurance is required for buildings in Special Flood Hazard Areas defined by the Flood Insurance Rate Map when a federally regulated lender holds the	Less than Significant

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	mortgage on the building. SN-I-12 Site new essential public facilities outside of the 100-year flood plains, including hospital and healthcare facilities, emergency shelters, police and fire stations, and emergency communications facilities to minimize exposure to 100-year floods. SN-I-13 Cooperate with the County Flood Control District, California Department of Transportation, and the Army Corp of Engineers to mitigate potential flooding risks, including flood control projects on Wildcat and San Pablo creeks and the maintenance of drainage facilities and infrastructure. Flood control projects will be designed to support the City's efforts to reestablish natural conditions in these creek corridors. SN-I-14 Work with railroad operators on minimizing downstream flooding related to limited number of culverts. <i>Proposed Specific Plan Policies that Reduce the Impact</i> 5-I-4 Design creek-side open space improvements to prevent flooding within the public right-of-way and near open space amenities. 5-I-5 Require all new private development located along above-ground creeks to prevent flooding with ample setbacks.	
3.5-5 Implementa tion of the proposed San Pablo Avenue Specific Plan would expose people or structures to risk of flooding due to the failure of a dam.	<i>Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan</i> The policies listed above under impacts 3.5-I through 3.5-4 also help to reduce this potential impact. <i>Proposed Specific Plan Policies that Reduce the Impact</i> The policies listed above under impacts 3.5-I through 3.5-4 also help to reduce this potential impact.	Less than Significant
3.5-6 Implementa tion of the proposed San Pablo Avenue Specific Plan in combination with past, present, and foreseeable future	<i>Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan</i> The policies listed above under impacts 3.5-I through 3.5-5 help to reduce this potential cumulative impact. <i>Proposed Specific Plan Policies that Reduce the Impact</i> The policies listed above under impacts 3.5-I through 3.5-5 help to reduce this potential cumulative impact.	Less than Significant

IMPACT	INCORPORATED GENERAL PLAN AND PROPOSED SPECIFIC PLAN GOALS, POLICIES, PROGRAMS AND MITIGATIONS THAT REDUCE THE IMPACT (GP POLICIES BEGIN WITH A LETTER; SPECIFIC PLAN POLICIES WITH A NUMBER)	SIGNIFICANCE AFTER MITIGATION
development in the surrounding communities and with other agencies in the County, could adversely affect water quality of regional water bodies.		
Biological Resources		
3.6-1 Implementa tion of the San Pablo Avenue Specific Plan could result in negative effects, either directly or through habitat modifications, on special- status species.	Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan OSC-G-3 <i>Protect and enhance wetlands, creek systems, and rare and endangered species and their habitats.</i> OSC-G-4 <i>Ensure both access and ecological functionality of the creek system in San Pablo.</i> OSC-G-5 <i>Protect water supply and quality through conservation and good stormwater management practices.</i> OSC-I-4 Require protection of sensitive habitat areas and “special status” species through measures implemented in new development in the following order: 1) avoidance, 2) on-site mitigation, and 3) offsite mitigation, and require assessments of biological resources prior to approval for any development within 300 feet of any creeks, wetlands, or other sensitive habitat areas. The City will coordinate with the U.S. Fish and Wildlife Service, National Marine Fisheries Service, California Department of Fish and Game, and Regional Water Quality Control Board to ensure City staff is providing developers with the best guidance and standards for project design to avoid impacts to creeks, wetland features, woodlands, or other sensitive natural features. OSC-I-5 Develop a list of native plants and landscaping guidelines residents and business owners should use for public and private landscaping plans. Make this list and guidance accessible through the Planning Department, the Public Library, and the City website. Urban landscaping design and planting choices should be managed to maximize ecological and health benefits for the whole community. OSC-I-6 Prohibit the use of invasive plant species, such as pampas grass and	Less than Significant

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	ivies, adjacent to wetlands, riparian areas, or other sensitive habitat. Invasive plants are introduced species that can thrive in areas beyond their natural range of dispersal. These plants are characteristically adaptable, aggressive, and have a high reproductive capacity. Their vigor combined with a lack of natural enemies often leads to outbreak populations that overwhelm local plant species. OSC-I-7 Preserve and protect undeveloped hillside areas for their potential habitat value and as a visual and open space resource. OSC-I-10 Maintain, protect, and enhance San Pablo's creeks, including Rheem, San Pablo, and Wildcat creeks, as local environmental and aesthetic resources, with approaches including, but not limited to: • Establishing a Creek Improvement Program to widen, day-light, and improve San Pablo and Wildcat creeks for the enjoyment of residents; • Strengthening stormwater management requirements for properties adjacent to the creek areas by applying techniques that maintain or restore natural character; • Enforcing restrictions on the planting of invasive species near creek areas; • Identifying and working with property owners to take advantage of unique opportunities where human active use (e.g. through trail development) would enhance creek appreciation without disrupting ecological function; • Working with developers to "daylight" portions of creeks that have historically been channelized underground under existing paved areas (e.g. parking lots); and • Requiring minimum setbacks from the top of the creek bank for development proposed adjacent to creeks, in keeping with City regulations and Best Management Practices. OSC-I-11 Require property owners with properties adjacent to creeks to pay for creek improvement maintenance. OSC-I-12 Continue to work with the Regional Water Quality Control Board (RWQCB) to protect and improve ground- and surface-water quality in the region. OSC-I-20 Require developers to use best management practices (BMPs) to reduce particulate emissions and dust associated with construction activities as a condition for approval of subdivision maps, site plans, and grading permits. These BMPs include, but are not limited to, regular materials and vehicle tire watering, covering, and dust prevention measures during clearing, grading, earth-moving, or excavation operations.	

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	SN-I-36 Use the Community Noise Level Exposure Standards, shown in Table 9.6-I in the General Plan, as review criteria for new land uses. Require all new development that would be exposed to noise greater than the “normally acceptable” noise level range to reduce interior noise through design, sound insulation, or other measures. SN-I-37 Require proposed industrial, commercial, and other uses with potential noise and vibration-producing activities to submit a noise study report identifying noise and vibration mitigation measures that would reduce the adjacent noise level to acceptable ranges based on the Community Noise Environment Standards. SN-I-38 Require new, fixed noise sources (e.g. mechanical equipment) to use best available control technology (BACT) to minimize noise and vibration. Noise from mechanical equipment can often be reduced by applying soundproofing materials, mufflers, or other controls provided by the manufacturer. PSCU-I-34 Update zoning standards to minimize storm water runoff rates and volumes, control water pollution, and maximize recharge of local groundwater aquifers. New development will be required to include features that reduce impermeable surface area and increase infiltration. Such features may include, but are not limited to: • Canopy trees or shrubs to absorb rainwater; • Grading that lengthens flow paths and increases runoff travel time to reduce the peak hour flow rate; • Removing curbs and gutters from parking areas where appropriate to allow stormwater sheet flow into vegetated areas; • Permeable paving and parking area design; • Stormwater detention and retention basins to facilitate infiltration; and • Integrated or subsurface water retention facilities to capture rainwater for use in landscape irrigation and other non-potable uses. <i>Proposed Specific Plan Policies that Reduce the Impact</i> 8-G-1 <i>Use development in the San Pablo Avenue corridor to improve local hydrology and water quality.</i> 8-G-2 <i>Strive for development in the San Pablo Avenue Specific Plan Planning Area that protects and improves the quality of habitat areas, particularly along San Pablo and Wildcat creeks.</i> 8-I-1 Require development in the San Pablo Avenue Specific Plan Planning Area to include low impact development features to reduce stormwater pollutant loads and increase on-site infiltration,	

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	consistent with General Plan policy PCSU-I-34. Features should be drawn from the Bay Area Stormwater Management Agency's "Start at the Source Design Guidance Manual for Stormwater Quality Protection." Ensure the update of zoning stormwater management standards pursuant to General Plan policy PCSU-I-34 includes provisions for stronger stormwater management on sites within 300 feet of creeks in the Planning Area, with an emphasis on maintaining or restoring the natural character of the water feature. 8-I-2 In accordance with the San Pablo Avenue Specific Plan Land Use Diagram, and General Plan policy OSC-I-10, ensure that redevelopment plans are designed to restore natural ecological systems wherever possible, including such techniques as "daylighting" Wildcat Creek immediately east of San Pablo Avenue in accordance with the Specific Plan Land Use Diagram, and integrating natural features and processes in the public experience throughout the Planning Area. These design efforts up front will improve both the ecological and aesthetic values of local hydrological resources. 8-I-3 Promote the development of new parks in the San Pablo Avenue Specific Plan Planning Area in accordance with the Land Use Diagram that provide both human and habitat services and which are contiguous with, and expand, existing Valley/foothill riparian habitat. 8-I-4 Prohibit siting of new hazardous materials handlers, such as gas stations, within 150 feet of any creeks within the Planning Area. This distance may be amended upon completion of the Creek Improvement Program described in General Plan policy OSC-I-10, but does not supersede the requirements for evaluation of biological resources within 300 feet of creeks pursuant to General Plan policy OSC-I-4.	
3.6-2 Implementa tion of the San Pablo Avenue Specific Plan could result in the direct loss of nesting birds.	<i>Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan</i> OSC-I-8 If site work or construction (i.e., ground clearing or grading, including removal of trees or shrubs) activities are to occur during the nesting bird breeding season (February 1 through August 31), the City will require a pre-construction survey by a qualified wildlife biologist, assessing potential special-status bird nesting habitat within 500 feet of the project site, no more than two weeks in advance, of the planned activity. All identified nests should be buffered from the construction activity as recommended by the biologist and confirmed by City staff, in accordance with the nature of the construction and nesting activities.	Less than Significant

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	<i>Construction activities scheduled to occur during the non-breeding season (September 1 through January 31) do not require a survey. Construction activities commencing during the non-breeding season and continuing into the breeding season also do not require surveys. Nests initiated during construction activities would be presumed to be unaffected by the activity, and a buffer zone around such nests would not be necessary. However, a nest initiated during construction cannot be moved or altered.</i> Furthermore, General Plan policies listed under Impact 3.6-1 would also help to reduce this potential impact to a level that is less than significant. Proposed Specific Plan Policies that Reduce the Impact Proposed Specific Plan policies listed under Impact 3.6-1 would also help to reduce this potential impact to a level that is less than significant.	
3.6-3 Implementa tion of the San Pablo Avenue Specific Plan has the potential to affect migratory and breeding birds through building collisions and increases in nighttime lighting.	Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan PSCU-I-7 Provide security lighting to illuminate communal areas and pathways in all parks to ensure safety, and where feasible, select lighting fixtures that will not produce glare or illuminate the night sky. <i>Whenever possible, the City will select lighting fixtures that are shielded, are solar-powered, and/or can turn on automatically in low light conditions.</i> Furthermore, General Plan policies listed under impacts 3.6-1 and 3.6-2 would also help to reduce this potential impact to a level that is less than significant. Proposed Specific Plan Policies that Reduce the Impact 2-I-16 Encourage structured or underground, or tuck-under parking in new development, to maximize occupied uses and open space at the ground level. Discourage new or expanded surface parking lots. 4-I-59 Maximize lighting for safety, especially along connections between transit facilities, in public plazas, pedestrian-oriented destinations, parking areas, and other major public destinations. DG-37 Ensure that all exterior lighting is shielded from surrounding use and directed downward except where safety and security purposes require otherwise.	Less than Significant
3.6-4 Implementa tion of the proposed San Pablo Avenue Specific Plan may adversely impact special- status bat species	Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan OSC-I-9 For any development projects involving removal of mature trees and/or demolition of vacant buildings (both potential habitats for special-status bats), require a pre-construction survey by a qualified wildlife biologist to determine if bats are present using an acoustic detector. Require implementation of feasible recommendations of the biologist on removal of trees with signs of bat activity during a period least likely to adversely affect the bats, or the creation of a	Less than Significant

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through removal of potential roosting habitat and through increases in noise levels during construction.	“no disturbance” buffer, if a viable alternative. With implementation of this General Plan policy, no additional policies would be necessary at the Specific Plan level, and the impact would be less than significant.	
3.6-5 Implementa tion of the San Pablo Avenue Specific Plan could result in the filling of wetlands and other waters.	<i>Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan</i> OSC-I-20 Require developers to use best management practices (BMPs) to reduce particulate emissions and dust associated with construction activities as a condition for approval of subdivision maps, site plans, and grading permits. These BMPs include, but are not limited to, regular materials and vehicle tire watering, covering, and dust prevention measures during clearing, grading, earth-moving, or excavation operations. SN-I-6 Require erosion prevention of hillside areas by re-vegetation or other acceptable methods. SN-I-7 Continue to minimize the risk of flooding to development through the development review process. Require new development within a flood plain to comply with the City’s Floodplain Management and Flood Damage Prevention Ordinance and to submit hydrologic studies, identify site development and construction methods, and implement appropriate mitigation measures to minimize surface water run-off. Developers will be required to provide an assessment of a project’s potential impacts on the local storm drainage system as part of the development review process. If development is found to have a negative impact on storm drainage, mitigation measures, such as the creation of permanent or temporary detention or retention basins, provision of additional landscaped areas and green roofs, installation of pump stations, and the use of permeable paving in driveways, walkways and parking areas, may be required. Furthermore, General Plan policies listed under impacts 3.6-I through 3.6-4 would also help to reduce this potential impact to a level that is less than significant. <i>Proposed Specific Plan Policies that Reduce the Impact</i> 5-I-4 Design creek-side open space improvements to prevent flooding within the public right-of-way and near open space amenities. 5-I-5 Require all new private development located along above-ground	Less than Significant

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	creeks to prevent flooding with ample setbacks.	
3.6-6 Implementa tion of the proposed San Pablo Avenue Specific Plan could interfere substantially with the movement of native resident or migratory fish or wildlife species.	Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan SN-I-13 Cooperate with the County Flood Control District, California Department of Transportation, and the Army Corp of Engineers to mitigate potential flooding risks, including flood control projects on Wildcat and San Pablo creeks and the maintenance of drainage facilities and infrastructure. Flood control projects will be designed to support the City's efforts to reestablish natural conditions in these creek corridors. Furthermore, General Plan policies listed under impacts 3.6-I through 3.6-5 would also help to reduce this potential impact to a level that is less than significant. Proposed Specific Plan Policies that Reduce the Impact Proposed Specific Plan policies listed under Impact 3.6-I would also help to reduce this potential impact to a level that is less than significant.	Less than Significant
3.6-7 Subsequent development projects associated with the implementatio n of the San Pablo Avenue Specific Plan in conjunction with other past, present, pending and reasonably foreseeable development in the County of Contra Costa or the City of San Pablo could result in cumulative adverse impacts on special-status species, wetlands, or	None required.	Less than Significant Cumulative Impact

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other waters of the United States.		
Geology & Seismicity		
3.7-1 Implementa tion of the proposed San Pablo Avenue Specific Plan could expose people or property to loss, injury, or death related to seismically- induced surface rupture, ground failure, ground shaking, liquefaction, landslides, or tsunamis.	Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan SN-I-1 Amend the Zoning Ordinance to include provisions for a geologic hazards abatement district for hillside areas at risk of landslides in San Pablo. SN-I-2 The Geologic Hazard Abatement District is a potentially useful tool to effectively abate a landslide hazard that crosses property boundaries. It is a mechanism that responds to the physical realities of landslides, and allows property owners to cooperate in solving a common problem. It removes much of the stigma of legal liabilities among adjacent landowners and allows them to cooperate rather than litigate. It also provides for a cost-effective solution, requiring only one geotechnical engineering firm and one plan to solve the problems of several landowners. SN-I-3 Pursuant to the requirements of the Alquist-Priolo Earthquake Fault Zone Act, continue to review individual projects to prohibit the development of critical or habitable structures within the Fault Zone. SN-I-4 Continue to maintain and enforce appropriate standards in the Uniform Building Code to ensure new development is designed to meet current safety standards associated with seismic activity. SN-I-5 Continue to identify and catalogue structures that may be subject to serious structural damage in the event of a major earthquake, and provide information to property owners on ways to pay for rehabilitation of existing buildings, including available State and other financing resources. SN-I-6 Support efforts by State and regional agencies to promote public awareness of potential geologic and seismic hazards.	Less than Significant
3.7-2 Implementa tion of the proposed San Pablo Avenue Specific Plan could require significant earthwork and road cuts,	Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan SN-I-6 Require erosion prevention of hillside areas by re-vegetation or other acceptable methods.	Less than Significant

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increasing the potential for short-term and long-term soil erosion and slope failure.		
3.7-3 Implementa tion of the proposed San Pablo Avenue Specific Plan could cause new development to be built on highly compressible, expansive, or weak, unconsolidate d soils, creating substantial risks to life or property from on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.	<i>Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan</i> General Plan policies listed under impacts 3.7-1 and 3.7-2 also reduce this impact to a level that is less than significant.	Less than Significant
3.7-4 Implementa tion of the proposed San Pablo Avenue Specific Plan, combined with regional population growth, would result in an increased risk of exposure of	None required.	Less than Significant Cumulative Impact

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people and property to geologic hazards.		
Public Services, Facilities, and Utilities		
3.8-I Implementa tion of the proposed San Pablo Avenue Specific Plan will require additional police and fire protection services that exceed current staffing and facilities.	Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan SN-I-24 Assess the manpower, training, facility and equipment needs of the Police Department periodically to ensure they meet current and future community needs. The City will ensure the staffing ratios and response times meet national standards, and hire additional police officers, support training programs, and retrofit police-related facilities and purchase equipment, as needed. SN-I-26 Explore the feasibility of developing a small police station at Rumrill Boulevard and Market Avenue and/or expansion of the existing facility. SN-I-27 Continue to share information and develop joint law enforcement efforts with adjacent jurisdictions and other public safety agencies. SN-I-16 Continue to work with the County Fire Department to make San Pablo more resilient to fire hazards. The City's Planning Division will work with the County Fire Department to plan for, maintain, and expand local fire service activities. The City's Building Division will consult with the Fire Department on new construction plan checking, building inspections, weed abatement and hazard mitigation activities, and public information resources. The City's Public Works and Planning Division will work with Fire Department to review hydrant locations, landscaping and other fire safety criteria. The City's Police Department will work with the Fire Department to distribute fire safety information and coordinate public safety education in schools. SN-I-18 Review the Fire District's fire hazard standards and annual report to determine if there should be a modification or additional types of services based on local population needs. Proposed Specific Plan Policies that Reduce the Impact 5-G-2 Maintain a safe and livable environment in the Planning Area by ensuring that building design and site planning adequately address public safety. 5-I-8 Coordinate with the San Pablo Police Department on project site design to increase public safety.	Less than Significant

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	5-I-9 Work with the Contra Costa County Fire Protection District to ensure that new development projects in the Planning Area have adequate emergency access. 5-I-10 Ensure that fire flow capacity is adequate for new development and that necessary improvements, such as fire access roadways and fire hydrants, are installed and in service prior to building construction.	
3.8-2 Implementa tion of the proposed San Pablo Avenue Specific Plan will increase enrollment, but this will not exceed the capacity of existing schools.	None required.	Less than Significant
3.8-3 Implementa tion of the proposed San Pablo Avenue Specific Plan would increase the ratio of parkland from the existing ratio but still fall short of the City's goal of 3 acres per thousand residents.	Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan Policies PSCU-G-8, SN-G-5, SN-I-22 and SN-I-23 listed under Impact 3.10-I would help reduce this impact to a level that is less than significant. Proposed Specific Plan Policies that Reduce the Impact 2-I-8 Require that redevelopment of the former Yard Birds site (south side of San Pablo Avenue just north of City Hall) provide a minimum of 0.35 acres of park or open space adjacent to the creek. 6-G-1 Provide a diverse range of recreational opportunities within a ten-minute walk of all residents in the Planning Area. 6-G-2 Connect to local and regional bikeways and trail networks to the greatest extent possible. 6-I-1 Create parks and recreation facilities in accordance with the Specific Plan Land Use Diagram (Figure 2-4) as development occurs and park land is dedicated. 6-I-2 Encourage provision of park land as part of new development rather than payment of impact or in-lieu fees. • If a greater amount of land is required by the Municipal Code than can be accommodated within the Planning Area, in-lieu fees may be used to enhance other City parks with greater recreational amenities. Parks created or improved with in-lieu fees should be located as close to the Planning Area as possible.	Less than Significant

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	6-I-3 Size and distribute parks in order to maximize accessibility and match the needs identified for both the Planning Area and the city as a whole. In particular, strive to create multiple smaller parks rather than a single large park, placing them within walking distance of housing and along major bikeways and trails where possible, and providing street visibility and access on several sides. 6-I-6 Develop a program of community activities to activate park spaces and establish parks as community gathering spaces and activity centers. 8-I-8 Require new residential projects within the Specific Plan Planning Area, and other potential projects in the area which may also be categorized as sensitive receptors (such as nursing home facilities, retirement living facilities, school or daycare facilities), to be located an adequate distance from existing and potential sources of TACs and odors, in accordance with the BAAQMD's Air Quality and Land Use Handbook (2005) recommendations, or the latest resource the air district has available. Existing stationary TAC sources in the Planning Area are mapped in Figure 8-I of the Specific Plan; however, project proponents are expected to check BAAQMD databases for the latest data on stationary TAC sources. 8-I-9 Require proponents of projects within 100 feet of existing hazardous materials case sites or TAC sources (as mapped on Figure 8-I) to investigate use compatibility at the location in question (some kinds of uses might be at lower risk than others), as well as potential feasible design-related risk mitigation measures. Project proponents must provide evidence to the City of consultation with the BAAQMD and the RWQCB in making refinements to project designs to reduce applicable hazardous materials and/or toxic air contaminant risk.	
3.8-4 Implementa tion of the proposed San Pablo Avenue Specific Plan will result in the increase in use of existing parks, such that substantial physical deterioration of the facility could occur or be	<i>Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan</i> PSCU-I-2 Adopt a Parks and Recreation Master Plan. The Master Plan should include the following components: • An assessment of existing and future parks and recreational needs including neighborhood parks and facilities; • Sustainable construction and park maintenance strategies; • Development of an action plan to prioritize the City's needs, identify preferred sites for new facilities, identify staffing needs, and present a plan for acquisition and improvement of future facilities. PSCU-I-3 Develop new park and recreation facilities and continue to upgrade existing ones with universal accessibility, durability, and low	Less than Significant

IMPACT	INCORPORATED GENERAL PLAN AND PROPOSED SPECIFIC PLAN GOALS, POLICIES, PROGRAMS AND MITIGATIONS THAT REDUCE THE IMPACT (GP POLICIES BEGIN WITH A LETTER; SPECIFIC PLAN POLICIES WITH A NUMBER)	SIGNIFICANCE AFTER MITIGATION
accelerated.	maintenance in mind. PSCU-I-9 Involve citizens, especially youths, in maintaining park areas through participating in park watches, citizen-based graffiti watch, and clean up and repair. HEA-I-2 Improve signage directing residents and visitors to public parks and recreational facilities from all parts of the community. Integrate parks signage with bikeway and pedestrian-oriented signage system throughout San Pablo. HEA-I-5 Link park facility improvement priorities to a ranking system keyed to public health and recreational goals. PSCU-I-1, PSCU-I-4, PSCU-I-5, PSCU-I-6, PSCU-I-8, and HEA-I-6 mentioned under Impact 3.8-3 would also help reduce this impact to a level that is less than significant. <i>Proposed Specific Plan Policies that Reduce the Impact</i> 6-I-4 Ensure that parks and public spaces in the Planning Area offer a diverse range of amenities and activities, such as: picnic areas; places to walk dogs; children’s play areas; sports fields; urban plazas with landscaping, paving, benches, and trees; a community center with City recreation programs and classes; and staging areas along trail networks where people can access bike and pedestrian trails. 6-G-1, 6-G-2, and 6-I-3 mentioned under Impact 3.8-3 would also help reduce this impact to a level that is less than significant.	
3.8-5 Implementa tion of the proposed San Pablo Avenue Specific Plan will increase the demand for public water which may exceed supply.	<i>Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan</i> PSCU-G-6 Support the efficient use and conservation of water. PSCU-I-23 Coordinate with East Bay Municipal Utilities District (EBMUD) to provide an adequate and clean water supply. The City will work with EBMUD to update and support compliance with the District’s Water Supply Management Program. PSCU-I-24 Establish water saving and conservation standards for new development. Standards may include, but are not limited to, the following: • Require new residential developments to install low-flush toilets and water saving shower heads; • Require new commercial, retail, and industrial developments to install low-flush toilets and auto shut-off faucets in public bathrooms; and • Require the installation of water meters on all new multifamily residential units, mobile homes, and common interest developments, whether owner-occupied or rented, as well as on	Less than Significant

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	existing multifamily units at the time of sale, or at the time of condominium conversion as a part of the subdivision mapping process. <i>The City will work with property owners to increase awareness of both the environmental and the economic advantages of sub-metering. Properly done, sub-metering of multifamily buildings can cut apartment resident demand by 15 percent.</i> PSCU-I-25 Reduce water use in municipal buildings and City operations. <i>The City will develop a schedule and budget for the retrofit of existing municipal buildings with water conservation features, such as auto shut-off faucets and water saving irrigation systems.</i> PSCU-I-26 Adopt a Water Conservation Ordinance to conserve water and reduce water waste in San Pablo. The Water Conservation Ordinance will establish restrictions on water uses such as lawn and landscape watering and the filling of fountains and swimming pools, as well as penalties for violations. It also will establish consumption reduction measures to be adopted when State or countywide water rationing is in effect. Landscape water conservation standards will apply to new development of more than 10,000 square feet. This ordinance also will: • Require commercial and public right-of-way projects to submit planting plans, irrigation plans, irrigation schedules and water use estimates for City approval prior to issuance of building permits; and • Require industrial projects to submit plans for water recycling and explain how water use will meet requirements of the National Pollutant Discharge Elimination System program during the plan review process. They are also required to submit irrigation plans for proposed landscaping. PSCU-I-27 Promote water conservation through public education, including but not limited to the following: • Encouraging educators to include water conservation in their curriculums; • Promoting the use of drought resistant plants and turf in yards and gardens; • Highlighting the availability of EBMUD water conservation programs to residents, including the free Residential Water Survey Program, Residential Landscape Rebate Program, Low-flush Toilet Replacement Program, High Efficiency Residential Clothes Washer Rebate Program and other programs; and	

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	• Providing tips to households and businesses on water conservation. The City will use its newsletter and website to promote water conservation, and may solicit assistance from EBMUD, environmental groups, and/or concerned citizens to provide education materials or staff time to assist in public outreach efforts. PSCU-I-28 Consult with EBMUD about starting a recycled water program for San Pablo to irrigate parks, recreational facilities, and landscaping. PSCU-I-29 Provide educational materials to support the development of safe and effective on-site gray water systems for local homes and businesses, consistent with State codes. PSCU-I-30 Provide educational materials to support the development of inexpensive and effective rainwater harvesting systems for local homes and businesses. <i>The following policies and programs are from the Housing Element:</i> Program H-4.1.6: Promote water conservation in San Pablo homes by: • Requiring all new and remodeled housing units to install high efficiency toilets; • Offering water efficiency surveys by trained staff that will make recommendations tailored to household needs; • Promoting the use of drought-resistant plants in gardens, sub-surface lawn irrigation systems; and • Promoting the use of gray-water (water recycling) systems and rainwater catchment systems, consistent with the Building Code. <i>Proposed Specific Plan Policies that Reduce the Impact</i> 5-G-1 Continue the successful provision, maintenance and operation of infrastructure and public utilities to maintain the quality of life and sustainability of the San Pablo Avenue corridor. 5-I-1 Maintain successful cooperation with independent agencies to continue adequate utility service throughout the San Pablo Avenue Specific Plan Planning Area. 5-I-2 Promote efficient use and conservation of water in the design of new residential and commercial development. This includes the installation of water meters and low-flow showerheads, faucets and toilets. 5-I-3 Promote efficient use of and conservation of water in the design of new streetscape and landscaped areas. This includes the installation of drought-resistant plant palettes.	

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	DG-25 Encourage sustainable landscape design with the use of hardy, native, low-water consumption, drought-tolerant planting, as well as stormwater management systems. Utilize bioswales and rain gardens in street medians or landscape buffers. Employ moisture-sensitive irrigation systems. DG-26 Refer to “Bay-Friendly Landscaping Guidelines” published by Stopwaste.org for a list of landscape materials that are appropriate for the climate and Contra Costa’s Clean Water Program for stormwater management best practices. DG-43 Install water saving appliances and systems such as gray water systems, moisture-sensitive irrigation rainwater cisterns, low-flow toilets and faucets.	
3.8-6 Implementa tion of the proposed Plan will generate waste water that exceed the treatment capacity of the West County Wastewater District or require additional infrastructure to meet growth demands.	<i>Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan</i> PSCU-I-31 Require, as a condition of project approval, stormwater drainage and sewer improvements in proportion to a project’s impacts, including upgrades, replacements, or repairs to older stormwater collection systems, as necessary. PSCU-I-32 Maintain master storm drain system maps that identify locations where easements should be reserved for eventual installation of pipes and structures to ensure appropriate storm drainage management. PSCU-I-33 Coordinate with the West County Wastewater District to address planning capacity and identify deficiencies in the waste water collection system. PSCU-I-34 Update zoning standards to minimize storm water runoff rates and volumes, control water pollution, and maximize recharge of local groundwater aquifers. New development will be required to include features that reduce impermeable surface area and increase infiltration. Such features may include, but are not limited to: • Canopy trees or shrubs to absorb rainwater; • Grading that lengthens flow paths and increases runoff travel time to reduce the peak hour flow rate; • Removing curbs and gutters from parking areas where appropriate to allow stormwater sheet flow into vegetated areas; • Permeable paving and parking area design; • Stormwater detention and retention basins to facilitate infiltration; and • Integrated or subsurface water retention facilities to capture rainwater for use in landscape irrigation and other non-potable	Less than Significant

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	uses. <i>Proposed Specific Plan Policies that Reduce the Impact</i> 5-G-1 Continue the successful provision, maintenance and operation of infrastructure and public utilities to maintain the quality of life and sustainability of the San Pablo Avenue corridor. 5-I-1 Maintain successful cooperation with independent agencies to continue adequate utility service throughout the San Pablo Avenue Specific Plan Planning Area. 5-I-6 Expand the wastewater collection system such that it is adequate to serve the projected development along the San Pablo Avenue corridor. Coordinate with the West County Wastewater District to update the collection system and Wastewater Master Plan to ensure that adequate conveyance capacity is available. 8-I-1 Require development in the San Pablo Avenue Specific Plan Planning Area to include low impact development features to reduce stormwater pollutant loads and increase on-site infiltration, consistent with General Plan policy PCSU-I-34. Features should be drawn from the Bay Area Stormwater Management Agency's "Start at the Source Design Guidance Manual for Stormwater Quality Protection." Ensure the update of zoning stormwater management standards pursuant to General Plan policy PCSU-I-34 includes provisions for stronger stormwater management on sites within 300 feet of creeks in the Planning Area, with an emphasis on maintaining or restoring the natural character of the water feature. DG-22 Limit hardscape to a maximum of 50% of required private common open space. Encourage the use of pervious materials to assist in stormwater management.	
3.8-7 Implementa tion of the proposed San Pablo Avenue Specific Plan may generate additional amounts of solid waste that may exceed future annual diversion targets.	<i>Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan</i> PCSU-I-39 Require recycling collection services in all residential and non-residential buildings. PCSU-I-40 Promote the importance of waste reduction and recycling, as well as the safe disposal of hazardous materials, to San Pablo residents and businesses owners. PCSU-I-41 Establish design standards for new multifamily development in the Zoning Ordinance to make provisions for recycling part of the building design. PCSU-I-42 Reduce construction waste in San Pablo by adopting a Waste Reduction and Construction Debris Recycling Ordinance that requires developers to: • Reuse building materials, or use materials with recycled content,	Less than Significant

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	to the maximum extent possible; • Submit a 'Construction and Demolition Materials Management Plan' indicating the estimated volume or weight of project construction and demolition materials, by materials type, to be generated; the maximum volume or weight of materials the project will divert; the vendor or diversion facility; and the volume or weight of residual materials that would be transported for disposal in a landfill; • Schedule time for deconstruction and recycling activities to take place during project demolition and construction phases; and • Divert at least 50 percent of recyclable debris (such as paper based boards, ceiling tiles, wood, or aluminum) generated from projects from landfill disposal to reuse or recycling options. PSCU-I-43 Reduce waste production in all City operations by using post-consumer recycled paper and other recycled materials. PSCU-I-44 Actively promote reuse by supporting swap meets, flea markets, and providing information on donation pick-up or drop off locations, as well as other waste reduction programs, on the City website. Proposed Specific Plan Policies that Reduce the Impact 5-I-7 Require all new development to participate in all recycling and hazardous waste reduction and solid waste diversion programs in effect at the time of issuance of building permits. DG-48 Divert waste from landfills by promoting reduction, reuse, recycling, and composting of materials during construction and through building materials selection. DG-49 All development is subject to Alameda County's StopWaste.Org waste diversion, recycling, and composting standards, as adopted by City Council.	
Noise		
3.9-I New development under the proposed San Pablo Avenue Specific Plan could potentially expose existing noise-sensitive uses to construction-	Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan SN-G-9 Protect public health and welfare by eliminating noise problems and maintaining an acceptable indoor and outdoor acoustic environment. SN-I-38 Require new, fixed noise sources (e.g. mechanical equipment) to use best available control technology to minimize noise and vibration. Noise from mechanical equipment can often be reduced by applying soundproofing materials, mufflers, or other controls provided by the manufacturer. SN-I-40 Work with Caltrans, AC transit and railroad operators to mitigate	Less than Significant

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related increases in ambient noise and groundborne vibration.	transportation-related noise impacts on residential areas and sensitive uses. Additionally, continue to limit hours for construction and demolition work to reduce construction-related noises.	
3.9-2 Implementa tion of the proposed San Pablo Avenue Specific Plan, combined with regional growth and development, could expose persons to or generate outdoor noise levels in excess of standards in the San Pablo 2030 General Plan Noise Element.	Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan SN-G-9 Protect public health and welfare by eliminating noise problems and maintaining an acceptable indoor and outdoor acoustic environment. SN-I-36 Use the Community Noise Level Exposure Standards, shown in General Plan Table 9.6-1, as review criteria for new land uses. Require all new development that would be exposed to noise greater than the “normally acceptable” noise level range to reduce interior noise through design, sound insulation, or other measures. SN-I-37 Require proposed industrial, commercial, and other uses with potential noise and vibration producing activities to submit a noise study report identifying noise and vibration mitigation measures that would reduce the adjacent noise level to acceptable ranges based on the Community Noise Environment Standards. SN-I-39 Establish standards for noise reduction for new housing exposed to DNL noise levels above 65 dB, including but not limited to, the following: • All facades must be constructed with substantial weight and insulation; • Sound-rated windows with enhanced noise reduction for habitable rooms; • Sound-rated doors with enhanced noise reduction for all exterior entries at habitable rooms; • Minimum setbacks and exterior barriers; • Acoustic baffling of vents is required for chimneys, attic and gable ends; and • Installation of a mechanical ventilation system affording comfort and fresh air under closed window conditions is required. Alternative acoustical designs that achieve the prescribed noise level reduction may be approved, provided a certified Acoustical Engineer submits information demonstrating that the required reductions can be achieved and maintained. SN-I-40 Work with Caltrans, AC transit and railroad operators to mitigate transportation-related noise impacts on residential areas and	Less than Significant

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	sensitive uses. Continue to limit hours for construction and demolition work to reduce construction-related noises. SN-I-41 Require that all new residential building designs for sites where the DNL will exceed 65dBA achieve noise level reductions through acoustical design and construction of the building elements: • Residential building designs must be based upon a minimum interior design noise level reduction of 35dB in all habitable areas (i.e., garages, storage areas, etc. are exempted). The 35dB criteria must provide a minimum constructed noise level reduction of 30dB; and • Residential building designs must also be based upon a minimum design noise level reduction of 40dB in all bedrooms. The 40dB criteria must provide a minimum constructed noise level reduction of 35dB. SN-I-42 Require that all residential building designs for sites where the DNL will exceed 65dBA include supporting information for City review and approval demonstrating that an acoustical design providing the necessary noise level reduction has been prepared by a Board Certified Acoustical Engineer for each dwelling unit prior to construction. Elements of this acoustical review process shall include: A letter by a Board Certified Engineer approving the acoustical design of each dwelling unit (or group of units, if identical), submitted to the City with building permit applications. This letter must be received and approved prior to the issuance of a building permit; Following construction, a letter by the Board Certified Engineer showing noise level reduction test results for a minimum of two habitable areas within each dwelling unit (or group of units, if identical), submitted to the City for review and approval prior to the issuance of an occupancy permit. Acoustical analysis pursuant to General Plan noise standards shall be the financial responsibility of the project applicant. All acoustical engineering and measurement must be conducted under the direction of an Acoustical Engineer who is currently Board Certified by the Institute of Noise Control Engineering, USA. General review and approval of groups of buildings or prototype designs may be sufficient to meet these requirements. <i>Proposed Specific Plan Policies that Reduce the Impact</i> 8-G-3 Maintain a healthy noise environment in the San Pablo Avenue Specific Plan Planning Area while accommodating the increased intensities and mix of uses intended to characterize the San Pablo	

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	Avenue corridor in the future. 8-I-5 Use Figure 8-3 and General Plan policies and noise standards contained in The Safety and Noise Element to ascertain need for acoustical analysis for noise-sensitive land uses, including residential uses and mixed-use projects containing residential uses. Ensure that adequate noise attenuation methods are incorporated in new development prior to the issuance of building permits. 8-I-6 For parcels where redevelopment in the San Pablo Avenue corridor will occur adjacent to existing low density residential development, place careful consideration for noise compatibility in project design, including location and orientation of driveways and parking areas, location of loading areas, location and shielding of noise-producing HVAC equipment, landscape planting buffers, and other design considerations.	
Hazardous Materials		
3.10-I Implementa- tion of the proposed San Pablo Avenue Specific Plan could result in exposure to residents or workers of hazardous materials or wastes from areas where releases of hazardous materials such as from undergroun d fuel storage tanks have occurred.	Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan PSCU-G-8 Enhance waste reduction and recycling in San Pablo. PSCU-I-39 Require recycling collection services in all residential and non-residential buildings. PSCU-I-40 Promote the importance of waste reduction and recycling, as well as the safe disposal of hazardous materials, to San Pablo residents and businesses owners. <i>Avenues of communication of waste reduction and conservation messages may include articles in local newsletters, advertisements in local newspapers, and the City website.</i> SN-G-4 Reduce the risk to the health of San Pablo residents from exposure to hazardous materials. SN-G-5 Promote the reduction, recycling, and safe disposal of household and business hazardous wastes through public education and awareness. SN-I-20 Require applicants for development in a potentially contaminated location to perform inspection and cleanup if the site is found to be contaminated with hazardous substances. <i>The City will require the project applicant to have the site inspected by a registered Environmental Assessor. Reports detailing the results must be submitted for City review. The level of remediation and cleanup will be in compliance with federal and State standards.</i> SN-I-21 Continue to support West Contra Costa Integrated Waste	Less than Significant

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	Management District's Household Hazardous Waste Drop-off Program, and encourage citizens and crime watch organizations to report unlawful dumping of hazardous materials. SN-I-22 Ensure that the production, use, storage, disposal, and transport of hazardous materials conform to standards specified in the County Hazardous Waste Management Plan. SN-I-23 Coordinate with Contra Costa County Health Services, the Contra Costa County Fire District, and other appropriate regulatory agencies in hazardous material emergency response and the review of all proposals that uses hazardous materials, or those properties that may have toxic contamination, such as petroleum hydrocarbons, CAM 17, metals, asbestos, and lead. <i>Proposed Specific Plan Policies that Reduce the Impact</i> 8-G-4 Ensure that infill and redevelopment in the San Pablo Avenue Specific Plan corridor minimize exposure to hazardous materials and toxic air contaminants. 8-I-7 Require remediation and cleanup of any contaminated sites in the Specific Plan Planning Area to levels required for the proposed new land use, where hazardous materials have impacted soil, surface water, or groundwater. Remediation and cleanup will be in compliance with federal and State standards. Documentation of the site investigation and cleanup will be provided to City staff during development project review. 8-I-8 Require new residential projects within the Specific Plan Planning Area, and other potential projects in the area which may also be categorized as sensitive receptors (such as nursing home facilities, retirement living facilities, school or daycare facilities), to be located an adequate distance from existing and potential sources of TACs and odors, in accordance with the BAAQMD's Air Quality and Land Use Handbook (2005) recommendations, or the latest resource the air district has available. Existing stationary TAC sources in the Planning Area are mapped in Figure 8-1; however, project proponents are expected to check BAAQMD databases for the latest data on stationary TAC sources. 8-I-9 Require proponents of projects within 100 feet of existing hazardous materials case sites or TAC sources (as mapped on Figure 8-1) to investigate use compatibility at the location in question (some kinds of uses might be at lower risk than others), as well as potential feasible design-related risk mitigation measures. Project proponents must provide evidence to the City of consultation with the BAAQMD and the RWQCB in making refinements to project designs to reduce applicable hazardous materials and/or toxic air contaminant risk.	
3.10-2	<i>Public Review Draft General Plan Policies (November 2010) Assumed to be</i>	Less than

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Implementa- tion of the proposed San Pablo Avenue Specific Plan could result in the disturbance of structures containing hazardous building materials, such as lead-based paint, asbestos, and PCBs which could expose and adversely affect workers, the public, or the environmen- t if not handled appropriatel- y.	<i>Adopted Prior to Adoption of the Proposed Specific Plan</i> Proposed San Pablo General Plan policies mentioned under Impact 3.10-I would also help reduce this impact to a level that is less than significant. No additional mitigation is needed. <i>The following programs are from the Housing Element:</i> Program H-1.2.2: Continue a modified Residential Paint Rebate Program to encourage residents to paint and maintain their homes. Modify the program by including a lead pain remediation educational component, to encourage households to complete safe and effective remediation for homes with lead paint hazards. Additionally, implement a tracking system to record the number of applications and approvals under this program each year, and the number and location of participant households with identified lead paint hazards. Program H-4.1.5: Facilitate environmentally sensitive construction practices by: • Restricting the use of chloroflourocarbons (CFCs), hydrochloroflourocarbons (HCFCs), and halons in mechanical equipment and building materials; • Promoting the use of products that are durable and allow efficient end-of-life disposal (recyclable); • Requiring large project applicants to submit a construction waste management plan for City approval; • Promoting the use of locally or regionally available materials; and • Promoting the use of cost-effective design and construction strategies that reduce resource and environmental impacts. <i>Proposed Specific Plan Policies that Reduce the Impact</i> DG-42 Utilize materials which have low embodied energy, are rapidly renewable, locally available, and do not give off harmful vapors.	Significant
3.10-3 Implementa- tion of the proposed San Pablo Avenue Specific Plan could result in new office, medical, and commercial uses that would involve	<i>Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan</i> Policies PSCU-G-8, SN-G-5, SN-I-22 and SN-I-23 listed under Impact 3.10-I would help reduce this impact to a level that is less than significant. <i>Proposed Specific Plan Policies that Reduce the Impact</i> Policies 8-I-8 and 8-I-9 listed under Impact 3.10-I would also help reduce this impact to a level that is less than significant.	Less than Significant

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the transportation, use, and storage of hazardous chemicals, which could present public health and/or safety risks to facility workers, patients and visitors, and the surrounding area.		
Cultural Resources		
3.11-I Implementation of the proposed San Pablo Avenue Specific Plan would cause a substantial adverse change in the significance of an archaeological or historic resource, or disturb any human remains, including those interred outside of formal cemeteries.	Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan Overall, current federal and State laws as well as the following policies in the San Pablo 2030 General Plan would reduce these impacts on archaeological resources to less than significant levels. OSC-I-13 Establish and maintain a register of historic and potentially historic resources in San Pablo. <i>A historic preservation register is the primary planning tool used to identify, record, and evaluate historic properties within a community, neighborhood, project area, or region. The City may use the list of historical buildings in the General Plan Map Atlas as a starting point to create a register of sites/buildings San Pablo may wish to designate as landmarks and/or important historical resources. The register can form an important component of the local preservation program, and can ultimately contribute to community knowledge of local history.</i> OSC-I-14 Preserve and build upon the historic and multicultural identity of Alvarado District as a defining element of the city. OSC-I-15 Help to ensure that new development analyzes and avoids potential impacts to historic, archaeological, and paleontological resources by: • Requiring a records review for development proposed in areas that are considered archaeologically or paleontologically sensitive; • Requiring pre-construction surveys and monitoring during any ground disturbance for all development in areas of historic or	Less than Significant

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	archaeological sensitivity; Implementing appropriate measures as a condition of project approval—measures such as avoidance, preservation in place, excavation, documentation, and/or data recovery—in order to avoid any identified cultural resource impacts. <i>In the event that historical, archaeological, or paleontological resources are accidentally discovered during construction, grading activity in the immediate area shall cease and materials and their surroundings shall not be altered or collected. A qualified archaeologist or paleontologist must make an immediate evaluation and avoidance measures or appropriate mitigation should be completed, according to CEQA Guidelines. The State Office of Historic Preservation has issued recommendations for the preparation of Archaeological Resource Management Reports that may be used as guidelines.</i> OCS-I-16 Work with local Native American tribes to protect recorded and unrecorded cultural and sacred sites, and to educate developers and the community-at-large about the connections between Native American history and the environmental features that characterize the local landscape. <i>Native American cultural resources in the Planning Area have been found near sources of water including perennial and intermittent streams and springs, on midslope terraces and elevated knolls above the floodplain, and near ecotones and other productive environments. There is a high likelihood that additional unrecorded Native American cultural sites also exist in the Planning Area.</i> The following policies and programs are from the Housing Element: Policy H-I.3: Continue to preserve historically significant housing and promote the Early California Architecture style to preserve San Pablo’s architectural heritage. Program H-I.3.1: Create an inventory of potential historical buildings, evaluate their historical and architectural significance, and designate those with significance as local landmarks. Program H-I.3.2: Preserve archaeologically significant sites by continuing to investigate and review all potentially significant Native American Sites before any development activity takes place.	
3.11-2 Implementa tion of the proposed San Pablo Avenue Specific Plan could	Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan San Pablo General Plan policy OSC-I-15 cited under Impact 3.11-I makes provisions for the accidental discovery of paleontological resources, and helps reduce this impact to a level that is less than significant.	Less than Significant

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destroy, directly or indirectly, a unique paleontological resource or site or unique geologic feature.		
Visual Resources		
3.12-1 Implementa- tion of the proposed San Pablo Avenue Specific Plan could adversely affect visual resources in the short- term during period of construc- tion by blocking or disrupting views.	Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan LU-I-7 Require design review of all new construction and visible exterior alterations of large non-residential buildings. <i>Any new non-residential construction or remodeling of an existing building where exterior work alters more than 50 percent of a visible building façade, including exterior improvements, such as new windows, doors or signage, will be subject to a design review.</i> LU-I-11 Enhance the City’s unique identity and image by adopting a consistent palette of landscaping, street trees, lighting, and signage within the public right-of-way for neighborhood and street improvements. <i>Large canopy street trees, such as oaks or the London Plane tree, can create a distinct character for San Pablo. They also provide important environmental benefits.</i> Proposed Specific Plan Policies that Reduce the Impact 4-I-27 Establish landscaped pedestrian walkways alongside or through commercial development. 4-I-57 Where residential buildings front onto San Pablo Avenue, provide landscaped setbacks with low attractive hedges, flowering shrubs, and trees planted in the same configuration as the street trees to create a pedestrian colonnade along the sidewalk.	Less than Significant
3.12-2 Implementa- tion of the proposed San Pablo Avenue Specific Plan could block views of significant	Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan LU-I-45 Protect the semi-rural character of the hillside area through the integration and balance of usable open space areas and residential uses. OSC-I-2 Continue to identify, preserve, and enhance scenic vistas to and from hillside areas and other visual resources. <i>New development should be designed to minimize obstructions of scenic</i>	Less than Significant

IMPACT	INCORPORATED GENERAL PLAN AND PROPOSED SPECIFIC PLAN GOALS, POLICIES, PROGRAMS AND MITIGATIONS THAT REDUCE THE IMPACT (GP POLICIES BEGIN WITH A LETTER; SPECIFIC PLAN POLICIES WITH A NUMBER)	SIGNIFICANCE AFTER MITIGATION
landscape features as seen from public areas.	<i>vistas and preserve or enhance important attributes of view corridors.</i> OSC-I-7 Preserve and protect undeveloped hillside areas for their potential habitat value and as a visual and open space resource. <i>Proposed Specific Plan Policies that Reduce the Impact</i> 2-I-5 Ensure that ample community gathering spaces, open spaces, and recreational facilities are part of any mixed-use development or master planned area. 4-G-2 Ensure that streets and open spaces form the framework for development, with the public realm designed to be accessible from the surroundings, and designed to enhance pedestrian movement. 4-G-12 Improve the visual character and quality of the San Pablo Avenue corridor and highlight gateways onto the corridor. 4-I-5 Provide direct and visible connections between San Pablo Avenue and the central community gathering space. 4-I-15 Incorporate small landscaped plazas that are visible and accessible from San Pablo Avenue to heighten the comfort and safety of the block, and accommodate outdoor seating. 4-I-60 Locate wayfinding elements such as kiosks and directional signage at key public destinations, including the library, City Hall, and entrances to the College, to help orient visitors. DG-24 Design publicly accessible open space that is physically and visually accessible from the street. Orient open space to the street; frame or mark the entrances to open space with architectural or landscape elements; and/or provide signage. Circle-S Site 3-I-26 Establish a street grid that covers the entire site and allows visual access into the development from San Pablo Avenue. The grid should organize all development within the site, provide a direct connection to Church Lane to the north, and provide a potential connection through to Vale Road to the south and potentially to the Casino. 3-I-27 Establish a central pedestrian-oriented street that provides a direct link from San Pablo Avenue to improved open space on the site.	
3.12-3 Implementa tion of the proposed San Pablo Avenue Specific Plan could create	<i>Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan</i> LU-I-5 Promote the phasing out of old uses in areas designated for new land use in an orderly fashion, consistent with adopted general plan designations. Promote the continuing viability of old uses during the transition period. LU-I-9 Encourage new residential, commercial and related forms of	Less than Significant

IMPACT	INCORPORATED GENERAL PLAN AND PROPOSED SPECIFIC PLAN GOALS, POLICIES, PROGRAMS AND MITIGATIONS THAT REDUCE THE IMPACT (GP POLICIES BEGIN WITH A LETTER; SPECIFIC PLAN POLICIES WITH A NUMBER)	SIGNIFICANCE AFTER MITIGATION
significant contrasts with the scale, form, line, color and/or overall visual character of the existing landscape in areas with sensitive visual resources or high visual quality, or add a modern element to a historic area.	development in a manner which fosters both day and appropriate night time activity; visual presence on the street level; appropriate lighting; and minimally obstructed view areas. LU-I-12 Enhance and celebrate key entrances to the city with signs, landscaping, street trees, lighting, banners, gateway and/or entry features. LU-I-13 Ensure that new development in or adjacent to established neighborhoods is compatible in scale and character with the surrounding area by: • Promoting a transition in scale and architectural character between new buildings and established neighborhoods; and • Requiring pedestrian circulation and vehicular routes to be well integrated. LU-I-21 Ensure that noise, traffic, and other potential conflicts that may arise in a mix of commercial and residential uses are mitigated through good site planning, building design, and/or appropriate operational measures. LU-I-27 Establish design guidelines to assure high quality design and site planning for large commercial and industrial developments. The guidelines should address: • Architectural finishes, coordinated color palette, massing, and hierarchy in scale; • Pedestrian-scaled amenities, signage, and lighting; • Site improvements, including parking lot landscaping, perimeter landscaping, foundation landscaping, walkways, and passageways; • Ground floor transparency requirements along shopping streets and limitations on blank walls in these areas; • Anti-theft glass on windows, instead of bars or roll-down metal screens, that are architecturally compatible with building design; • Screening of truck loading, parking, mechanical equipment, transformers, ventilation systems, storage containers, and refuse collection areas from the street; • Building entries; and • Design standards for perimeter walls and fencing. <i>Where a building exceeds a certain height, the City will evaluate shading created and its relationship and effects on surrounding buildings.</i> LU-I-38 Develop a distinct design theme with defined design standards and guidelines for each of the special planning areas to foster an identifiable image for each area.	

IMPACT	INCORPORATED GENERAL PLAN AND PROPOSED SPECIFIC PLAN GOALS, POLICIES, PROGRAMS AND MITIGATIONS THAT REDUCE THE IMPACT (GP POLICIES BEGIN WITH A LETTER; SPECIFIC PLAN POLICIES WITH A NUMBER)	SIGNIFICANCE AFTER MITIGATION
	OSC-I-14 Preserve and build upon the historic and multicultural identity of Alvarado District as a defining element of the city. OSC-I-13 Establish and maintain a register of historic and potentially historic resources in San Pablo. OSC-I-10 Maintain, protect, and enhance San Pablo's creeks, including Rheem, San Pablo, and Wildcat creeks, as local environmental and aesthetic resources, with approaches including, but not limited to: • Establishing a Creek Improvement Program to widen, day-light, and improve San Pablo and Wildcat creeks for the enjoyment of residents; • Strengthening stormwater management requirements for properties adjacent to the creek areas by applying techniques that maintain or restore nature character; • Identifying and working with property owners to take advantage of unique opportunities where human active use (e.g. through trail development) would enhance creek appreciation without disrupting ecological function; • Working with developers to "daylight" portions of creeks that have historically been channelized underground under existing paved areas (e.g. parking lots); and • Requiring minimum setbacks from the top of the creek bank for development proposed adjacent to creeks, in keeping with City regulations and Best Management Practices. <i>Proposed Specific Plan Policies that Reduce the Impact</i> 4-G-9 Develop a memorable streetscape identity for the San Pablo Avenue corridor as a "boulevard" with consistent streetscape elements throughout its extent in San Pablo, with distinguishing elements at major activity centers and focus areas. 4-G-11 Design the streetscape at the pedestrian scale with wide sidewalks, bike lanes, and amenities for pedestrians and cyclists such as bike racks, comfortable street furnishings, sufficient and attractive lighting, and street trees for shading and aesthetics. 4-G-12 Improve the visual character and quality of the San Pablo Avenue corridor and highlight gateways onto the corridor. 4-I-8 Maintain buildings of generally three to four stories, with lower heights in certain portions of the site, and reaching five or six stories in selected locations, stepped away from the project's edges. 4-I-22 Maintain consistent streetscape and street tree schemes on pedestrian paths and vehicular roads throughout the site. DG-5 Ensure smooth transitions in building height. Tall buildings should	

IMPACT	INCORPORATED GENERAL PLAN AND PROPOSED SPECIFIC PLAN GOALS, POLICIES, PROGRAMS AND MITIGATIONS THAT REDUCE THE IMPACT (GP POLICIES BEGIN WITH A LETTER; SPECIFIC PLAN POLICIES WITH A NUMBER)	SIGNIFICANCE AFTER MITIGATION
	step down adjacent to existing low-density residential development. DG-14 Ensure unified and harmonious building façades by integrating all architectural elements, including signs, balconies, building entrances, and lighting. Windows should have regular patterns and be coherent in shape and proportion.	
3.12-4 Implementa tion of the proposed San Pablo Avenue Specific Plan could create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.	<i>Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan</i> PSCU-I-7 Provide security lighting to illuminate communal areas and pathways in all parks to ensure safety, and where feasible, select lighting fixtures that will not produce glare or illuminate the night sky. <i>Whenever possible, the City will select lighting fixtures that are shielded, are solar-powered, and/or can turn on automatically in low light conditions</i> <i>Proposed Specific Plan Policies that Reduce the Impact</i> 2-I-16 Encourage structured or underground, or tuck-under parking in new development, to maximize occupied uses and open space at the ground level. Discourage new or expanded surface parking lots. 4-I-59 Maximize lighting for safety, especially along connections between transit facilities, in public plazas, pedestrian-oriented destinations, parking areas, and other major public destinations. DG-37 Ensure that all exterior lighting is shielded from surrounding use and directed downward except where safety and security purposes require otherwise.	Less than Significant

1 Introduction

This program Environmental Impact Report (EIR) has been prepared on behalf of the City of San Pablo in accordance with the California Environmental Quality Act (CEQA). This EIR analyzes the potential significant adverse environmental impacts of the adoption and implementation of the proposed San Pablo Avenue Specific Plan.

1.1 PURPOSE OF THE EIR

This environmental assessment of the proposed San Pablo Avenue Specific Plan (SCH# 2010112062) fulfills the requirements of CEQA and represents a good faith effort to inform decision-makers, responsible and trustee agencies, and the general public of the proposed action and the range of potential environmental impacts of that action. The EIR process provides an opportunity to identify environmental benefits of the proposed San Pablo Avenue Specific Plan that might balance some potentially significant adverse environmental impacts. As necessary, the EIR recommends measures to mitigate significant adverse impacts identified in the analysis of the proposed San Pablo Avenue Specific Plan. This EIR also analyzes alternatives to the proposed Plan. As the lead agency for preparing this EIR, the City of San Pablo will use it in its review and consideration of the merits of the proposed San Pablo Avenue Specific Plan prior to taking action on the Plan.

This EIR represents the best effort to evaluate the potential environmental effects of the proposed San Pablo Avenue Specific Plan given its long-term planning horizon. It can be anticipated that conditions will change; however, the assumptions used are the best available at the time of preparation and reflect existing knowledge of patterns of physical and economic development, travel, and technological factors.

1.2 RELATIONSHIP TO OTHER EIRS

As a program EIR, the preparation of this document does not relieve the sponsors of specific projects from the responsibility of complying with the requirements of CEQA (and/or NEPA for projects requiring federal funding or approvals). As noted, individual projects are required to prepare a more precise, project-level analysis to fulfill CEQA and/or NEPA requirements. The lead agency responsible for reviewing these projects shall determine the level of review needed, and the scope of that analysis will depend on the specifics of the particular project. These projects may, however, use the discussion of impacts in this EIR as a basis of their assessment of these regional, citywide, or cumulative impacts.

1.3 APPROVALS FOR WHICH THIS EIR WILL BE USED

This EIR is being prepared for use by the City of San Pablo in its review and approval of the proposed San Pablo Avenue Specific Plan. The EIR is intended to be used for the approval of the proposed Plan and should generally not be used for the approval of individual projects undertaken subsequent to the Plan's adoption; however, information in this document can be referenced as applicable. There is one case in which this Specific Plan EIR may be used for subsequent approval: in accordance with Government Code Section 65453, where a lead agency has prepared an EIR for a specific plan, no EIR or negative declaration need be prepared prior to approving a residential project conforming to that specific plan, unless a subsequent EIR for the plan is required pursuant to section 15162 of the CEQA Guidelines. In this context, "residential project" includes, but is not limited to, land subdivisions, zoning changes implementing the specific plan and consistent therewith, and residential planned unit developments. (CEQA Guidelines Section 15182; Government Code Section 65457)

1.4 SPECIFIC PLAN PROCESS AND PUBLIC INVOLVEMENT

The Specific Plan process began in July 2009. The planning process evolved from visioning to defining implementation measures through a combination of analytics and community input. During each phase of the process, San Pablo community members—residents, workers, students, business owners, and landowners—were asked for input and ideas. Forums for this input included three public workshops; stakeholder meetings and interviews; and the General Plan Advisory Committee (GPAC), which met monthly to discuss both the General Plan Update and the Specific Plan. The planning team prepared memos following each community outreach activity to summarize priorities, concerns, and feedback, and to inform subsequent stages of the planning effort.

Complementing community outreach activities were analyses of site and market conditions. An Existing Conditions Report was prepared in September 2009, presenting maps and analysis of existing conditions, including land uses, zoning, community facilities, land ownership, constraints, and opportunity areas. Land use alternatives were analyzed and presented in the Alternatives Workbook in November 2009, presenting possible concepts for major opportunity sites in the Planning Area. A Market Study Report was released in May 2010, analyzing the market potential of housing, retail, office, and entertainment uses in the Planning Area. Feedback from community members and decision-makers on these studies and reports informed the preparation of the Preferred Plan, which introduced the preferred land use and circulation policy direction, as well as the guiding principles articulated above. Following review by the Planning Commission, the Preferred Plan became the land use and policy framework for the Specific Plan.

All of the documents, maps, and reports were also made available to the public through the City of San Pablo website, at <http://www.ci.san-pablo.ca.us/main/SPAvenueSpecificPlan.htm>.

The proposed Specific Plan will be considered by the City Council at public hearings following public review of this Draft EIR.

1.5 NOTICE OF PREPARATION

A Notice of Preparation (NOP) for the EIR on the proposed San Pablo Avenue Specific Plan was circulated twice, first in May 2010, and again in November 2010 (received at the State Clearinghouse on November 23, 2010) and the City received comments during a 30-day review period. Both the first and second NOPs are provided in Appendix A of this EIR. An environmental scoping meeting was held at the City Hall on June 1, 2010, during the first circulation of the NOP. During the second circulation of the NOP, between November 23 and December 23, 2010, the City of San Pablo offered to hold a second scoping meeting by request. No scoping meeting was requested, but the City received comments from six agencies: Contra Costa Health Services: Environmental Health Division, the West County Wastewater District, The Lytton Rancheria of California, the California Department of Fish and Game, the East Bay Municipal Utility District, and the California Department of Transportation. NOP comments received are included in Appendix A for the record.

1.6 EIR APPROACH AND ISSUES ADDRESSED

The San Pablo Avenue Specific Plan EIR is a program EIR, defined in Section 15168 of the CEQA Guidelines as: "[An EIR addressing a] series of actions that can be characterized as one large project and are related either: (1) Geographically; (2) A[s] logical parts in the chain of contemplated actions; (3) In connection with the issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program; or (4) As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental impacts which can be mitigated in similar ways."

Program EIRs can be used as the basic, general environmental assessment for an overall program of projects such as the San Pablo Avenue Specific Plan, intended to be developed over a 20-year planning horizon. A program EIR has several advantages. First, it provides a basic reference document to avoid unnecessary repetition of facts or analysis in subsequent project-specific assessments. Second, it allows the lead agency to look at the broad, regional impacts of a program of actions before its adoption and eliminates redundant or contradictory approaches to the consideration of regional and cumulative effects.

As a programmatic document, this EIR presents an assessment of the potential impacts of the proposed San Pablo Avenue Specific Plan. It does not separately evaluate subcomponents of the proposed Plan nor does it assess project-specific impacts of potential future projects under the Specific Plan, all of which are required to comply with CEQA and/or NEPA as applicable.

Environmental Issue Areas

As provided for in the CEQA Guidelines, the focus of this EIR is on those environmental issues and concerns identified as possibly significant by San Pablo in its Notice of Preparation (see Appendix A). These issue areas of concern include:

- **Land Use:** Would the San Pablo Avenue Specific Plan: Conflict with applicable area land use plans, including the County Plan, the City's General Plan and other specific plans? Result in community residential or business disruption or displacement of substantial numbers of existing population and

housing? Result in permanent alterations to the characteristics and qualities of an existing neighborhood or community?

- **Transportation:** Would the San Pablo Avenue Specific Plan: Conflict with policies in the General Plan establishing level of service (LOS) standards? Conflict with the applicable Congestion Management Program or adopted Action Plan for Routes of Regional Significance? Conflict with adopted policies, plans, or programs regarding public transit, bikeways, or pedestrian facilities, or otherwise substantially decrease the performance or safety of such facilities?
- **Air Quality:** Would the San Pablo Avenue Specific Plan: Cause the rate of increase in VMT or vehicle trips to exceed the rate of increase in population indicated by current ABAG projections (2007 and 2009; transportation model is calibrated to 2007) for the years covered by the proposed Specific Plan? Be inconsistent with or fail to implement the Air Quality Plan Transportation Control Measures? Fail to identify or establish goals, policies, objectives, and/or overlay or buffer zones for existing and proposed land uses that would emit odors or toxic air contaminants in order to minimize potential impacts of these emissions on sensitive receptors?
- **Energy and Greenhouse Gases:** Would the San Pablo Avenue Specific Plan: Cause a substantial increase in energy consumption, or cause GHGs to exceed BAAQMD thresholds? Require a substantial increase in energy supply capacity or infrastructure the construction of which could cause adverse environmental effects? Conflict with any existing local, regional, state, or federal standards for energy production or efficiency or efforts to implement AB 32 or SB 375?
- **Hydrology and Water Quality:** Would the San Pablo Avenue Specific Plan: Violate any water quality standards or waste or storm water discharge requirements? Substantially deplete groundwater supplies or interfere substantially with groundwater recharge? Substantially alter the existing drainage pattern of the area causing flooding or erosion? Expose people or structures to a significant risk of loss, injury, or death involving flooding?
- **Biological Resources:** Would the San Pablo Avenue Specific Plan: Have the potential to disturb or reduce important habitats for plant and animal species, especially rare and endangered species? Would the proposed San Pablo Avenue Specific Plan obstruct the migration and movement of species within their habitats? Would the Plan be consistent with adopted conservation plans?
- **Geology and Seismicity:** Would the San Pablo Avenue Specific Plan: Increase exposure of people or structures to the risk of property loss, injury, or death involving earthquake ground shaking, seismic-related ground failure, liquefaction, or landslides? Result in substantial soil erosion or topsoil loss?
- **Public Services, Facilities, and Utilities:** Would the San Pablo Avenue Specific Plan: Result in adverse environmental effects due to necessary increases in staffing, facilities, and equipment for public services? Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? Result in adverse environmental effects due to the provision of necessary new, altered, or expanded water, wastewater, storm drainage, or solid waste disposal systems? Conflict with existing city standards for parks provision?
- **Noise:** Would the San Pablo Avenue Specific Plan: Expose persons to or generate construction noise levels and groundborne vibration? Expose persons to or generate noise levels in excess of those considered 'normally acceptable' compared to existing conditions?

- **Hazardous Materials and Wildfire Hazards:** Would the San Pablo Avenue Specific Plan: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions resulting in the release of hazardous materials? Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? Expose people or structures to a significant risk of loss, injury, or death involving wildland fires?
- **Cultural Resources:** Would the San Pablo Avenue Specific Plan: Cause a substantial adverse change in the significance of a historic resource? Cause a substantial adverse change in the significance of a unique archaeological resource? Disturb any human remains, including those interred outside of formal cemeteries? Destroy, directly or indirectly, a unique paleontological resource or site or unique geologic feature?
- **Visual Resources:** Would the San Pablo Avenue Specific Plan: Block panoramic views or views of significant landscape features or landforms as seen from public viewing areas? Create significant contrasts with the scale, form, line, color and/or overall visual character of the existing landscape in areas with sensitive visual resources or high visual quality? Add a visual element of urban character to an existing rural or open space area or add a modern element to a historic area? Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Types of Impacts

According to CEQA Guidelines, the following general types of environmental impacts need to be considered:

- Direct or primary impacts, which are caused by the project and occur at the same time and place as the project.
- Indirect or secondary impacts, which are caused by the project and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect or secondary impacts may include growth-inducing impacts and other impacts related to induced changes in the pattern of land use, population density, or growth rate, and related impacts on air and water and other natural systems, including ecosystems. Indirect or secondary impacts may also include cumulative impacts.
- Short-term impacts, which are those of a limited duration, such as the impacts that would occur during the construction phase of a project.
- Long-term impacts, which are those of greater duration, including those that would endure for the life of a project and beyond.
- Significant unavoidable impacts, which cannot be mitigated to a level that is less than significant.
- Irreversible environmental changes, which may include current or future irretrievable commitments to using non-renewable resources, or growth-inducing impacts that commit future generations to similar irretrievable commitments of resources. Also, irreversible change can result from risks of accidents and injury associated with the project.

- Cumulative impacts, which include two or more individual impacts that when considered together are considerable or which compound or increase other adverse environmental effects. The individual impacts may be changes resulting from a single project or a program of projects. The cumulative effect from several projects is the change in the environment that results from the incremental effect of the proposed project when added to other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor, but collectively significant, projects taking place over a period of time.

Timeframe

For analytic purposes in this EIR, the year 2010 is the base year (existing conditions), while the year 2030 is the horizon year (future conditions) when the proposed San Pablo Avenue Specific Plan will be fully implemented. In cases where current data is not available, the default is to use the latest known data to depict the baseline (i.e., existing conditions). The proposed Plan covers approximately a 20-year planning period, and the year 2030 represents the last year of the plan when projects/programs are anticipated to be fully implemented.

Alternatives

CEQA requires EIRs to evaluate a reasonable range of alternatives to the proposed Project that could feasibly attain most of the basic project objectives and would avoid or substantially lessen any of the significant environmental impacts. This EIR will evaluate three alternatives, namely Alternative A: Centers and Nodes; Alternative B: Urban Boulevard; and the No Project Alternative.

See Chapter 4 for more details about the alternatives.

Cumulative Impacts Assumptions

Due to the size of the Planning Area, this EIR uses a regional projections approach to assess the cumulative impacts of the proposed San Pablo Avenue Specific Plan. The EIR attempts to distinguish between the impacts of the proposed Plan and the independent impacts of forecasted future population and employment growth in nearby communities, together with assumptions about where this growth will occur. Projections for the proposed Project are based on the regional growth projections prepared by the Association of Bay Area Governments (ABAG). The most recent adopted forecast is used in this EIR: Projections 2009. Notably, the transportation, air quality, energy and greenhouse gases, hydrology and water quality, and noise analyses are largely cumulative impact analyses.

1.7 EIR ORGANIZATION

Executive Summary

This EIR begins with an executive summary of the environmental analysis, which includes a review of the potentially significant adverse regional environmental impacts of the proposed San Pablo Avenue Specific Plan and the measures recommended to mitigate those impacts. The executive summary also indicates whether or not those measures mitigate the significant impacts to a less than significant level. Finally, the executive summary describes the alternatives and their merits as compared to the proposed San Pablo Avenue Specific Plan, and identifies the environmentally superior alternative among them.

Chapter 1 Introduction

Chapter 1 (this chapter) describes the relationship between the proposed San Pablo Avenue Specific Plan and the EIR, the organization of the EIR, and the basic legal requirements of a program level EIR. It discusses the level of analysis and the alternatives considered as well as how this EIR is related to other environmental documents and the EIR's intended uses.

Chapter 2 Project Description

Chapter 2 introduces the purpose and objectives of the proposed San Pablo Avenue Specific Plan and summarizes specific information to describe the proposed Plan and complete the EIR analysis. This includes a description of the existing project setting, an outline of the projected population and employment growth rates and development patterns through the 2030 planning horizon year, and land use maps, tables, and key policy direction.

Chapter 3 Settings, Impacts, and Mitigation Measures

Chapter 3 describes the existing physical and regulatory settings for each of the environmental issue areas analyzed in the EIR, the potential impacts of the proposed San Pablo Avenue Specific Plan on these environmental issue areas, the proposed Plan policies that help to reduce those impacts, and, if necessary, measures to mitigate potential impacts identified. Each issue area is analyzed in a separate numbered subsection of the chapter. Each subsection is organized as follows:

- Environmental Setting
 - Physical Setting
 - Regulatory Setting
- Impact Analysis
 - Significance Criteria
 - Methodology and Assumptions
 - Summary of Impacts
 - Impacts and Mitigation Measures

Chapter 4 Analysis of Alternatives

Chapter 4 includes a description of alternatives to the proposed San Pablo Avenue Specific Plan and an assessment of their potential to achieve the objectives of the proposed Plan while reducing potentially significant adverse environmental effects. As required by CEQA, an environmentally superior alternative is identified.

Chapter 5 CEQA Required Conclusions

Chapter 5 provides the assessment of impacts of the proposed Plan in several subjects areas required by CEQA, including:

- Significant irreversible environmental changes;
- Significant unavoidable impacts;
- Growth-inducing impacts;
- Cumulative impacts; and
- Effects found to be not significant.

End Matter

Chapter 6 consists of the bibliography, Chapter 7 persons and organizations consulted, Chapter 8 the glossary, and Chapter 9 acronyms and abbreviations. Following these chapters are the appendices. Appendix A includes the NOP and comments received on the NOP, Appendix B provides the transportation modeling results used for the transportation analysis, Appendix C shows a list of special status species potentially occurring in and adjacent to the Planning Area, and Appendix D provides documentation of consultation with the Northwest Information Center regarding cultural resources in the Planning Area.

2 Project Description

The project analyzed in this EIR is the proposed San Pablo Avenue Specific Plan. Hereafter referred to as the proposed Plan. The Plan proposes a mix of residential and commercial redevelopment along San Pablo Avenue in San Pablo, California. The project is consistent with the San Pablo 2030 General Plan, which was recently updated by the City.

This chapter provides background information to describe the proposed Plan and complete the EIR analysis. This includes a description of the existing regional and local project setting, an outline of the projected population and employment growth rates, the proposed land use diagram, and key themes and policies of the proposed Plan. This project description provides the basis for the environmental analysis in Chapter 3.

2.1 REGIONAL LOCATION AND PLANNING BOUNDARIES

Located approximately one mile from San Pablo Bay, the City of San Pablo is surrounded by the City of Richmond and the unincorporated communities of North Richmond and El Sobrante (**Figure 2.1-1**). San Pablo Avenue runs through the middle of the city, and I-80 abuts the Planning Area to the east. The closest BART stations are El Cerrito Del Norte, located approximately 1.8 miles to the south along San Pablo Avenue, and Richmond, located about 2.1 miles to the southwest along 23rd Street. Hilltop Mall is located just northeast of the Planning Area. While there is a limited amount of open space in the City of San Pablo, two regional parks are nearby—Wildcat Canyon to the southeast and Point Pinole to the north.

Figure 2.1-1
San Pablo
Regional Location

- Open Space
- Urbanized Land
- San Pablo Ave Specific Plan
- San Pablo City Limits
- BART
- Railroad
- Interstate Highway

SOURCE: City of San Pablo, 2010; Dyett & Bhatia, 2010.

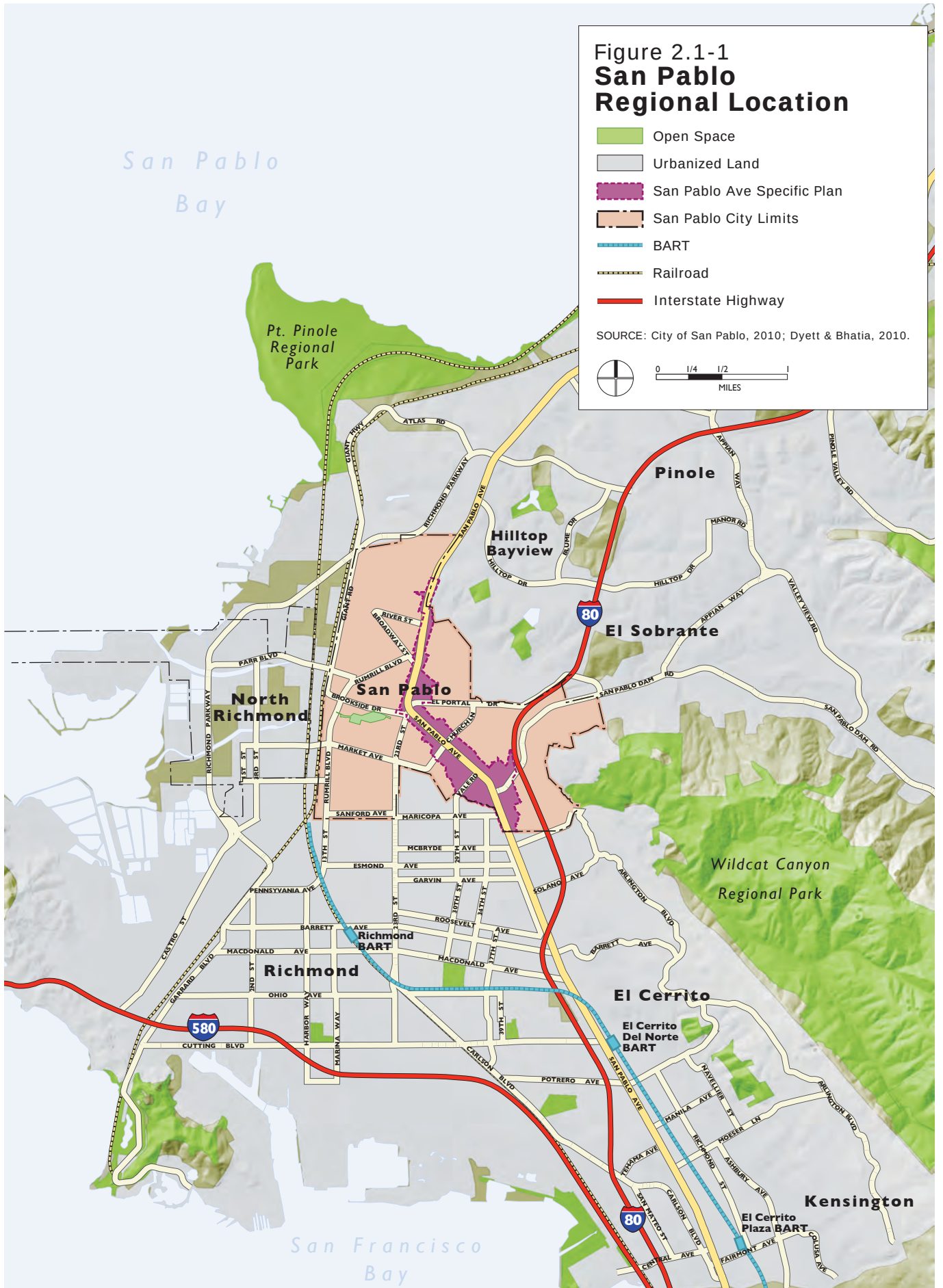
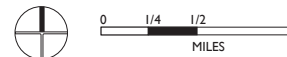


Figure 2.1-2 depicts the Specific Plan Planning Area, which totals 261 acres, or 0.41 square miles. This Planning Area occupies approximately 15 percent of the total area of the city. Within the city, San Pablo Avenue extends for two linear miles. At its north end, the Planning Area includes an additional one-quarter linear mile of San Pablo Avenue which is not included in the City limits. Because this unincorporated portion of the corridor is adjacent to City land, it is included in the Planning Area. This brings the total length of the corridor to 2.25 linear miles. Within the City of San Pablo, the Planning Area is a major transit destination, with ten bus lines passing through. Three creeks—Rheem Creek, San Pablo Creek, and Wildcat Creek—cross the Planning Area in the east-west direction, and a number of recent and planned development projects are located within and near the Planning Area.

Also within the Planning Area are tribal trust lands of the Lytton Rancheria of California. The title to tribal trust lands is held by the federal government in a trust status for the benefit of current and future generations of tribal members. Trust status means that the land falls under tribal government authority and is generally not subject to state laws. Trust status creates limitations on the use of the land and requires federal approval for most actions; for instance, tribes may convey, sell, or acquire new trust land only with the consent of the federal government. Tribal fee lands are owned privately rather than by the federal government and are subject to state and local regulation.

For purposes of this EIR, lands known to be owned by the Lytton Rancheria of California are indicated on **Figure 2.2-1**, but are not otherwise distinguished in the analysis. To the extent that there are known potential environmental effects as a result of implementation of the proposed Project, they are disclosed in the EIR and the document does not make distinctions between impacts based on land ownership status.

2.2 PURPOSE AND OBJECTIVES OF THE PROPOSED PLAN

Plan Objectives

The broad objective of the Plan is to foster revitalization of San Pablo Avenue into a pedestrian- and transit-oriented boulevard, with amenities that draw residents from the entire city and surrounding region. It establishes the area as a key regional and community destination that is both active and accessible, with mixed-use higher intensity development that will bolster transit ridership and promote vital street life. The Plan also provides a framework for development on major opportunity sites, and helps integrate new development with key activity centers, including Contra Costa College, City Hall, Doctors Medical Center, and the San Pablo Lytton Casino. It seeks to strengthen economic activity in the city, facilitate access to the Avenue and its various destinations through public transit, and enhance existing communities along and near San Pablo Avenue. The area is well served by bus routes, has easy access to I-80, and is within close reach of BART stations. **Figure 2.1-2** shows the Planning Area.

Funding for the Plan has been provided primarily by the Metropolitan Transportation Commission (MTC) as part of the FOCUS Priority Development Area (PDA) program, a region-wide effort to revitalize major transit corridors throughout the Bay Area.

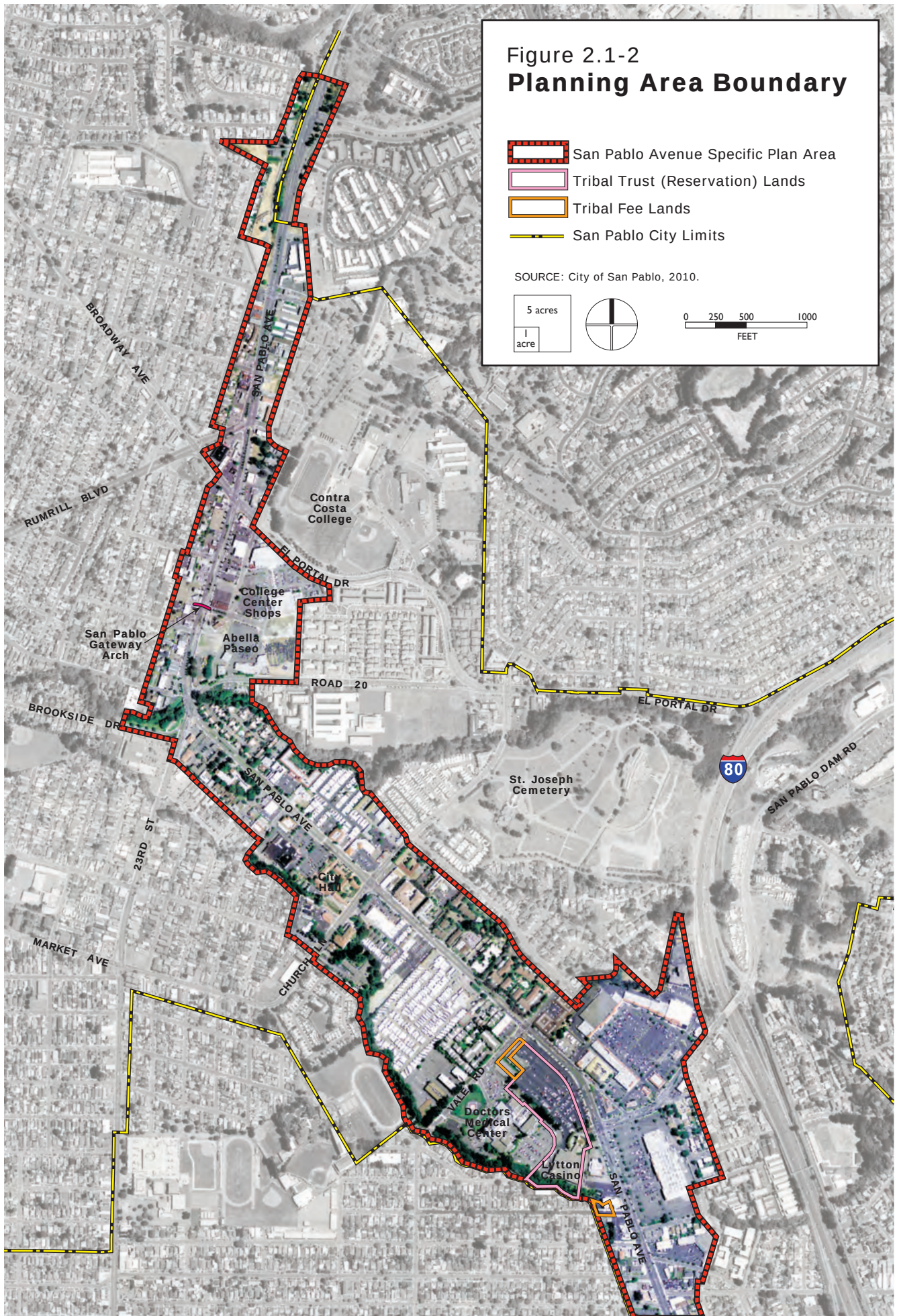
Figure 2.1-2
Planning Area Boundary

-  San Pablo Avenue Specific Plan Area
-  Tribal Trust (Reservation) Lands
-  Tribal Fee Lands
-  San Pablo City Limits

SOURCE: City of San Pablo, 2010.



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Guiding Principles

The Specific Plan presents a tremendous opportunity for quality medium to high-intensity development. The Planning Area includes several major destinations, including City Hall, Doctors Medical Center, and San Pablo Lytton Casino. Given its proximity to transit and the presence of several large underutilized parcels, the area can be transformed into a “signature area” of San Pablo, with high quality development and interesting pedestrian areas that add to the city’s quality of life. The following Guiding Principles emerged from community and decision-maker input throughout the planning process. Taken together, these ideas establish an overall vision for the corridor that is reflected in the land use pattern, policies, and implementation measures of this Specific Plan:

1. **Walkability and a High-Intensity Mix of Uses.** Development along this major transportation corridor must have a synergistic mix of uses. The Plan locates higher density residential neighborhoods adjacent to neighborhood-serving retail, employment centers, and amenities such as the Contra Costa College. Retail, restaurants and entertainment uses are grouped to create walkable destinations. The Plan encourages service uses like supermarkets, pharmacies, laundries, and community centers. In several areas along the corridor, vertical mixes of uses is encouraged or required in an effort to create self-supporting districts.
2. **Destinations and Amenities for All Ages.** Activities that serve as citywide and regional draws will be critical to the future of the corridor. Shopping, dining, theaters, event venues and other attractions will bring the community together, encourage visitors, and establish needed activity nodes along the corridor. The success of the San Pablo Lytton Casino, the ample acreage of opportunity sites near the Casino, and the dearth of existing entertainment uses all suggest that an entertainment district near the Casino would enliven the corridor. This district, established as an “overlay” in the Plan, would help to create jobs, destinations for families, and a recognizable and marketable image for the city.
3. **A Variety of Housing Options.** A variety of housing options are needed to attract new residents to the San Pablo Avenue corridor, provide options for the ageing San Pablo population, and house the anticipated growth in enrollment at Contra Costa College and workers at establishments such as the Doctors Medical Center. The Specific Plan allows for a variety of housing options for all potential residents, including families, students, and professionals. Planned residential uses vary in density and in proximity to commercial uses. The Plan includes policies to ensure that density does not compromise livability.
4. **Community Facilities and Open Space.** Community-oriented facilities are an essential component of new development along the corridor. The Plan provides a new community plaza along San Pablo Avenue as part of redevelopment of the former Circle S site. Additionally, one major public open space along the improved Wildcat Creek and a number of smaller and more programmed open spaces (e.g. pocket parks, trails, exercise stations, and playgrounds) are integrated into the corridor. Candidate uses for additional community facilities include a cultural center, a community theater, sports fields and courts, a community swimming pool, trade schools, senior centers, bilingual service centers, and preschools. While it may not be physically feasible to include all of these amenities, key opportunity areas will have designations that accommodate these types of uses. In a high-density infill setting, well-designed public open spaces are also essential—not just to residents, but to pedestrians between destinations.
5. **Improved Accessibility.** The corridor is well-served by bus lines, but increasing ridership will be achieved only through improvements to complementary modes of travel, such as walking and biking. The Plan necessitates that future development and street improvements be more conscious of the pedestrian and bicycle experience and employ universal design throughout. The Plan includes policies

to ensure that parking is hidden from view from the public right-of-way, and façades improved in a style that projects a consistent image along the corridor. Within the right-of-way, the pedestrian realm is designed to create more comfortable and inviting paths that diminish perceived walking distances, and continuous, convenient, and safe bicycle routes are established

2.3 PROPOSED PLAN

The proposed Plan is illustrated in **Figure 2.3-1**. The land use framework envisions a diversity of uses and environments to establish an attractive, well-defined identity for the San Pablo Avenue corridor. Multiple mixed-use districts are proposed, which will build on key community services and regional destinations like Contra Costa College, Doctors Medical Center, and the Lytton Casino, to create a vibrant corridor with a diverse mix of residential, employment, service, and entertainment uses. In the northern and central portions of the Planning Area, the proposed mixed residential and commercial centers will attract a range of residents and connect to services and transit. To the south, mixed-use development will maximize entertainment and regionally-oriented retail and eating/drinking opportunities, to create synergies with the casino and the medical center.

Land Use Classifications

The Land Use Diagram includes the following land uses classifications, organized into four categories: *Residential*, *Mixed Use*, *Commercial*, and *Public*. Intensity and density ranges are described for each designation. Intensity is described by Floor Area Ratio (FAR), or the permitted ratio of gross floor area to site area. In design terms, FAR is a measure of building bulk that controls both visual prominence and traffic generation. Additionally, the classifications include allowable densities in terms of the number of housing units per gross acre for the residential uses.

Residential

Low Density Residential. This designation is intended for single-family detached residential development of up to 12 units per gross acre, accommodating existing development in a small northern-most end of the Planning Area, adjacent to Wanlass Park. New development within this classification is not expected. The minimum lot size is 5,000 square feet (6,000 square feet for a corner lot).

Medium Density Residential. This designation is intended for a mix of housing types, with density ranging from 12.1 to 24 units per gross acre. Housing types may include single-family attached or multifamily dwellings. Medium Density Residential development will remain primarily along the central portion of the corridor. This designation is also applied to serve as a transition to higher-intensity or commercial development (for example, south of Wanlass Park).

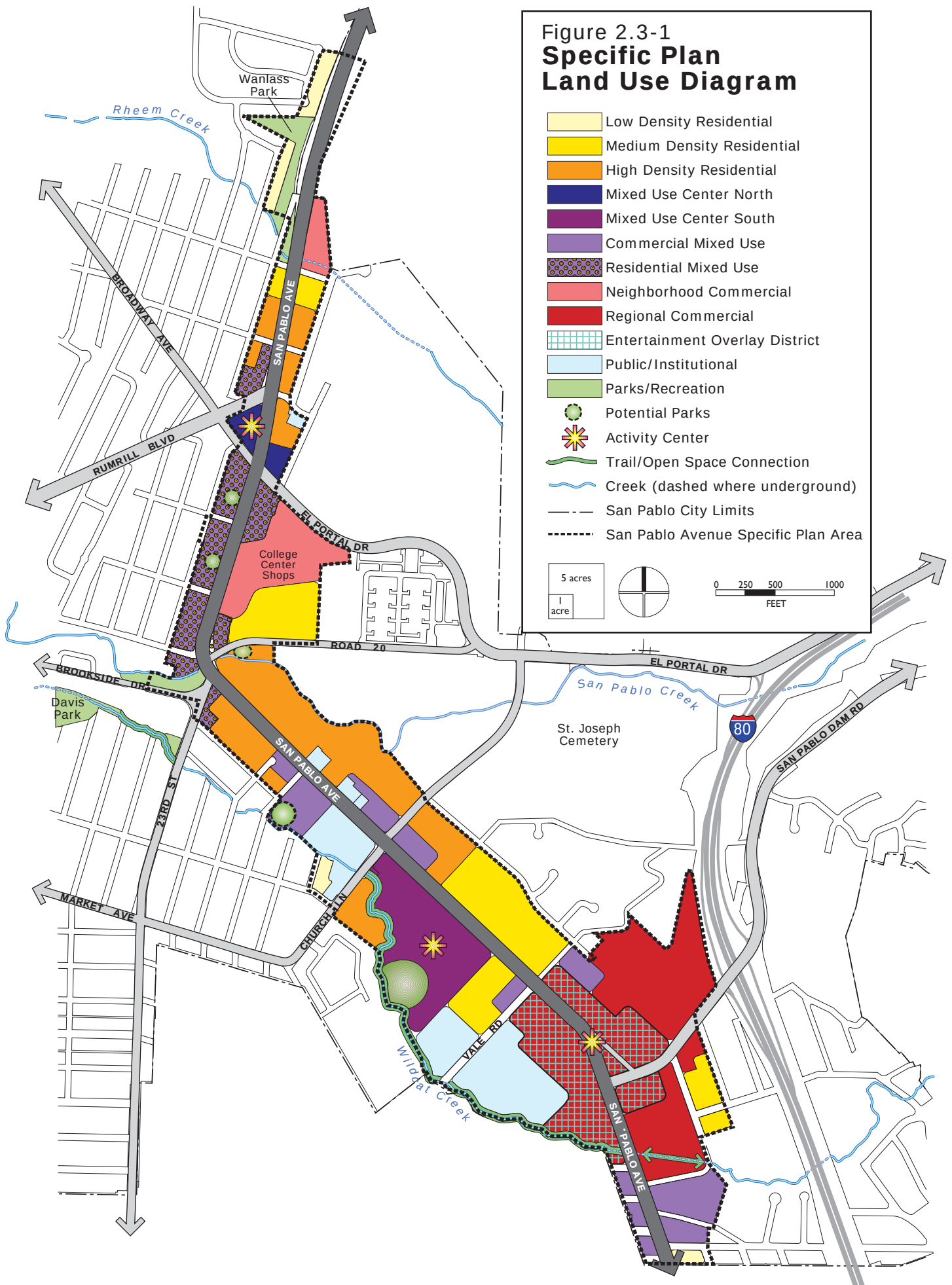
High Density Residential. This designation is intended for multifamily buildings and townhomes between 24.1 and 60 units per gross acre. The higher densities of this designation may provide more affordable rental and ownership housing opportunities, while its location near active commercial centers may provide more lifestyle options. Developments in this classification would typically stand two to four stories high. Common open space and shared amenities are required within High Density Residential developments.

Mixed Use

Mixed Use Center North. The Mixed Use Center North designation aims to establish an active destination that caters to a student population and allows high intensity mixed-use development at and near the Mission Plaza site, adjacent to Contra Costa College. Stores, restaurants/cafés or other active uses are required on the ground floor to promote an active pedestrian environment. (See Chapter 4: Urban Design and Building Standards for a detailed description of the desired active pedestrian environment.) Typical heights are expected to be four stories, with portions of buildings reaching 60 feet. The maximum FAR is 2.5 and the maximum residential density allowed (included within the FAR limit) is 80 units per gross acre. The minimum required FAR is 0.3.

Mixed Use Center South. The Mixed Use Center South designation is limited to the former Circle-S site. Similar to Mixed Use Center North, this designation describes a new high-intensity mixed-use destination in an area with high growth potential. The Mixed Use Center South designation aims to establish a major new activity center and regional destination for the City of San Pablo. Uses may include commercial, office (including medical offices), residential, institutional and hotel. Typical heights are expected to reach three to five stories, with a maximum height of 60 feet. The maximum FAR is 2.5 and the maximum density allowed is 60 units per gross acre. The minimum required FAR is 0.5.

Figure 2.3-1
**Specific Plan
 Land Use Diagram**



Commercial Mixed Use. This is a mixed-use designation that includes office, retail, commercial, residential and public uses. Active uses are required for frontage along San Pablo Avenue, and residential uses are allowed only when the commercial FAR is 0.5 or greater. This designation applies primarily to the gateway area at the southern end of the corridor, and near the intersection with Church Lane in the central portion of the corridor. Typical height is expected to be two to three stories, with a maximum allowable height of 40 feet. The maximum FAR is 1.5 and the maximum density is 50 units per gross acre.

Residential Mixed Use. The Residential Mixed Use designation applies primarily to the northern segment of the San Pablo Avenue corridor, north of Road 20. Located near Contra Costa College and recent commercial development, this area is characterized by small parcels and high pedestrian traffic. This designation is intended for a variety of residential and non-residential uses on infill sites and promotes pedestrian activity in a mixed-use environment. Residential Mixed Use development that fronts onto San Pablo Avenue must have active commercial uses at the ground floor; elsewhere, residential uses are permitted on the ground floor. Non-residential uses may include administrative, financial, business, professional, medical, dental and public uses. The typical height is expected to be two to three stories, with a maximum allowable height of 40 feet. The maximum FAR is 1.5 and the maximum density is 50 units per gross acre.

Commercial

Neighborhood Commercial. This designation is intended for small-scale commercial uses that primarily provide convenience, personal services and social services such as retail and specialty shops, eating and drinking establishments, and commercial recreation. It is limited to the recent College Center Shops development and future Walgreens development between San Pablo Avenue, Road 20, and El Portal Drive. Residential uses are not permitted. The maximum height is 30 feet and the maximum permitted FAR is 1.0.

Regional Commercial. This designation is intended for large-scale commercial development that serves local and regional needs. Located near the intersection of San Pablo Avenue and San Pablo Dam Road, it is easily accessible by freeways and regional roadways. It is intended to include a range of goods and services such as retail, eating and drinking establishments, hotels and motels. Residential uses are not permitted. The maximum height is 30 feet, and the maximum permitted FAR is 0.75.

Entertainment District Overlay. This overlay district allows for intensification of an underlying commercial or mixed-use designation. The entertainment district is easily accessed by freeways and regional roadways, and serves community and regional retail needs with a focus on entertainment and recreation uses. This includes nightlife venues, various types of theaters, arcades/game rooms, and eating and drinking establishments. This designation allows for a maximum height of 60 feet and an additional FAR of 0.5, for entertainment uses only, above the base district's maximum FAR.

Public

Public/Institutional. This designation is intended for uses that serve a public purpose, including public and private schools, administrative offices, corporation yards, and public facilities such as hospital and medical centers, police stations, and fire stations.

Parks/Recreation. This designation is intended for improved and unimproved park facilities, including neighborhood, community, and regional parks; and recreational facilities that provide visual open space and serve the outdoor recreational needs of the community.

Proposed Parks. This symbol is intended to show the general location of proposed mini-parks and other parks on San Pablo Avenue. They are not site-specific designations, and the future park may be at a different location in the vicinity.

Summary of Density and Intensity Standards

The density and intensity standards used in the Specific Plan are shown in **Table 2.3-1**. For mixed-use classifications, the FAR includes both residential and non-residential uses. Maximum intensities shown in the table may not be attainable on all sites, as development regulations (e.g. building height limits or development standards) or site conditions may reduce development potential. On all sites throughout the Planning Area, intensities can be averaged over multiple contiguous parcels for an individual project to accommodate areas of high-intensity development, open space, and other amenities.

TABLE 2.3-1 SAN PABLO AVENUE SPECIFIC PLAN LAND USE DENSITY AND INTENSITY STANDARDS

LAND USE CLASSIFICATION	FLOOR AREA RATIO (FAR; INCLUDES ALL USES—NON-RESIDENTIAL AND RESIDENTIAL)		DENSITY (UNITS PER GROSS ACRE)
	MINIMUM	MAXIMUM	RANGE OR MAXIMUM
Low Density Residential	-	-	up to 12
Medium Density Residential	-	-	12.1 - 24
High Density Residential	-	-	24.1 - 60
Mixed Use Center North	0.30 ²	2.5	up to 80 ¹
Mixed Use Center South	0.50 ²	2.5	up to 60 ¹
Commercial Mixed Use	0.40 ²	1.5	up to 50 ^{1,4}
Residential Mixed Use	-. ⁵	1.5	up to 50 ¹
Neighborhood Commercial	0.30	1.0	-
Regional Commercial	0.30	0.75	-
Entertainment District Overlay		0.5 above base district maximum ³	-
Public Institutional	-	-	-
Parks/Recreation	-	-	-

¹ Included within the FAR limit.

² The frontage of a site along San Pablo Avenue is required to be devoted to active uses. Residential is not permitted at the ground level along San Pablo Avenue.

³ Additional FAR available for entertainment uses only.

⁴ Residential uses only allowed when commercial FAR is 0.5 or greater.

⁵ While no minimum FAR is specified, development along San Pablo Avenue must have active uses on the ground floor.

Source: Dyett & Bhatia, 2010.

2.4 BUILDOUT UNDER THE SPECIFIC PLAN

Buildout and Opportunity Sites

Full development under the proposed Specific Plan is referred to as “buildout.” Although the proposed Plan applies a 20 year planning horizon, the Plan is not intended to specify or anticipate when buildout will actually occur; nor does the designation of a site for a certain use necessarily mean the site will be built/redeveloped for that use within the next 20 years.

New development is expected to occur on “land use opportunity sites” which consist of vacant and underutilized sites. These sites have been identified through a combination of ways, including mapping using Geographic Information Systems, field reconnaissance, consultation with City staff, interviews with stakeholders, and research into individual parcels. A total of 86.1 acres of opportunity sites have been identified. Acreages by land use on opportunity sites are shown separately from non-opportunity sites in **Table 2.4-1**.

TABLE 2.4-1 SAN PABLO AVENUE SPECIFIC PLAN LAND USES BY ACRE

	PROPOSED LAND USE OPPORTUNITY SITES	PROPOSED LAND USE NON- OPPORTUNITY SITES	TOTAL	PERCENT OF TOTAL
Residential				
Low Density Residential	-	4.2	4.2	2%
Medium Density Residential	0.6	23.3	23.8	11%
High Density Residential	5.7	31.4	37.0	17%
Mixed Use				
Mixed Use Center North	2.7	-	2.7	1%
Mixed Use Center South	16.1	-	16.1	8%
Commercial Mixed Use	12.6	5.1	17.7	8%
Residential Mixed Use	9.6	3.2	12.8	6%
Commercial				
Neighborhood Commercial	0.3	17.3	17.6	8%
Regional Commercial	24.2	2.5	26.7	12%
Entertainment District	10.1	12.0	22.1	10%
Public				
Public Institutional	-	24.1	24.1	11%
Parks/Recreation	4.2	5.6	9.8	5%
Total¹	86.1	128.7	214.8	100%

¹Totals may not add up due to rounding, and does not include roads and other right-of-ways.

Source: Dyett & Bhatia, 2010.

Focus Areas

These five “focus” areas, described below, contain the majority of the opportunity sites within the Planning Area, and are therefore the locations where most new development is likely to occur. The location of the focus areas are illustrated in **Figure 2.4-1**.

Circle-S

This 18-acre site, owned by the San Pablo Redevelopment Agency, is a major opportunity for the City of San Pablo. Located adjacent to Wildcat Creek and along the busiest stretch of San Pablo Avenue, this site presents an opportunity to capitalize on the proximity of City Hall, the San Pablo Lytton Casino, and nearby medical offices to establish a major mixed-use node in the heart of the corridor. It also presents an opportunity to integrate a large park or community open space into the development and the corridor.

Mission Plaza

This 1.56-acre triangular-shaped block, located at the junction of San Pablo Avenue, Broadway Avenue, and Rumrill Boulevard, is highly visible and accessible, and is located just one block from Contra Costa College and the new College Center Shops development. About half of the block is owned by the San Pablo Redevelopment Agency.

West San Pablo Avenue

This corridor is located along the west side of San Pablo Avenue across from the new College Center Shops development. With pedestrian improvements planned at the intersection with Brookside Drive, and given the proximity of Davis Park, Contra Costa College, new commercial and residential development, the San Pablo Gateway Arch, and existing small-scale unique businesses on the west side of the Avenue, this area represents an opportunity to capitalize on existing uses and amenities. Development along this portion of the corridor could be oriented toward 22nd Street (to the west) as well as to San Pablo Avenue.

Towne Center

The existing Towne Center shopping area is a 22.5-acre development at the intersection of San Pablo Avenue and San Pablo Dam Road. Located just off of I-80 between the Casino and a hotel, this area has high visibility and freeway accessibility.

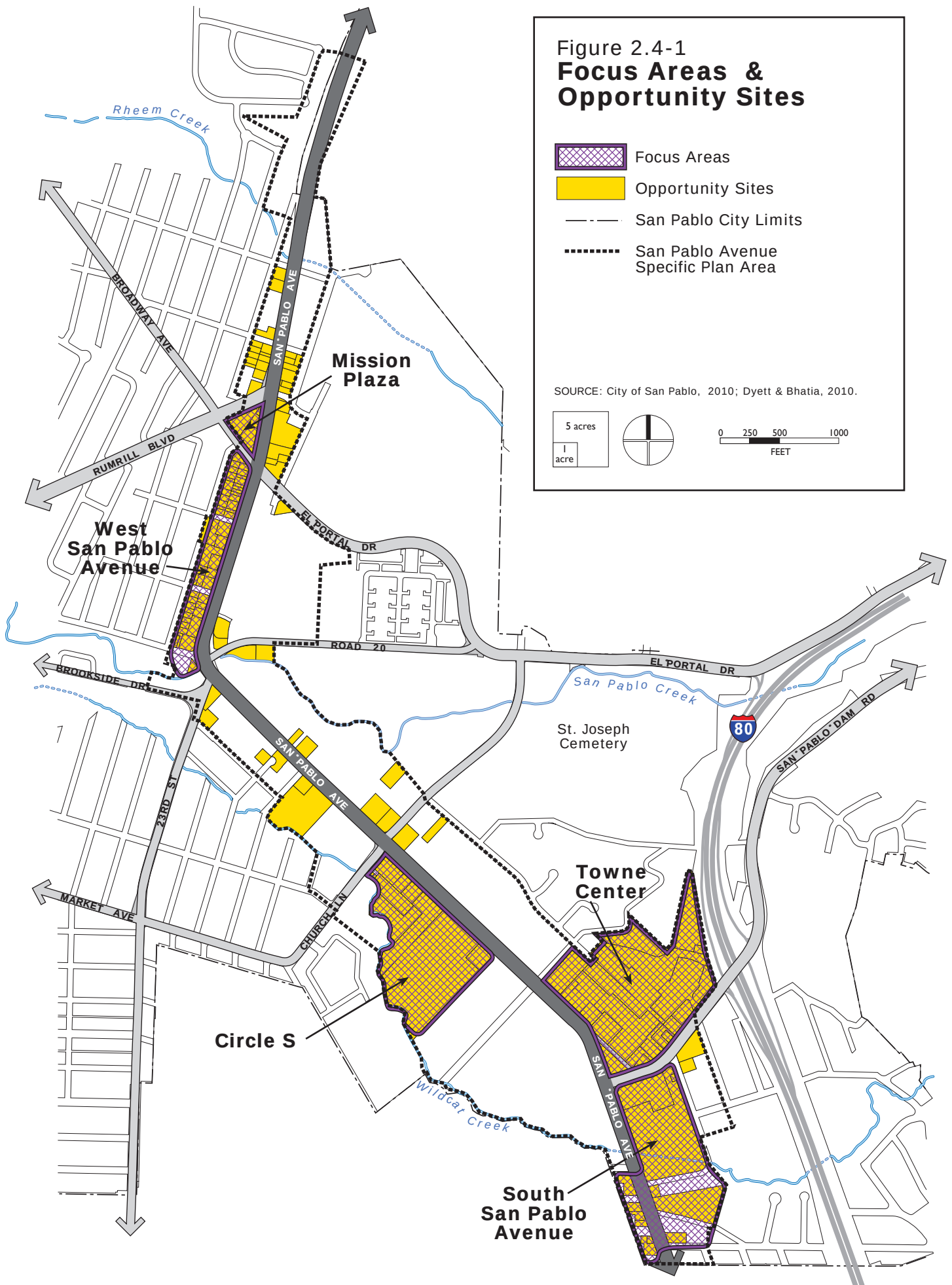
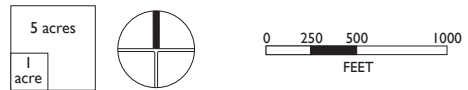
South San Pablo Avenue

This 18.5-acre area offers a cluster of several small opportunity sites and two large ones (the existing Big Lots/Food Maxx regional shopping center, and Dias Plaza). Located just south of San Pablo Dam Road and the I-80 ramps and just north of the city’s border with Richmond, this intersection is a highly visible and well-trafficked gateway to the city.

Figure 2.4-1
Focus Areas & Opportunity Sites

-  Focus Areas
-  Opportunity Sites
-  San Pablo City Limits
-  San Pablo Avenue Specific Plan Area

SOURCE: City of San Pablo, 2010; Dyett & Bhatia, 2010.



Population Growth, Housing and Jobs

Table 2.4-2 shows a detailed breakdown of the potential residential units, non-residential development and jobs that could result from buildout of the Specific Plan. This table summarizes the net total buildout within the Planning Area (the sum of existing development and net new development). This total represents development that could be expected in 2030 if the Specific Plan is implemented according to the Land Use Diagram and land use classifications described in this chapter.

TABLE 2.4-2 SAN PABLO AVENUE POTENTIAL BUILDOUT SUMMARY

	EXISTING	CIRCLE-S	MISSION PLAZA	WEST SAN PABLO AVENUE	TOWNE CENTER	SOUTH SAN PABLO AVENUE	OTHER AREAS	NET NEW	NET TOTAL
Population (residents)	4,000	379	276	182	91	279	965	2,173	6,173
Residential units	1,360	129	94	62	31	95	328	740	2,100
Commercial Square Feet	1,600,000	459,000	12,000	19,840	181,500	106,000	36,660	815,000	2,415,000
Jobs	4,090	938	41	97	312	238	364	1,990	6,080

Source: Dyett & Bhatia, 2010.

Residential Development

As shown in **Table 2.4-3**, approximately 1,360 housing units currently exist in the Planning Area. The Specific Plan proposes approximately 740 units of residential development, all of which will be in multi-family structures. In total, implementation of the proposed Plan would increase the Planning Area's housing stock by 54 percent to 2,100 housing units.

TABLE 2.4-3 BUILDOUT PROJECTIONS FOR HOUSING UNITS AND POPULATION

	HOUSING UNITS	POPULATION
Existing	1,360	4,000
Buildout	2,100	6,170

Source: Dyett & Bhatia, 2010.

Commercial Square Footage

Buildout of the Specific Plan is expected to increase the available commercial square footage from 1.6 million square feet to 2.4 million square feet, an increase of about 50 percent (**Table 2.4-4**). Up to 1,990 new jobs may be created from this space. This is a net estimate of new jobs, after deducting the number of jobs lost by demolition of existing buildings for new development. Jobs from the retail and entertainment sector comprise 45 percent of the additional employment under the plan. Professional

office and service uses would represent 25 percent of the total new employment, while public and institutional and other uses would account for the remaining 30 percent.

TABLE 2.4-4 BUILDOUT PROJECTIONS FOR COMMERCIAL SQUARE FOOTAGE AND JOBS

	COMMERCIAL FLOOR SPACE (MILLION SQUARE FEET)	JOBS
Existing	1.6	4,090
Buildout	2.4	6,080

Source: Dyett & Bhatia, 2010.

2.5 KEY POLICIES OF THE PROPOSED SPECIFIC PLAN

Policy direction for the San Pablo Avenue Specific Plan is described in this section. Key policies are summarized below; additional policies are included in the Plan itself. All of these policies are incorporated by reference into this project description and analyzed in this EIR.

Land Use

- 2-G-1 *Promote development of San Pablo Avenue as an attractive boulevard, lined with a diverse array of uses that promote vibrant street life, and maintain eyes on the street at all times.*
- 2-G-2 *Locate higher intensity nodes, which include community and regional-oriented stores and amenities, in areas that are adjacent to major employment or education centers, and where opportunities are present.*
- 2-G-3 *Promote pedestrian- and transit-friendly development that enhances the public realm.*

Access, Circulation, and Parking

- 3-G-1 *Establish the San Pablo Avenue transit hub as a major transit destination, with improved pedestrian and streetscape facilities, safety measures, and visibility.*
- 3-G-2 *Improve the quality, visibility, and safety of transit stops along the San Pablo Avenue corridor.*
- 3-G-3 *With new construction, ensure access to transit is provided for seniors, families with children, and persons with disabilities throughout the Planning Area.*
- 3-G-4 *Provide continuous pedestrian sidewalks and safe bike travel routes throughout the Planning Area and within development projects.*
- 3-G-5 *Improve pedestrian and bicycle amenities throughout the Planning Area to encourage walking and bicycle trips along the corridor.*
- 3-G-6 *Ensure that private development integrates pedestrian and bicycle connections to transit, open space, and key destinations.*

- 3-G-7 *Maximize connectivity in the Planning Area through creation of finer street grid patterns in new development.*
- 3-G-8 *Provide sufficient capacity on the Planning Area roadway network to efficiently and safely serve local traffic needs.*
- 3-G-9 *Support roadway improvement efforts to establish San Pablo Avenue as a Complete Street. Balance the needs of cars with those of pedestrians, bicyclists, and transit.*
- 3-G-10 *Promote redevelopment of higher intensity uses along the San Pablo Avenue corridor by establishing parking requirements that reflect a balanced approach between different transportation modes and providing opportunities for shared parking.*
- 3-G-11 *Avoid excessive supplies of parking that would discourage transit ridership and pedestrian or bicycle trips.*
- 3-G-12 *In areas designated for mixed-use development, locate and design parking structures to accommodate the needs of all uses to maximize shared parking arrangements between the uses to the extent possible.*
- 3-G-13 *Encourage use of Transportation Demand Management strategies to minimize traffic contributions from new and existing development.*
- 3-G-21 *Promote public and privately-run alternative modes of transit, such as shuttles, along the San Pablo Avenue corridor.*

Urban Design and Building Development Standards

- 4-G-1 *Develop the Circle-S site with a vital mix of synergistic retail, eating/drinking establishments, office, and residential uses, and as a citywide and regional destination.*
- 4-G-2 *Ensure that streets and open spaces form the framework for development, with the public realm designed to be accessible from the surroundings, and designed to enhance pedestrian movement.*
- 4-G-3 *Encourage a mix of uses that is compatible with and caters to the needs of the community and region.*
- 4-G-4 *Develop the Mission Plaza sites with ground floor commercial uses designed to capitalize on the student population, and residential uses above.*
- 4-G-5 *Explore public-private partnership to enable both public- and privately-owned portions of the site to be developed cohesively and efficiently.*
- 4-G-6 *Support continued operation of the Towne Center. At such time as the site is expanded or reused, seek development of regional retail and a high-intensity entertainment hub at this prominent site at the corner of San Pablo Avenue and San Pablo Dam Road, with heightened accessibility and walkability throughout the site.*

- 4-G-7 *Allow continued operation of the establishments at the Big Lots/Food Maxx site. Promote intensification of existing uses. At such time when the site is redeveloped, promote regional commercial uses and an active street frontage along San Pablo Avenue, with heightened pedestrian accessibility and parking located in the rear of the block.*
- 4-G-8 *At the Dias Plaza site, promote commercial development along San Pablo Avenue and mixed-use development at the rear of the site.*
- 4-G-9 *Develop a memorable streetscape identity for the San Pablo Avenue corridor as a “boulevard” with consistent streetscape elements throughout its extent in San Pablo, with distinguishing elements at major activity centers and focus areas.*
- 4-G-10 *Foster a walkable, accessible, and safe street environment that connects people to transit, housing, employment, and major destinations in the Planning Area.*
- 4-G-11 *Design the streetscape at the pedestrian scale with wide sidewalks, bike lanes, and amenities for pedestrians and cyclists such as bike racks, comfortable street furnishings, sufficient and attractive lighting, and street trees for shading and aesthetics.*
- 4-G-12 *Improve the visual character and quality of the San Pablo Avenue corridor and highlight gateways onto the corridor.*
- 4-G-13 *Encourage a building-to-street relationship that establishes a pedestrian-oriented environment along San Pablo Avenue and within all mixed-use developments.*
- 4-G-14 *Design building facades at a pedestrian scale to heighten pedestrian comfort and access, and to create an active and inviting public realm.*
- 4-G-15 *Accommodate community members of all ages and ability in design of the public realm, through design elements such as providing minimal level changes and at-grade or ramped entries.*
- 4-G-16 *Ensure that residents, workers, and visitors can easily navigate the San Pablo Avenue corridor and Planning Area with clear and highly visible wayfinding and other signage.*
- 4-G-17 *Design public spaces and streetscapes to maximize visibility and safety for pedestrians.*

Utilities and Public Services

- 5-G-1 *Continue the successful provision, maintenance and operation of infrastructure and public utilities to maintain the quality of life and sustainability of the San Pablo Avenue corridor.*
- 5-G-2 *Maintain a safe and livable environment in the Planning Area by ensuring that building design and site planning adequately address public safety considerations.*

Community Facilities

- 6-G-1 *Provide a diverse range of recreational opportunities within a ten-minute walk of all residents in the Planning Area.*

- 6-G-2 *Connect to local and regional bikeways and trail networks to the greatest extent possible.*
- 6-G-3 *Make new park spaces and recreation facilities sources of community pride and demonstrations of character through design, public art, and community-based activities.*
- 6-G-4 *Promote adequate and accessible school facilities for the Planning Area population.*
- 6-G-5 *Enhance visibility and connectivity to existing and new community facilities within and around the Planning Area.*
- 6-G-6 *Provide a broad range of recreation opportunities and social services in and around the Planning Area, including recreation and community centers, daycare, youth centers, and senior and transitional services.*

Environmental, Health, and Safety

- 8-G-1 *Use development in the San Pablo Avenue corridor to improve local hydrology and water quality.*
- 8-G-2 *Strive for development in the San Pablo Avenue Specific Plan Planning Area that protects and improves the quality of habitat areas, particularly along San Pablo and Wildcat creeks.*
- 8-G-3 *Maintain a healthy noise environment in the San Pablo Avenue Specific Plan Planning Area while accommodating the increased intensities and mix of uses intended to characterize the San Pablo Avenue corridor in the future.*
- 8-G-4 *Ensure that infill and redevelopment in the San Pablo Avenue Specific Plan corridor minimize exposure to hazardous materials and toxic air contaminants.*

2.6 SPECIFIC PLAN IMPLEMENTATION

The proposed Plan provides specific policy guidance for implementation of its initiatives and establishes a basis for coordinated action by the City, adjacent jurisdictions, and regional and State agencies. The proposed Plan's Implementation Program describes, in general terms, the responsibilities for implementation. It also outlines specific implementation actions that will be initiated after adoption. The Implementation Program will be updated as often as deemed necessary to ensure that it reflects the City's implementation and strategic priorities.

Policy and Regulatory Implementation

The San Pablo Avenue Specific Plan was prepared concurrently with the City's General Plan update. As a result, the Specific Plan is consistent with the General Plan and no amendment of the General Plan is necessary. Plans and existing regulations that need to be amended include the City's Zoning Ordinance and Map and the City's Capital Improvement Program (CIP). Specifically, the Zoning Ordinance must establish regulations for new land use districts, density and intensity limits, as well as allowable uses to conform to General Plan policies. It must also establish new development standards to be consistent with the Specific Plan.

Physical Implementation

Areawide Infrastructure

A series of area-wide infrastructure improvements will take place to accommodate residential and mixed use development; make it more accessible to and comfortable for pedestrians; improve vehicle navigability; and provide open space amenities. Streetscape improvements are particularly important to give identity to the area and make it amenable to walking and bicycles. Recommended improvements include the following specific projects:

- Pedestrian streetscape improvements. This includes installing street trees, planters, signage, lighting, gateway features and other pedestrian amenities within the right-of-way;
- Pedestrian traffic improvements such as installing crosswalks with signals and paving and/or striping throughout the Planning Area. Efforts must be focused on Mixed Use Centers and the Entertainment Overlay;
- Roadway improvements to establish San Pablo Avenue as a Complete Street, from Rivers Street to the southern boundary of the Planning Area. This includes coordinating with AC Transit to determine locations for bus bulb-outs;
- Parks and open space improvements such as the creation of a public plaza in Mixed Use Center South;
- Transportation improvements identified in EIR;
- System of trails for pedestrians and cyclists along creeks and landscaped streets; and
- New street network with smaller block sizes to facilitate walking and vehicle access.

Responsible Agencies

Overall responsibility for plan implementation is vested in the City Council, Planning Commission, and Planning Division. The proposed Specific Plan includes an implementation chapter, which lists the actions and responsible parties needed to enact the Plan. These mechanisms will require the involvement of City departments and divisions such as: Planning, Engineering, Redevelopment Agency, Parks and Recreation, and the Police Department. Other public agencies will need to be involved in the implementation of key infrastructure components, including West County Wastewater District, Contra Costa Transportation Authority, AC Transit, and WestCAT.

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3.1 *Land Use*

This section presents the environmental setting pertaining to land use, population growth, and housing in the San Pablo Avenue Specific Plan Planning Area. There are no state-classified agricultural soils of importance within the Planning Area; therefore, agricultural impacts are not addressed in this EIR.

ENVIRONMENTAL SETTING

Physical Setting

City of San Pablo

The City of San Pablo is situated at the western portion of Contra Costa County, inland from the east side of San Pablo Bay. The City can be reached by I-80 and by I-580 across the Richmond-San Rafael Bridge. It is bounded predominantly by the City of Richmond, the unincorporated community of El Sobrante, and other unincorporated areas in Contra Costa County.

Planning Area

The Planning Area is located within the City of San Pablo. It includes land on both sides of the San Pablo Avenue corridor, which runs in a north to south direction in the middle of the city. There are approximately 261 acres of land in the Planning Area. The scale and character of land uses along San Pablo Avenue differ depending on location. Generally, three distinct types can be discerned. Land uses at the southern section of San Pablo Avenue between Church Lane and the southern city limit include regional retail, medical and entertainment uses. Notable destinations here include the Lytton Casino, San Pablo Towne Center, and Doctors Medical Center. Land uses in the mid-section of San Pablo Avenue between Church Lane and Road 20 are generally residential in nature. Public land uses such as the City Hall and the police and fire departments can also be found here. Lastly, land uses at the northern section of San Pablo Avenue between Road 20 and the northern city limit are typified by locally-oriented neighborhood retail and services.

Figure 3.1-1 shows the existing land uses and **Table 3.1-1** lists the land uses in the Planning Area. As these figures demonstrate, 25 percent of all land in the Planning Area is currently residential. Commercial uses, which include commercial, neighborhood, and service commercial establishments, comprise 30 percent of the total land. Institutional and public uses represent 9 percent of land area and serve to attract visitors from San Pablo as well as around the region. Park land is scarce in San Pablo due to the urbanized nature of the city. In total, 5.6 acres of parks can be found in the Planning Area, not including school fields. Vacant land comprises 19.7 acres or 8 percent of the total land.

TABLE 3.1-1 EXISTING LAND USES IN THE SPECIFIC PLAN AREA

LAND USE	ACRES	PERCENT OF TOTAL
Low Density Residential	20.1	8%
Medium Density Residential	23.0	9%
High Density Residential	20.0	8%
Commercial	64.0	25%
Service Commercial	10.9	4%
Neighborhood Commercial	1.2	<1%
Office	5.0	2%
Medical Facilities	20.3	8%
Light Industrial	0.2	<1%
Warehouse	1.1	<1%
Public/Institutional	22.9	9%
Parks/Recreation	5.6	2%
Parking	0.6	<1%
Vacant	19.7	8%
Roads or Other Rights-of-Way	46.2	18%
Total	261.0	100%

Source: City of San Pablo, 2010; Dyett & Bhatia, 2010.

The area immediately surrounding the Specific Plan Planning Area is characterized by commercial/retail and high density residential uses to the south (in the City of Richmond), low density residential to the west, Contra Costa College and St Joseph Cemetery to the east, and neighborhood retail and regional retail to the north. Nearby land uses include Hilltop Mall and the Hilltop residential area and the North Richmond Industrial District. There are several new development projects underway in the Planning Area, including Abella Paseo townhomes, College Center Shops, Walgreens, and a new West County Health Center (still in the proposal stage).

Population and Housing

Existing demographic estimates for the Planning Area and the City of San Pablo are shown in **Table 3.1-2**. According to these estimates, there are 10,520 housing units, 32,200 people, and about 5,900 jobs in whole City of San Pablo in 2010.¹ The Specific Plan Planning Area contains approximately 1,360 housing units or about 13 percent of the city total. The population is estimated to be 4,000 persons which brings the average population density to about 15 persons per gross acre in the Planning Area. When the Specific Plan is fully implemented, the Planning Area will contain about 18 percent of the City's total housing units.

¹ Association of Bay Area Governments *Projections 2009*; City of San Pablo, 2010.

**Figure 3.1-1
Existing Land Use**

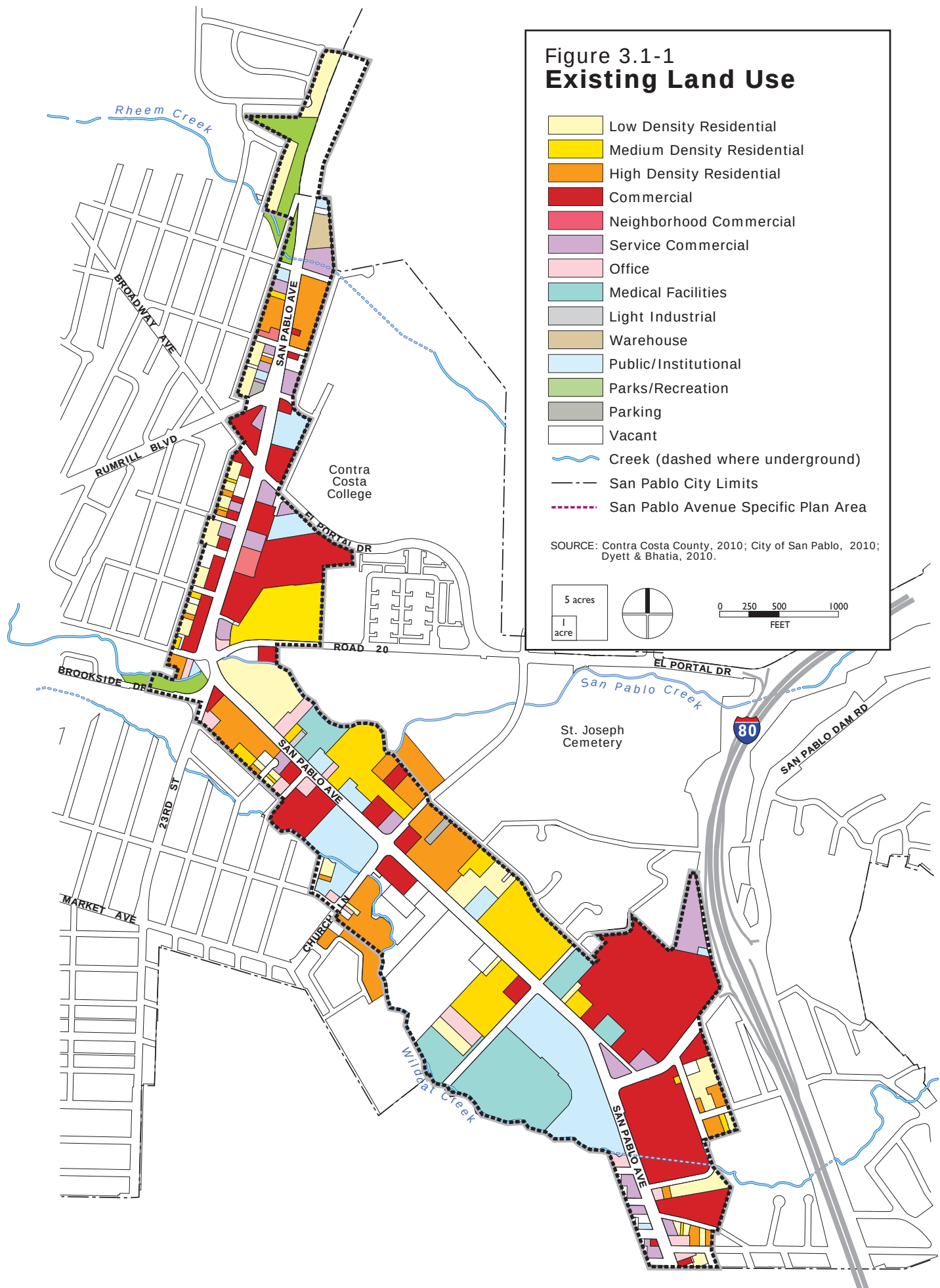


TABLE 3.1-2 EXISTING DEMOGRAPHIC DATA (2010)

DEMOGRAPHIC	PLANNING AREA	CITY OF SAN PABLO
Population		
Persons	4,000	32,200
Households	1,290	9,990
Housing Units	1,360	10,520
Jobs	4,090	5,900

Source: Association of Bay Area Governments Projections 2009; City of San Pablo, 2010.

ABAG's growth projections for the City of San Pablo are shown in **Table 3.1-3**. The demographic information indicate that San Pablo's population grew approximately 3.9 percent between 2000 and 2005, while the number of jobs declined by 0.8 percent. Between 2010 and 2030, it is anticipated that population and households would grow at a steady pace to reach 36,700 persons and 10,900 households in 2030. Meanwhile, the number of jobs is expected to grow from 5,900 in 2010 to 7,940 in 2030. Based on these projections, the ratio of jobs per household will increase from 0.61 in 2010 to 0.73 in 2030.

TABLE 3.1-3 ABAG PROJECTIONS FOR THE CITY OF SAN PABLO

YEAR	2005	2010	2015	2020	2025	2030
Population	31,000	32,200	32,800	34,100	35,400	36,700
Percent Growth	-	3.9%	1.9%	4.0%	3.8%	3.7%
Households	9,340	9,680	9,860	10,210	10,570	10,900
Percent Growth	-	3.6%	1.9%	3.5%	3.5%	3.1%
Jobs	5,950	5,900	5,970	6,040	6,900	7,940
Percent Growth	-	-0.8%	1.2%	1.2%	14.2%	15.1%

Source: Association of Bay Area Governments Projections 2009.

Regulatory Setting

The regulatory setting includes federal and State agencies and laws, local regulatory bodies, and local control mechanisms guiding land use decisions.

Federal Regulations

Department of Housing and Community Development

The State Department of Housing and Community Development (HCD) is responsible for determining the regional housing need for all jurisdictions in California and ensuring the availability of affordable housing for all income groups.

California Community Redevelopment Law

California's Community Redevelopment Act (CRA) was enacted in 1945 to address blight and decay in California cities. California Health and Safety Code sections 33000-34160 contain the Community Redevelopment Law. Redevelopment is a process authorized under California law that enables local government entities to identify deteriorated and blighted areas in their jurisdictions in need of revitalization. "Redevelopment" means the planning, development, replanning, redesign, clearance,

reconstruction, or rehabilitation, or any combination of these, of all or part of a survey area, and the provision of those residential, commercial, industrial, public, or other structures or spaces as may be appropriate or necessary in the interest of the general welfare, including recreational and other facilities incidental or appurtenant to them. In addition, redevelopment agencies are required to deposit 20 percent of the property tax revenues generated from their activities into a special fund called a “Low- and Moderate-Income Housing Fund.” These funds can only be used for the purpose of increasing, improving, and preserving the community’s supply of affordable housing for very low-, low- or moderate-income households.

Regional/Local Regulations

Association of Bay Area Governments (ABAG)

Through its role as the Bay Area’s council of governments, ABAG has been designated by the State and federal governments as the official comprehensive planning agency for the Bay Area. ABAG reviews projects of regional significance for consistency with regional plans and is also responsible for preparation of the Regional Housing Needs Assessment (RHNA), pursuant to California Government Code Section 65584(a). ABAG’s locally adopted Regional Housing Needs Allocation and the San Francisco Bay Area Housing Needs Plan, provide a policy guide for planning the region’s housing, economic development, environmental quality, transportation, recreation, and health and safety.

Contra Costa County Local Agency Formation Commission

Under State law, each county must have a local agency formation commission (LAFCO), which is the agency that has the responsibility to create orderly local government boundaries, with the goals of encouraging the orderly formation of local governmental agencies and the preservation of open space lands, and discouraging urban sprawl. While the commission in Contra Costa County has no direct land use power, its actions determine which local government will be responsible for planning new areas. Additionally, the commission addresses a wide range of boundary actions, including the creation of a county-wide sphere of influence, adjustments to boundaries of special districts, annexations, and incorporations of cities.

Local Control Mechanisms

San Pablo General Plan (1996)

The City’s current General Plan was adopted in 1996. The Plan includes four elements: The Land Use, Physical Design and Economic Development Element, the Public Safety and Related Service Element, the Circulation and Public Facilities and Services Element, and the Environmental Resources Management Element. The Plan provides a land use framework for the pattern of development within city limits. The primary land use designation under the current General Plan is low-density residential intended for single-family homes. Higher density residential uses are primarily located along San Pablo Avenue between Church Lane and 23rd Street. The principal employment generating use is the commercial land use designation, located along 23rd Street, San Pablo Avenue, and at major road junctions.

Proposed San Pablo General Plan

Land use in the Planning Area will be regulated by the proposed San Pablo General Plan, which is expected to be adopted by early 2011. Because this Specific Plan is being updated in tandem with the City’s General Plan, it is consistent with policies and land use designations in the 2030 General Plan.

Elements in the 2030 General Plan include Land Use and Physical Design, Economic Development, Growth Management, Circulation, Parks, Schools, Community Facilities & Utilities, Open Space & Conservation, Health, Safety & Noise, and Housing.

San Pablo Growth Management Element

The City's last Growth Management Element was adopted in 1992, pursuant to the Contra Costa Transportation and Growth Management Program (Measure C). The Element establishes policies and standards for traffic Levels of Service (LOS), and performance standards for fire, police, parks, sanitary facilities, water and flood control in order to ensure generally that public facilities are provided consistent with adopted standards. The Element includes comprehensive policies that require new development contribute to capital improvement programs and mitigate their development impacts. The intent of the Element is to ensure growth takes place in a manner that will protect the health, safety, and welfare of both existing and future residents.

The 23rd Street Specific Plan

The 23rd Street Specific Plan was adopted in 2008 to provide for more focused policy guidance and development standards tailored to the 23rd Street corridor area. The Specific Plan calls for a pedestrian friendly shopping environment along 23rd Street, with businesses fronting on the sidewalk, transparent storefronts and pedestrian scaled streetscape elements. It also calls for non-commercial uses above the ground floor of buildings, including residential units. The objectives are to reinforce the unique desirable characteristics of the area; provide development standards to help revitalize the commercial corridor; and prioritize reinvestment in public infrastructure.

San Pablo Zoning Ordinance

The San Pablo Zoning Ordinance can be found under Title 17 of the Municipal Code. The Zoning Ordinance was originally adopted in 1958. Since then, it has been amended many times (most recently in 2002), to address changes to San Pablo's growth and planning legislation. The Zoning Code provides development standards, identifies allowable land uses, and specifies other regulations related to development within the city.

Zoning designations found in the Planning Area include R-1 (Single-Family Residential District), R-2 (Two-Family Residential District), R-3 (Multifamily Residential District), R-4 (High Density Multifamily Residential District), C-1 (Light Commercial), I (Institutional), and OS (Open Space). Primary land uses in the I district include parks, government administrative offices, Contra Costa College, Doctors Medical Center, convalescent homes, fire stations, post offices, and various types of state and federal facilities. Primary land uses in the OS district include non-recreational open space and lands owned by a public agency.

The 2030 General Plan calls for the creation of several new zoning districts. Regulations for these districts will be established as part of the comprehensive zoning update being undertaken after the General Plan is adopted. The use regulations and development standards for existing zoning districts will need to be amended to conform to Plan policies.

Plans from Surrounding Jurisdictions and Other Agencies

Contra Costa County General Plan

Last amended in 2005, the Contra Costa County General Plan guides development in the unincorporated areas of the county. The communities of North Richmond and El Sobrante are within its jurisdiction. According to the Plan, hundreds of acres of vacant industrial land in the North Richmond Area will be redeveloped in the near future, now that “the completion of a major flood control and expressway project has made the area more attractive to investors.”

For the El Sobrante area, the Contra Costa General Plan states that the “overall goal of the area is to retain and reinforce the semi-rural and suburban character of the community with its strong emphasis on single-family residences”. The Plan calls for residential development to be directed primarily to areas where infilling of previously “passed over” property can occur, as well as to discourage strip commercial development in the community.

Measure J – Growth Management Program (GMP)

The Growth Management Program (GMP) is an important component of Measure J, and builds upon the GMP for Measure C. It is intended to ensure that new developments are served with adequate infrastructure and services. Measure J also requires cooperative, multi-jurisdictional planning while maintaining local autonomy over land use decisions.

Local jurisdictions must comply with the requirements of the GMP to receive funds from the Local Street Maintenance and Improvement program and to be eligible for Transportation for Livable Communities (TLC) program. The GMP requires a local jurisdiction to:

- Adopt a Growth Management Element, as part of its General Plan that outlines the jurisdiction’s goals and policies for managing growth and requirements for achieving those goals. The Growth Management Element must show how the jurisdiction will comply with the other requirements;
- Adopt, or maintain in place, a development mitigation program that ensures that new growth pays its fair share of the costs associated with that growth;
- Participate in cooperative planning with other jurisdictions and agencies, the RTPCs and the CCTA to create a balanced, safe and efficient transportation system and to manage the impacts of growth in Contra Costa;
- Prepare and maintain a five-year capital improvement program that outlines the capital projects needed to implement the goals and policies of the jurisdiction’s General Plan for at least the following five-year period to meet or maintain traffic service and performance standards as well as implement the goals and policies of the jurisdiction’s General Plan;
- Adopt a transportation system management ordinance or resolution that complies with the direction of the Authority;
- Demonstrate reasonable progress in providing housing opportunities for all income levels as part of a report on the implementation of the actions outlined in its adopted Housing Element, and incorporate standards and policies into the review of new developments that support transit, bicycle and pedestrian access; and

- Continually comply with either a new “Countywide mutually agreed upon voter approved ULL” or the “local jurisdiction’s voter approved ULL.”

The City of San Pablo is in the process of adopting a Growth Management Element as part of its 2030 General Plan update. The Growth Management Element will be consistent with requirements under Measure J.

Measure L – Urban Limit Line

In 2006, the County passed Measure L with 63 percent of the vote to extend the life of the present Urban Limit Line (ULL) to 2026. Consistent with Measure J, the ULL was intended to establish the limit of urban development and preserve the 65/35 land preservation standard that limits urban development to no more than 35 percent of the County. In December 2006, the San Pablo City Council adopted the County ULL as its own. Adoption of the ULL allows San Pablo to obtain its share of Measure J funds that is earmarked for local transportation maintenance and improvements.

IMPACT ANALYSIS

Significance Criteria

Implementation of the proposed Project would have a potentially significant adverse impact if it would:

Criterion 1: Conflict with applicable area land use plans, including the General Plan and specific plans.

Criterion 2: Result in community residential or business disruption or displacement of substantial numbers of existing population and housing.

Criterion 3: Result in permanent alterations to the characteristics and qualities of an existing neighborhood or community by separating residences from community facilities and services, restricting access to commercial or residential areas, or eliminating community amenities.

Methodology and Assumptions

This analysis considered 2030 General Plan policies and goals, existing and proposed land use conditions within San Pablo, and applicable regulations and guidelines. It compared the Specific Plan proposed land uses to existing land use conditions to determine whether implementation of the project will trigger any impacts. Farmland resources were checked on the California Department of Conservation to determine if any farmland would be affected.

The impact analysis used the following assumptions to estimate the amount of residential and commercial development that may be developed during the planning period: 100 percent buildout of all opportunity sites located within focus areas and 50 percent buildout of all opportunity sites located outside of focus areas. The development projections are based on the proposed Specific Plan’s assumed density and intensity of each land use classification.

Impact Summary

The proposed San Pablo Avenue Specific Plan will not divide an established community. Rather, by providing better connectivity within the city, the proposed Project provides more linkages within and between existing neighborhoods.

Redevelopment consistent with permitted land uses and densities under the Specific Plan may result in the temporary removal of housing in some areas. However, the proposed Plan supports an overall increase the number of housing units in the San Pablo Avenue corridor, and works in conjunction with the recently adopted Housing Element update to provide for more affordable housing. Those who may be displaced are expected to be able to find replacement accommodation in the same area, at a minimum under Housing Element Program H-2.2.2 which requires one-to-one replacement of demolished affordable units.

No farmland would be affected or lost as there is none in the Planning Area.

The proposed Specific Plan is consistent with the proposed San Pablo General Plan which is expected to be adopted shortly before or concurrent with the Specific Plan. As such, no amendment of the General Plan is necessary. However, other adopted plans, programs, the zoning code, and other implementing tools will need to be amended to conform to the Specific Plan.

The proposed Specific Plan does not contain policies or programs that conflict with the Contra Costa County General Plan or the Richmond General Plan.

Impacts and Mitigation Measures

Impact

3.1-1 Implementation of the proposed San Pablo Avenue Specific Plan would lead to increased population and jobs through the development of new housing and commercial uses. (*Less than Significant*)

The proposed San Pablo Avenue Specific Plan is related to the 2030 General Plan in a number of ways: Not only are they being updated at the same time, land use designations in both plans are consistent with each other. Additionally, the Specific Plan Planning Area forms part of the General Plan Planning Area. This means that growth projections (in terms of housing and jobs) under the Specific Plan represent a subset of the General Plan. In the analysis of this impact, the 2030 General Plan housing and job projections are considered since they can be more easily compared with ABAG projection numbers.

The 2030 General Plan calls for the construction of new residential, commercial, and mixed use development in the San Pablo Avenue corridor which will result in an increase in population and jobs from existing levels. However, implementation of the plan does not contribute to a substantial unanticipated increase beyond those currently projected by ABAG as indicated in **Table 3.1-4**.

TABLE 3.1-4 CITY OF SAN PABLO BUILDOUT PROJECTIONS 2030

	ABAG PROJECTIONS	2030 GENERAL PLAN PROJECTIONS	% DIFFERENCE
Population	36,700	34,950	-4.8%
Households	10,900	10,930	0.3%
Jobs	7,940	8,520	7.3%

Source: ABAG, 2009; Dyett & Bhatia, 2010.

In terms of population, the amount projected by the General Plan is only 4.8 percent less than those projected by ABAG. Similarly, the amount of jobs projected in the General Plan is just 7.3 percent greater than those projected by ABAG. Although the implementation of the General Plan and the proposed Specific Plan will lead to increased population and jobs from existing levels, they do not represent a significant departure from growth anticipated by ABAG. Therefore, the impact is less than significant.

Mitigation Measures

None required.

3.2 *Transportation*

This EIR section analyzes the potential for adverse impacts of the proposed San Pablo Avenue Specific Plan on the circulation system. Because traffic impacts are regional and cumulative in nature, this analysis is based largely on the citywide technical data gathered in preparation of the Transportation Element of the San Pablo 2030 General Plan, and is augmented to provide additional detail for the Specific Plan analysis. Additional multi-modal level of service analysis was performed to assess the effects on vehicles, bicycles, pedestrians, and transit within the San Pablo Avenue Specific Plan Planning Area.

ENVIRONMENTAL SETTING

This section provides a description of existing conditions in the Planning Area, including a description of the existing street and highway system, operating conditions at selected freeway segments and intersections, pedestrian and bicycle facilities and transit service.

Physical Setting

Existing Transportation System

Roadways

San Pablo Avenue along with Interstate 80 (I-80) provides regional roadway access to and from the Specific Plan corridor. I-80 runs from the San Francisco-Oakland Bay Bridge through the City of San Pablo to the Carquinez Bridge to Sacramento and farther east. Access to San Pablo from I-80 is provided at the El Portal Drive and San Pablo Dam Road interchanges. According to the 2009 West County Action Plan, I-80 continues “to experience a severe level of congestion throughout the day and an extreme amount of congestion during the morning (6am – 9am) and evening (3pm – 7pm) peak periods.”¹ Consequently, San Pablo Avenue is used as an alternate route for regional traffic and has been designated as a Route of Regional Significance by the West Contra Costa Transportation Advisory Committee (WCCTAC) in the West Contra Costa County Action Plan Update. Routes of Regional Significance are roadways that provide regional connections, facilitate access to one or more regional highways or transit facilities, and carry high volume of through traffic.

San Pablo Avenue extends for roughly 19 miles and runs parallel with I-80 between the unincorporated community of Rodeo in Contra Costa County to the north and downtown Oakland in Alameda County to the south through the East Bay cities of Hercules, Pinole, San Pablo, Richmond, El Cerrito, Albany

¹ 2009 West County Action Plan Update, p. 6.

and Berkeley. It is designated as State Route 123 between its junction with I-80 in Richmond and I-580 in Oakland. Through the City of San Pablo, San Pablo Avenue runs roughly in a north-south direction between the northern city limit and Road 20, where it turns southeasterly. The posted speed limit is 45 mph north of River Street and 35 mph in the rest of the city. The two-mile long arterial is divided with a center median with left-turn pockets. It is characterized by many intersecting streets forming T-intersections with minor roadways.

According to 2007 data, average daily traffic volumes on San Pablo Avenue range from 14,600 to 47,500, as shown in **Table 3.2-1**. San Pablo Avenue and surrounding roadway network are shown in **Figure 3.2-1**.

TABLE 3.2-1 AVERAGE DAILY TRAFFIC VOLUMES FOR SELECTED LOCATIONS, 2007

NO.	LOCATION	ADT
1	San Pablo Ave from River St to Lake St	27,800
2	San Pablo Ave from Stone St to International Market Pl	20,500
3	San Pablo Ave from 23rd St to Campo Verde Circle	14,600
4	San Pablo Ave from Church Ln to Pinewood Terrace	47,500

Source: City of San Pablo, 2007.

Intersections

Thirteen signalized intersections, listed in **Table 3.2-2**, were selected for evaluation. Traffic counts collected at these locations between February 2004 and August 2006 were used as the basis for analysis. These counts were conducted prior to the economic downturn that started in 2008, but are considered representative of, or even higher volumes than, current 2010 conditions.

TABLE 3.2-2 STUDY INTERSECTIONS

NO.	LOCATION	COUNT MONTH/YEAR
1	San Pablo Avenue / Robert Miller Drive	April 2005
2	San Pablo Avenue / River Street	February 2004
3	San Pablo Avenue / Rumrill Boulevard	October 2005
4	San Pablo Avenue / El Portal Drive-Broadway Avenue	February 2004
5	San Pablo Avenue / Road 20	February 2004
6	San Pablo Avenue / Church Lane	August 2006
7	San Pablo Avenue / Vale Road	October 2005
8	San Pablo Avenue / San Pablo Dam Road	December 2005
9	San Pablo Avenue / Rheem Avenue	October 2005
10	I-80 WB off-ramp / El Portal Drive	March 2004
11	I-80 EB ramps / El Portal Drive	March 2004
12	San Pablo Dam Road / Amador Street-I-80 EB on-ramp	October 2005
13	I-80 WB off-ramp / San Pablo Dam Road	October 2005

Source: Dowling Associates, 2010.

Figure 3.2-1
Existing Roadway System

State Highway

Parkway

Major Arterial

Collector

Local

 Major Transit Hub

 Creek (dashed where underground)

 San Pablo City Limits

 San Pablo Avenue Specific Plan Area

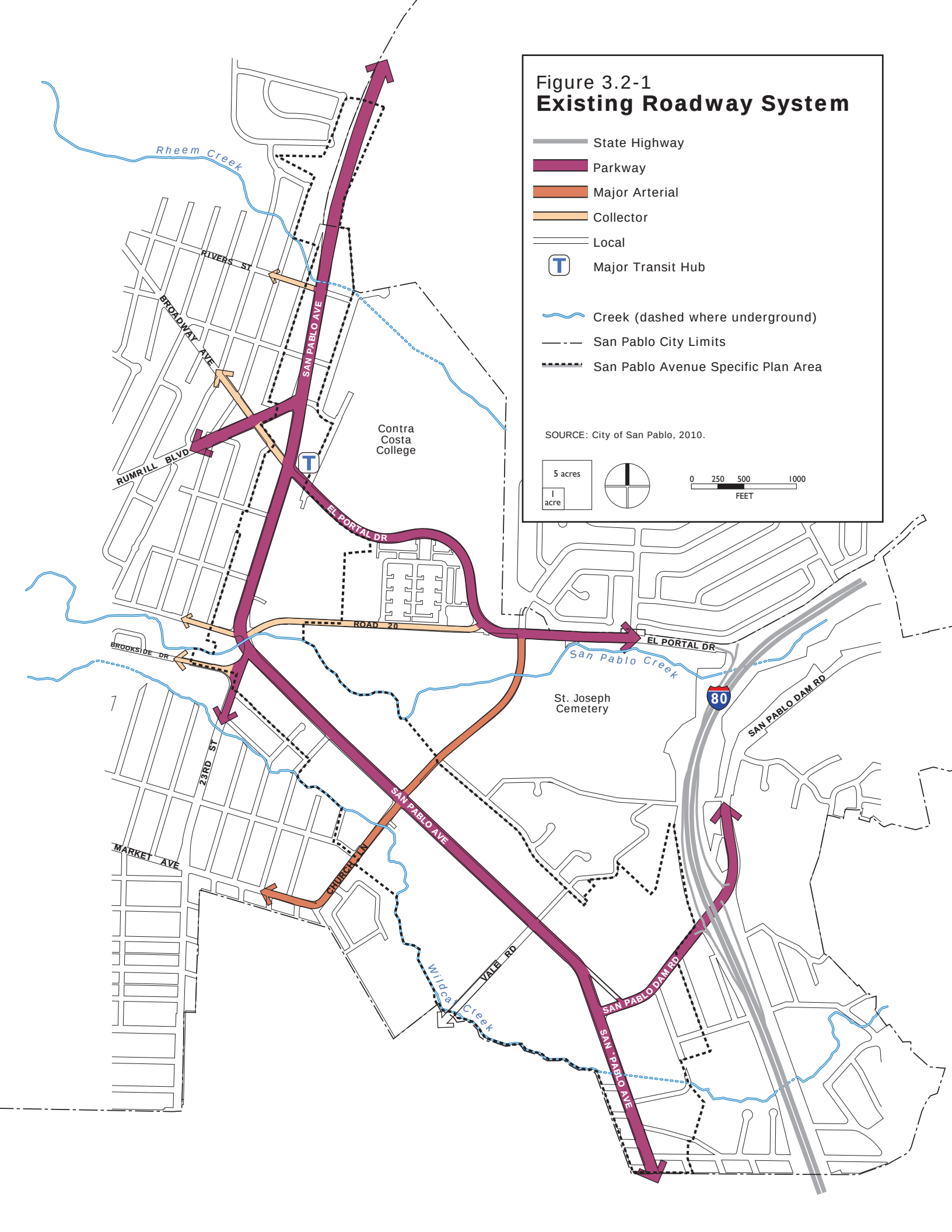
SOURCE: City of San Pablo, 2010.

5 acres

1 acre



0 250 500 1000
FEET



Intersection Level of Service

Level of service (LOS) is a qualitative assessment of the motorists and passengers' perceptions of traffic conditions. It is generally described in terms of travel time and speed, freedom to maneuver, traffic interruptions, comfort and convenience. LOS applies quantifiable traffic measures such as average speed, intersection delays, and volume-to-capacity ratios to approximate driver satisfaction. These measures differ by roadway type because the user's perceptions and expectations vary by roadway type.

The Contra Costa Transportation Authority Level of Service (CCTALOS) methodology was used to calculate the level of service at intersections. The CCTALOS methodology applies a modified Circular 212 analysis method. The signalized intersection level of service was determined based on the critical volume-to-capacity ratio (V/C) and assigned a level of service grade based on the definitions and ranges shown in **Table 3.2-3**.

TABLE 3.2-3 DEFINITION OF LEVEL OF SERVICE FOR SIGNALIZED INTERSECTIONS

LEVEL OF SERVICE	EXPECTED DELAY	RANGE OF VOLUME TO CAPACITY (V/C) RATIOS
A	Little or no delay	≤0.60
B	Short traffic delays	0.61 to 0.70
C	Average traffic delays	0.71 to 0.80
D	Long traffic delays	0.81 to 0.90
E	Very long traffic delays	0.91 to 1.00
F	Extreme delays; potentially affecting other traffic movements in the intersections	> 1.00

Source: Contra Costa Transportation Authority (CCTA), Technical Procedures Update, July 2006.

Intersection Operations

Peak hour intersection operations were assessed and the results are presented in **Table 3.2-4** and **Figure 3.2-2**. All study intersections operate at LOS D or better during the AM and PM peak hours.

TABLE 3.2-4 INTERSECTION EXISTING CONDITIONS LEVEL OF SERVICE SUMMARY

NO.	LOCATION	TRAFFIC CONTROL	PEAK HOUR	EXISTING ¹	
				LOS ²	V/C ³
1	San Pablo Ave/Robert Miller Dr	Signal	AM	A	0.32
			PM	A	0.47
2	San Pablo Ave/Rivers St	Signal	AM	A	0.52
			PM	A	0.58
3	San Pablo Ave/Rumrill Blvd	Signal	AM	A	0.44
			PM	B	0.63
4	San Pablo Ave/El Portal Dr-Broadway Ave	Signal	AM	A	0.54
			PM	A	0.58
5	San Pablo Ave/Rd 20	Signal	AM	A	0.54
			PM	B	0.65
6	San Pablo Ave/Church Ln	Signal	AM	C	0.76
			PM	A	0.58
7	San Pablo Ave/Vale Rd	Signal	AM	A	0.45
			PM	A	0.43
8	San Pablo Ave/San Pablo Dam Rd	Signal	AM	A	0.49
			PM	B	0.63
9	San Pablo Ave/Rheem Ave	Signal	AM	A	0.46
			PM	A	0.40
10	I-80 WB off-ramp/El Portal Dr	Signal	AM	C	0.77
			PM	C	0.79
11	I-80 EB ramp/El Portal Dr	Signal	AM	C	0.73
			PM	D	0.83
12	San Pablo Dam Rd/Amador St/I-80 EB on-ramp	Signal	AM	B	0.63
			PM	B	0.60
13	I-80 WB off-ramp/San Pablo Dam Rd	Signal	AM	C	0.75
			PM	B	0.62

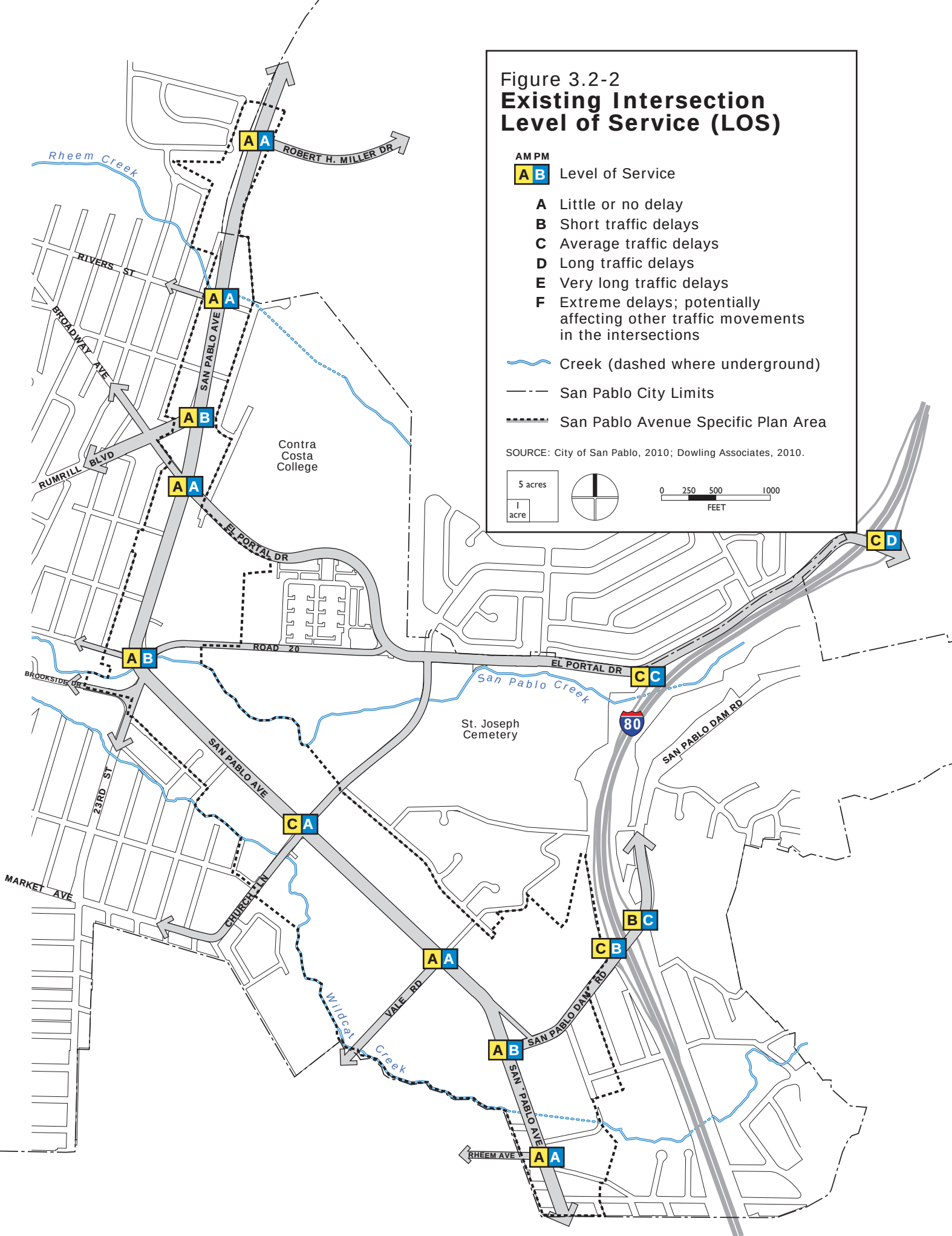
¹ Existing intersection traffic volumes were collected between February 2004 and August 2006

² LOS - Level of service - calculated using CCTALOS methodology and based on volume-to-capacity (v/c) ratio.

³ V/C - critical volume-to-capacity ratio

Source: Dowling Associates, January 2010.

Figure 3.2-2
**Existing Intersection
 Level of Service (LOS)**



Transit Services

Regional and local bus services in the Planning Area are provided by the Alameda-Contra Costa Transit District (AC Transit) and Western Contra Costa County Transit (WestCAT). Heavy and commuter rail services are provided by the Bay Area Rapid Transit (BART) and Amtrak via the Richmond station about 1.5 miles south of San Pablo. Bus routes are illustrated on **Figure 3.2-3**.

AC Transit

AC Transit serves 13 cities and adjacent unincorporated areas in Alameda and Contra Costa counties from Richmond/Pinole in the north, to Fremont in the south, to Castro Valley in the east, and west into San Francisco. It provides fixed-route bus service on weekdays, weekends, and holidays, linking San Pablo riders to major retail, institutional, and governmental activity centers located within the service area and providing connection services to other transit services in the region. A major bus terminal is established in the campus of Contra Costa College, near the Student Association (SA) Building and the Vocational (VA) Building. This stop is a “Timed Transfer Stop” which provides synchronized bus-to-bus transfers.

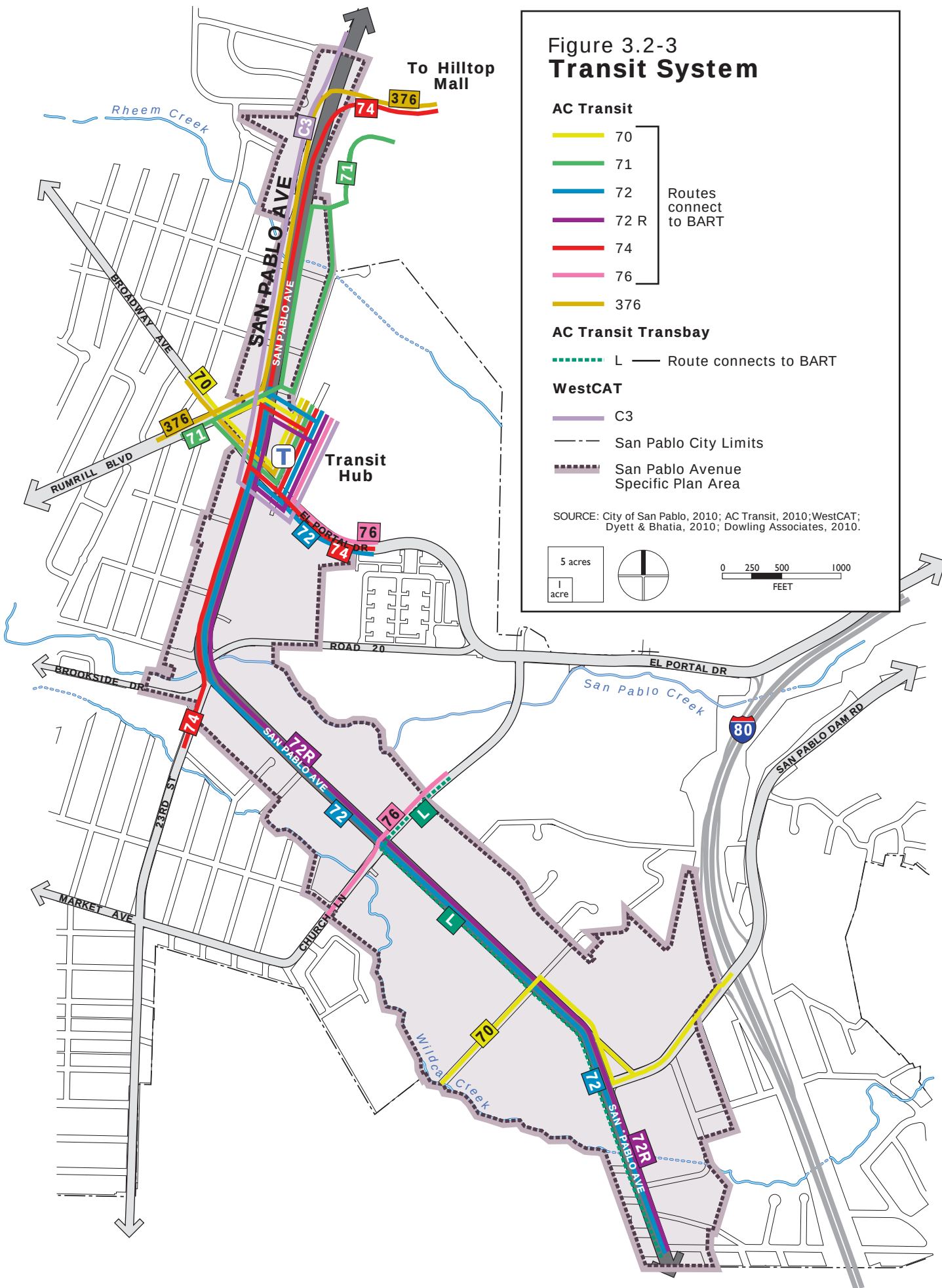
All routes serving the city of San Pablo originate, pass through or cross over San Pablo Avenue in the study area²:

- **Route 70:** A daily regional transit route going through San Pablo, North Richmond, El Sobrante, and Richmond.
- **Route 71:** A daily regional transit route serving the cities of San Pablo, Richmond, and El Cerrito.
- **Route 72/72R:** A daily regional transit route connecting the cities of San Pablo, Richmond, El Cerrito, Albany, Berkeley, Emeryville, and Oakland. A “Rapid” version of the bus is denoted by 72R.
- **Route 74:** A daily regional transit route serving the cities of San Pablo and Richmond. This bus has route variations that also reach the Orinda BART station.
- **Route 76:** A daily regional transit route going through San Pablo, Richmond, and stopping at El Cerrito.
- **Route 376:** A daily regional transit route going through San Pablo, Richmond, and stopping at El Cerrito.
- **Route L:** A weekday only transbay transit route operating between the East Bay and San Francisco serving the cities of San Pablo, Richmond, El Cerrito, and Albany.

Numerous bus stops are found along San Pablo Avenue at roughly one-fifth mile intervals. However, some are as close as one-tenth of a mile apart; while others are as far as one-third of a mile apart. Almost half of the stops are equipped with bus shelters, primarily those along the southern portion of the corridor, while benches are provided at a few others.

² Compiled from AC Transit website on November 9, 2010.

Figure 3.2-3
Transit System



WestCAT

WestCAT primarily serves the cities of Pinole and Hercules but one of its service routes (C3) extends south to the Contra Costa College Timed Transfer terminus. This weekday-only service operates along San Pablo Avenue.

BART/Amtrak

Bay Area Rapid Transit (BART) provides service to San Francisco as well as Contra Costa, Alameda, and San Mateo counties. The closest BART stations to San Pablo residents are the Richmond and El Cerrito Del Norte stations. BART serves these stations in 15- to 20-minute intervals between 4:00 a.m. and midnight Monday through Friday; 6:00 a.m. to midnight on Saturdays; and 8:00 a.m. to midnight on Sundays and major holidays. All AC Transit bus routes described above connect to one of these BART stations.

The Richmond BART station is also the connecting point for two Amtrak routes. The Capitol Corridor, which serves Sacramento and Auburn to the east and Oakland and San Jose to the south, operates sixteen eastbound and sixteen westbound trains on weekdays and eleven trains per direction on weekends. The San Joaquins, which serves the Central Valley corridor of Stockton, Fresno and Bakersfield, operates four trains per direction through the Richmond station on a daily basis.

Pedestrian Facilities

The mix of land uses and flat topography attract bicyclists and pedestrians to San Pablo Avenue. During traffic observation field trips conducted on several occasions from 2007 to 2009, pedestrians were seen not just around key commercial nodes but along the entire corridor. Foot traffic was heaviest near the San Pablo Dam Road and Church Lane intersections. Several incidents of jaywalking were observed during one mid-afternoon period. Bicyclists, though fewer in number, were also observed on San Pablo Avenue.

The provision of pedestrian amenities, such as sidewalks, curb ramps and crosswalks were reviewed. Sidewalks are typically provided along San Pablo Avenue. The only exception is along the northern portion of the corridor north of Rivers Street, where no sidewalk is provided. Although there are few uses fronting this stretch of San Pablo Avenue, it provides access to Community Alliance Church and to multi-family residential developments on Lancaster Drive and Aberdeen Way. Pedestrians were seen walking along and crossing this segment of roadway. The planned San Pablo Avenue Sidewalk Construction Project (Project No. PW 331) would install sidewalks on the east side of San Pablo Avenue between Rivers Street and Lancaster Drive. This project is expected to be completed by 2014.

Accessible curb ramps are generally provided along the corridor; however, detectable warnings compliant with the Americans with Disabilities Act (ADA) are missing at most of the ramps. This is consistent with the City's 2009 ADA Transition Plan Update, which indicated that only two percent of the 997 locations surveyed throughout the city have curb ramps compliant with ADA guidelines.

There are twelve signalized intersections along the two-mile long corridor within the Planning Area between Robert Miller Drive in the north and Rheem Avenue in the south. They provide protected crossing locations for pedestrians across the arterial roadway. The distance between signalized intersections ranges from one-tenth to one-third of a mile with an average distance of 0.175 mile or 924 feet. Marked crosswalks are provided on at least one leg of the signalized intersection except for Robert Miller Drive where no marked crosswalk is found. Only three of the intersections have marked crosswalks

on all legs: Broadway Avenue/El Portal Drive, Church Lane, and Vale Road. The crosswalks at Church Lane have brick inlay and are thus more visible to motorists. On the legs that are not marked, there is generally no explicit crossing prohibition. One exception is the north leg of the San Pablo Dam Road intersection where a no crossing sign is posted. However, a pedestrian was observed crossing this leg.

Between signalized locations are intersections with stop-signs on the minor street approach. Almost all such intersections are T-intersections. While pedestrians can legally cross San Pablo Avenue at these intersections, no marked crosswalk is provided. The center median also does not provide a refuge for pedestrians crossing the four-lane roadway particularly where it is narrowed to provide left-turn pockets for vehicles. At Stone Street, Tulare Avenue, and Kirk Lane where center islands were constructed to prohibit left-turn movements from the minor streets, it is even more hazardous for pedestrians to cross. For these reasons, there is little incentive to cross San Pablo Avenue at the nearest intersection; rather, pedestrians will cross at midblock locations or wherever is most convenient for them. Midblock crossing can be hazardous because motorists do not anticipate pedestrians and may not stop for them. A high visibility, uncontrolled, marked crosswalk is provided midblock between Van Ness Street and Church Lane serving City Hall and San Pablo Police Department.

Bicycle Facilities

Compared to pedestrians, fewer bicyclists were seen on San Pablo Avenue. Most of the observed bicyclists seem to use their bicycles for utilitarian purposes as opposed to recreational purposes. San Pablo currently has a limited number of disconnected bicycle facilities as illustrated in **Figure 3.2-4**.

Bicycle facilities are defined as the following three classes according to Chapter 1000 of the Caltrans Highway Design Manual:

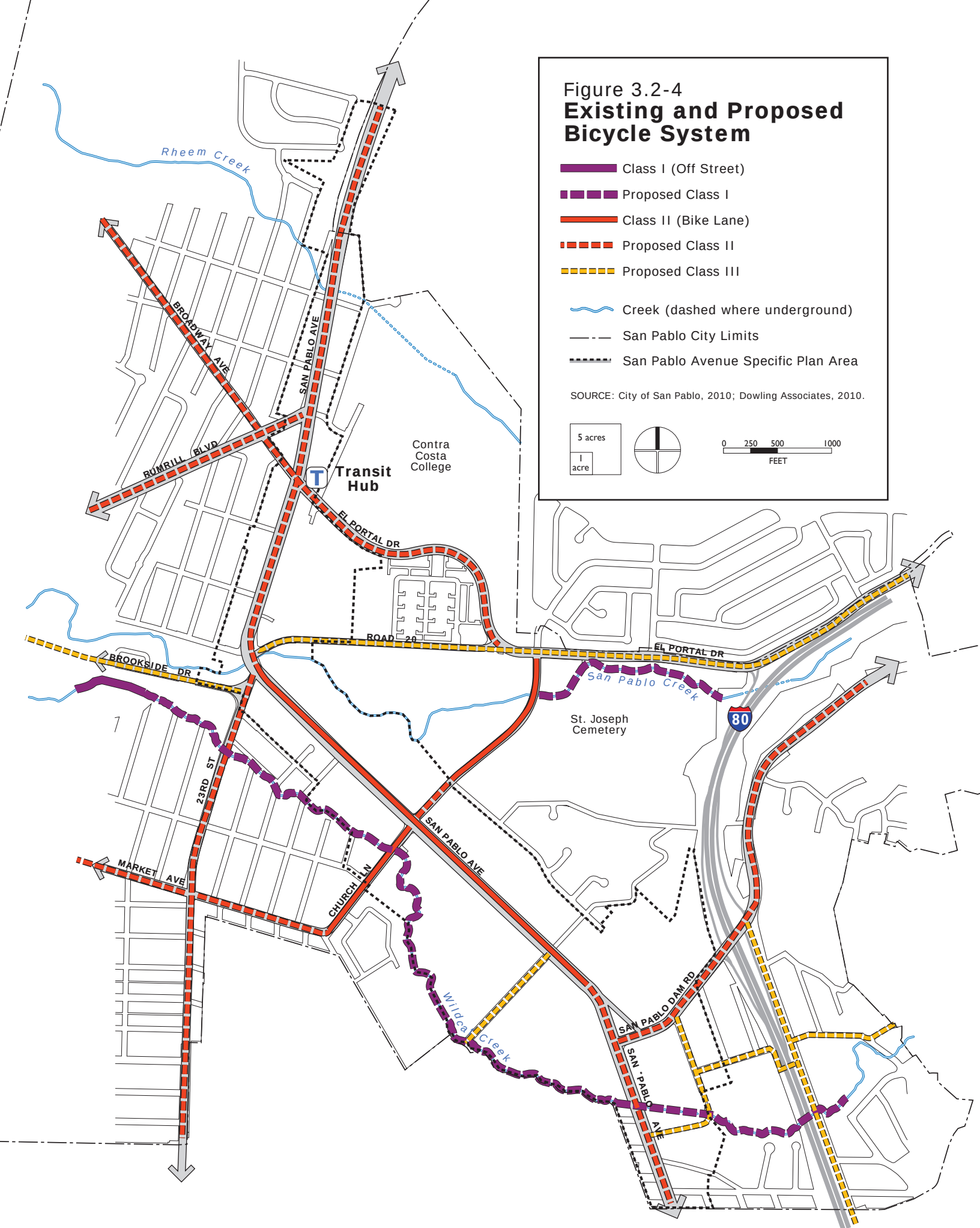
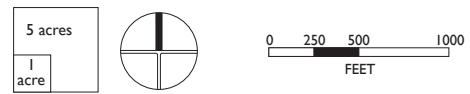
- **Class I** – Provides a completely separated facility designed for the exclusive use of bicyclists and pedestrians with crossing points minimized.
- **Class II** – Provides a restricted right-of-way designated lane for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and cross-flows by pedestrians and motorists permitted.
- **Class III** – Provides a right-of-way designated by signs or permanent markings and shared with pedestrians and motorists.

Bike lanes are found along a segment of San Pablo Avenue between 23rd Street and Evans Avenue. South of Evans Avenue, a “Bike Route” sign designates San Pablo Avenue as a Class III facility. The San Pablo Avenue bike lane is connected to a short segment of bike lane on Church Lane, which only extends southwest for about one-fifth of a mile. However, the 2009 Contra Costa Countywide Bicycle and Pedestrian Plan envisions a well-connected bicycle network linking San Pablo Avenue via facilities on San Pablo Dam Road, Church Lane and Lancaster Drive to the east and Rumrill Boulevard, Brookside Drive and Church Lane to the west. A number of planned Class I bike paths would also cross San Pablo Avenue in San Pablo.

Figure 3.2-4
Existing and Proposed Bicycle System

-  Class I (Off Street)
-  Proposed Class I
-  Class II (Bike Lane)
-  Proposed Class II
-  Proposed Class III
-  Creek (dashed where underground)
-  San Pablo City Limits
-  San Pablo Avenue Specific Plan Area

SOURCE: City of San Pablo, 2010; Dowling Associates, 2010.



Parking

On-street parking along San Pablo Avenue is generally provided between Rivers Street and Road 20. There are no parking meters but some segments have time restriction of one hour. On-street parking on San Pablo Avenue is prohibited north of Rivers Street and south of Road 20 in San Pablo. Many businesses and institutions along the corridor have their own off-street parking; therefore, on-street spaces are generally not fully occupied. Occupancy is particularly light along segments with lower retail commercial concentration such as the segment between Rivers Street and Rumrill Boulevard.

Regulatory Setting

Standards for roadway operations in the Planning Area are defined on a countywide basis. In 1988, Contra Costa County voters passed Measure C, which raised the sales tax to provide funding for regional transportation improvements. Measure C requires local jurisdictions to adopt and implement a growth control program in order to receive their share of funds for transportation projects including maintenance. Measure C also included the Growth Management Program, which established a cooperative, multi-jurisdictional planning process requiring participation of all cities, towns, and the County in managing the impacts of growth in Contra Costa County. The Contra Costa Transportation Authority (CCTA) established to implement Measure C and its overall goals.

Measure J, approved by the voters in 2004, authorized the extension of Measure C and establishes the Transportation Sales Tax Expenditure Plan that extends the transportation sales tax initially authorized by the passage of Contra Costa Measure C. It provides for \$2 billion in funding for programs and projects. These expenditures are “for the construction and improvement of State highways, the construction, maintenance, improvement, and operation of local streets, roads, and highways, and the construction, improvement, and operation of public transit systems”, including paratransit services (California Public Utilities Code Section 180205), and for specific efforts supporting such investments. Measure J’s Growth Management Program simplifies Measure C’s requirements; it also requires a binding Urban Limit Line for the county and all of the cities within the county.

CCTA also serves as the Congestion Management Agency responsible for the CMP. The CMP requires each jurisdiction to identify existing and future transportation facilities that would operate below an acceptable service level and provide mitigation where future growth would degrade that service level. Local jurisdictions work through their respective Regional Transportation Planning Committees (RTPCs). As part of western Contra Costa County, the City of San Pablo works with other west county jurisdictions through the West Contra Costa Transportation Advisory Committee (WCCTAC) to develop the West Contra Costa Action Plans for Routes of Regional Significance. WCCTAC approved the *West County Action Plan for Routes of Regional Significance—2009 Update* in July 2009. The Action Plan identified Multi-Modal Transportation Service Objectives (MTSOs) to measure the effectiveness of regional freeway, arterial routes, and alternative mode use such as transit, ridesharing and bicycling. The Action Plan identifies MTSOs for Routes of Regional Significance (RRS). San Pablo Avenue is one of five RRS in the city. The others—Interstate 80, 23rd Street, El Portal and San Pablo Dam Road—intersect with or are tangential to the Specific Plan Planning Area. On these routes, the MTSOs set target levels of service.

IMPACT ANALYSIS

Significance Criteria

Implementation of the proposed San Pablo Avenue Specific Plan would have a potentially significant adverse impact if it would:

Criterion 1: Conflict with the applicable Congestion Management Program or adopted Action Plan for RRS, including, but not limited to level of service standards and MTSSOs or other standards established by the county congestion management agency for designated roads or highways. Specifically:

- Cause the Delay Index on I-80 from the Carquinez Bridge to the Alameda County line to exceed 3.0 during weekday morning or evening peak hours.
- Cause a signalized intersection along San Pablo Avenue or San Pablo Dam Road to operate below LOS E.
- Cause a signalized intersection along 23rd Street or El Portal Drive to operate below LOS D.

Criterion 2: Conflict with adopted policies, plans, or programs regarding public transit, bikeways, or pedestrian facilities, or otherwise substantially decrease the performance or safety of such facilities.

Given the nature of the project and the distance to nearest airport, San Rafael Airport about 10 miles west, and the fact that the airport facility does not provide commuter or connecting services, the proposed Specific Plan is not expected to result in any change to air traffic patterns or safety. No criterion for this issue is proposed, and it is analyzed no further in this EIR. Likewise, as there are no railways in or adjacent to the Planning Area, there are not criteria or impacts analyzed in this EIR related to rail facilities function or safety. This issue is analyzed no further in this EIR.

Methodology and Assumptions

The transportation impact analysis is focused on potential vehicular intersection level of service impacts that would occur from increased travel demand associated with new land development and roadway configurations under the proposed Specific Plan. The evaluation of these components of the transportation systems was conducted quantitatively using the process outlined in the Analysis Methodology section below and intersection level of service methodology previously described in the Environmental Setting section. For the transit, bicycle and pedestrian systems, the policies and implementation measures were evaluated qualitatively for conflicts with current adopted policies, plans, or programs. Furthermore, a multi-modal level of service assessment for transit, bicycles and pedestrians was performed using CompleteStreetsLOS software to quantitatively document the effects of the proposed roadway configurations on the various modes and to compare the level of service to the standards proposed as part of the San Pablo 2030 General Plan, assumed to be adopted prior to or concurrent with this proposed Project.

Analysis Methodology

The Contra Costa Transportation Authority's Travel Demand Model was used to develop future traffic volume forecasts for the San Pablo Avenue Specific Plan Planning Area. The model was used to forecast the daily roadway volumes as well as the AM and PM peak hour intersection turning movement volumes. The following steps were taken in the analysis:

1. **Roadway Networks.** The latest available CCTA Model was reviewed to ensure that future regional roadway improvements are included as part of the future 2030 condition. The Model includes the following network modifications for the 2030 baseline conditions:
 - Grade separation at the intersection of San Pablo Avenue and Richmond Parkway outside the city limit, and
 - Appian Way widening from two lanes to four lanes between San Pablo Dam Road and Manor Road outside the city limit.

However, the network does not include the planned San Pablo Dam Road interchange improvement project. The full extent of the improvement, which includes modifications to the El Portal Drive, San Pablo Dam Road and McBryde Avenue interchanges, and the preferred project configuration was not available at the time the model forecasts were prepared. Other modifications to model assumptions include the proposed narrowing of 23rd Street between San Pablo Avenue and the southern city limits. Upon implementation of the proposed Project, 23rd Street would have one travel lane per direction and turn lanes would be provided.

2. **Land Use Data.** The CCTA model includes future development throughout the region. The 2030 forecasts are consistent with regional totals for growth projected by the Association of Bay Area Governments (ABAG) in their *Projections 2005* report. Therefore, the traffic forecasts reflect traffic from growth in San Pablo as well as growth in the region that may use the local roadways.

The land use data was categorized citywide into total households, single-family dwelling units, multi-family dwelling units, total employment, and employment by sector (retail, service, agriculture, manufacturing, wholesale, and other) by traffic analysis zone (TAZ) for input to the model.

3. **Model Forecasts.** The model was used to produce traffic volume forecasts for 2030 No Project conditions and 2030 proposed General Plan and Specific Plan conditions. The Gateway Capacity Constraint Methodology was applied in projecting the peak hour volumes. This methodology, consistent with the West County Action Plan for Routes of Regional Significance – 2009 Update (West County Action Plan), limits future peak hour volumes based on the capacity of major corridors (or gateways) that serves the area. The Bay Bridge serves as the gateway for the West Contra Costa County including San Pablo. Both base year and future year forecasts were extracted and used to estimate the growth, which was applied to the existing counts.
4. **Impact Analysis.** The performance measures (LOS and delay index) described in the significance criteria were used to identify potential roadway network deficiencies. For the intersections, the future (2030) volumes were adjusted following the process established in the CCTA Technical Procedures, using the Furness method. Free-flow and congested speeds from the model were used to calculate the delay index.

Impact Summary

The proposed Specific Plan would maintain the freeway delay index at less than 3.0 during both AM and PM peak hours on both travel directions. Therefore, the impact on the I-80 MTSO for freeway delay index is considered less than significant.

Future forecasts and on-going environmental assessments suggest that the San Pablo Avenue and San Pablo Dam Road intersection may experience a future LOS below current MTSOs for Routes of Regional Significance. However, because a substantial portion of this impact is a result of regional growth, and because a portion of that impact could be a result of Caltrans improvements at other related nearby intersections as part of the San Pablo Dam Road Interchange improvement, and because the multimodal goals of the San Pablo 2030 General Plan and Specific Plan consistent with regional transportation planning preclude a simple “expansion” improvement designed for vehicles only, the proposed General Plan policies offers interim LOS standards that allow vehicle level of service at this intersection to fall to F until such time as an adequate, multimodal solution is found. General Plan policy C-I-9 will potentially reduce the impact using just lane designation and signal timing changes. However, the effectiveness of this measure is uncertain due to traffic flow changes expected to result from the Caltrans ramp improvements. This impact remains cumulatively significant, though the project’s contribution to the significant cumulative effect is found to be less than considerable with this policy implemented.

The proposed Specific Plan land uses, policies, and bicycle linkages and alignments do not ultimately conflict with adopted policies, plans, or programs regarding public transit, bikeways, or pedestrian facilities, or otherwise substantially decrease the performance or safety of such facilities. In particular, Specific Plan policies ensure that potential conflicts associated with countywide bicycle planning are less than significant.

Finally, the proposed Specific Plan would not conflict with the San Pablo 2030 General Plan multimodal level of service policies. Transit and pedestrian LOS would meet the proposed standard, and bicycle LOS would improve and meet the proposed standard in most sections of the corridor at most peak hour periods. In the PM peak hour of the central and southern sections the future bicycle LOS is expected to be worse than existing conditions, but not worse than the future condition without the project. Therefore, this impact is considered less than significant overall.

Impacts and Mitigation Measures

MTSO Impact

- 3.2-1 Implementation of the proposed San Pablo Avenue Specific Plan, in conjunction with anticipated citywide and regional growth and development, could cause conflicts with MTSOs for Routes of Regional Significance presented in the West County Action Plan. (*Significant Cumulative Impact; Project Contribution Not Cumulatively Considerable*)**

Delay Index

The MTSO outlined in the West County Action Plan for Interstate 80 is to maintain the delay index at less than 3.0. Delay index is measured by computing the ratio of off-peak hour travel time to peak hour travel time from the Carquinez Bridge to Alameda County Line. As shown in **Table 3.2-5**, the delay index for I-80 with the implementation of the proposed San Pablo Avenue Specific Plan would be

maintained at less than 3.0 during both AM and PM peak hours on both travel directions in 2030. Therefore, the impact on I-80 is considered less than significant.

TABLE 3.2-5 FREEWAY DELAY INDEX FOR I-80 BETWEEN ALAMEDA COUNTY LINE AND CARQUINEZ BRIDGE (2030)

SCENARIO	DIRECTION	DISTANCE (MILES)	AM DELAY INDEX	PM DELAY INDEX
Proposed Specific Plan	I-80 NB	13.802	1.64	2.51
	I-80 SB	13.807	2.63	1.87

Source: Dowling Associates, 2010.

Intersections on Regional Routes

As shown in **Table 3.2-6** and in **Figure 3.2-5**, the proposed Specific Plan coupled with projected citywide and regional growth would cause four intersections on Routes of Regional Significance to operate below the acceptable MTSO standard during one or both peak hours:

- San Pablo Avenue/San Pablo Dam Road (PM peak hour)
- I-80 Westbound off-ramp/El Portal Drive (AM and PM peak hours)
- I-80 Eastbound ramp/El Portal Drive (PM peak hour)
- San Pablo Dam Road/Amador Street/I-80 Eastbound ramps (AM peak hour)

The San Pablo Avenue/San Pablo Dam Road intersection and three freeway ramp intersections are all junctions of two Routes of Regional Significance indicating their utilization not only by local San Pablo traffic but also by through-travelers from and to destinations outside the city. Each of these intersections would be adversely affected by projected regional growth with or without the addition of trips generated by the proposed Specific Plan, as the modeling suggests several of these intersections will perform below acceptable LOS in the No Project condition.

Analysis results for the proposed Specific Plan do not account for Caltrans-proposed reconfiguration of interchanges at El Portal, San Pablo Dam Road, and McBryde Avenue. Based on the results of the traffic analysis for the I-80/San Pablo Dam Road Interchange Project IS/EA prepared by Caltrans, reconfiguration would result in the three intersections at interchanges I-80 westbound off-ramp/El Portal Drive, San Pablo Dam Road/Amador Street/I-80 eastbound ramps, and the I-80 eastbound ramp/El Portal Drive operating at an acceptable LOS (D or better) during AM and PM peak hours.³ With the marginal addition of traffic associated with the 2030 General Plan and Specific Plan, the intersection operations are not expected to drop below LOS E at the two San Pablo Dam Road intersections and LOS D at the El Portal Drive intersection.

³ Caltrans. I-80/San Pablo Dam Road Interchange Project: Initial Study with Mitigated Negative Declaration/Environmental Assessment with Finding of No Significant Impact, February 2010.

TABLE 3.2-6 LEVEL OF SERVICE FORECAST FOR SIGNALIZED INTERSECTIONS

INTERSECTION	PEAK HOUR	EXISTING ¹		NO PROJECT (2030)		SPECIFIC PLAN (2030)	
		LOS ²	V/C ³	LOS ²	V/C ³	LOS ²	V/C ³
1 San Pablo Av/Robert Miller Dr	AM	A	0.32	A	0.43	A	0.43
	PM	A	0.47	A	0.54	A	0.51
2 San Pablo Av/Rivers St	AM	A	0.52	B	0.64	B	0.63
	PM	A	0.58	B	0.67	B	0.65
3 San Pablo Av/Rumrill Blvd	AM	A	0.44	B	0.61	A	0.60
	PM	B	0.63	C	0.79	C	0.80
4 San Pablo Av/El Portal Dr-Broadway Av	AM	A	0.54	C	0.71	B	0.61
	PM	A	0.58	D	0.84	C	0.77
5 San Pablo Av/Rd 20	AM	A	0.54	C	0.72	B	0.62
	PM	B	0.65	D	0.85	D	0.81
6 San Pablo Av/Church Ln	AM	C	0.76	D	0.83	D	0.88
	PM	A	0.58	C	0.71	C	0.77
7 San Pablo Av/Vale Rd	AM	A	0.45	A	0.55	B	0.63
	PM	A	0.43	B	0.63	C	0.73
8 San Pablo Av/San Pablo Dam Rd	AM	A	0.49	B	0.64	B	0.66
	PM	B	0.63	E	0.92	F	1.03
9 San Pablo Av/Rheem Av	AM	A	0.46	B	0.61	B	0.62
	PM	A	0.40	A	0.57	A	0.58
10 I-80 WB off-ramp/El Portal Dr	AM	C	0.77	F	1.02	F	1.04
	PM	C	0.79	F	1.04	F	1.05
11 I-80 EB ramp/El Portal Dr	AM	C	0.73	C	0.74	C	0.76
	PM	D	0.83	F	1.04	E	0.96
12 San Pablo Dam Rd/Amador St/I-80 EB on-ramp	AM	B	0.70	E	1.00	F	1.03
	PM	C	0.72	E	0.92	E	0.98
13 I-80 WB off-ramp/San Pablo Dam Rd	AM	C	0.75	E	0.97	D	0.84
	PM	B	0.62	C	0.73	A	0.53

¹ Existing intersection traffic volumes were collected between February 2004 and August 2006.

² LOS - Level of service - calculated using CCTALOS methodology and based on volume-to-capacity (v/c) ratio.

³ V/C - critical volume-to-capacity ratio

Bold only items signify modeled potentially significant impacted intersections which are mitigated by the I-80/San Pablo Dam Road Interchange Project IS/EA.

Shaded and bold item signifies the remaining potentially significant impacted intersection.

Source: Dowling Associates, June 2010.

However, according to the I-80/San Pablo Dam Road Interchange Project IS/EA, the San Pablo Avenue/San Pablo Dam Road intersection would operate at LOS F in the future with no project (in this case, referring to no *Caltrans* project), as well as with *Caltrans*' proposed reconfiguration of the interchanges. This means that while the *Caltrans* interchange reconfigurations may improve traffic flow

overall, those improvements do not substantively change performance of this intersection under future local and regional growth conditions. The cumulative impact at this intersection of regional growth, Caltrans efforts, and the proposed Specific Plan and General Plan is therefore considered potentially significant.

Widening this intersection to provide increased capacity and to accommodate the additional traffic would improve the vehicle level of service at this intersection. However, as one of the key intersections in the city, it not only serves as a gateway to the city from I-80 and the south, but also is categorized as a Mixed Use Boulevard serving bicyclists and transit and identified as a Pedestrian Priority Zone on the Proposed Roadway Network of the San Pablo 2030 General Plan and the proposed Specific Plan. Any additional improvements designed to ease the flow of automobile traffic could conflict with the General Plan's Complete Streets policy and proposed Specific Plan policies in support of enhanced pedestrian and bicycle facilities.

Ultimately, the design and operation of this intersection should reflect the needs of all users and not be dictated solely by the vehicle LOS performance standard. The following General Plan policies acknowledge this balance, and offer several approaches to mitigation of traffic impacts. Policies that specifically improve the pedestrian and bicycle system are listed under Impact 3.2-2.

Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

- C-I-7 Apply traffic Level of Service (LOS) standards to signalized intersections on Routes of Regional Significance to be consistent with the Contra Costa Transportation Authority's West County Action Plan. (See Policy GME-I-17 in Chapter 4, Growth Management Element)
- C-I-8 Accept LOS F at the intersection of San Pablo Dam Road and San Pablo Avenue opposite Lytton Casino and at I-80 ramps at El Portal Drive and San Pablo Dam Road/Amador Street during two hour peak periods (a.m. and p.m.) as an interim standard until feasible traffic improvements can be designed, funded, and constructed.
- C-I-9 Design, evaluate, and implement improvements to the intersection of San Pablo Avenue and San Pablo Dam Road, upon collection of more specific data from Caltrans on anticipated (or measured) changes to traffic volumes related to their I-80 ramp improvement projects. Based solely on the CCTA model assumptions, a set of improvements that would mitigate regional growth and proposed project impacts include:
 - Converting the southbound through lane on San Pablo Avenue to a left-or-through lane to provide a total of one left-turn-only lane, one left-or-through lane and one through-or-right lane; and
 - Modifying the traffic signal timing to allow "split phases" for the northbound and southbound movements.

Figure 3.2-5
**Future Intersection
 Level of Service (LOS)**

AM PM



Level of Service

- A** Little or no delay
- B** Short traffic delays
- C** Average traffic delays
- D** Long traffic delays
- E** Very long traffic delays
- F** Extreme delays; potentially affecting other traffic movements in the intersections

Creek (dashed where underground)

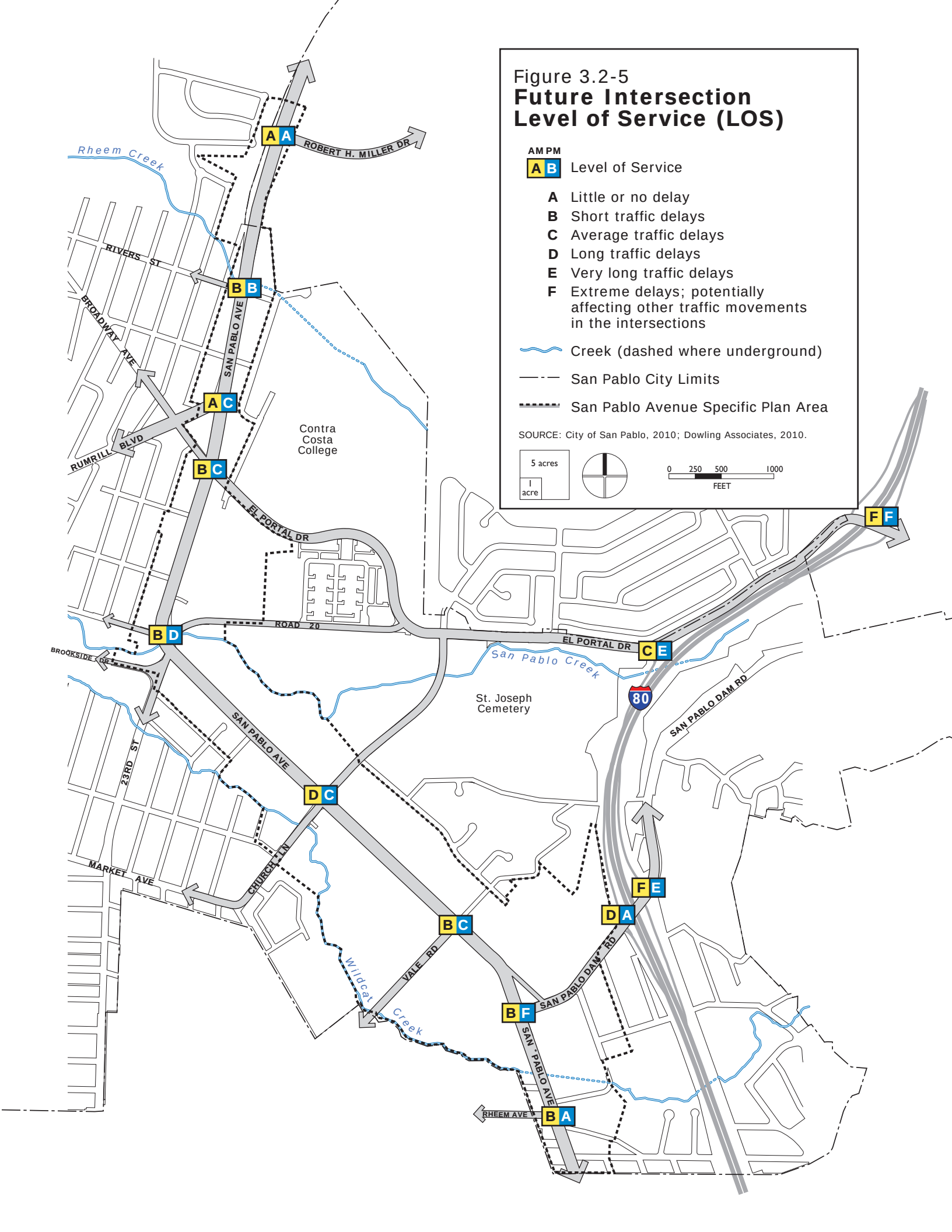
San Pablo City Limits

San Pablo Avenue Specific Plan Area

SOURCE: City of San Pablo, 2010; Dowling Associates, 2010.



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 FEET



- C-I-11 Require new development to provide traffic improvements necessary to accommodate trips generated by the project without violating traffic LOS standards established by Policy C-I-8 or increasing the travel delay index above that established for Interstate 80 unless the City adopts Findings of Special Circumstances.
- C-I-13 Continue cooperative efforts with CCTA to identify streets and intersections with unacceptable traffic LOS standards and implement programs to upgrade them, consistent with the Complete Streets policy. See Growth Management Element for additional details.

The current analysis suggests that implementation of policy C-I-9 would allow the intersection of San Pablo Avenue and San Pablo Dam Road to operate at LOS B with a v/c of 0.68 in the AM peak hour and LOS E with a v/c of 0.95 in the PM peak hour.

Despite the potential benefits of the lane designations and signal timing improvements, there is still too much uncertainty around the effects of the Caltrans ramps improvements on traffic flow into this intersection. As the Caltrans analysis did not report V/C ratios but only LOS in terms of letter-grade, and as it found both the No Project condition and the future proposed Project condition to perform below standard at this intersection, Caltrans went no further in their analysis to try to measure or mitigate the impacts of their ramp improvements on this particular intersection. Without more data on changes in actual traffic flow between I-80 and the intersection of San Pablo Avenue and San Pablo Dam Road, the signal timing and/or lane designation changes necessary to improve future performance, and their effectiveness, remain uncertain. Therefore, even with implementation of General Plan policy C-I-9, this analysis still finds a potentially significant cumulative impact on traffic LOS at this intersection. However, the proposed Specific Plan's contribution to this significant cumulative effect is not cumulatively considerable due to the General Plan policy's ability to reduce CCTA-based modeled LOS within an acceptable range for the duration of the planning period (to 2030).

Proposed Specific Plan Policies that Reduce the Impact

Recognizing the uncertainty around traffic impacts in the San Pablo Avenue corridor into the future, the proposed Specific Plan offers a particular set of policies designed to help San Pablo implement various transportation demand management solutions in the Planning Area:

- 3-G-13 *Encourage use of Transportation Demand Management strategies to minimize traffic contributions from new and existing development.*
- 3-G-14 *Promote public and privately-run alternative modes of transit, such as shuttles, along the San Pablo Avenue corridor.*
- 3-I-45 Encourage and support carpooling and vanpooling by providing preferential parking at employment sites for carpools and vanpools.
- 3-I-46 Explore the feasibility of shuttles. This could include:
 - As part of a comprehensive transportation demand management strategy, employer-based shuttles that provide service to and from the Richmond and El Cerrito Del Norte BART stations for new large developments. At a minimum, employer shuttles should operate during the morning and evening peak periods. Shuttle schedules should be timed to facilitate transfer from northbound BART trains in the morning and southbound BART trains in the evening.

- A shuttle program to serve San Pablo Avenue that links Mission Plaza to South San Pablo Avenue as well as Contra Costa College, College Center, City Hall, Circle S, the Casino, and Doctor's Medical Center. This could be similar to the free shuttle in Oakland along Broadway that connects portions of Downtown Oakland and is funded by contributions from recent developments and a grant from the Bay Area Air Quality Management District.
 - A shuttle that runs between commercial centers located in neighboring cities, including Pinole, El Cerrito, and Richmond (to the Hilltop Mall, for example).
- 3-I-47 Work with the West Contra Costa Transportation Advisory Committee TDM Program Manager to promote the ridesharing and Guaranteed Ride Home Program provided through 511 Contra Costa, the comprehensive transportation demand management program for Contra Costa County.
- 3-I-48 Work with Contra Costa College to develop transportation demand management strategies to reduce single-occupancy vehicle trips to the campus, through use of improved bus and shuttle services, as well as improved pedestrian and bicycle connectivity from nearby student housing.
- 3-I-49 As development occurs within the Planning Area, require transportation demand management strategies as part of the approval process, including:
- Provisions for transit passes;
 - Carsharing;
 - Parking cash out.
- 3-I-50 Provide incentives to existing employers to develop transportation demand management programs.
- 3-I-51 Draft and adopt a Commuter Benefit Ordinance to allow employers and workers citywide to tap into an existing federal program to pay for transit passes and vanpool. This would be similar to ordinances in cities of Richmond, San Francisco, and Berkeley.

Mitigation Measures

None required.

Bicycle and Pedestrian Impact

3.2-2 Implementation of the proposed San Pablo Avenue Specific Plan could conflict with the adopted Countywide Bicycle Master Plan. (*Less than Significant*)

The 2030 General Plan and proposed Specific Plan have put forth the creation of a walkable community as one of their chief objectives. These plans also emphasize a comprehensive transportation system that serves the needs of all segments of the community and all travel modes including vehicles, transit, pedestrians, and bicycles. Specifically, the General Plan Circulation Element contains the following Guiding Policies:

- C-G-1 *Develop a transportation system that meets the needs of all segments of the community, including residents, businesses, visitors, and the region.*

- C-G-4 Maintain acceptable levels of service for all modes of travel.*
- C-G-5 Develop a safe and comprehensive bicycle and pedestrian network.*
- C-G-6 Encourage the expansion of public transportation systems.*
- C-G-7 Facilitate the use of public transportation in San Pablo by making it more comfortable and convenient.*
- C-G-8 Promote efficient use of existing transportation facilities through the implementation of transportation demand management concepts.*

The proposed San Pablo Avenue Specific Plan would provide a continuous Class II bike lane along the length of San Pablo Avenue that connects with proposed bike lanes on Church Lane, San Pablo Dam Road, 23rd Street, and El Portal Drive west of Church Lane.

The proposed Specific Plan is supportive of adopted regional policies, plans or programs regarding public transit, bikeways, and pedestrian facilities and does not decrease the performance or safety of such facilities. A review of CCTA's Countywide Plan confirms the flexibility of the alignments shown on CCTA's Bike Map and the importance of San Pablo Avenue as a bikeway corridor. The Countywide Plan indicates:

- “On the maps, proposed segments do not represent specific suggested alignments, even when they are shown on a particular street or road. Instead, they represent corridors and general connections to link existing segments.” Local jurisdictions will determine the ultimate alignment of bike routes, “based on such factors as feasibility, complexity, and cost.” (page 50 of the Countywide Plan)
- San Pablo Avenue is one of the major “building blocks” of the CCTA bike network. (page 56 of the Countywide Plan) The proposed Specific Plan proposes a continuous bike lane along the entire length of San Pablo's portion of San Pablo Avenue, thereby supporting this CCTA objective.

Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

- C-I-1 Design and operate city streets based on a “Complete Streets” concept that enables safe, comfortable, and attractive access and travel for pedestrians, bicyclists, motorists, and transit users of all ages and abilities.*
- C-I-2 Include “Complete Street” considerations in the design of all circulation improvement projects.*
- C-I-13 Expand and maintain a safe and comprehensive bicycle system that connects the city's neighborhoods to regional bicycle routes.*
- C-I-15 Require the provision of bicycle parking and related facilities in new employment-generating development to facilitate multi-modal commute choices.*

Proposed Specific Plan Policies that Reduce the Impact

The proposed Specific Plan includes the following implementing policies related to improving the pedestrian experience in the San Pablo Avenue corridor:

- 3-G-4 Provide continuous pedestrian sidewalks and safe bike travel routes throughout the Planning Area and within development projects.*

- 3-G-5 *Improve pedestrian and bicycle amenities throughout the Planning Area to encourage walking and bicycle trips along the corridor.*
- 3-G-6 *Ensure that private development integrates pedestrian and bicycle connections to transit, open space, and key destinations.*
- 3-I-12 Create internal streets within new mixed-use developments that maximize safe and efficient pedestrian circulation by incorporating design elements such as wider landscaped sidewalks, reduced vehicular speed limits, pedestrian-oriented lighting, bulb-outs, curb extensions at intersections, high visibility crosswalks, and on-street parking to buffer pedestrians from moving vehicles.
- 3-I-13 Provide mid-block connections through new developments that accommodate bicyclists and pedestrians, or all modes, to facilitate access to transit stops and major public destinations.
- 3-I-14 Consider connections and extensions to future bike and walking trails in anticipation of future amenities and improvements at Wildcat, San Pablo, and Rheem creeks, and potential park sites.
- 3-I-15 Enhance pedestrian connections and amenities and prioritize pedestrian access and circulation in Pedestrian Priority Zones.

Additional policies relating to the pedestrian network are also included in the Specific Plan under Chapter 4, Section 4.2: Streetscape Design.

The proposed Specific Plan includes the following implementing policies related to improving the bicycle system in the San Pablo Avenue corridor:

- 3-I-16 Provide signage that clearly and explicitly indicates connections to local and regional bicycle facilities.
- 3-I-17 Provide secure short- and long-term bicycle parking at transit stops.
- 3-I-18 Encourage provision of bike racks and locking systems in all multi-family residential developments, multi-tenant retail and office developments, and government and institutional uses.
- 3-I-19 Incorporate a one-foot buffer, distinguished through color or paving, between the bicycle lane and the adjacent travel lane along the length of San Pablo Avenue, to enhance visibility and safety for bicyclists.
- 3-I-20 Maintain bike lanes along San Pablo Avenue, including pavement condition as well as clearing of debris.

Proposed Specific Plan policies and the proposed bike lane on San Pablo Avenue do not conflict with countywide bicycle planning or the General Plan Bicycle System or pedestrian network, and therefore this impact is less than significant.

Mitigation Measures

None required.

Multi-modal LOS Impact

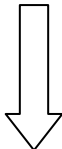
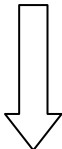
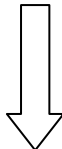
3.2-3 Implementation of the proposed San Pablo Avenue Specific Plan could conflict with San Pablo 2030 General Plan multimodal level of service policies. (*Less than Significant*)

The San Pablo 2030 General Plan Circulation Element specifies as a guiding policy a measurement standard to “Maintain acceptable levels of service for all modes of travel” (C-G-4). Specifically, the Circulation Element contains the following implementing policies related to MMLOS:

C-I-17 Evaluate multimodal level of service (MMLOS) qualitatively, consistent with the criteria in Table 5.2-4, for the following routes:

For bicyclists, evaluate the routes shown on Figure 5-4, to determine necessary improvements. Bicycle LOS “C” standard is the goal for these streets. For pedestrians, evaluate streets within Pedestrian Priority Zones (e.g. San Pablo Avenue, 23rd Street). As shown on Figure 5-1, to determine necessary improvements. In these zones, the Pedestrian LOS “C” is the goal.

GENERAL PLAN TABLE 5.2-4 DEFINITION OF MULTI-MODAL LEVEL OF SERVICE INDICATORS

LOS	TRANSIT	BICYCLE	PEDESTRIAN
A	(Good walking access to bus stops, frequent service, good bus stop amenities.)	(Few driveway and cross street conflicts, good pavement condition, ample width of outside lane, including parking and bike lanes.)	(Low traffic volumes, wide buffer separating sidewalk from traffic, numerous street trees, and high parking occupancy.)
B			
C			
D			
E			
F	(Poor walking access to bus stops, infrequent service, poor schedule adherence, no bus stop amenities.)	(Poor pavement condition, narrow width of outside lane, frequent driveways and cross streets.)	(High traffic volumes, limited buffer separating sidewalk from traffic, few street trees, low parking occupancy.)

Source: Dowling Associates, 2010.

C-I-25 Continue coordination efforts with public transit providers to maintain transit service that is safe and efficient with convenient connections to high use and activity intersections in the city.

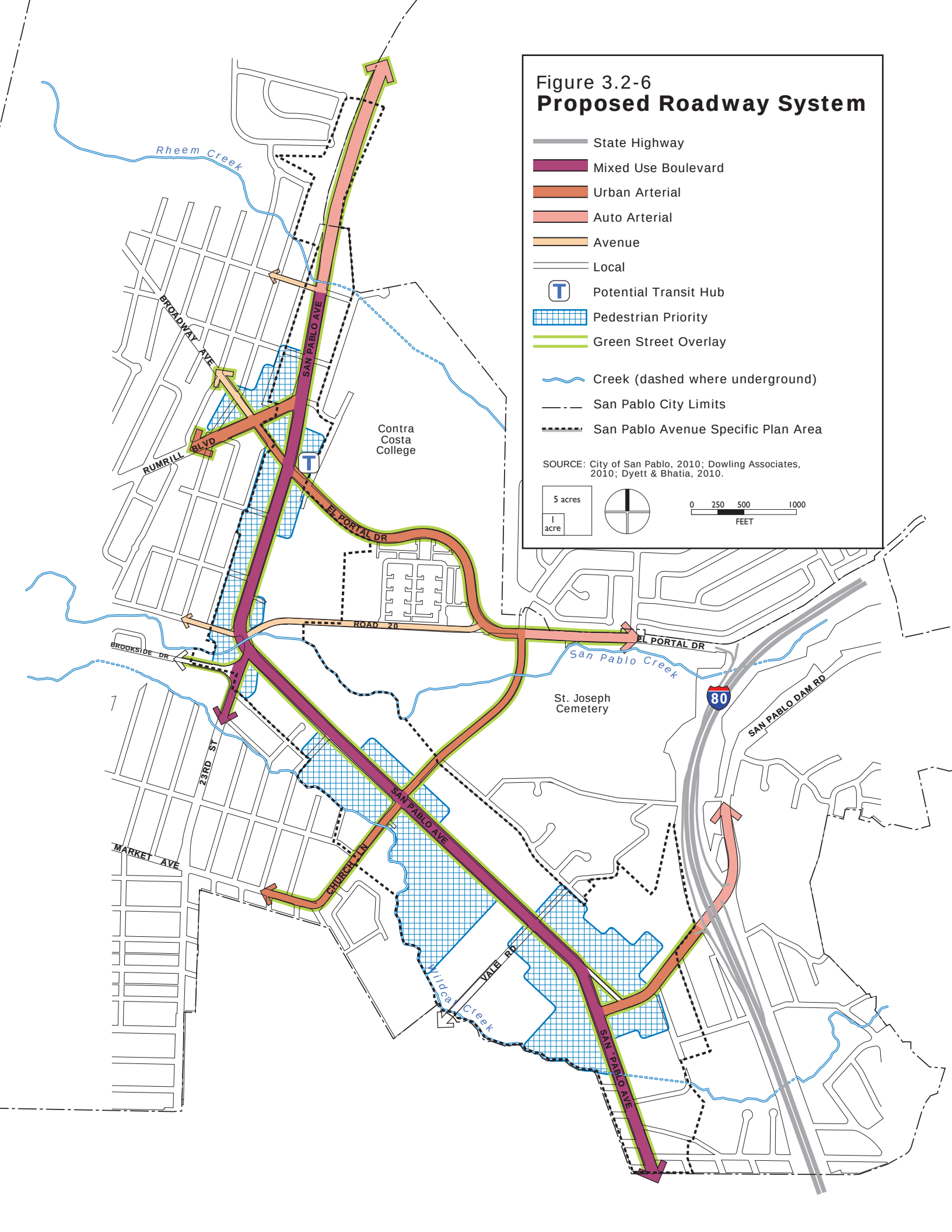
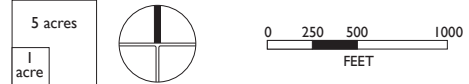
On the key transit corridors, such as San Pablo Avenue, a higher level of satisfied riders, at Transit LOS “B” standard, is the goal. This means achieving a combination of frequent service (4 to 5 buses per hour), good on-time performance and good travel speed, and having bus stop amenities such as benches and shelters, at more than half of the bus stops.

A multimodal level of service analysis was performed for the San Pablo Avenue corridor. All 13 signalized intersections along the corridor from Robert Miller Drive to Rheem Avenue were included in the analysis. The proposed Specific Plan Roadway Network, and these 13 signalized intersections, are depicted in **Figure 3.2-6** and reflect the multimodal classification framework used in the Specific Plan.

Figure 3.2-6
Proposed Roadway System

-  State Highway
-  Mixed Use Boulevard
-  Urban Arterial
-  Auto Arterial
-  Avenue
-  Local
-  Potential Transit Hub
-  Pedestrian Priority
-  Green Street Overlay
-  Creek (dashed where underground)
-  San Pablo City Limits
-  San Pablo Avenue Specific Plan Area

SOURCE: City of San Pablo, 2010; Dowling Associates, 2010; Dyett & Bhatia, 2010.



The transit, bicycle, and pedestrian scores and corresponding LOS grade are summarized by corridor sections in **Table 3.2-7**.

As shown, the transit LOS falls well within the proposed LOS B standard in both northbound and southbound directions during the AM and PM peak hours, due primarily to the high frequency of bus service along San Pablo Avenue. For pedestrians, the pedestrian LOS meets the proposed LOS C standard.

When compared to existing conditions and the No Project Alternative, the proposed Project roadway sections for San Pablo Avenue would result in improved bicycle LOS for the north segment during both peak hours, at an LOS compliant with the General Plan standard. During the AM peak hour for the central and southern segments performance would also improve under the proposed Specific Plan as compared to existing conditions and the No Project Alternative, however it would not necessarily improve enough to be in compliance with the proposed LOS C standard. In only the PM peak hour of the central and southern sections of the corridor does the proposed Project perform worse than in existing conditions (these are the table cells with a light gray fill).

TABLE 3.2-7 MULTIMODAL LEVEL OF SERVICE SUMMARY

CORRIDOR SECTION	PEAK HOUR	TRANSIT											
		NORTHBOUND						SOUTHBOUND					
		EXISTING		2030 NO PROJECT		2030 SPECIFIC PLAN		EXISTING		2030 NO PROJECT		2030 SPECIFIC PLAN	
		SCORE	LOS	SCORE	LOS	SCORE	LOS	SCORE	LOS	SCORE	LOS	SCORE	LOS
North	AM	1.67	A	2.11	B	2.07	B	1.65	A	1.78	A	1.76	A
	PM	1.71	A	1.79	A	1.76	A	1.64	A	2.08	B	2.05	B
Central	AM	1.08	A	1.22	A	1.20	A	1.10	A	1.27	A	1.23	A
	PM	1.10	A	1.14	A	1.12	A	1.08	A	2.50	B	2.46	B
South	AM	0.91	A	1.07	A	1.04	A	0.80	A	1.06	A	1.05	A
	PM	0.95	A	0.99	A	0.96	A	0.79	A	1.30	A	1.29	A
CORRIDOR SECTION	PEAK HOUR	BICYCLE											
		NORTHBOUND						SOUTHBOUND					
		EXISTING		2030 NO PROJECT		2030 SPECIFIC PLAN		EXISTING		2030 NO PROJECT		2030 SPECIFIC PLAN	
		SCORE	LOS	SCORE	LOS	SCORE	LOS	SCORE	LOS	SCORE	LOS	SCORE	LOS
North	AM	3.45	C	3.49	C	3.18	C	3.55	D	3.61	D	3.29	C
	PM	3.61	D	3.70	D	3.35	C	3.53	D	3.63	D	3.30	C
Central	AM	3.50	C	3.54	D	3.48	C	3.49	C	3.55	D	2.95	C
	PM	3.57	D	3.70	D	3.62	D	3.44	C	3.50	C	2.90	C
South	AM	4.13	D	4.22	D	3.69	D	3.60	D	3.65	D	3.57	D
	PM	4.36	E	4.78	E	3.90	D	3.58	D	3.69	D	3.60	D

TABLE 3.2-7 MULTIMODAL LEVEL OF SERVICE SUMMARY

CORRIDOR SECTION	PEAK HOUR	PEDESTRIAN											
		NORTHBOUND								SOUTHBOUND			
		EXISTING		2030 NO PROJECT		2030 SPECIFIC PLAN		EXISTING		2030 NO PROJECT		2030 SPECIFIC PLAN	
		SCORE	LOS	SCORE	LOS	SCORE	LOS	SCORE	LOS	SCORE	LOS	SCORE	LOS
North	AM	2.98	C	3.08	C	2.84	C	3.07	C	3.19	C	3.04	C
	PM	3.26	C	3.43	C	3.20	C	3.03	C	3.23	C	3.08	C
Central	AM	3.06	C	3.15	C	3.03	C	2.96	C	3.07	C	2.83	C
	PM	3.20	C	3.47	C	3.35	C	2.84	C	3.06	C	2.82	C
South	AM	2.87	C	2.99	C	2.81	C	2.83	C	2.96	C	2.85	C
	PM	3.10	C	3.37	C	3.21	C	2.76	C	2.99	C	2.89	C

Source: Dowling Associates, 2010.

The bicycle LOS is calculated based on several factors including the number of cross-street conflicts, the pavement condition, and the width of the outside lane (including parking and bike lanes). The effect of parking adjacent to the bike lane is demonstrated in the central segment which has better bicycle LOS southbound due to proposed parking on the west side, than it does northbound where the bike lane is adjacent to the curb. In the southern section of the corridor, the limited right-of-way does not provide enough room for on-street parking, resulting in a bicycle LOS D. Given the right-of-way constraint along San Pablo Avenue, the proposed bicycle LOS C goal from the General Plan may not be obtained without additional right-of-way.

Despite the fact that under some conditions bicycle LOS is not modeled to meet the General Plan standard under the proposed Project, this analysis finds that the overall performance and improvements to transit, pedestrian, and bicycle LOS as a result of the proposed Project signify a less than significant impact on multimodal level of service in the Planning Area. Furthermore, the San Pablo Avenue corridor is a regional-serving transportation corridor, and as such some exceptions to, or delays in, achieving the bicycle LOS standard in all peak hour conditions may be acceptable for this roadway.

Proposed Specific Plan Policies that Reduce the Impact

- 3-G-1 Establish the San Pablo Avenue transit hub as a major transit destination, with improved pedestrian and streetscape facilities, safety measures, and visibility.*
- 3-G-2 Improve the quality, visibility, and safety of transit stops along the San Pablo Avenue corridor.*
- 3-G-3 With new construction, ensure access to transit is provided for seniors, families with children, and persons with disabilities throughout the Planning Area.*
- 3-I-1** Work with AC Transit and West CAT to establish a station of consolidated bus stops that best serves Contra Costa College and existing and planned high-density residential development. This may be located at College Lane, El Portal Drive, or along San Pablo Avenue. Formalize the Transit Hub by consolidating stops to one location, installing shelters, signage with system information and next-bus updates, bus pull-out areas, and expanded pedestrian furnishings and pedestrian-scaled lighting for visibility and security.

- 3-I-2 Coordinate with AC Transit and West CAT to implement bus service modifications to improve service and increase accessibility to transit for new higher-intensity development in the Planning Area.
- 3-I-3 Identify direct paths to bus stops for pedestrians and bicyclists, and identify opportunities for implementation—either new connections through redevelopment or improvements to existing development.
- 3-I-4 Work with Contra Costa College to develop and improve connections to the proposed Transit Hub near the college, by designating paths and improving signage.
- 3-I-5 Provide way finding signage to indicate pathways to and location of major bus stops.
- 3-I-6 Improve the pedestrian crosswalks at El Portal Drive and Rumrill Boulevard to ensure accessibility for persons with disabilities and provide greater connectivity near high density mixed-use development, such as the potential student housing at Mission Plaza.
- 3-I-7 Provide signalized pedestrian crosswalks at mid-block crossings and countdown signals at wide crosswalks or near bus stop locations.
- 3-I-8 Improve streetscape design to establish greater pedestrian comfort and access to transit stations. See Chapter 4, Section 4.2: Streetscape Design for specific measures.
- 3-I-9 Provide bus shelters, seating, lighting, trash receptacles, signage and kiosks, lighting and enhanced landscaping (for shade and aesthetics) at all bus stops.
- 3-I-10 Employ technologies such as “next-bus” to provide real-time system updates to increase user convenience at all bus stops.
- 3-I-11 Allow advertisements on bus shelters in cooperation with transit providers, as a means of cost recovery.
- 3-G-7 *Maximize connectivity in the Planning Area through creation of finer street grid patterns in new development.*
- 3-G-8 *Provide sufficient capacity on the Planning Area roadway network to efficiently and safely serve local traffic needs.*
- 3-G-9 *Support roadway improvement efforts to establish San Pablo Avenue as a Complete Street. Balance the needs of cars with those of pedestrians, bicyclists, and transit.*
- 3-I-25 Ensure that new developments provide fine grain street grids, creating shorter blocks and more route options that emphasize pedestrian connectivity to and from San Pablo Avenue, transit, and key destinations.
- 3-I-26 Establish a street grid that covers the entire site and allows visual access into the development from San Pablo Avenue. The grid should organize all development within the site, provide a direct connection to Church Lane to the north, and provide a potential connection through to Vale Road to the south and potentially to the Casino.
- 3-I-27 Establish a central pedestrian-oriented street that provides a direct link from San Pablo Avenue to improved open space along Wildcat Creek.
- 3-I-28 As part of any redevelopment of Towne Center, establish a street grid for the site that provides access points to San Pablo Dam Road, San Pablo Avenue, and Willow Road.

- 3-I-29 Establish a pedestrian-only axis that leads directly from the Casino through the site in order to create a single, cohesive entertainment district.
- 3-I-30 Provide vehicular access to off-street parking from San Pablo Avenue via a new pedestrian-oriented roadway through the site.

In addition, policies listed under Impact 3.2-2 related to the bicycle and pedestrian systems also help to reduce this impact.

Mitigation Measures

None required.

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3.3 *Air Quality*

This section assesses the local and regional air quality impacts of implementing the proposed San Pablo Specific Plan. This analysis focuses on criteria air pollutants and toxic air contaminants. Greenhouse gases are evaluated in Section 3.4: Energy and Greenhouse Gases.

ENVIRONMENTAL SETTING

Physical Setting

Air quality is affected by the rate, amount, and location of pollutant emissions, and the associated meteorological conditions that influence pollutant movement and dispersal. Atmospheric conditions, including wind speed, wind direction, and air temperature, in combination with local surface topography (i.e., geographic features such as mountains and valleys), determine the effect of air pollutant emissions on local air quality.

Climate, Meteorology, and Topography

Regional

The Planning Area is located within the San Francisco Bay Area Air Basin. The Bay Area Air Quality Management District (BAAQMD) is the regional agency with regulatory authority over emission sources in the Bay Area, which includes all of San Francisco, San Mateo, Santa Clara, Alameda, Contra Costa, Marin, and Napa counties and the southern half of Sonoma and southwestern half of Solano counties.

Wet winters and dry summers characterize the region's climate. Rainfall can vary widely over a short distance, with windward coastal mountain areas receiving over 40 inches of rain, while leeward areas receive about 15 inches. During rainy periods, horizontal and vertical air movement ensures rapid pollutant dispersal. Rain also washes out particulate and other pollutants.

Regional wind patterns vary from season to season. Wind tends to move from areas of high-pressure to areas of low-pressure. In warmer months, this means that air currents move from the Pacific Ocean to inland areas. While Pacific Ocean air is generally free of harmful air pollutants, the wind picks up emissions from numerous sources (anthropogenic and biogenic), and will then carry these pollutants to areas many miles away. Mountains and valleys often affect on-shore winds. This means that a wind pattern that started as northwesterly will often swing 90 degrees or more when it encounters topographic features.

Normally, air temperatures decrease with increasing elevations. Sometimes this normal pattern is inverted, with warmer air aloft, and cool air trapped near the earth's surface. This phenomenon occurs in all seasons. In summer, especially when wind speeds are very low, a strong inversion will trap air emissions and high levels of ozone smog can occur. In winter, a strong inversion can trap emissions of particulate and carbon monoxide near the surface, resulting in unhealthy air quality.

The air pollution potential of an area is largely dependent on winds, atmospheric stability, solar radiation, and terrain. The combination of low wind speeds and low inversions produces the greatest concentration of air pollutants. On days without inversions, or on days of winds averaging over 15 miles per hour (mph), smog potential is greatly reduced. High particulate matter levels can occur in areas of intense motor vehicle use, such as freeways, ports, etc., and in most valley areas where residential wood smoke and other pollutants are trapped by inversions and stagnant air.

San Pablo

San Pablo is located within the North Alameda and West Contra Costa climatological sub-region of the Bay Area. At the northern end of this sub-region, near Richmond and San Pablo, the sea breezes from San Francisco Bay and San Pablo Bay dominate during spring and summer months. Low clouds and fog are common in spring and summer. At the BAAQMD's Point San Pablo meteorological station, approximately four miles west of the Planning Area, the prevailing direction is south-southwesterly, with over 50 percent of the winds coming from the south through southwest sectors. The average wind speed at this station is 11 mph.¹

Air Pollution Sources

The major source of air pollution within San Pablo is the I-80 transportation corridor. In addition, air pollution from the I-580 corridor and Oakland-San Francisco metropolitan area to the south of San Pablo may be transported to San Pablo during southerly wind conditions. Other sources within the Planning Area include facilities such as auto body shops, dry cleaners, and light industrial uses. Larger air pollution sources such as the Chevron Refinery in Richmond, located approximately 2.5 miles southwest (and upwind) of the City of San Pablo, also contribute to the air quality in the Planning Area. Contra Costa County is home to other refineries operated by Shell, Tesoro, ConocoPhillips and Valero. However, these refineries are located downwind, as is Mirant Corp.'s Pittsburg power plant, the fourth largest power plant in California.

The BAAQMD maintains a database of stationary sources and their associated risks and hazards for cities within its jurisdiction. Many of these sources are dry-cleaning facilities, spray booths, or other common facilities with a relatively low potential for hazardous air emissions. Impact 3.3-3 discusses the significant stationary sources within the San Pablo Avenue Specific Plan Planning Area.

Existing Air Quality

Criteria Air Pollutants: Bay Area Attainment Status

To measure and monitor the ambient concentrations of criteria pollutants in the Bay Area, the BAAQMD operates a regional network of monitoring stations that measures the ambient concentrations of criteria pollutants. Ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂),

¹ BAAQMD, 2009.

particulate matter (PM), and lead are the six criteria air pollutants. Detailed definitions of pollutants are provided below in the regulatory setting.

The major criteria pollutants of concern in the San Francisco Bay Area are ozone and particulate matter (both PM-10 and PM-2.5), which are monitored at a number of locations. As of August 2010, the Bay Area had nonattainment status for ozone (State and federal standards) and particulate matter – PM-10 and PM-2.5 (State and federal standards). The Bay Area has attained the State and federal CO standards; however, CO can still be a concern at highly congested intersections under certain kinds of atmospheric conditions. Sulfur dioxide is no longer considered a problem pollutant in California due to improved industrial source controls, the substitution of natural gas for fuel oil, and the lower sulfur content in fuels. The state has attained the sulfur dioxide standard for several years.² **Table 3.3-1** summarizes the Bay Area attainment status.

TABLE 3.3-1 AMBIENT AIR QUALITY SOURCES, STANDARDS AND ATTAINMENT STATUS IN THE BAY AREA

AVERAGING TIME		STANDARD	BAY AREA ATTAINMENT STATUS
Ozone: from motor vehicles, other mobile sources, combustion, industrial and commercial processes			
State	1 hour	0.09 ppm	Non-Attainment
	8 hours	0.07 ppm	Non-Attainment
Federal	8 hours	0.075 ppm	Non-Attainment
Carbon Monoxide: Internal combustion engines, primarily gasoline-powered motor vehicles			
State	1 hour	20 ppm	Attainment
	8 hours	9.0 ppm	Attainment
Federal	1 hour	35 ppm	Attainment
	8 hours	9.0 ppm	Attainment
Nitrogen Dioxide: Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads			
State	1 hour	0.18 ppm	Attainment
	Annual Average	0.030 ppm	Attainment
Federal	1 hour	0.1 ppm	Unclassified
	Annual average	0.053 ppm	Attainment
Sulfur Dioxide: Fuel combustion, chemical plants, sulfur recovery plants and metal processing			
State	1 hour	0.25 ppm	Attainment
	24 hours	0.04 ppm	Attainment
Federal	1 hour	0.075 ppm	Attainment
Respirable Particulate Matter (PM-10): Dust- and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays)			
State	24 hours	50 µg/m ³	Non-Attainment
	Annual arithmetic mean	20 µg/m ³	Non-Attainment

² CARB, 2009.

TABLE 3.3-1 AMBIENT AIR QUALITY SOURCES, STANDARDS AND ATTAINMENT STATUS IN THE BAY AREA

	AVERAGING TIME	STANDARD	BAY AREA ATTAINMENT STATUS
Federal	24 hours	150 µg/m ³	Unclassified
Fine Particulate Matter (PM-2.5): same sources as PM-10			
State	Annual arithmetic mean	12 µg/m ³	Non-Attainment
Federal	24 hours	35 µg/m ³	Non-Attainment
	Annual arithmetic mean	15 µg/m ³	Attainment
Lead: Lead smelters, battery manufacturing and recycling facilities			
State	30 Day Average	1.5 µg/m ³	Attainment
Federal	Calendar quarter	1.5 µg/m ³	Attainment

A pollutant is designated “unclassified” if the data available are incomplete and do not support a designation of attainment or non-attainment. In June 2004, the Bay Area was designated as a marginal nonattainment area for the national 8 hour ozone standard. The U.S. EPA lowered the 8 hour ozone standard from 0.08 ppm to 0.075 effective May 27, 2008. The EPA will issue final designations of the new standards by March 2010. This has not yet been updated on the BAAQMD website. Attainment of state nitrogen dioxide standard is based on the state 1-hour standard only as published by BAAQMD and CARB. Note: ppm = parts per million; and µg/m³ = micrograms per cubic meter. On June 2, 2010, the U.S. EPA established a new 1-hour SO₂ standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. The EPA also revoked both the existing 24-hour SO₂ standard of 0.14 ppm and the annual primary SO₂ standard of 0.030 ppm, effective August 23, 2010.

Source: BAAQMD, 2010, accessed December 9, 2010.

Criteria Air Pollutants: Local Air Quality

Existing and probable future air quality in the Planning Area can generally be inferred from ambient air quality measurements conducted by the BAAQMD at its nearby monitoring stations. While there are no monitoring stations in the Planning Area itself, the City of San Pablo has one monitoring station located at 1865 Rumrill Blvd. that measures criteria pollutants, including ozone, carbon monoxide, nitrogen dioxide, particulate matter and sulfur dioxide. Particulate matter is assessed in two size categories, particulate matter of 10 microns or less (PM-10) and fine particulate matter of 2.5 microns or less (PM-2.5). There is no BAAQMD or California Air Resources Board (CARB) station that monitors PM-2.5 concentrations that can be considered to be representative of concentrations in San Pablo. As particulate matter is a local pollutant, data from the Concord Treat Boulevard station (located approximately 20 miles east of San Pablo) would not be considered representative of actual concentrations in San Pablo. Therefore existing air quality with regard to particulate matter is only presented relative to PM-10.

Ozone

In the Bay Area, on-road motor vehicles are the major sources of ozone precursors, followed by other mobile sources, and petroleum and solvent evaporation. Ozone levels have been trending down in the Bay Area in general, and specifically in Contra Costa County, since 1988. Based on implementation of state and district programs and controls, this trend is expected to continue, though at a slower rate.³

Based on air quality data measured at the Rumrill Boulevard station, there have been no exceedances of the State one-hour ozone standard or the State and national eight-hour standards since 2005. The

³ CARB, 2009.

principal sources of ozone precursors, ROG and NO_x, in the Bay Area include on-road motor vehicles (approximately 35 percent for ROG and 48 percent for NO_x), other mobile sources (approximately 22 percent for ROG and 39 percent for NO_x), solvent evaporation (approximately 19 percent for ROG), fuel combustion (approximately 9 percent NO_x), cleaning and surface coating (approximately 9 percent ROG) and petroleum production and marketing (approximately 6 percent for ROG). **Table 3.3-2** summarizes ozone data for the past five years. Generally, peak ozone values have improved.

Carbon Monoxide

Table 3.3-2 also shows that local CO concentrations have been well below both state and federal standards, and continue to decline. This decline in CO concentrations is largely attributable to the use of reformulated gasoline in California. The Bay Area has been in attainment and has not experienced any exceedances of State and federal ambient CO standards in the last five years. The highest daily eight-hour CO averages measured at the Rumrill Boulevard station over the last five years is 1.40 parts per million (ppm), well below the State and national ambient air quality standard of 9 ppm. Currently, on-road motor vehicles are responsible for approximately 23 percent of the CO emitted within the San Francisco Bay Area and Contra Costa County.⁴ Total CO emissions are expected to decrease within the basin by approximately 40 percent between 2005 and 2020 primarily due to improved fuel mixtures.⁵

Particulate Matter

Finally, **Table 3.3-2** shows that local PM-10 concentrations have exceeded State (but not federal) 24-hour standards over two of the past five years. The annual average concentration has been over the State standard in each of the past four years for which it has been calculated. The Bay Area does experience exceedances of the State PM-10 and PM-2.5 standards on a fairly regular basis. As described above, site-specific information for PM-2.5 concentrations in San Pablo is not available.

Contributors to PM concentrations in the project area are primarily urban sources, such as dust suspended by vehicle traffic, and secondary aerosols formed by reactions in the atmosphere. Particulate concentrations near residential sources generally are higher during the winter, when more fireplaces are in use and meteorological conditions prevent the dispersion of directly emitted contaminants. Direct PM-10 emissions in the Bay Area are expected to increase by approximately 14 percent between 2005 and 2020.⁶ This increase would be primarily fugitive dust from increased vehicle miles traveled (VMT) as well as additional stationary sources (such as industrial activities) and area sources (such as construction and demolition, road dust, and other miscellaneous processes). Fugitive dust refers to particulate matter not emitted from a duct, tailpipe or stack, which becomes airborne due to the forces of wind, man's activity, or both. Activities that generate fugitive dust include vehicle travel over paved and unpaved roads, brake wear, tire wear, soil cultivation, off-road vehicles, any vehicles operating on open fields or dirt roadways, wind erosion of exposed surfaces, storage piles at construction sites, etc. PM-2.5 emissions in the Bay Area are projected to increase by about 5 percent over the same period,⁷ as the projected reduction in emissions from on-road and off-road engines would be more than offset by an increase in their activity and also an increase in industrial growth.

⁴ *Ibid.*

⁵ *Ibid.*

⁶ *Ibid.*

⁷ *Ibid.*

TABLE 3.3-2 AIR QUALITY DATA SUMMARY (2005 – 2009) FOR THE CITY OF SAN PABLO¹

	STANDARD	MONITORING DATA BY YEAR				
		2005	2006	2007	2008	2009
Ozone						
Highest 1-hour average (ppm)		0.066	0.061	0.074	0.084	0.043
Days above state 1-Hour Std.	0.9	0	0	0	0	0
Highest 8-hour average ppm		0.057	0.050	0.051	0.063	0.040
Days above state 8-hour Std.	0.07	0	0	0	0	0
Days above federal 8-Hour Std.	0.075	0	0	0	0	0
Carbon Monoxide						
Highest 8-hour average ppm		1.33	1.40	1.23	1.30	0.78
Days above state 8-hour Std.	9.0	0	0	0	0	0
Days above federal 8-Hour Std.	9.0	0	0	0	0	0
Respirable Particulate Matter (PM-10)						
Highest 24-hour average (µg/m³)		41.6	61.5	57.4	44.3	34.0
Estimated Days above state Std. ²	50	0	11.5	12	0	n/a
Estimated Days above federal Std.	150	0	0	0	0	n/a
Annual Average	20	21	21	21	21	n/a

¹ Data for Rumrill Avenue Monitoring Station in San Pablo.

² Measurements are usually collected every six days. Estimated days over the standard represent the estimated number of days the standard would have been exceeded if measurements were collected every day.

Notes: ppm means parts per million; $\mu\text{g}/\text{m}^3$ means micrograms per cubic meter; n/a means insufficient data available.

Source: California Air Resources Board <http://www.arb.ca.gov/adam/topfour/topfour1.php>

Toxic Air Contaminants

The ambient background of toxic air contaminants (TACs) is the combined result of many diverse human activities, including gasoline stations, automobiles, dry cleaners, industrial operations, hospital sterilizers, and painting operations. In general, mobile sources contribute more significantly to health risks than do stationary sources. The BAAQMD operates a network of monitoring stations that measure ambient concentrations of certain TACs that are associated with strong health-related effects and are present in appreciable concentrations in the Bay Area, as in all urban areas. The Rumrill Boulevard station also measures TACs. **Table 3.3-3** presents the measured concentrations and associated cancer risks at the Rumrill Boulevard station in San Pablo.

TABLE 3.3-3 AVERAGE AMBIENT CONCENTRATIONS OF CARCINOGENIC TACS

COMPOUND	CONCENTRATION		UNIT RISK ¹ (μG/M ³) ⁻¹	CANCER RISK (PER MILLION)
	(PPB)	(μG/M ³)		
Gaseous TACs ²				
Benzene	0.38	1.22	2.9 × 10-5	35.2
1,3-Butadiene	0.10	0.22	1.7 × 10-4	37.6
Carbon Tetrachloride	0.11	0.69	4.2 × 10-5	29.1
Ethylene dibromide	0.01	0.08	7.1 × 10-5	5.5
Ethylene dichloride	0.05	0.20	2.1 × 10-5	4.2
Perchloroethylene	0.03	0.21	5.9 × 10-6	1.2
Methylene Chloride	0.34	1.18	1.0 × 10-6	1.1
MTBE	0.63	2.27	2.6 × 10-7	0.6
Chloroform	0.02	0.10	5.3 × 10-6	0.5
Trichloroethylene	0.03	0.16	2.0 × 10-6	0.3
Total Risk for All TACs				115.3

¹ Unit Risk is the probability of contracting cancer if one is constantly exposed to an average concentration of one microgram per cubic meter of the specific substance. Multiplying the Unit Risk of a compound by its concentration in micrograms per cubic meter gives its cancer risk per million. These Unit Risk values are from the California Office of Environmental Health Hazard Assessment (OEHHA).

² All values are from BAAQMD 2003 monitoring data for the San Pablo station 1865-D Rumrill Blvd., San Pablo (BAAQMD, 2007).

Notes: ppb means parts per billion; $\mu\text{g}/\text{m}^3$ means micrograms per cubic meter.

Source: BAAQMD, 2010.

Regionally, ambient concentrations of TACs are similar throughout the urbanized portions of the Bay Area. Of the pollutants for which monitoring data are available, benzene and 1,3-butadiene (which are emitted primarily from motor vehicles) account for more than one-half of the average calculated cancer risk.⁸ Benzene levels have declined dramatically since 1996 with the advent of Phase 2 reformulated gasoline. The use of reformulated gasoline also appears to have led to significant decreases in 1,3-butadiene. Due largely to these observed reductions in ambient benzene and 1,3-butadiene levels, the calculated network average cancer risk has been significantly reduced in recent years. Based on 2003 ambient monitoring data, the calculated inhalation cancer risk is 162 in one million, which is 46 percent less than what was observed in 1995.⁹

However, the risks described above do not include the entire cancer risk from exposure to airborne TACs, mainly because an important TAC, diesel particulate matter (DPM), is not included in the monitoring data. DPM is a mixture of over 30 different toxic chemicals, most of which are not part of the TAC measurement system. CARB has estimated Statewide levels of DPM by relying on measurements of surrogate substances related to diesel exhaust, such as carbon black. From these Statewide measurements, CARB has determined that risks from exposure to DPM make up about 70 percent of the total risks from

⁸ BAAQMD, 2006.

⁹ *Ibid.*

TACs.¹⁰ Applying this factor to the Bay Area value of 162 in a million (above) yields a combined cancer risk estimate of approximately 540 in a million.

Odors

Another air quality issue of concern in the Bay Area is nuisance impacts from odors. Objectionable odors may be associated with a variety of pollutants. Common sources of odors include wastewater treatment plants, landfills, composting facilities, refineries and chemical plants. Odors rarely directly affect health, but they can be very unpleasant and lead to distress and concern over possible health effects among the public, generating citizen complaints to local governments. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors. No odor nuisances were specifically identified by the public or environmental documents reviewed in relation to the Planning Area.

Regulatory Setting

Regulation of air pollution is achieved through both national and state ambient air quality standards and emissions limits for individual sources of air pollutants.

Definitions

Attainment Status

Under amendments to the federal Clean Air Act, EPA has classified air basins or portions thereof, as either “attainment” or “nonattainment” for each criteria air pollutant, based on whether or not the national standards have been achieved. The California Clean Air Act, patterned after the federal Clean Air Act, also designates areas as “attainment” or “nonattainment” for State standards. Thus, California has two sets of attainment/nonattainment designations: one with respect to national standards and one with respect to State standards.

Criteria Air Pollutants

As required by the federal Clean Air Act passed in 1977, the EPA has identified six criteria air pollutants that are pervasive in urban environments and for which state and national health-based ambient air quality standards have been established. The EPA identifies these pollutants as criteria air pollutants because the agency has regulated them by developing specific public health- and welfare-based criteria as the basis for setting permissible levels. Ozone, CO, NO₂, SO₂, PM-10 and PM-2.5, and lead are the six criteria air pollutants. In addition, California has established State ambient air quality standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles.

- **Ozone.** Ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and that can cause substantial damage to vegetation and other materials. Ozone is not emitted directly into the atmosphere, but is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG) and nitrogen oxides (NO_x). ROG and NO_x are known as precursor compounds for ozone. Significant ozone production generally requires ozone precursors to be present in a stable atmosphere with strong sunlight for approximately three hours. Ozone is a regional air pollutant because it is not emitted directly by sources, but is formed downwind of sources of ROG and NO_x under the influence of

¹⁰ BAAQMD, undated.

wind and sunlight. Ozone concentrations tend to be higher in the late spring, summer, and fall, when long sunny days combine with regional subsidence inversions to create conditions conducive to the formation and accumulation of secondary photochemical compounds, like ozone. Ground level ozone in conjunction with suspended particulate matter in the atmosphere leads to hazy conditions generally termed as “smog.”

- **Carbon Monoxide (CO).** CO, a colorless and odorless gas, is a non-reactive pollutant that is a product of incomplete combustion and is mostly associated with motor vehicle traffic. High CO concentrations develop primarily during winter when periods of light wind combine with the formation of ground level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased CO emission rates at low air temperatures. When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces the oxygen-carrying capacity of the blood. This results in reduced oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease or anemia.
- **Nitrogen Dioxide (NO₂).** NO₂ is an air quality concern because it acts a respiratory irritant and is a precursor of ozone. NO₂ is produced by fuel combustion in motor vehicles, industrial stationary sources, ships, aircraft, and rail transit.
- **Sulfur Dioxide (SO₂).** SO₂ is a combustion product of sulfur or sulfur-containing fuels such as coal and oil, which are restricted in the San Joaquin Valley. Its health effects include breathing problems and may cause permanent damage to lungs. SO₂ is an ingredient in acid rain, which can damage trees, lakes and property, and can also reduce visibility.
- **Particulate Matter.** PM-10 and PM-2.5 consist of particulate matter that is 10 microns or less in diameter and 2.5 microns or less in diameter, respectively. (A micron is one-millionth of a meter). PM-10 and PM-2.5 represent fractions of particulate matter that can be inhaled into the air passages and the lungs and can cause adverse health effects. Particulate matter in the atmosphere results from many kinds of dust- and fume-producing industrial and agricultural operations, fuel combustion, and atmospheric photochemical reactions. Some sources of particulate matter, such as demolition and construction activities, are more local in nature, while others, such as vehicular traffic, have a more regional effect. Very small particles (PM-2.5) of certain substances (e.g., sulfates and nitrates) can cause lung damage directly, or can contain adsorbed gases (e.g., chlorides or ammonium) that may be injurious to health. Particulates also can damage materials and reduce visibility.
- **Lead.** Leaded gasoline (which has been phased out), paint (houses, cars), and manufacture of lead storage batteries have been the primary sources of lead released into the atmosphere. Lead has a range of adverse neuron-toxic health effects for which children are at special risk. Some lead-containing chemicals cause cancer in animals.

Hazardous Air Pollutants

The federal Clean Air Act defines hazardous air pollutants as those which may reasonably be anticipated to result in increased deaths or serious illness and which are not already regulated. Hazardous air pollutants are similar to State-designated TACs.

Toxic Air Contaminants

The California Health and Safety Code defines TACs as air pollutants that may cause or contribute to an increase in mortality or in serious illness, or that may pose a present or potential hazard to human health. TACs are less pervasive in the urban atmosphere than criteria air pollutants, but are linked to short-term (acute) or long-term (chronic and/or carcinogenic) adverse human health effects. There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes, commercial operations (e.g., gasoline stations and dry cleaners), and motor vehicle exhaust. The current list of TACs includes approximately 200 compounds, including all of the toxics identified under federal law plus additional compounds, such as particulate emissions from diesel-fueled engines, which were added in 1998.

- **Diesel particulate matter (DPM).** DPM has been identified by CARB as a TAC and represents 70 percent of the known potential cancer risk from air toxics in California. DPM is an important contributor to particulate matter air pollution. Particulate matter exposure is associated with premature mortality and health effects such as asthma exacerbation and hospitalization due to aggravating heart and lung disease.
- **Asbestos.** In 1986, CARB identified asbestos as a TAC based on its classification as a known cancer causing pollutant. In that process, CARB found that no threshold exposure level could be identified below which adverse health effects would not be expected. Asbestos occurs naturally in ultramafic rock (which includes serpentine). When this material is used in unpaved surfacing and disturbed by vehicles and other means, dust containing asbestos can be generated. Serpentine soils have been identified in Contra Costa County, but not within the Planning Area.

Sensitive Receptors

Some receptors are considered more sensitive than others to air pollutants. The reasons for greater than average sensitivity include pre-existing health problems, proximity to emissions source, or duration of exposure to air pollutants. Land uses such as schools, children's day care centers, hospitals, and convalescent homes are considered to be more sensitive than the general public to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress and other air quality-related health problems. Parks and playgrounds are considered moderately sensitive to poor air quality because persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality; however, exposure times are generally far shorter in parks and playgrounds than in residential locations and schools, which typically reduces overall exposure to pollutants. Residential areas are considered more sensitive to air quality conditions than commercial and industrial areas because people generally spend longer periods of time at their residences, resulting in greater exposure to ambient air quality conditions.

The location of land uses where sensitive receptors are present should be carefully evaluated. State law restricts the siting of new schools within 500 feet of a freeway, urban roadways with 100,000 vehicles/day, or rural roadways with 50,000 vehicles with some exceptions. CARB has published advisory recommendations on siting new sensitive land uses, with the same guidelines as the state school limitation.¹¹

¹¹ CARB, 2005.

Vehicle Miles Traveled (VMT)

Vehicle miles traveled (VMT) is a term used throughout this EIR and refers to the number of vehicle miles traveled within a specified geographic area during a given period of time. One vehicle traveling one mile constitutes one vehicle mile, regardless of the vehicle's size or the number of passengers. VMT is a common measure of roadway use and economic activity. VMT per capita is the total VMT divided by the population of the geographic area; basically, it is a measure of the vehicle miles each person travels on average. Per capita VMT data correlate with various economic and lifestyle factors such as auto ownership rates, levels of women in the workforce, teen driving, and other land use patterns.

Federal Regulations

The U.S. Environmental Protection Agency (EPA) is responsible for implementing the programs established under the federal Clean Air Act. The Clean Air Act establishes the framework for federal air pollution control, including direction for the EPA to develop national emission standards for hazardous air. **Table 3.3-1** provides the 2008 Ambient Air Quality Standards for the State of California and federal standards. If an area does not meet the federal standard for a pollutant, the state is required to prepare and adopt State Implementation Plans (SIPs) to show how the standards will be attained.

The federal Clean Air Act also outlines requirements for ensuring that federal transportation plans, programs, and projects conform to the SIP's purpose of eliminating or reducing the severity and number of violations of the national ambient air quality standards. As such, Regional Transportation Plans (RTPs) and Transportation Improvement Programs (TIPs) that require federal funding or approval must be included in the SIP emissions budget.

National Emission Standards for Hazardous Air Pollutants developed by the EPA in accordance with Title III of the 1990 federal Clean Air Act Amendments regulate "major source" facilities that emit large quantities of TACs. These rules require that emissions be reduced using the Maximum Achievable Control Technology (MACT).

State Regulations

In California, the CARB is responsible for establishing and reviewing California ambient air quality standards, developing and managing the California SIP, securing approval of the SIP from the EPA, and identifying TACs. The California Clean Air Act of 1988 focuses on attainment of the State ambient air quality standards, which, for certain pollutants and averaging periods, are more stringent than the comparable federal standards. Local and regional air districts are required to prepare and adopt air quality attainment plans if the district violates the State standards.

The State of California's regulatory efforts regarding the identification and control of TACs are embodied in AB 1807, the Tanner Bill (effective 1984). The CARB identifies the most important toxic pollutants by considering risk of harm to public health, amount or potential amount of emissions, manner of usage of the substance, its persistence in the atmosphere, and its concentration in the outdoor air. CARB also regulates mobile emissions sources in California, such as construction equipment, trucks, and automobiles, and oversees the activities of air quality management districts, which are organized at the county or regional level. All new diesel-powered engines and vehicles sold in California are required to meet both federal and state emissions certification requirements. The Air Toxics 'Hot Spots' Act (AB 2588) was enacted in 1987 with the objective of collecting information concerning industrial emissions of TACs and making the information available to the public.

Regional Regulations

The BAAQMD is the regional agency with regulatory authority over emission sources in the Bay Area. An air quality management district is primarily responsible for regulating stationary emissions sources at facilities within its geographic areas and for preparing the air quality plans required under the federal Clean Air Act and California Clean Air Act. BAAQMD also maintains the regional Toxics Emission Inventory.

Ozone

BAAQMD has prepared both federal and State air quality plans to bring the San Francisco Bay Area Air Basin (SFBAAB) into attainment with ozone standards. The 2001 Ozone Attainment Plan describes the Bay Area's strategy for compliance with the federal 1-hour ozone standard. Although the US EPA revoked the federal one-hour ozone standard on June 15, 2005, the emission reduction commitments in the plan are still being carried out by the BAAQMD. At the time of the NOP, the Bay Area 2005 Ozone Strategy was the current adopted plan describing the strategy for compliance with the state 1-hour ozone standard. In September 2010, BAAQMD adopted the 2010 Bay Area Clean Air Plan, which replaces the Bay Area 2005 Ozone Strategy. This plan is the most current triennial update to the 1991 Clean Air Plan. This plan includes a control strategy to reduce ozone, particulate matter, air toxics, and Greenhouse Gas Emissions (GHGs) in a single, integrated plan.

Carbon Monoxide

The 1996 Carbon Monoxide Redesignation Request and Maintenance Plan for Ten Federal Planning Areas was developed by the air districts with jurisdiction over ten planning areas (including the BAAQMD) to ensure continued attainment of the federal carbon monoxide standard. In June 1998, the EPA approved this plan and designated the ten areas as being in attainment. The maintenance plan was revised most recently in 2004.

Particulate Matter

The 2010 Bay Area Clean Air Plan includes a control strategy to reduce particulate matter. In addition, there is a schedule for bringing the Bay Area into compliance, the Particulate Matter Implementation Schedule of 2005. In 2003, SB 656 mandated compliance with state PM standards in order to reduce public exposure to the health risks related to PM. BAAQMD has also developed additional regulations to reduce particulate emissions, including from stationary internal combustion engines (Regulation 9-8), commercial broiling operations (Regulation 6-2), and residential wood-burning devices (Regulation 6-3).¹²

Toxic Air Contaminants

TACs do not have ambient standards below which no adverse health effects are assumed. Since 1987, BAAQMD has had a program to describe, control, and where possible, eliminate public exposure to airborne toxic compounds from stationary sources. The program elements include preconstruction review processes for new and modified TAC sources; the Air Toxics Hot Spots Program which identifies and monitors industrial and commercial facilities that emit TACs; implementation of control measures to reduce emissions from source categories of TACs; maintenance of the TAC air emissions inventory;

¹² BAAQMD, 2010b.

ambient TAC concentration monitoring; and the Community Air Risk Evaluation (CARE) Program which determines the impacts of TACs at a community level.

BAAQMD has established specific public notification measures for various levels of health risks associated with a facility's routine TAC emissions as determined in a Health Risk Assessment. The "individual cancer risk" is the likelihood that a person exposed to concentrations of TACs from a facility over a 70-year lifetime will contract cancer, based on the use of standard risk assessment methodology established by the Air Toxics Hot Spots Program.

1. Level 1 Risks: Between 10 and 100 in one million
2. Level 2 Risks: Between 100 and 500 in one million
3. Level 3 Risks: Greater than 500 in one million

BAAQMD Regulation 2, Rule 5 New Source Review of Toxic Air Contaminants implements State guidelines and control requirements for new and modified stationary sources. If the emissions from a stationary source exceed trigger levels, the source must use Best Available Control Technology (BACT) to minimize TAC emissions.

In addition, demolition of buildings constructed prior to 1980 which often involved the use of hazardous materials such as asbestos in insulation, fire retardants, or building materials (floor tile, roofing, etc.) and lead-based paint must be carried out very carefully because airborne asbestos fibers and lead dust pose a serious health threat. The demolition, renovation and removal of asbestos-containing building materials would be subject to the requirements of BAAQMD Regulation 11, Rule 2.

Odors

All odor sources are subject to the requirements of the BAAQMD Regulation 7 – Odorous Substances, which establishes general limitations on odorous substances and specific emission limitations on certain odorous compounds, in addition to the requirements of local nuisance ordinances.

IMPACT ANALYSIS

Significance Criteria

Implementation of the proposed Plan would have a potentially significant adverse impact if it would:

- Criterion 1:** Cause the rate of increase in VMT or vehicle trips with implementation of the proposed Specific Plan to exceed the rate of increase in population with implementation of the Plan for the years covered by the proposed Specific Plan.
- Criterion 2:** Be inconsistent with or fail to implement the Air Quality Plan Transportation Control Measures (particularly those for which local governments are implementing agencies).

Criterion 3: Fail to identify or establish goals, policies, objectives, and/or overlay or buffer zones for existing and proposed land uses that would emit odors or toxic air contaminants in order to minimize potential impacts of these emissions on sensitive receptors.¹³

Methodology and Assumptions

Criterion 1 is assessed based on existing population and VMT and projected population and VMT in the future under the proposed Specific Plan and assuming the adoption of the San Pablo 2030 General Plan. For this criterion, the analysis uses citywide VMT and population growth because the transportation model was run for the city as a whole. This approach is consistent with the understanding that transportation patterns are regional and cumulative in nature, and that a more localized model run would not necessarily improve the accuracy of the results. Rather, changes in VMT are a result of changes in population and jobs within the corridor itself, as well as throughout the city, and throughout the region. Likewise, potential criteria pollutant emissions are a result of VMT are also regional and cumulative in nature, and impacts cannot be isolated to just one transportation corridor.

Criterion 2 is assessed based on BAAQMD guidance which identifies three tests to determine consistency. These Criterion 2 consistency tests are as follows:

1. Does the Specific Plan support the primary goals of the 2010 Bay Area Clean Air Plan? which are:
 - a. Attain air quality standards;
 - b. Reduce population exposure and protect public health in the Bay Area; and
 - c. Reduce greenhouse gas emissions and protect the climate.
2. Does the Specific Plan include applicable control measures from the Clean Air Plan (CAP)? The 2010 CAP contains 55 control measures to reduce air pollution. Consistency with greenhouse gas reduction measures of the CAP are addressed in the Greenhouse Gas and Climate Change Section of this EIR.
3. Does the Specific Plan disrupt or hinder implementation of any CAP control measures? BAAQMD identified examples of how a Plan may cause the disruption or delay of control measures, such as a project which may preclude an extension of a transit line or bike path or proposes excessive parking beyond parking requirements.

Criterion 3 is assessed based on BAAQMD guidance which state that the thresholds of significance for Plans with regard to community risk and hazard impacts are inclusion of a land use diagram that identifies overlay zones around existing and planned sources of TACs and overlay zones of at least 500 feet around each side of freeways and high volume roadways. Additionally, the Plan must identify goals, policies and objectives to minimize potential impacts and create overlay zones for sources of TACs and receptors.

¹³ BAAQMD, 2010c.

Impact Summary

PROPOSED PROJECT IMPACT	MITIGATION MEASURE	SIGNIFICANCE AFTER MITIGATION
Implementation of the proposed San Pablo Avenue Specific Plan could result in an increase in VMT at a rate that would exceed the rate of population increase within the City.	None available	Significant and Unavoidable
Implementation of the proposed San Pablo Avenue Specific Plan would result in an implementing document that is consistent with and implements the goals and Control Measures of the Clean Air Plan.	None required	Less than significant
Implementation of the proposed San Pablo Avenue Specific Plan could result in an implementing document that does not include a land use diagram identifying overlay zones around existing and planned sources of toxic air contaminants (TACs) or odors, and address these sources and sensitive receptors in its goals, policies and objectives.	None required	Less than significant

Impacts and Mitigation Measures

Criteria Pollutant Impact

3.3-1 Implementation of the proposed San Pablo Avenue Specific Plan could result in an increase in VMT at a rate that would exceed the rate of population increase within the City. (*Significant, Unavoidable*)

BAAQMD guidance states that “due to the [Bay Area’s] nonattainment status for ozone and PM, and the cumulative impacts of growth on air quality [long-range] plans almost always have significant unavoidable adverse air quality impacts.” To assess this possibility related to the proposed Specific Plan, the increases in VMT and population envisioned under the Specific Plan were calculated and compared. The VMT were modeled citywide assuming the adoption and implementation of the San Pablo 2030 General Plan, as well as the proposed Specific Plan, primarily because air quality impacts are a regional, cumulative concern. The projections of daily VMT generated in the future condition with proposed Specific Plan (950,000) indicate that implementation of the proposed Plan would result in an approximately 42 percent increase in VMT from the baseline (year 2000) total of 670,000 (see **Table 3.3-4**). Comparatively, population projections in the future condition with the proposed Specific Plan (34,950) indicate that implementation of the proposed Plan would increase population from the 2000 baseline of 30,215 by 15.7 percent (see **Table 3.3-4**). Because the rate of increase in VMT would exceed the rate of increase in population, the proposed Plan must be found to have a significant adverse impact relative to criteria pollutants.

TABLE 3.3-4 CHANGE IN VMT COMPARED TO POPULATION, CITYWIDE¹

	2000 BASELINE ²	SPECIFIC PLAN (2030)	CHANGE
Vehicle Miles Traveled (VMT)	670,000	950,000	41.8%
Population	30,215	34,950	15.7%

¹ VMT are modeled citywide due to the regional and cumulative nature of transportation patterns and air quality issues. Buildout under the proposed Specific Plan thus assumes buildout of the assumed to be adopted San Pablo 2030 General Plan, as well as other regional growth and development that might contribute to VMT and air quality issues.

² Baseline VMT data is based on data from the year 2000, therefore for this analysis also considers population growth from 2000, rather than from 2010.

Source: Dyett & Bhatia, 2010; Dowling Associates, 2010; ABAG Projections, 2009.

Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

- OSC-I-17 Prepare a Greenhouse Gas Emissions Reduction Plan that focuses on feasible actions the City can take to minimize the adverse impacts of growth and development on climate change and air quality. The plan would include, but not be limited to:
- A baseline inventory of all known or reasonably discoverable sources of greenhouse gases (GHGs) that currently exist in the city and sources that existed in 1990.
 - A projected inventory of the GHGs that can reasonably be expected to be emitted in the city in the year 2030 in accordance with discretionary land use decisions pursuant to this General Plan update and foreseeable communitywide and municipal operations.
 - A target for the reduction of emissions from those identified sources reasonably attributable to the City's discretionary land use decisions and municipal operations, in line with site goals and targets established by the Air Resources Board.
 - A list of feasible GHG reduction measures whose purpose shall be to meet the established local reduction target, including energy conservation and "green building" requirements in municipal buildings and private development.
- OSC-I-20 Require developers to use best management practices (BMPs) to reduce particulate emissions and dust associated with construction activities as a condition for approval of subdivision maps, site plans, and grading permits. These BMPs include, but are not limited to, regular materials and vehicle tire watering, covering, and dust prevention measures during clearing, grading, earth-moving, or excavation operations.
- OSC-I-21 Provide incentives for the installation of EPA-certified wood heaters or approved wood-burning appliances; list permitted and prohibited fuels, and create a "no burn" policy on days when air quality is particularly poor.
- OSC-I-22 Support CCTA's efforts to address climate change and air quality issues on a regional basis as reflected in the 'Principles for Collaborative Development of Sustainable Communities Strategies in Contra Costa County'.

OSC-I-23	Continue to support the Bay Area Air Quality Management District's efforts to monitor and control air pollutants from stationary sources.
OSC-I-24	Continue to work with surrounding jurisdictions and agencies to establish parallel air quality programs and implementation measures, as necessary, to improve air quality standards.
OSC-I-25	Support non-polluting transportation modes and opportunities (i.e. pedestrian, bike, carpooling opportunities and public transit improvements) as specified in the Circulation Element.
OSC-I-26	Promote energy efficiency in architectural design for new construction including building orientation to take advantage of wind and sun, and site design features (such as clustering of uses), pre-wiring for optional photovoltaic or solar heating systems, etc.
C-G-10	Promote efficient use of existing transportation facilities through the implementation of transportation demand management concepts.
C-I-37	Establish travel demand management programs to reduce peak-hour traffic congestion and help reduce regional vehicle miles traveled.
HEA-I-6	Establish an incentive system to encourage land dedication and park development beyond the minimum City requirements. Incentives may include density bonuses, and increased building height at appropriate locations. Tie incentive program to priority areas for parks development.
HEA-I-11	Support the use of clean fuel, "climate friendly" vehicles in order to reduce energy use, energy costs, and greenhouse gas emissions by residents, businesses, and city government activities.
HEA-I-12	Use zoning and redevelopment programs to establish incentives for locating healthy food grocery stores at the center of neighborhoods and to increase communitywide healthy food access. Approaches may include: • Within the Zoning Ordinance, clearly define "healthy food grocery stores" in order to ensure that businesses meeting that description have access to incentives developed with them in mind. Recommended criteria include: 1) dedicates at least 50 percent of retail space for a general line of food and non-food grocery products intended for home preparation, consumption, and use; 2) dedicates at least 30 percent of retail space for perishable goods that include dairy, fresh produce, fresh meats-poultry-fish, and frozen foods; and 3) dedicates at least 500 square feet of its retail space for fresh produce; • Ensure sites are made available that could be developed as healthy food grocery stores (with a focus on neighborhood areas with little or no access); • Provide expedited permit processing for healthy food grocery store development;

- Leverage City staff time, redevelopment funds, and other economic development grant money to help potential new healthy food grocers to consolidate parcels and/or make necessary improvements;
 - Encourage large healthy food grocers to offer shuttle service and home delivery; and
 - Develop standards and incentives flexible enough to accommodate “alternative” grocery stores which use less space, require less parking, and focus on the day-to-day needs of nearby residents.
- C-I-13 Expand and maintain a safe and comprehensive bicycle system that connects the City’s neighborhoods to regional bicycle routes.
- C-I-14 Acquire land for new bicycle routes along Wildcat Creek, as shown in Figure 5-4 of the General Plan, only if land owners are willing to sell such land or provide easements for public access. If landowners object to route designations, seek alternative routes and amend Bicycle Map accordingly.
- C-I-15 Require the provision of bicycle parking and related facilities in new employment-generating development to facilitate multi-modal commute choices.
- C-I-16 Evaluate multimodal level of service (MMLOS) qualitatively, consistent with the criteria in Table 5.2-4, for the following routes:
- For bicyclists, evaluate the routes shown on Figure 5-4 of the General Plan, to determine necessary improvements. Bicycle LOS “C” standard is the goal for these streets.
 - For pedestrians, evaluate streets within Pedestrian Priority Zones (e.g. San Pablo Avenue, 23rd Street). As shown on Figure 5-1 of the General Plan, to determine necessary improvements. In these zones, the Pedestrian LOS “C” is the goal.
- C-I-17 Adopt a Bicycle Master Plan to enhance bicycle circulation and planning, based on the route network in Figure 5-4 of the General Plan and the Contra Costa Countywide Bicycle and Pedestrian Plan.
- C-I-18 Use brightly-colored paint or a one-foot buffer strip along bicycle routes to provide a visual signal to drivers to watch out for bicyclists and nurture a “share the lane” ethic. Start with areas of town where automobile-bicycle collisions have occurred in the past, based on data from the Statewide Integrated Traffic Records System maintained by the California Highway Patrol.
- C-I-19 Work with the City of Richmond and Contra Costa County to develop safe and clearly marked pedestrian and bicycle linkages from downtown San Pablo to the Bay Trail. Improvements should connect Contra Costa College to the Wildcat Creek bikeway west of Davis Park, and also connect the bikeway at Davis Park to Alvarado Park east of the city. (See Figure 8-1 of the General Plan.)

- C-I-20 Complete and enhance the pedestrian network with an interconnected system of walkways, continuous sidewalks on both sides of the street, and pedestrian crossings.
- C-I-21 To maintain walkability and pedestrian safety, consider reducing curb-to-curb road widths and employing roadway design features such as islands, pedestrian refuges, and pedestrian count-down signals.
- C-I-22 Provide pedestrian facilities that are accessible to persons with disabilities and ensure that roadway improvement projects address accessibility and universal design concepts.
- C-I-23 In mixed-use areas or other areas with high pedestrian traffic, provide mid-block pedestrian crossings, where feasible, to create more direct walking routes and slow vehicle speeds.
- C-G-9 *Foster practical parking solutions to serve community needs while avoiding excessive amounts of surface parking that disrupt the urban fabric of the city.*
- C-I-31 Amend the Zoning Ordinance to establish “green” parking design standards that have multiple benefits, such as shared parking for mixed use projects, photovoltaic panels on parking structures to generate energy for parking lot lighting, landscaping and trees in surface parking, and pervious paving to improve groundwater recharge and promote innovative surface parking design that avoids the appearance of a “sea of asphalt” and reduces environmental impacts. Strategies will include, but are not limited to:
- Require parking to be provided behind buildings, wherever feasible;
 - Promote the use of time, motion-sensing, and/or solar powered parking lot lights or security lights, wherever feasible;
 - Establish specific standards for perimeter landscaping, including the type and coverage required along the edges of surface parking areas adjacent to streets;
 - Require a minimum number of trees per parking stall in surface parking areas (e.g. 1 per 8 stalls for double-loaded bays) to provide shade, and reduce urban heat island effects;
 - Separate pedestrian pathways from car lanes where possible;
 - Promote the use of porous paving and a variety of drainage features according to the site; and
 - Restrict use of vacant lots as vehicle parking and outdoor storage of commercial equipment, construction equipment, and similar items unless screened from view from adjacent streets.

The following policies and programs are from the Housing Element:

- H-4: Promote the development of energy efficient homes to help protect the environment and lower energy costs for San Pablo residents.

Program H-2.1.8: Provide by right reductions from the standard parking requirements for new residential projects that are located on San Pablo Avenue and have frequent transit service.

H-4.1: Encourage the incorporation of energy conservation design features in existing and future residential developments to conserve resources and reduce housing costs.

Program H-4.1.1: Create an “Energy Improvement and Weatherization Program” to offer rehabilitation loans to extremely low- to moderate-income homeowners and seniors to improve the energy efficiency of their residence and/or replace existing energy inefficient appliances.

Program H-4.1.2: Promote the use of solar energy and other environmentally sound, energy efficient methods for heating and cooling homes, consistent with adopted building, mechanical and plumbing codes.

Program H-4.1.3: Require developers to complete a GreenPoint Checklist, Leadership in Energy and Environmental Design Checklist (LEED) or equivalent, as part of their submittal to the Planning Division and encourage them to attain the equivalent of LEED Silver certification or better.

Program H-4.1.4: Consider a Green Building Design Ordinance that offers density, FAR, and height bonuses for private projects that meet certain green building thresholds.

Program H-4.1.5: Facilitate environmentally sensitive construction practices by:

- Restricting the use of chloroflourocarbons (CFCs), hydrochloroflourocarbons (HCFCs), and halons in mechanical equipment and building materials;
- Promoting the use of products that are durable and allow efficient end-of-life disposal (recyclable);
- Requiring large project applicants to submit a construction waste management plan for City approval;
- Promoting the use of locally or regionally available materials; and
- Promoting the use of cost-effective design and construction strategies that reduce resource and environmental impacts.

Proposed Specific Plan Policies that Reduce the Impact

The proposed Specific Plan includes the following policies related to increasing pedestrian activity in the San Pablo Avenue corridor:

3-G-4 *Provide continuous pedestrian sidewalks and safe bike travel routes throughout the Planning Area and within development projects.*

3-G-5 *Improve pedestrian and bicycle amenities throughout the Planning Area to encourage walking and bicycle trips along the corridor.*

- 3-G-6 *Ensure that private development integrates pedestrian and bicycle connections to transit, open space, and key destinations.*
- 3-I-12 Create internal streets within new mixed-use developments that maximize safe and efficient pedestrian circulation by incorporating design elements such as wider landscaped sidewalks, reduced vehicular speed limits, pedestrian-oriented lighting, bulb-outs, curb extensions at intersections, high visibility crosswalks, and on-street parking to buffer pedestrians from moving vehicles.
- 3-I-13 Provide mid-block connections through new developments that accommodate bicyclists and pedestrians, or all modes, to facilitate access to transit stops and major public destinations.
- 3-I-14 Consider connections and extensions to future bike and walking trails in anticipation of future amenities and improvements at Wildcat, San Pablo, and Rheem creeks, and potential park sites.
- 3-I-15 Enhance pedestrian connections and amenities and prioritize pedestrian access and circulation in Pedestrian Priority Zones.

Additional policies relating to the pedestrian network are also included in the Specific Plan under Chapter 4, Section 4.1: Streetscape Design.

The proposed Specific Plan includes the following policies related to increasing bicycle activity in the San Pablo Avenue corridor:

- 3-I-16 Provide signage that clearly and explicitly indicates connections to local and regional bicycle facilities.
- 3-I-17 Provide secure short- and long-term bicycle parking at transit stops.
- 3-I-18 Encourage provision of bike racks and locking systems in all multi-family residential developments, multi-tenant retail and office developments, and government and institutional uses.
- 3-I-19 Incorporate a one-foot buffer, distinguished through color or paving, between the bicycle lane and the adjacent travel lane along the length of San Pablo Avenue, to enhance visibility and safety for bicyclists.
- 3-I-20 Maintain bike lanes along San Pablo Avenue, including pavement condition as well as clearing of debris.

Recognizing the uncertainty around vehicle miles generated in the San Pablo Avenue corridor into the future, the proposed Specific Plan offers a particular set of policies designed to help San Pablo implement various transportation demand management solutions in the Planning Area:

- 3-G-13 *Encourage use of Transportation Demand Management strategies to minimize traffic contributions from new and existing development.*
- 3-G-14 *Promote public and privately-run alternative modes of transit, such as shuttles, along the San Pablo Avenue corridor.*
- 3-I-45 Encourage and support carpooling and vanpooling by providing preferential parking at employment sites for carpools and vanpools.

- 3-I-46 Explore the feasibility of shuttles. This could include:
- As part of a comprehensive transportation demand management strategy, employer-based shuttles that provide service to and from the Richmond and El Cerrito Del Norte BART stations for new large developments. At a minimum, employer shuttles should operate during the morning and evening peak periods. Shuttle schedules should be timed to facilitate transfer from northbound BART trains in the morning and southbound BART trains in the evening.
 - A shuttle program to serve San Pablo Avenue that links Mission Plaza to South San Pablo Avenue as well as Contra Costa College, College Center, City Hall, Circle S, the Casino, and Doctor's Medical Center. This could be similar to the free shuttle in Oakland along Broadway that connects portions of Downtown Oakland and is funded by contributions from recent developments and a grant from the Bay Area Air Quality Management District.
 - A shuttle that runs between commercial centers located in neighboring cities, including Pinole, El Cerrito, and Richmond (to the Hilltop Mall, for example).
- 3-I-47 Work with the West Contra Costa Transportation Advisory Committee TDM Program Manager to promote the ridesharing and Guaranteed Ride Home Program provided through 511 Contra Costa, the comprehensive transportation demand management program for Contra Costa County.
- 3-I-48 Work with Contra Costa College to develop transportation demand management strategies to reduce single-occupancy vehicle trips to the campus, through use of improved bus and shuttle services, as well as improved pedestrian and bicycle connectivity from nearby student housing.
- 3-I-49 As development occurs within the Planning Area, require transportation demand management strategies as part of the approval process, including:
- Provisions for transit passes
 - Carsharing
 - Parking cash out
- 3-I-50 Provide incentives to existing employers and/or developers to develop transportation demand management programs, such as reduced parking requirements.
- 3-I-51 Draft and adopt a Commuter Benefit Ordinance to allow employers and workers citywide to tap into an existing federal program to pay for transit passes and vanpool. This would be similar to ordinances in cities of Richmond, San Francisco, and Berkeley.

A well implemented TDM plan can reduce VMT by up to 15 percent overall.¹⁴ However, this would still be insufficient to close the gap between predicted VMT growth and population growth.

¹⁴ CAPCOA, 2010. This CAPCOA report notes that commute trip reduction, a strategy similar to TDM, can have up to a 25 percent reduction in work trip VMT, or a 15 percent reduction in overall VMT.

Mitigation Measures

The BAAQMD CEQA Guidelines state, with regard to mitigation of plan impacts, “Plans are the appropriate place to establish community-wide air quality policies that reinforce regional air quality plans. Plans present opportunities to establish requirements for new construction, future development, and redevelopment projects within a community that will ensure new or revised plans do not inhibit attainment of State and national air quality standards and actually assist in improving local and regional air quality. Binding, enforceable mitigation measures identified through the environmental review process should be incorporated as policies and implementation programs within the plan to the greatest extent feasible. Ideally, air quality related goals, policies, performance measures, and standards should be incorporated within the context of the proposed project itself, rather than introduced as corrective actions within the EIR.”¹⁵

In terms of mitigation measures identified by the BAAQMD in its CEQA Guidelines, both the assumed to be adopted General Plan and the proposed Specific Plan are premised on infill development, as opposed to new development in areas not currently built upon. The City of San Pablo is a mature community, without large undeveloped areas or large areas planned for wholesale redevelopment. Because future land use changes in the Planning Area are limited to incremental alterations and infill development, the proposed Project does not offer large-scale changes in the city’s land use pattern. Additionally, San Pablo is nearly completely surrounded by existing urban uses.

In light of this context, as discussed in detail in the EIR on the San Pablo 2030 General Plan (assumed to be adopted), the General Plan already incorporates a number of strategies recommended by the BAAQMD for reducing automobile travel, including increased bicycle parking and pedestrian and bicycle enhancements to encourage alternatives to automobile travel, including the adoption of a Bicycle Master Plan (Policies C-I-13 through C-I-23), calls for “foster[ing] practical parking solutions to serve community needs while avoiding excessive amounts of surface parking that disrupts the urban fabric of the city,” including shared parking: (Policy C-G-9 and Policy C-I-31), and proposes locating grocery stores in the center of neighborhoods (Policy HEA-I-12).¹⁶ Additionally, the Housing Element proposes reduced parking requirements for transit-accessible development on San Pablo Avenue (Program H-2.1.8), and calls for consideration of a Green Building Ordinance “that offers density, FAR, and height bonuses for private projects that meet certain green building thresholds” (Program H-4.1.4). The General Plan also promotes energy-efficient homes, energy conservation, and water efficiency in San Pablo, all of which would contribute to the reduction of air pollution (Goal H-4 and its supporting policies and programs; Policy HEA-I-11; Policy PSCU-G-6 and Policies PSCU-I-23 through PSCU-I-30).

Contributing to the General Plan policy foundation, the proposed Specific Plan designates mixed-use centers and corridors, primarily in the central portion of San Pablo and at key arterial intersections along San Pablo Avenue, which provides the best transit access in the city. The proposed Specific Plan offers numerous policies to support a stronger pedestrian and bicycle network, taking cars off the streets, and the proposed Specific Plan also lays out a policy foundation for implementation of a strong TDM program in the future.

¹⁵ BAAQMD, 2010c.

¹⁶ This last policy, in the proposed Health Element, is aimed at improving access to healthy food. However, convenient grocery access would also limit the need for residents to drive to more distant stores for shopping.

In short, the proposed Specific Plan, in conjunction with the San Pablo 2030 General Plan and Housing Element, includes many of the measures identified by the BAAQMD as applicable to reduce air quality impacts of land use plans. Unfortunately, transportation modeling is still unable to account for the positive influence of these policy and land use design choices. Based strictly on the transportation modeling conducted for the proposed Project in accordance with BAAQMD CEQA Guidelines, vehicle travel is forecast to increase at a faster rate than population, and therefore this impact related to criteria pollutant emissions would be considered significant and unavoidable.

An additional mitigating factor to consider is that this determination cannot be modified to reflect the fact that improvements in vehicle fuel efficiency are expected to decrease emissions per vehicle mile traveled over the planning period. As described in the Metropolitan Transportation Commission's Transportation 2035 Plan EIR (2009) air quality analysis, emissions of several criteria pollutants are projected to decrease, not increase, through 2035 due to fuel-efficiency gains. As a basis for making a finding of overriding considerations, it is reasonable for the City to find that fuel efficiency, combined with the compact land use and multimodal transportation initiatives represented by proposed Plan policies, would actually result in minimal contribution to the overall regional cumulative impact of criteria pollutant emissions. However, in accordance with BAAQMD requirements, the impact described in this EIR must still be found to be significant and unavoidable based on the threshold relationship associated with population and VMT.

Impact

3.3-2 Implementation of the proposed San Pablo Avenue Specific Plan could result in an implementing document that is inconsistent with the goals and control measures of the Clean Air Plan. (*Less than Significant*)

The Bay Area 2010 Clean Air Plan (CAP) was adopted by the BAAQMD Board on September 15, 2010. The primary goals of the CAP are to (1) attain air quality standards; (2) reduce population exposure to protect public health in the Bay Area; and (3) reduce greenhouse gas emissions and protect the climate.

The proposed Specific Plan is entirely consistent with the recently updated San Pablo 2030 General Plan, which supports the attainment of air quality standards by establishing implementing policies that work to reduce air pollution emissions generated within the city. Implementing policies OSC-I-17, OSC-I-20, OSC-I-21, OSC-I-22, OSC-I-25, and OSC-I-26 as described in Impact 3.3-1, would all serve to reduce ozone and PM emissions generated throughout San Pablo. The 2030 General Plan supports the reduction of population exposure to protect public health by establishing implementing policy OSC-I-18 which directs the City to develop and implement a Community Risk Reduction Plan (CRRP) to address the exposure of sensitive populations to toxic air contaminant emissions in San Pablo. The General Plan supports the reduction of GHG emissions by establishing implementing policy OSC-I-17 which directs the City to prepare a GHG Reduction Plan that focuses on feasible actions the City can take to minimize the adverse impacts of growth and development on climate change. Additionally, implementing policy OSC-I-22 supports CCA's efforts to address climate change and air quality issues on a regional basis as reflected in the "Principles for Collaborative Development of Sustainable Communities Strategies in Contra Costa County." The Specific Plan, while not duplicating policy direction within the General Plan, reinforces that policy direction and augments it where necessary.

The Bay Area 2010 Clean Air Plan (CAP) contains 59 control measures aimed at reducing air pollution in the Bay Area. Many (18) of these measures address stationary sources and will be implemented by

BAAQMD using its permit authority and are therefore not suited to implementation through local planning efforts. Sixteen other measures are a draft list of measures for further study and are not yet identified as feasible for implementation under the 2010 CAP. The remaining 25 measures are identified in **Table 3.3-5**. This table identifies each Control Strategy and correlates it to specific goals or policies of the proposed Specific Plan or presents justification for why the Strategy does not apply to the proposed Specific Plan. As demonstrated in **Table 3.3-5**, the proposed Specific Plan would be consistent with the Control Strategies contained in the 2010 CAP for the San Francisco Bay Area Air Basin. Where there is not a specific proposed Project policy in support of the TCM, there is a citywide policy assumed to be adopted in the San Pablo 2030 General Plan. (The EIR for the San Pablo 2030 General Plan provides a similar matrix showing General Plan policy consistency which is not duplicated here).

Table 3.3-5 also shows that the proposed Specific Plan would not disrupt or hinder implementation of CAP control measures. BAAQMD has identified examples of how a Plan may cause the disruption or delay of control measures, such as a project that may preclude an extension of a transit line or bike path or proposes excessive parking beyond parking requirements. As described in **Table 3.3-5**, these policies demonstrate that the two BAAQMD-identified examples of control measure disruption or delay would not occur under the proposed Specific Plan.

TABLE 3.3-5 SPECIFIC PLAN CONSISTENCY WITH CONTROL STRATEGIES OF THE 2010 CLEAN AIR PLAN

2010 CAP CONTROL STRATEGY	ELEMENTS OF THE PROPOSED SPECIFIC PLAN CONSISTENT WITH THE STRATEGY OR JUSTIFICATION FOR NON-APPLICABILITY	
Transportation Control Measures		
TCM A: Improve Transit Services	3-G-1	<i>Establish the San Pablo Avenue transit hub as a major transit destination, with improved pedestrian and streetscape facilities, safety measures, and visibility.</i>
A-1: Improve Local & Areawide Bus Service	3-G-2	<i>Improve the quality, visibility, and safety of transit stops along the San Pablo Avenue corridor.</i>
A-2: Improve Local & Regional Rail Service	3-G-3	<i>With new construction, ensure access to transit is provided for seniors, families with children, and persons with disabilities throughout the Planning Area.</i>
	3-I-3	Identify direct paths to bus stops for pedestrians and bicyclists, and identify opportunities for implementation—either new connections through redevelopment or improvements to existing development.
	3-I-4	Work with Contra Costa College to develop and improve connections to the proposed Transit Hub near the college, by designating paths and improving signage.
	3-I-5	Provide way finding signage to indicate pathways to and location of major bus stops.
	3-I-6	Improve the pedestrian crosswalks at El Portal Drive and Rumrill Boulevard to ensure accessibility for persons with disabilities and provide greater connectivity near high density mixed-use development, such as the potential student housing at Mission Plaza.
	3-I-7	Provide signalized pedestrian crosswalks at mid-block crossings and countdown signals at wide crosswalks or near bus stop locations.
	3-I-8	Improve streetscape design to establish greater pedestrian comfort and access to transit stations. See Chapter 4, Section 4.2: Streetscape Design for specific measures.
	3-I-9	Provide bus shelters, seating, lighting, trash receptacles, signage and kiosks, lighting and enhanced landscaping (for shade and aesthetics) at all bus stops.
	3-I-11	Allow advertisements on bus shelters in cooperation with transit providers, as a means of cost recovery.
TCM B: Improve System Efficiency	3-I-1	Work with AC Transit and West CAT to establish a station of consolidated bus stops that best serves Contra Costa College and existing and planned high-density residential development. This may be located at College Lane, El Portal Drive, or along San Pablo Avenue. Formalize the transit hub by consolidating stops to one
B-1: Freeway & Arterial Operations Strategies		

TABLE 3.3-5 SPECIFIC PLAN CONSISTENCY WITH CONTROL STRATEGIES OF THE 2010 CLEAN AIR PLAN

2010 CAP CONTROL STRATEGY	ELEMENTS OF THE PROPOSED SPECIFIC PLAN CONSISTENT WITH THE STRATEGY OR JUSTIFICATION FOR NON-APPLICABILITY	
B-2: Transit Efficiency & Use Strategies		location, installing shelters, signage with system information and next-bus updates, bus pull-out areas, and expanded pedestrian furnishings and pedestrian-scaled lighting for visibility and security.
B-3: Bay Area Express Lane Network	3-I-2	Coordinate with AC Transit and West CAT to implement bus service modifications to improve service and increase accessibility to transit for new higher-intensity development in the Planning Area.
B-4: Goods Movement Improvements & Emission Reduction Strategies	3-I-10	Employ technologies such as “next-bus” to provide real-time system updates to increase user convenience at all bus stops.
TCM C: Encourage Sustainable Travel Behavior	3-G-13	<i>Encourage use of Transportation Demand Management strategies to minimize traffic contributions from new and existing development.</i>
C-1: Voluntary Employer-Based Trip Reduction Program	3-G-14	<i>Promote public and privately-run alternative modes of transit, such as shuttles, along the San Pablo Avenue corridor.</i>
C-2: Safe Routes to School & Safe Routes to Transit	3-I-45	Encourage and support carpooling and vanpooling by providing preferential parking at employment sites for carpools and vanpools.
C-3: Rideshare Services & Incentives	3-I-46	Explore the feasibility of shuttles. This could include: - As part of a comprehensive transportation demand management strategy, employer-based shuttles that provide service to and from the Richmond and El Cerrito Del Norte BART stations for new large developments. At a minimum, employer shuttles should operate during the morning and evening peak periods. Shuttle schedules should be timed to facilitate transfer from northbound BART trains in the morning and southbound BART trains in the evening. - A shuttle program to serve San Pablo Avenue that links Mission Plaza to South San Pablo Avenue as well as Contra Costa College, College Center, City Hall, Circle S, the Casino, and Doctor's Medical Center. This could be similar to the free shuttle in Oakland along Broadway that connects portions of Downtown Oakland and is funded by contributions from recent developments and a grant from the Bay Area Air Quality Management District. - A shuttle that runs between commercial centers located in neighboring cities, including Pinole, El Cerrito, and Richmond (to the Hilltop Mall, for example).
C-4: Conduct Public Outreach & Education	3-I-47	Work with the West Contra Costa Transportation Advisory Committee TDM Program Manager to promote the ridesharing and Guaranteed Ride Home Program provided through 511 Contra Costa, the comprehensive transportation demand management program for Contra Costa County.
C-5: Smart Driving	3-I-48	Work with Contra Costa College to develop transportation demand management strategies to reduce single-occupancy vehicle trips to the campus, through use of improved bus and shuttle services, as well as improved pedestrian and bicycle connectivity from nearby student housing.
	3-I-49	As development occurs within the Planning Area, require transportation demand management strategies as part of the approval process, including: - Provisions for transit passes - Carsharing - Parking cash out
	3-I-50	Provide incentives to existing employers and/or developers to develop transportation demand management programs, such as reduced parking requirements.
	3-I-51	Draft and adopt a Commuter Benefit Ordinance to allow employers and workers citywide to tap into an existing federal program to pay for transit passes and vanpool. This would be similar to ordinances in cities of Richmond, San Francisco, and Berkeley.

TCM D: Support

Bicycle:

TABLE 3.3-5 SPECIFIC PLAN CONSISTENCY WITH CONTROL STRATEGIES OF THE 2010 CLEAN AIR PLAN

2010 CAP CONTROL STRATEGY	ELEMENTS OF THE PROPOSED SPECIFIC PLAN CONSISTENT WITH THE STRATEGY OR JUSTIFICATION FOR NON-APPLICABILITY
Focused Growth	3-I-16 Provide signage that clearly and explicitly indicates connections to local and regional bicycle facilities.
D-1: Bicycle Access & Facilities Improvement	3-I-17 Provide secure short- and long-term bicycle parking at transit stops.
D-2: Pedestrian Access & Facilities Improvements	3-I-18 Encourage provision of bike racks and locking systems in all multi-family residential developments, multi-tenant retail and office developments, and government and institutional uses.
D-3: Local Land Use Strategies	3-I-19 Incorporate a one-foot buffer, distinguished through color or paving, between the bicycle lane and the adjacent travel lane along the length of San Pablo Avenue, to enhance visibility and safety for bicyclists.
	3-I-20 Maintain bike lanes along San Pablo Avenue, including pavement condition as well as clearing of debris.
	Pedestrian:
	3-G-4 <i>Provide continuous pedestrian sidewalks and safe bike travel routes throughout the Planning Area and within development projects.</i>
	3-G-5 <i>Improve pedestrian and bicycle amenities throughout the Planning Area to encourage walking and bicycle trips along the corridor.</i>
	3-G-6 <i>Ensure that private development integrates pedestrian and bicycle connections to transit, open space, and key destinations.</i>
	3-I-12 Create internal streets within new mixed-use developments that maximize safe and efficient pedestrian circulation by incorporating design elements such as wider landscaped sidewalks, reduced vehicular speed limits, pedestrian-oriented lighting, bulb-outs, curb extensions at intersections, high visibility crosswalks, and on-street parking to buffer pedestrians from moving vehicles.
	3-I-13 Provide mid-block connections through new developments that accommodate bicyclists and pedestrians, or all modes, to facilitate access to transit stops and major public destinations.
	3-I-14 Consider connections and extensions to future bike and walking trails in anticipation of future amenities and improvements at Wildcat, San Pablo, and Rheem creeks, and potential park sites.
	3-I-15 Enhance pedestrian connections and amenities and prioritize pedestrian access and circulation in Pedestrian Priority Zones.
	Land Use Strategies and Connections:
	3-G-7 <i>Maximize connectivity in the Planning Area through creation of finer street grid patterns in new development.</i>
	3-G-8 <i>Provide sufficient capacity on the Planning Area roadway network to efficiently and safely serve local traffic needs.</i>
	3-G-9 <i>Support roadway improvement efforts to establish San Pablo Avenue as a Complete Street. Balance the needs of cars with those of pedestrians, bicyclists, and transit.</i>
	3-I-25 Ensure that new developments provide fine grain street grids, creating shorter blocks and more route options that emphasize pedestrian connectivity to and from San Pablo Avenue, transit, and key destinations.
	3-I-26 Establish a street grid that covers the entire site and allows visual access into the development from San Pablo Avenue. The grid should organize all development within the site, provide a direct connection to Church Lane to the north, and provide a potential connection through to Vale Road to the south and potentially to the Casino.
	3-I-27 Establish a central pedestrian-oriented street that provides a direct link from San Pablo Avenue to improved open space along Wildcat Creek.
	3-I-28 As part of any redevelopment of Towne Center, establish a street grid for the site that provides access points to San Pablo Dam Road, San Pablo Avenue, and Willow

TABLE 3.3-5 SPECIFIC PLAN CONSISTENCY WITH CONTROL STRATEGIES OF THE 2010 CLEAN AIR PLAN

2010 CAP CONTROL STRATEGY	ELEMENTS OF THE PROPOSED SPECIFIC PLAN CONSISTENT WITH THE STRATEGY OR JUSTIFICATION FOR NON-APPLICABILITY
	Road.
	3-I-29 Establish a pedestrian-only axis that leads directly from the Casino through the site in order to create a single, cohesive entertainment district.
	3-I-30 Provide vehicular access to off-street parking from San Pablo Avenue via a new pedestrian-oriented roadway through the site.
	Parking:
	3-G-10 Promote redevelopment of higher intensity uses along the San Pablo Avenue corridor by establishing parking requirements that reflect a balanced approach between different transportation modes and providing opportunities for shared parking.
	3-G-11 Avoid excessive supplies of parking that would discourage transit ridership and pedestrian or bicycle trips.
	3-G-12 In areas designated for mixed-use development, locate and design parking structures to accommodate the needs of all uses to maximize shared parking arrangements between the uses to the extent possible.
	3-I-31 Establish in the Municipal Code parking standards for the Specific Plan area that reflect its designated role as a vital, transit- and pedestrian-oriented district, with commensurate reductions in off-street parking requirements. <i>This could be accomplished by establishing parking requirements specific to the San Pablo Avenue Specific Plan area, or through reductions by Planning Area. Refer to Table 3-3 for specific recommendations by land use type.</i>
	3-I-32 Build in the Municipal Code methodology for determining parking reduction for mixed-use developments and shared uses. Allow reductions without need for a conditional use or a special permit. One approach would be to apply the methodology described in ULI's Shared Parking to determine the parking reduction for shared parking in mixed-use developments proposed as part of the Specific Plan. This analysis would account for size of development and mix of uses. The ULI methodology could also be applied to redevelopment of adjacent properties with specified mix of uses and would reduce the need to conduct parking studies on a project by project basis.
	3-I-33 Explore opportunities for shared parking for both existing and new uses. <i>A shared parking structure between the San Pablo Lytton Casino and Moose Lodge could provide additional parking for both uses—which if located at the edge of the street along San Pablo Avenue, would also provide an improved street edge and physical presence.</i>
TCM E: Implement Pricing Strategies E-1: Value Pricing Strategies E-2: Promote Parking Pricing to Reduce Motor Vehicle Travel E-3: Implement Transportation Pricing Reform	Housing Element policy in support of this TCM applies citywide.
Mobile Source Control Measures	
MSM A-1: Promote Clean Fuel Efficient Vehicles	Health Element policy in support of this TCM applies citywide.
MSM A-2: Zero Emission Vehicles & Plug-in	Health Element policy in support of this TCM applies citywide.

TABLE 3.3-5 SPECIFIC PLAN CONSISTENCY WITH CONTROL STRATEGIES OF THE 2010 CLEAN AIR PLAN

2010 CAP CONTROL STRATEGY	ELEMENTS OF THE PROPOSED SPECIFIC PLAN CONSISTENT WITH THE STRATEGY OR JUSTIFICATION FOR NON-APPLICABILITY
Hybrids	
MSM A-3: Green Fleets	Health Element policy in support of this TCM applies citywide.
MSM A-4: Replacement or Repair of High-emitting Vehicles	Not Applicable: This Strategy addresses vehicle buy-back programs implemented by BAAQMD.
MSM B-1: Fleet Modernization for Medium and Heavy-Duty Trucks	Not Applicable: This Strategy addresses incentive programs for truck modernization which are implemented by BAAQMD or CARB.
MSM B-2: Low NOx retrofits in Heavy-Duty Trucks	Not Applicable: This Strategy addresses cash incentives for retrofits which are implemented by BAAQMD or CARB.
MSM B-3: Efficient Drive Trains	Not Applicable: This Strategy addresses development and demonstration programs in partnership with CARB and the California Energy Commission.
MSM C-1: Construction and Farming Equipment	Not Applicable: This Strategy addresses cash incentives for retrofits which are implemented by BAAQMD or CARB.
MSM C-2: Lawn & Garden Equipment	Not Applicable: This Strategy addresses voluntary exchange programs implemented by BAAQMD.
MSM C-3: Recreational Vessels	Not Applicable: This Strategy addresses voluntary exchange programs implemented by BAAQMD.
Land Use & Local Impact Measures	
LUM 1: Goods Movement	3-G-7 <i>Maximize connectivity in the Planning Area through creation of finer street grid patterns in new development.</i>
	3-G-8 <i>Provide sufficient capacity on the Planning Area roadway network to efficiently and safely serve local traffic needs.</i>
	3-G-9 <i>Support roadway improvement efforts to establish San Pablo Avenue as a Complete Street. Balance the needs of cars with those of pedestrians, bicyclists, and transit.</i>
	3-I-25 Ensure that new developments provide fine grain street grids, creating shorter blocks and more route options that emphasize pedestrian connectivity to and from San Pablo Avenue, transit, and key destinations.
	3-I-26 Establish a street grid that covers the entire site and allows visual access into the development from San Pablo Avenue. The grid should organize all development within the site, provide a direct connection to Church Lane to the north, and provide a potential connection through to Vale Road to the south and potentially to the Casino.
	3-I-27 Establish a central pedestrian-oriented street that provides a direct link from San Pablo Avenue to improved open space along Wildcat Creek.
	3-I-28 As part of any redevelopment of Towne Center, establish a street grid for the site that provides access points to San Pablo Dam Road, San Pablo Avenue, and Willow Road.
	3-I-29 Establish a pedestrian-only axis that leads directly from the Casino through the site in order to create a single, cohesive entertainment district.
	3-I-30 Provide vehicular access to off-street parking from San Pablo Avenue via a new pedestrian-oriented roadway through the site.
LUM 2: Indirect Source Review Rule	Not Applicable: This Strategy addresses implementation of an indirect source Rule by BAAQMD.
LUM 3: Updated CEQA	Not Applicable: This Strategy addresses updating of the CEQA Guidelines by BAAQMD

TABLE 3.3-5 SPECIFIC PLAN CONSISTENCY WITH CONTROL STRATEGIES OF THE 2010 CLEAN AIR PLAN

2010 CAP CONTROL STRATEGY	ELEMENTS OF THE PROPOSED SPECIFIC PLAN CONSISTENT WITH THE STRATEGY OR JUSTIFICATION FOR NON-APPLICABILITY
Guidelines & Enhanced Review	(adopted in June 2010 and applied in this analysis).
LUM 4: Land Use Guidance	This strategy addresses updating land use planning documents such as the proposed Specific Plan and demonstrating consistency with air quality protection guidance such as the new BAAQMD CEQA Guidelines that are applied in this analysis.
LUM 5: Reduce Health Risk in Impacted Communities	8-G-4 <i>Ensure that infill and redevelopment in the San Pablo Avenue Specific Plan corridor minimize exposure to hazardous materials and toxic air contaminants.</i> 8-I-8 Require new residential projects within the Specific Plan Planning Area, and other potential projects in the area which may also be categorized as sensitive receptors (such as nursing home facilities, retirement living facilities, school or daycare facilities), to be located an adequate distance from existing and potential sources of TACs and odors, in accordance with the BAAQMD's Air Quality and Land Use Handbook (2005) recommendations, or the latest resource the air district has available. Existing stationary TAC sources in the Planning Area are mapped in Figure 8-1; however, project proponents are expected to check BAAQMD databases for the latest data on stationary TAC sources. 8-I-9 Require proponents of projects within 100 feet of existing hazardous materials case sites or TAC sources (as mapped on Figure 8-1) to investigate use compatibility at the location in question (some kinds of uses might be at lower risk than others), as well as potential feasible design-related risk mitigation measures. Project proponents must provide evidence to the City of consultation with the BAAQMD and the RWQCB in making refinements to project designs to reduce applicable hazardous materials and/or toxic air contaminant risk.
LUM 6: Enhanced Air Quality Monitoring	Not Applicable: This Strategy addresses air quality monitoring that is the purview of BAAQMD and/or CARB.
Energy & Climate Measures	
ECM 1: Energy Efficiency	DG-42 Utilize materials which have low embodied energy, are rapidly renewable, locally available, and do not give off harmful vapors. DG-46 Use energy-efficient and low emission heating, ventilation and air conditioning (HVAC) systems, if mechanical systems are necessary. DG-47 Provide operable windows that allow natural ventilation and potentially eliminate the need for mechanical ventilation.
ECM 2: Renewable Energy	General Plan policies in support of this TCM apply citywide.
ECM 3: Urban Heat Island Mitigation	General Plan policies in support of this TCM apply citywide.
ECM 4: Shade Tree Planting	4-G-11 Design the streetscape at the pedestrian scale with wide sidewalks, bike lanes, and amenities for pedestrians and cyclists such as bike racks, comfortable street furnishings, sufficient and attractive lighting, and street trees for shading and aesthetics.

Source: BAAQMD, 2010; Dyett & Bhatia, 2010.

Mitigation Measures

None required.

Impact

3.3-3 Implementation of the proposed San Pablo Avenue Specific Plan results in an implementing document that addresses TAC sources and sensitive receptors in its goals, policies and objectives. (*Less than Significant*)

CARB notes that the location of land uses where sensitive receptors are present, such as day care centers, schools, nursing homes, and hospitals, should be carefully evaluated. State law restricts the siting of new schools within 500 feet of a freeway, urban roadways with 100,000 vehicles/day, or rural roadways with 50,000 vehicles, with some exceptions. CARB has published advisory recommendations on siting new sensitive land uses, with the same guidelines as the State school limitation.¹⁷ BAAQMD guidance identifies the thresholds of significance for plans with regard to community risk and hazard impacts through the inclusion of a land use diagram that identifies existing and planned sources of TACs and overlay zones of at least 500 feet around each side of freeways and high volume roadways. Additionally, the Plan must identify goals, policies and objectives to minimize potential impacts and create overlay zones for sources of TACs and receptors.

There are no freeways or high volume roadways in the Specific Plan Planning Area; therefore, no overlay zones are indicated on the Specific Plan Land Use Diagram. However, an overlay zone of 500 feet around either side Interstate 80 is included in the San Pablo 2030 General Plan Land Use Diagram with which the proposed Specific Plan is consistent. Furthermore, policy OSC-I-18 of the General Plan directs the City to work with BAAQMD to develop and implement a Community Risk Reduction Plan (CRRP) to address the exposure of sensitive populations to toxic air contaminant emissions in San Pablo. This policy addresses the need for the General Plan to contain goals, policies and objectives to minimize potential impacts. Stationary sources located in the San Pablo Avenue Specific Plan Planning Area are identified in **Table 3.3-6**. Air quality for all new sensitive receptors will need to be evaluated at the project level when individual projects are proposed, per BAAQMD CEQA Guidelines for local community risk and hazard impacts.¹⁸ Drycleaners will be required to phase out perc operations by 2023 per State law and BAAQMD regulation, reducing the health risk of drycleaner sources to less than significant. Projects proposed prior to the phase-out will be required to complete a site specific analysis.

TABLE 3.3-6 EXISTING STATIONARY SOURCES OF TACS IN THE PLANNING AREA

FACILITY NAME	SOURCE TYPE	ADDRESS
San Pablo Chevron	Gas dispensing facility	13065 San Pablo Ave
San Pablo Police Department	Gas dispensing facility	13880 San Pablo Ave
Hertz Equipment Rental	Gas dispensing facility	2400 San Pablo Dam Rd
Contra Costa County Fire Station #70	Gas dispensing facility	13928 San Pablo Ave
World Oil Marketing Company #24	Gas dispensing facility	13013 San Pablo Ave
Doctors Medical Center-San Pablo	Heating hot water boiler	2000 Vale Rd
City of San Pablo Police Dept	Emergency generator	13880 San Pablo Ave

Source: Bay Area Air Quality Management District, 2009.

¹⁷ CARB, 2005.

¹⁸ BAAQMD, 2010c.

Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

- OSC-I-18 Work with the Bay Area Air Quality Management District to develop and implement a Community Risk Reduction Plan (CRRP) to address the exposure of sensitive populations to toxic air contaminant emissions in San Pablo.
- OSC-I-19 Maintain a 500-foot Air Quality Health Risk Overlay Zone on either side of Interstate 80 within the Planning Area to protect sensitive receptors from toxic air emissions. Within this overlay, avoid approval of new sensitive land uses, and for those projects permitted, require site-specific project design improvements (such as higher performance windows and HVAC systems) in order to reduce public health risks associated with poor air quality in these locations.

Also, policies OSC-I-23 through OSC-I-25 are relevant, as described in Impact 3.3-1.

Proposed Specific Plan Policies that Reduce the Impact

- 8-G-4 *Ensure that infill and redevelopment in the San Pablo Avenue Specific Plan corridor minimize exposure to hazardous materials and toxic air contaminants.*
- 8-I-8 Require new residential projects within the Specific Plan Planning Area, and other potential projects in the area which may also be categorized as sensitive receptors (such as nursing home facilities, retirement living facilities, school or daycare facilities), to be located an adequate distance from existing and potential sources of TACs and odors, in accordance with the BAAQMD's Air Quality and Land Use Handbook (2005) recommendations, or the latest resource the air district has available. Existing stationary TAC sources in the Planning Area are mapped in Figure 8-1; however, project proponents are expected to check BAAQMD databases for the latest data on stationary TAC sources.
- 8-I-9 Require proponents of projects within 100 feet of existing hazardous materials case sites or TAC sources (as mapped on Figure 8-1) to investigate use compatibility at the location in question (some kinds of uses might be at lower risk than others), as well as potential feasible design-related risk mitigation measures. Project proponents must provide evidence to the City of consultation with the BAAQMD and the RWQCB in making refinements to project designs to reduce applicable hazardous materials and/or toxic air contaminant risk.

Mitigation Measures

None required.

3.4 *Energy and Greenhouse Gases*

This section analyzes the effect of the proposed San Pablo Avenue Specific Plan on energy resources and greenhouse gas emissions. The section identifies energy laws, plans, and policies; identifies energy sources; and describes existing and projected energy consumption and trends in the Planning Area. This section also analyzes quantitatively how implementation of the proposed Specific Plan may contribute to global climate change (GCC) through greenhouse gas (GHG) emissions related to land use changes and transportation. The analysis of sea level rise impacts is provided in Section 3.5: Hydrology, Flooding, and Water Quality.

ENVIRONMENTAL SETTING

Physical Setting

Energy Use

United States

According to the Energy Information Administration (EIA) Annual Energy Review of 2008 (published in 2009), 31 percent of nationwide energy consumption occurred in the industrial sector, 28 percent in the transportation sector, 22 percent in residential, and 19 percent in commercial. As a secondary sector (because it includes components of multiple primary sectors), electric power made up over 40 percent of all national energy consumption. In terms of supply sources, petroleum provided over 37 percent of the nation's energy, natural gas—24 percent, coal—23 percent, nuclear power—9 percent, and renewable—7 percent. Seventy-one percent of all the petroleum consumed in the U.S. was used in the transportation sector.¹

California

California is the second largest consumer of energy in the country, second only to Texas. However, California's population is large and the State has one of the lowest *per capita* energy consumption rates in the country (higher only than Rhode Island and New York, as of 2007), in part due to mild weather that reduces energy demand for heating and cooling, and in part due to the government's energy-efficiency

¹ EIA, 2009.

programs. In California, about 40 percent of energy consumption—the largest share by any sector—is in the transportation sector.² More motor vehicles are registered in California than any other State, and worker commute times are among the longest in the country.³ Other energy-intensive industries include chemical, forest products, glass, and petroleum.

Petroleum and natural gas supply most of the energy consumed in California. Petroleum products provide approximately 46 percent of the state’s energy demand, and natural gas provides approximately 29 percent. The remaining demand is met by a variety of energy resources, including nuclear, hydropower, biomass, coal, geothermal, wind, and solar.⁴

Bay Area and Contra Costa County

The Bay Area Air Quality Management District (BAAQMD) completed an emission inventory for the Bay Area in 2005, which gives a sense of Contra Costa County’s contribution to regional energy use and emissions. As described in **Table 3.4-1**, Contra Costa makes up about 15 percent of the Bay Area population, and is responsible for about 15 percent of the gasoline consumed in the region. Natural gas usage in Contra Costa, however, is significantly higher than in other parts of the region.

TABLE 3.4-1 CONTRA COSTA COUNTY BASIC ENERGY USE STATISTICS, 2005 AND 2007

INDICATOR	MEASURE	2005	% OF BAY AREA	2007	% OF BAY AREA
		TOTAL	TOTAL	TOTAL	TOTAL
Population		1,016,000	15%	1,039,000	15%
Natural Gas Usage	million cu. ft. daily	817	56%	636	49%
Gasoline Consumption	gallons sold per day	1,111,000	14%	1,150,000	14%
Vehicle Miles Traveled	daily, in millions	23.1	16%	25.7	16%

Source: BAAQMD, 2008 and 2010 emissions inventories.

San Pablo Energy Use

PG&E supplies building energy (electricity and natural gas) to San Pablo. With the help of PG&E and MTC, the City completed energy and emissions inventories for the years 2005 and 2007 using the Clean Air and Climate Protection (CACP) software available through ICLEI Local Governments for Sustainability (ICLEI). The results of the energy use inventory are reported below in **Table 3.4-2**. The data show that residential and transportation energy use have declined slightly between 2005 and 2007, while commercial and industrial energy use have increased. The overall result is a decline in communitywide energy use of about 2 percent over two years.

² EIA, 2007.

³ EIA, 2010.

⁴ EIA, 2007.

TABLE 3.4-2 COMMUNITYWIDE ENERGY USE IN SAN PABLO

SECTOR	2005 (CITY BASELINE)		2007 (INTERIM YEAR)	
	MMBTU	SHARE OF TOTAL	MMBTU	SHARE OF TOTAL
Residential	492,267	13%	490,337	14%
Commercial	274,290	7%	289,842	8%
Industrial	63,035	2%	66,692	2%
Transportation	2,842,251	77%	2,766,660	77%
Total	3,671,843	100%	3,613,531	100%

Source: City of San Pablo, 2010, CACP reports.

Energy Types and Sources

Natural Gas

According to the CEC Energy Almanac, four regions supply California with natural gas, all of them in North America. Three of them—the Southwestern U.S., the Rocky Mountains, and Canada—supply 85 percent of all the natural gas consumed in California.⁵ The remainder is produced in California itself. Approximately one-half of all the natural gas consumed in California is used to generate electricity, and residential consumption represented one-fifth of California natural gas use.⁶

PG&E is the primary electricity and natural gas provider for much of California, including Contra Costa County. PG&E obtains its energy supplies from power plants and natural gas fields in northern California and from energy purchased outside its service area.

Electricity

Power plants in California meet approximately 70 percent of the in-state electricity demand; the Pacific Northwest provides another 8 percent and power plants in the southwestern U.S. provide another 22 percent.⁷ The contribution between in-state and out-of-state power plants depends upon, among other factors, the precipitation that occurred in the previous year and the corresponding amount of hydroelectric power that is available. Contra Costa County is home to 25 power plants, including 5 coal, 1 landfill gas, 17 oil/gas, and 2 wind power generation facilities.⁸ Of these, the Pittsburg Natural Gas Power Plant is one of the largest power plants in California and the Bay Area and has a capacity of 1,311 megawatts.⁹ Because of PG&E's power plant located in Pittsburg, Contra Costa County consumes 56 percent of the Bay Area's natural gas. The electricity generated by the PG&E plants, however, is used throughout PG&E's service area, which extends, with a few exceptions, north to south from Eureka to Bakersfield, and east to west from the Sierra Nevada to the Pacific Ocean. Smaller power plants and cogeneration facilities are located throughout the Bay Area.

⁵ CEC, 2010.

⁶ *Ibid.*

⁷ CEC, 2008.

⁸ *Ibid.*

⁹ Mirant, 2010.

Petroleum

As noted above, transportation is the largest energy consumer in the State, accounting for about 40 percent of total energy use, and most—96 percent—of that demand is met with petroleum.¹⁰ Nearly 26 million vehicles are registered in California, consuming about 380 million barrels of gasoline and almost 100 million barrels of diesel annually.¹¹

In 2007, approximately one-half of the crude oil came from in-state oil production facilities, one-fifth came from Alaska, and the remaining—just under one-third—came from foreign sources. Most gasoline and diesel fuel sold in California for motor vehicles is refined in California to meet state-specific formulation standards required by the California Environmental Protection Agency's Air Resources Board. Major petroleum refineries in California are concentrated in three counties: Contra Costa, Kern County in central California, and Los Angeles County in southern California. There are no petroleum refineries in the San Pablo Avenue Specific Plan Planning Area.

According to the most recent transportation energy forecasts and analyses for the 2009 Integrated Energy Policy Report, California average daily gasoline demand for the first six months of 2009 was 1.0 percent lower compared to the same period in 2008, continuing a declining trend since 2004. Over the 12-month period from July 2008 through June 2009, gasoline demand was down 3.4 percent compared to the previous 12-month period. Between 2007 and 2030, CEC staff estimates total annual gasoline consumption in California will fall 13.3 percent in the low-demand case to 13.57 billion gallons, largely as a result of high fuel prices, efficiency gains, and competing fuel technologies. In the high-demand case, the recovering economy and lower relative prices lead to a gasoline demand peak in 2014 of 16.40 billion gallons before consumption falls to a 2030 level of 14.32 billion gallons, 8.5 percent below 2007 levels. These forecasted volumes have not been adjusted to account for compliance with the revised federal Renewable Fuel Standard (RFS) fair share obligations that further decrease demand for gasoline (E10) and greatly increase the demand outlook for E85, nor do they account for the revised federal CAFE standards.

Alternative Transportation Fuels

The U.S. Department of Transportation currently recognizes the following as alternative fuels: methanol and denatured ethanol (alcohol mixtures that contain no less than 70 percent of the alcohol fuel), natural gas (compressed or liquefied), liquefied petroleum gas, hydrogen, coal-derived liquid fuels, fuels derived from biological materials (i.e., biomass), and electricity. The liquid fuel referred to as Methanol (M85) consists of methanol and gasoline and is derived from natural gas, coal, or woody biomass. The liquid fuel referred to as Ethanol (E85) consists of ethanol and gasoline and is derived from corn, grains or agricultural waste. Natural gas consists of a high percentage of methane (generally above 85 percent), and varying amounts of ethane, propane, butane, and inerts (typically nitrogen, carbon dioxide, and helium) and comes from underground reserves. Liquefied petroleum gas (LPG) consists mostly of propane and is a byproduct of petroleum refining or natural gas processing. Currently available alternative fuel vehicles include electric, flexible fuel (can be fueled with ethanol), natural gas, propane, biodiesel, hybrid electric, plug-in hybrid electric, and fuel cell (fueled with hydrogen).¹² It should be noted that the use of electricity, depending on the method of production, could have secondary and potentially significant

¹⁰ CEC, 2010.

¹¹ *Ibid.*

¹² USDOE, 2008.

impacts depending on where the electricity is produced. The cost of substituting electricity for diesel could make its use infeasible.

Global Climate Change

Global Climate Change (GCC) refers to a change in the average air temperature that may be measured by wind patterns, storms, precipitation, and temperature. The baseline by which these changes are measured originates in historical records identifying temperature changes that have occurred in the distant past, such as during previous ice ages. The rate of temperature change has typically been incremental, with warming and cooling occurring over the course of thousands of years. In the past 10,000 years the earth has experienced incremental warming as glaciers retreated across the globe. However, scientists have observed an unprecedented increase in the rate of warming over the past 150 years, roughly coinciding with the global industrial revolution.

Although GCC is now generally accepted by the public, the extent and speed of change to be expected, and the exact contribution from human sources, remains in debate. Nonetheless, the Intergovernmental Panel on Climate Change (IPCC)¹³—made up of the world’s leading climate scientists—have reached consensus that global climate change is “very likely” caused by humans, and that hotter temperatures and rising sea levels will continue for centuries to come. In particular, human influences have:

- *very likely* contributed to sea level rise and increased storm surge during the latter half of the 20th century;
- *likely* contributed to changes in wind patterns, affecting extra-tropical storm tracks and temperature patterns;
- *likely* increased temperatures of extreme hot nights, cold nights, and cold days;
- *more likely than not* increased the risk of heat waves, areas affected by drought since the 1970s, and frequency of heavy precipitation events.¹⁴

The IPCC predicts that the increase in global mean temperature from 1990-2100 could range from 2.0 to 11.5 degrees Fahrenheit, with the most likely scenario between 3.2 and 7.1 degrees. The same report projects a sea level rise of 7 to 23 inches by the end of the century, with a greater rise possible depending on the rate of polar ice sheet melting.

Other Climate Change Impacts and Adaptation

According to the California Climate Action Team (CCAT), accelerating GCC has the potential to cause a number of adverse impacts in California, including but not limited to: a shrinking Sierra snowpack that would threaten the state’s water supply; public health threats caused by higher temperatures and more smog; damage to agriculture and forests due to reduced water storage capacity, rising temperatures, increasing salt water intrusion, flooding, and pest infestations; critical habitat modification and

¹³ The Intergovernmental Panel on Climate Change (IPCC) is a scientific intergovernmental body set up by the World Meteorological Organization (WMO) and by the United Nations Environment Programme (UNEP). Its role is to assess on a comprehensive, objective, open and transparent basis the latest scientific, technical and socio-economic literature produced worldwide relevant to the understanding of the risk of human-induced climate change, its observed and projected impacts, and options for adaptation and mitigation.

¹⁴ IPCC, 2007a.

destruction; eroding coastlines; increased wildfire risk; and increased electricity demand.¹⁵ These impacts have and will continue to have considerable costs associated with them.

While all of these impacts may be felt to some extent in the Bay Area, of particular concern to San Pablo are water quality and water supply issues; increased temperature and extreme heat events; an imbalance between electricity supply and demand; and indirectly, sea-level rise and increased storm surge with potential for intermittent flooding and gradual inundation of facilities nearby San Pablo. The following paragraphs describe in more detail some of the most relevant impacts to the environment that could result from continued global warming.¹⁶

Increased Temperatures and Extreme Heat Events

Climate change is expected to lead to an increase in ambient (i.e., outdoor) average air temperature, with greater increases expected in summer than in winter months. Larger temperature increases are anticipated in inland communities as compared to the California coast. Climate models predict a 4°F temperature increase in the next 20 to 40 years, with an increase in the number of long dry spells.

The potential health impacts from sustained and significantly higher than average temperatures include heat stroke, heat exhaustion, and the exacerbation of existing medical conditions such as cardiovascular and respiratory diseases, diabetes, nervous system disorders, emphysema, and epilepsy. Over the past 15 years, heat waves have claimed more lives in the state than all other declared disaster events combined. According to the IPCC (2004), the summer mortality rates will double by half by 2050 due to hot weather episodes.

Increased temperatures also pose a risk to human health when coupled with high concentrations of ground-level ozone and other air pollutants, which may lead to increased rates of asthma and other pulmonary diseases. The incidence of bad air days in California's urban areas has increased, mostly in the summer. On long, hot, stagnant days, ground level ozone can build up to levels that violate federal and State health-based standards. Recent studies indicate that hot days correlate with poor air quality days, and air pollution is contributing to more annual deaths and cases of respiratory illness and asthma.¹⁷ For more discussion of air quality impacts, see Chapter 3.3: Air Quality. Other impacts related to increased temperatures and heat waves include:

- **Increased urban heat island effect:** urban heat islands are especially dangerous because they are both hotter during the day and do not cool down at night, increasing the risk of heat-related illness;
- **Reduced freezing events:** too few freezes could lead to increased incidence of disease as vectors and pathogens do not die off. In addition, certain agricultural crops depend on freezing as part of the life-cycle, so fewer such events would impact California's food production and indirectly the food supply in San Pablo;
- **Increased energy demand:** it is expected that energy, particularly electricity, demand will increase in order to meet increasing demands for air conditioning and refrigeration.

¹⁵ CCAT, 2006.

¹⁶ California Natural Resources Agency, 2009.

¹⁷ Jacobson, 2008.

Changes in Precipitation and Extreme Events

Climate change is anticipated to cause a 20-30 percent increase in precipitation in the spring and fall in California. More frequent and heavier precipitation events cause flooding and mudslides, which would incur considerable costs in damages to property, infrastructure and even human life. Such events also are associated with drinking water contamination outbreaks; contamination of shellfish and other food-borne illnesses; and overloading of wastewater and stormwater systems.

With warmer average temperatures, more winter precipitation will fall in the form of rain instead of snow, shortening the winter snowfall season and accelerating the rate at which the snowpack melts in the spring. Not only does such snow melt increase the threat for spring flooding, it will decrease the Sierras' capacity as a natural water tower, resulting in decreased water availability for agricultural irrigation, hydro-electric generation and the general needs of a growing population. The decrease in snow-pack is particularly relevant in California, as the Sierra snow-pack provides approximately 80 percent of California's annual water supply. A decreased snowpack would result in increased drought conditions; water supply and quality impacts; and food production impacts.

Drought conditions also result in increased frequency, intensity, and duration of wildfires. In these conditions, fires burn hotter and spread faster. In addition to fatalities and property damage, smoke from wildfires impairs air quality and can cause acute and chronic health impacts.

Impacts on Plants and Vegetation

Native plants and animals are also at-risk as temperatures rise. Scientists are reporting more species moving to higher elevations or more northerly latitudes in response. Increased temperatures also provide a foothold for invasive species of weeds, insects and other threats to native species. The increased flow and salinity of water resources could also seriously affect the food web and mating conditions for fish that are of both economic and recreational interest to residents. In addition, the natural cycle of plant's flowering and pollination, as well as the temperature conditions necessary for a thriving, locally adapted agriculture could be affected, with perennial crops such as grapes taking years to recover. In California, the impacts of climate change on agriculture are estimated by the Farm Bureau to be \$30 billion, mostly due to changes in chill hours required per year for cash crops.

Diseases

Warming temperatures, fewer freezing spells, and increased precipitation are likely to change the distribution and quantity of common disease vectors, such as mosquitoes, ticks, and rodents.

Sea Level Rise

Sea level rise as a consequence of global warming has received considerable attention in the scientific community and the media. Higher global temperatures will lead to the melting of polar ice caps, which in turn will cause global sea levels to rise. The analysis of sea level rise impacts is provided in Chapter 3.5: Hydrology, Flooding, and Water Quality.

Greenhouse Gases

Gases that trap heat in the Earth's atmosphere are called greenhouse gases (GHGs). These gases play a critical role in determining the Earth's surface temperature. Some of the solar radiation that enters Earth's atmosphere is absorbed by the Earth's surface, and some is reflected back toward space. Of the radiation reflected back toward space, GHGs will absorb a part. As a result, radiation that otherwise would have

escaped back into space is retained, resulting in a warming of the atmosphere. Some level of GHGs is essential for maintaining temperatures supportive of life on Earth. Without naturally-occurring GHGs, the Earth's surface would be about 61°F cooler.¹⁸ This phenomenon is known as the greenhouse effect, and is not, of itself, a bad thing. However, many scientists believe that emissions from human activities—such as electricity generation, vehicle emissions, and even farming and forestry practices—have elevated GHGs in the atmosphere beyond naturally-occurring concentrations, contributing to global climate change. The six primary GHGs are:

- **Carbon dioxide (CO₂)**, emitted when solid waste, fossil fuels (oil, natural gas, and coal), and wood and wood products are burned;
- **Methane (CH₄)**, produced through the anaerobic decomposition of waste in landfills, animal digestion, decomposition of animal wastes, production and distribution of natural gas and petroleum, coal production, and incomplete fossil fuel combustion;
- **Nitrous oxide (N₂O)**, typically generated as a result of soil cultivation practices, particularly the use of commercial and organic fertilizers, fossil fuel combustion, nitric acid production, and biomass burning;
- **Hydrofluorocarbons (HFCs)**, primarily used as refrigerants;
- **Perfluorocarbons (PFCs)**, originally introduced as alternatives to ozone depleting substances (such as HFCs) and typically emitted as by-products of industrial and manufacturing processes; and
- **Sulfur hexafluoride (SF₆)**, primarily used in electrical transmission and distribution systems.

Though there are other gases that can contribute to global warming, these six are identified explicitly in California legislation and litigation as being of primary concern. GHGs have varying potentials to trap heat in the atmosphere. The potential is typically measured using two parameters: global warming potential (GWP), and atmospheric lifetimes. Measurements of GWP range from 1 for CO₂ to 23,900 for SF₆. GHG emissions with a higher GWP have a greater global warming effect on a molecule-by-molecule basis. For example, one ton of CH₄ has the same contribution to the greenhouse effect as approximately 21 tons of CO₂.¹⁹ GWP is alternatively described as “carbon dioxide equivalents”, or CO₂e. The second parameter, “atmospheric lifetime” describes how long it takes to restore the system to equilibrium following an increase in the concentration of a GHG in the atmosphere. Atmospheric lifetimes of GHGs can range from tens to thousands of years.

California GHG Emissions

GHG emissions contributing to GCC are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors.²⁰ The State of California alone produced almost 500 million metric tons of CO₂, making California the second largest emitter in the United States after Texas, and about 12th in the world. Major sources in California include fossil fuel consumption from transportation (38 percent), industry (20 percent), electricity production (25 percent), residential (6 percent), and agricultural (6 percent) sectors.²¹ Much like nations around the

¹⁸ CCAT, 2006.

¹⁹ California Climate Action Registry, 2009.

²⁰ CEC, 2007, 19.

²¹ CEC, 2007.

world, the California government is looking at options and opportunities for drastically reducing GHG emissions with the hope of thereby delaying, mitigating, or preventing some of the anticipated impacts of GCC on California communities.

The Global Warming Solutions Act of 2006 (AB 32) required that the California Air Resources Board (CARB) determine the statewide greenhouse gas emissions level in 1990. Based on its 1990-2004 inventory work, CARB staff set 427 million metric tons of carbon dioxide equivalent emissions (MMTCO₂e) as the total statewide greenhouse gas 1990 emissions level, and the 2020 emissions limit. The CARB approved the 2020 limit on December 6, 2007.²² This would be about 9.7 MTCO₂e per capita, based on the Department of Finance's state population projection of 44 million as shown in **Table 3.4-3**.

TABLE 3.4-3 CALIFORNIA 2020 GHG EMISSIONS GOAL

Total Emissions (MMTCO ₂ e)	427
2020 Population	44,136,000
Annual Emissions per Capita (MT)	9.7

Source: CARB, 2007; California Department of Finance, 2007; Dyett & Bhatia, 2008.

Bay Area GHG Emissions

Local and regional agencies in the Bay Area have also taken steps to measure/quantify, evaluate, and mitigate their contributions to GHG emissions and global warming. For example, the cities of San Francisco, San Jose, and Palo Alto, the East Bay Municipal Utility District, UC Berkeley and Stanford University, and numerous other water and power utilities, public agencies, foundations, and individual businesses are voluntary members of the Climate Action Registry, a private non-profit organization formed by the State of California in 2001 that serves as a voluntary greenhouse gas (GHG) registry to protect and promote early actions to reduce GHG emissions by organizations. Additionally, a number of cities and counties in the Bay Area have recently developed or are in the process of completing their own climate/greenhouse gas reduction action plans and inventories.

In 2008, the Bay Area Air Quality Management District (BAAQMD) completed a regionwide baseline inventory of GHG emissions for the year 2007. According to that inventory, updated most recently in February of 2010, 95.8 million metric tons of CO₂e were emitted in the Bay Area that year, which is about 13.6 metric tons CO₂e per person.²³ **Table 3.4-4** shows the Bay Area GHG emissions breakdown by pollutant.

²² CARB, 2008.

²³ BAAQMD, 2010.

TABLE 3.4-4 2007 BAY AREA CO₂E EMISSIONS BY POLLUTANT

POLLUTANT	CO ₂ E (MMT/YEAR)	PERCENTAGE
Carbon Dioxide	87.8	91.6
Methane	2.5	2.6
Nitrous Oxide	1.5	1.6
HFC, PFC, SF ₆	4.0	4.1
Total	95.8	100

Source: Bay Area Air Quality Management District, 2010.

In 2007, the Bay Area's transportation sector contributed 36 percent of the CO₂e GHG emissions, as did industrial and commercial sources (36 percent), followed by electricity and co-generation (16 percent), residential fuel usage (7 percent), off-road equipment (3 percent), and agriculture and farming (1 percent). Absent any policy changes, the Bay Area's greenhouse gas emissions are expected to grow at a rate of approximately 1.4 percent a year in the future due to population and economic growth.²⁴

Contra Costa County GHG Emissions

According to the BAAQMD GHG Inventory, Contra Costa County generated more GHG emissions in 2007—31.5 million metric tons, or 33 percent of the total—than any other county in the nine-county region. In 2008, Contra Costa County published a baseline inventory of GHG emissions for the base year 2005, as shown in **Table 3.4-5**.²⁵ According to the County inventory, in 2005 Contra Costa was responsible for only 12.3 million metric tons of CO₂e. That emissions estimate is substantially less than the 2007 one generated by BAAQMD for the county, but the methodologies are likely very different, and thus the numbers are not directly comparable.

The Contra Costa inventory evaluated building and industrial energy use, vehicle transportation, and waste disposal for cities and unincorporated areas in the County. Countywide data for residential, commercial, and industrial energy use was provided by PG&E. The commercial/industrial emissions are based exclusively on energy use and do not include emissions from refinery operations.²⁶ Transportation data was provided by the Metropolitan Transportation Commission (MTC). Emissions calculations for land-filled waste assume an 85 percent methane recovery factor.

²⁴ *Ibid.*

²⁵ Contra Costa County, 2008.

²⁶ This is likely a major source of the discrepancy between the regional estimate and the county estimate.

TABLE 3.4-5 CONTRA COSTA COUNTYWIDE GHG EMISSIONS (2005)

EMISSIONS SOURCE	TOTAL EMISSIONS MTCO _{2E} ¹	PERCENT OF COUNTY TOTAL	EMISSIONS PER CAPITA
Incorporated Areas			
Residential Energy Use	1,308,216	11	1.51
Commercial/Industrial/Direct Access Energy Use	2,530,030	21	2.93
Transportation	3,569,319	29	4.13
Land-filled Waste	153,043	1	0.18
Incorporated Subtotal	7,560,608	61	8.75
Unincorporated Areas			
Residential Energy Use	279,439	2	1.75
Commercial/Industrial/Direct Access Energy Use	3,500,768	28	21.93
Transportation	972,754	8	6.09
Land-filled Waste	22,335	<1	0.14
Unincorporated Subtotal	4,775,296	39	29.91
County Totals			
Residential Energy Use	1,587,655	13	1.55
Commercial/Industrial/Direct Access Energy Use	6,030,798	49	5.89
Transportation	4,542,073	37	4.44
Land-filled Waste	175,378	1	0.17
County Total	12,335,904	100	12.05
2050 County Goal (80 percent less)	2,467,181		1.36
MTCO _{2E} , metric tons carbon dioxide equivalent, describes the number of metric tons of carbon dioxide that would have the same climate change potential as the actual assortment of greenhouse gases.			

Source: Contra Costa County Greenhouse Gas Emissions Inventory Report, June 2008; Dyett & Bhatia, 2008.

The inventory includes a more detailed analysis of County operations such as: County building energy use, streetlight energy use, water and sewage energy use, fuel use by the municipal vehicle fleet, and land-filled waste disposal from County facilities and operations. However, data for individual cities or water and sewer districts have not been analyzed separately. The inventory does not account for construction emissions.

Total countywide GHG emissions in 2005 were approximately 12.3 million metric tons, which is equivalent to approximately 12 metric tons per capita per year. For the County as a whole, commercial and industrial energy use accounts for almost half of the total emissions (49 percent), followed by transportation (37 percent), residential energy use (13 percent), and landfill waste (1 percent). The major oil refineries located in unincorporated Contra Costa County account for a large part of the greenhouse gas emissions from the commercial and industrial sectors.²⁷

²⁷ Contra Costa County, 2008.

San Pablo GHG Emissions

While there is no GHG inventory specific to the San Pablo Avenue corridor, the City of San Pablo prepared baseline and interim year communitywide inventories of GHGs as shown in **Table 3.4-6**. By far, the transportation sector contributes the largest share of all GHG emissions in San Pablo.

TABLE 3.4-6 COMMUNITYWIDE GREENHOUSE GAS EMISSIONS IN SAN PABLO (CO₂E)

SECTOR	2005 (CITY BASELINE)		2007 (INTERIM YEAR)	
	METRIC TONS	SHARE OF TOTAL	METRIC TONS	SHARE OF TOTAL
Residential	27,805	16%	30,264	17%
Commercial	16,279	10%	20,133	11%
Industrial	3,686	2%	4,420	3%
Transportation	104,624	61%	101,089	57%
Waste	18,735	11%	20,881	12%
Total	171,129	100%	176,787	100%

Source: City of San Pablo, 2010, CACP reports.

Regulatory Setting

The regulation of greenhouse gases is changing constantly as nations, and the U.S. federal, state, and local governments work to determine strategies that will work to systematically reduce GHG emissions and the impacts of climate change. GHG regulation is also intertwined with regulation of energy production and distribution. The regulations listed below reflect a tailored list of relevant actions the federal and State governments have taken to address energy, greenhouse gases, and global climate change.

Federal Regulations

Section 202 GHG Regulation of Cars and Light Duty Trucks

This rule was proposed jointly by EPA and the National Highway Traffic Safety Administration (NHTSA) to create a National Program of GHG emission standards and Corporate Average Fuel Economy (CAFE) standards. The standards apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. The standards are designed to achieve a national vehicle fleet whose emissions and fuel economy performance improves year over year. The goal is to reduce CO₂ emissions by 960 million metric tons and save 1.8 billion barrels of oil over the lifetime of the vehicles sold in model years 2012 through 2016.²⁸ The final rule was signed on April 1, 2010 and will become effective 60 days after its publication in the Federal Register.

Renewable Fuel Standard Program

Finalized on February 3, 2010, this rule makes changes to the Renewable Fuel Standard (RFS) program, as required by the Energy Independence and Security Act of 2007. The original RFS program was designed to implement the provisions of the Energy Policy Act of 2005 (EPAct, described later). The revised statutory requirements establish new specific volume standards for cellulosic biofuel, biomass-based diesel, advanced biofuel, and total renewable fuel that must be used in transportation fuel each year.

²⁸ US EPA, 2010.

The revised statutory requirements also include new definitions and criteria for both renewable fuels and the feedstocks used to produce them, including new greenhouse gas emission thresholds for renewable fuels.

Greenhouse Gas Findings (2009)

In the U.S. Supreme Court case *Massachusetts v. EPA* (2007), 12 states, three cities, and 13 environmental groups filed suit that the EPA should be required to regulate carbon dioxide and other greenhouse gases as pollutants under the federal Clean Air Act. In April 2007, the U.S. Supreme Court found that the EPA has a statutory authority to formulate standards and regulations to address greenhouse gases, which it historically has not done. On December 7, 2009, the Environmental Protection Agency Administrator finalized two findings to be effective January 14, 2010. The findings are related to greenhouse gases under section 202(a) of the Clean Air Act. These findings do not themselves impose any requirements on industry or other entities.

- **Endangerment Finding:** The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases—carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆)—in the atmosphere threaten the public health and welfare of current and future generations.
- **Cause or Contribute Finding:** The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare.²⁹

Executive Order 13154 Federal Leadership in Environmental, Energy, and Economic Performance

On October 5, 2009, President Obama issued Executive Order 13154, which instructs federal agencies to set or achieve various emissions reduction and energy and environmental benchmarks by 2015, 2020, and 2030. The order requires agencies to set GHG emissions reduction targets for 2020 within 90 days, and requires OMB to set a federal government target for 2020 within 120 days. The order also sets out required reductions in vehicle fleet petroleum use and requires increases in water and energy efficiency and in recycling and waste diversion rates. The order also mandates adoption of certain contract and procurement practices designed to promote energy and water efficiency and environmentally-preferable products.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 was designed to improve vehicle fuel economy and help reduce U.S. dependence on oil. The Act establishes several key standards:

- Increases the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) requiring fuel producers to use at least 36 billion gallons of biofuel in 2022, which represents a nearly five-fold increase over current levels; and
- Reduces U.S. demand for oil by setting a National Fuel Economy Standard of 35 miles per gallon by 2020—an increase in fuel economy of 40 percent.

²⁹ US EPA, 2009.

Energy Policy and Conservation Act, and CAFE Standards

The Energy Policy and Conservation Act (EPCA) of 1975 declared it to be U.S. policy to establish a reserve of up to 1 billion barrels of petroleum, and established nationwide fuel economy standards in order to conserve oil. Pursuant to this Act, the National Highway Traffic and Safety Administration, part of the U.S. Department of Transportation, is responsible for revising existing fuel economy standards and establishing new vehicle fuel economy standards.

The Corporate Average Fuel Economy (CAFE) program was established to determine vehicle manufacturer compliance with the government's fuel economy standards. Compliance with CAFE standards is determined based on each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the United States. The EPA calculates a CAFE value for each manufacturer based on city and highway fuel economy test results and vehicle sales. The CAFE values are a weighted harmonic average of the EPA city and highway fuel economy test results. Based on information generated under the CAFE program, the U.S. Department of Transportation is authorized to assess penalties for noncompliance.

CAFE rules require the average fuel economy of all vehicles of a given class that a manufacturer sells in each model year to be equal or greater than the standard. CAFE standards apply to passenger cars and light trucks (gross vehicle weight of 8,500 pounds or less). Heavy-duty vehicles (i.e. gross vehicle weight over 8,500 pounds) are not currently subject to fuel economy standards. The EPCA was reauthorized in 2000 (49 CFR 533). The Energy Independence and Security Act of 2007 revised CAFE standards for the first time in 30 years, followed quickly by Section 202 GHG Regulation of Cars and Light Duty Trucks, which calls for further revision of the CAFE standards. Both of those regulations are described above.

Energy Policy Acts of 1992, 2005, etc. (EPAAct)

The Energy Policy Act of 1992 (EPAAct) was passed to reduce the country's dependence on foreign petroleum and improve air quality. EPAAct includes several parts intended to build an inventory of alternative fuel vehicles (AFVs) in large, centrally fueled fleets in metropolitan areas. EPAAct requires certain federal, state, and local government and private fleets to purchase a percentage of light duty AFVs capable of running on alternative fuels each year. In addition, financial incentives are also included in EPAAct. Federal tax deductions will be allowed for businesses and individuals to cover the incremental cost of AFVs. The Act also requires states to consider a variety of incentive programs to help promote AFVs. The Energy Policy Act of 2005 includes updated provisions for renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants, and loan guarantees for clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

Tax Credit for Wind-Generated Electricity

Beginning in the late 1990s, Congress introduced a tax subsidy on the production of renewable wind-generated electricity. The availability, expiration, and potential extension of the Production Tax Credit cause the boom and bust production of energy that typifies wind development in the United States. The Production Tax Credit's limitations have determined the role of the wind energy industry in the United States and contributed to the dominance of electric utility subsidies.

Energy Star Program

Energy Star is a joint program of the United States Environmental Protection Agency and the Department of Energy. The program establishes criteria for energy efficiency for household products and labels energy efficient products with the Energy Star seal. Homes can be qualified as “Energy Star homes” if they meet efficiency standards. In California, Energy Star homes must use at least 15 percent less energy than standards set by Title 24, pass the California Energy Star Homes Quality Insulation Installation Thermal Bypass Checklist Procedures, have Energy Star windows, and have minimal duct leakage.

Global Change Research Act (1990)

The purpose of the legislation was: “...to require the establishment of a United States Global Change Research Program aimed at understanding and responding to global change, including the cumulative effects of human activities and natural processes on the environment, to promote discussions towards international protocols in global change research, and for other purposes.” To that end, the Global Change Research Information Office (GCRIO) was established in 1991 (it began formal operation in 1993) to serve as a clearinghouse of information. The Act requires a report to Congress every four years on the environmental, economic, health and safety consequences of climate change; however, the first and only one of these reports to-date, the National Assessment on Climate Change, was not published until 2000. In February 2004, operational responsibility for GCRIO shifted to the U.S. Climate Change Science Program.

State Regulations

California Attorney General Actions

The California Attorney General’s office has taken several actions to ensure that California meets its greenhouse gas reduction targets.³⁰ Examples of the Office of Attorney General’s efforts since 2006 include taking companies in the power industry and the auto industry to task for their contributions to global warming and writing letters or submitting oral testimony in over 50 CEQA environmental review processes involving city Specific Plans, county Specific Plans, regional transportation plans, and specific projects throughout California.

CEQA Guidelines Appendix F: Energy Conservation

Appendix F of the CEQA Guidelines describes the types of information and analyses related to energy conservation that are to be included in Environmental Impact Reports (EIRs). Energy conservation is described in terms of decreasing per capita energy consumption; decreasing reliance on fossil fuels such as coal, natural gas, and oil; and increasing reliance on renewable energy sources. To assure that energy implications are considered in project decisions, EIRs must include a discussion of the potentially significant energy impacts of proposed projects (to the extent relevant and applicable to the proposed Project), with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy.

³⁰ The Attorney General’s web portal for global warming may be found at <http://ag.ca.gov/globalwarming>. The portal contains information on global warming generally, impacts in California, and documentation of the comments, speeches, op-eds, testimony, and litigation actions he has taken to support AB 32 goals.

Executive Order S-13-08 (Gov. Schwarzenegger, November 2008)

This Order directs state agencies to plan for sea level rise and climate change impacts. There are four key actions in the Order, including: (1) initiate California's first statewide climate change adaptation strategy that will assess the State's expected climate change impacts, identify where California is most vulnerable and recommend climate adaptation policies by early 2009; (2) request the National Academy of Science establish an expert panel to report on sea level rise impacts in California to inform State planning and development efforts; (3) issue interim guidance to State agencies for how to plan for sea level rise in designated coastal and floodplain areas for new projects; and (4) initiate a report on critical existing and planned infrastructure projects vulnerable to sea level rise.

Sustainable Communities and Climate Protection Act of 2008 (Chapter 728, Statutes of 2008)

The Sustainable Communities and Climate Protection Act of 2008, otherwise known as Senate Bill (SB) 375, establishes a process for CARB to implement the State's global warming legislation (AB 32) for the transportation sector by requiring CARB to adopt regional GHG targets for emissions associated with the automobile and light truck sector. SB 375 requires MPOs such as MTC to develop a Sustainable Communities Strategy (SCS)—a new element of the regional transportation plan (RTP)—to strive to reach these GHG reduction targets.

On June 30, 2010, CARB released proposed 2020 targets for the State's four largest MPO regions including the San Francisco Bay area. The targets propose a five to ten percent reduction in per capita GHG emissions from 2005 levels for each region. Although CARB found that there is insufficient technical information to establish firm targets for 2035, the agency has proposed placeholder targets for each of the four largest regions. Based on the work that has already been done on the Bay Area SCS by the Metropolitan Transportation Commission (MTC), the 2035 target for this region is a 3 to 12 percent reduction in GHG levels in addition to the emission reductions expected from the Greenhouse Gas Vehicle Standards and Low Carbon Fuel Standard measures the State adopts to implement AB 1493, the Pavley bill discussed above.³¹

On July 28, 2010, MTC approved a set of "Bay Area Principles for Establishing Regional Greenhouse Gas Reduction Targets" (Resolution 3970). The principles propose, among other things, per-capita GHG reductions of 7 percent by 2020 and 15 percent by 2035. The approved principles are intended to inform CARB in its GHG target-setting deliberations between now and September 30, 2010, when it adopts statewide GHG targets.³²

SB 375 provides assurance that transportation projects programmed for funding prior to 2012 and contained in the 2009 federal transportation improvement program, funded by Proposition 1B, or a voter approved sales tax measure approved prior to 2009 will not be subject to new environmental scrutiny under the bill's provisions.

SB 375 ties the regional housing needs assessment (RHNA) process to the RTP process, requires local governments to rezone their Specific Plans consistent with the updated housing element within three years of adoption, and provides that RHNA allocations must be consistent with the development pattern in the SCS. It moves the RHNA process to an eight-year cycle from the current five-year one. Also, SB

³¹ CARB, 2010.

³² MTC website: http://www.mtc.ca.gov/news/current_topics/7-10/ghg.htm

375 provides a California Environmental Quality Act (CEQA) exemption or a streamlined process for housing and mixed-use projects that meet specified criteria, such as proximity to transit.

California Building Code

Title 24, Part 6, of the California Code of Regulations is the California Building Code, governs all aspects of building construction. Included in Part 6 of the Code are standards mandating energy efficiency measures in new construction. Since its establishment in 1977, the building efficiency standards (along with standards for energy efficiency in appliances) have contributed to a reduction in electricity and natural gas costs in California. The standards are updated every three years to allow new energy efficiency technologies to be considered. The latest update to Title 24 standards became effective in January 2007. The standards regulate energy consumed in buildings for heating, cooling, ventilation, water heating, and lighting. Title 24 is implemented through the local plan check and permit process.

CalGreen, the nation's first Green Building Standards Code, became effective in August 2009 for voluntary compliance and local adoption, and will become effective for mandatory compliance on January 1, 2011. This Code establishes minimum standards for new construction that are intended to help the State achieve the AB 32 goal of reducing GHG emissions to 1990 levels by 2020. In addition to energy efficiency standards, CalGreen includes mandatory measures for water conservation, storm water drainage and retention, material conservation, and construction waste reduction. The requirements for nonresidential construction also include parking, landscaping, and other standards. Local jurisdictions have the option of adopting procedures by ordinance to improve the level of construction beyond the CalGreen minimum standard.³³

Executive Order S-01-07 (Gov. Schwarzenegger, January 2007)

This Order calls for a statewide goal to be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020 ("2020 Target"), and that a Low Carbon Fuel Standard ("LCFS") for transportation fuels be established for California. Further, it directs CARB to determine if an LCFS can be adopted as a discrete early action measure pursuant to AB 32, and if so, consider the adoption of a LCFS by June 30, 2007, pursuant to Health and Safety Code Section 38560.5. The LCFS applies to all refiners, blenders, producers or importers ("Providers") of transportation fuels in California, will be measured on a full fuels cycle basis, and may be met through market-based methods by which Providers exceeding the performance required by a LCFS shall receive credits that may be applied to future obligations or traded to Providers not meeting the LCFS.

In June 2007, CARB approved the LCFS as a Discrete Early Action item under AB 32. The LCFS rulemaking package was filed with the Office of Administrative Law (OAL) on November 25, 2009. The OAL approved the LCFS rulemaking and filed with the Secretary of State on January 12, 2010.

Senate Bill 97 (Chapter 185, Statutes of 2007)

Senate Bill (SB) 97 directs the Office of Planning and Research (OPR) to prepare, develop, and transmit to the California Resources Agency guidelines for feasible mitigation of GHG emissions or the effects of GHG emissions, by July 1, 2009. The Natural Resources Agency was required to certify and adopt amendments to the Guidelines implementing the California Environmental Quality Act ("CEQA Guidelines") on or before January 1, 2010. In keeping with SB 97, OPR proposed amendments to the

³³ California Building Standards Commission, 2010.

CEQA Guidelines for the mitigation of greenhouse gas emissions and transmitted them to the Resources Agency for rulemaking on April 13, 2009. The Resources Agency adopted the amendments on December 30, 2009. On February 16, 2010, the OAL approved the amendments, and filed them with the Secretary of State for inclusion in the California Code of Regulations. The amendments became effective on March 18, 2010.

Implementation of the Alternative and Renewable Fuel and Vehicle Technology Program

AB 118 (Chapter 750, Statutes of 2007) directs the California Energy Commission to develop the Alternative and Renewable Fuel and Vehicle Technology Program. Crucial to implementing the Program is the development and adoption of an Investment Plan. The Investment Plan will establish priorities and opportunities for the Program, and describe how funding will complement existing public and private investments, including existing State programs. The Investment Plan will be updated annually.

California Global Warming Solutions Act of 2006 (AB 32)

This Act (Health and Safety Code Section 38500 et. seq.) requires the reduction of statewide total GHG emissions to 1990 levels by the year 2020. This change, which is estimated to be a 25 to 35 percent reduction from current emission levels, will be accomplished through an enforceable statewide cap on GHG emissions that will be phased-in starting in 2012. The Act also directs CARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources and address GHG emissions from vehicles. CARB has stated that the regulatory requirements for stationary sources will be first applied to electricity power generation and utilities, petrochemical refining, cement manufacturing, and industrial/commercial combustion. The second group of target industries will include oil and gas production/distribution, transportation, landfills and other GHG-intensive industrial processes.

Executive Order S-20-06 (Gov. Schwarzenegger, October 2006)

This Order establishes the authority and roles of various departments and leadership roles in implementing AB 32.

Executive Order S-06-06 (Gov. Schwarzenegger, April 2006)

This Order establishes biomass production and use targets for California. Biomass is a large but primarily unused resource including residues from forestry, urban, and agricultural wastes and can be used to create electricity, transportation fuels, and biogas. Use of biomass could not only increase energy production but also reduce the waste stream. The Order states that biomass should comprise 20 percent of the State's Renewables Portfolio Standard for 2010 and 2020, and California shall produce a minimum of 20 percent of its biofuels in-state by 2010, 40 percent by 2020, and 75 percent by 2050. Additional funding and research will go to further developing these technologies and integrating them into use.

Senate Bill 1368 (Chapter 598, Statutes of 2006)

Senate Bill (SB) 1368 requires the California Public Utilities Commission (PUC) to establish a GHG emissions performance standard for "baseload" generation from investor-owned utilities by February 1, 2007. The California Energy Commission (CEC) was required to establish a similar standard for local publicly-owned utilities by June 30, 2007. The legislation further required that all electricity provided to California, including imported electricity, must be generated from plants that meet or exceed the standards set by the PUC and the CEC. In January 2007, the PUC adopted an interim performance standard for new long-term commitments (1,100 pounds of CO₂ per megawatt-hour), and in May 2007, the CEC approved regulations that match the PUC standard.

State Alternative Fuels Plan (Chapter 371, Statutes of 2005)

Assembly Bill (AB) 1007, the State Alternative Fuels Plan, required the CEC to prepare a State plan to increase the use of alternative fuels in the transportation sector in California. The CEC prepared the State Alternative Fuels Plan (Plan) in partnership with CARB and in consultation with the other state, federal, and local agencies. The Plan was adopted in October 2007. The Plan presents strategies and actions California must take to increase the use of alternative non-petroleum fuels in a manner that minimizes costs to California and maximizes the economic benefits of in-state production. Specific strategies include combining private capital investment, financial investment, technology advancement, investment in infrastructure, and others. The Plan also assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuels use, reduce greenhouse gas emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

Executive Order S-3-05 (Gov. Schwarzenegger, June 2005)

This Order recognizes California's vulnerability to climate change, noting that increasing temperatures could potentially reduce snow pack in the Sierra Nevada, which is a primary source of the State's water supply. Additionally, according to this Order, climate change could influence human health, coastal habitats, microclimates, and agricultural yield. The Order set the greenhouse gas reduction targets for California: By 2010, reduce GHG emissions to 2000 levels; by 2020 reduce GHG emissions to 1990 levels; by 2050 reduce GHG emissions to 80 percent below 1990 levels. This corresponds to an approximate 27 percent reduction by 2030 to 1990 levels, or 55 CO₂e in total emissions which correlates to 41 percent reduction over today's levels by 2030.

Executive Order S-20-04 (Gov. Schwarzenegger, July 2004)

This Order requires that the State commit to aggressive action to reduce State building electricity use, and more specifically, State agencies, departments, and other entities, take measures to reduce energy use by 20 percent by 2015. In addition, the Order requires that the CEC increase energy efficiency standards by 20 percent by 2015, compared to the 2003 Titles 20 and 24 standards.

State of California Energy Action Plans

The CEC is responsible for preparing the State Energy Action Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. At the beginning of 2008, the Energy Commission and CPUC determined that an Update to the 2005 California Energy Action Plan would be more appropriate than a new plan given the passage of Assembly Bill 32 and the critical role it will play in energy policy in coming years. The 2008 Update shifts focus to climate change. The nine major action areas, as described in previous Energy Action Plans include: energy efficiency; demand response; renewable energy; electricity adequacy, reliability, and infrastructure; electricity market structure; natural gas supply, demand, and infrastructure; transportation fuels supply, demand, and infrastructure; research, development, and demonstration; and climate change. The report emphasizes the importance of improving fuel standards in order to reduce energy use and greenhouse gas emissions, and notes the importance of also incorporating smart growth and land use policies.

Integrated Energy Policy Reports

Senate Bill 1389 (Chapter 568, Statutes of 2002) requires that the CEC prepare a biennial integrated energy policy report that contains an integrated assessment of major energy trends and issues facing the

State's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the State's economy; and protect public health and safety (Public Resources Code Section 25301[a]). The 2009 Integrated Energy Policy Report is the most current report to fulfill the requirement of SB 1389. According to the 2009 report: "as California pursues its goal to address climate change by reducing greenhouse gas emissions, the driving force for the State's energy policies continues to be maintaining a reliable, efficient, and affordable energy system that minimizes the environmental impacts of energy production and use. Although the economic downturn has reduced energy demand in the short-term, demand is expected to grow over time as the economy recovers. It is essential that the State's energy sectors be flexible enough to respond to future fluctuations in the economy and that the State continue to develop and adopt the "green" technologies that are critical for long-term reliability and economic growth."

California Renewables Portfolio Standard Program (2002)

Senate Bill (SB) 1078 (Chapter 516, Statutes of 2002) establishes a renewable portfolio standard (RPS) for electricity supply. The RPS requires that retail sellers of electricity, including investor-owned utilities and community choice aggregators, provide 20 percent of their supply from renewable sources by 2017. This target date was moved forward by SB 1078 to require compliance by 2010. In addition, electricity providers subject to the RPS must increase their renewable share by at least one percent each year. The outcomes of this legislation will impact regional transportation powered by electricity.

Assembly Bill 1493 (Chapter 200, Statutes of 2002)

Assembly Bill (AB) 1493 (Pavley) amends Health and Safety Code sections 42823 and 43018.5 requiring CARB to develop and adopt regulations that achieve maximum feasible and cost-effective reduction of GHG emissions from passenger vehicles, light-duty trucks, and other vehicles used for noncommercial personal transportation in California. The regulations prescribed by AB 1493 may not take effect prior to January 1, 2006, and they apply only to 2009 and later model years.

In September 2004, pursuant to AB 1493, the CARB approved regulations to reduce greenhouse gas emissions from new motor vehicles. Under the regulation, one manufacturer fleet average emission standard is established for passenger cars and the lightest trucks, and a separate manufacturer fleet average emission standard is established for heavier trucks. The regulation took effect on January 1, 2006 and set near-term emission standards, phased in from 2009 through 2012, and mid-term emission standards, phased in from 2013 through 2016 (referred to as the Pavley Phase 1 rules). The CARB intends to extend the existing requirements to obtain further reductions in the 2017 to 2020 timeframe (referred to as Pavley Phase 2 rules). EPA at first refused to grant a waiver that would allow California to implement these standards, and California challenged this action in federal court. On January 26, 2009, President Obama directed that EPA assess whether the denial of the waiver was appropriate. On June 30, 2009, EPA granted the waiver request, which begins with motor vehicles in the 2009 model year. The CARB calculates that in calendar year 2016, the Pavley Phase 1 rules will reduce California's GHG emissions by 16.4 million metric tons of carbon dioxide equivalents, and by 2020, Pavley Phase 2 would reduce emissions by 31.7 million metric tons of carbon dioxide equivalents. The AB 1493 vehicle requirements would cumulatively produce 45 percent more GHG reductions by 2020 compared to the federal CAFE standard in the Energy Independence and Security Act of 2007,³⁴ but roughly equivalent reductions to

³⁴ CARB, 2008.

the latest national agreement resulting in even more stringent CAFE standards (Section 202 GHG Regulation of Cars and Light Duty Trucks, described under federal regulations, above).

Senate Bill 1771 (Chapter 1018, Statutes of 2000)

Senate Bill (SB) 1771 requires the CEC to prepare an inventory of the State's greenhouse gas emissions, to study data on global climate change, and to provide government agencies and businesses with information on the costs and methods for reducing greenhouse gases. It also established the California Climate Action Registry to serve as a certifying agency for companies and local governments to quantify and register their greenhouse gas emissions for possible future trading systems.

Reducing Dependence on Petroleum Assembly Bill 2076 (Chapter 936, Statutes of 2000)

In response to Assembly Bill (AB) 2076, the CEC and CARB prepared and adopted a joint agency report, Reducing California's Petroleum Dependence. Included in this report are recommendations to increase the use of alternative fuels to 20 percent of on-road transportation fuel use by 2020 and 30 percent by 2030, significantly increase the efficiency of motor vehicles, and reduce per capita vehicle miles traveled.³⁵ Further, in response to the CEC's 2003 and 2005 Integrated Energy Policy Reports, the Governor directed the CEC to take the lead in developing a long-term plan to increase alternative fuel use. A performance-based goal is to reduce petroleum demand to 15 percent below 2003 demand.

Warren-Alquist State Energy Resources Conservation and Development Act (1974)

The 1974 Warren-Alquist Act (Public Resources Code Section 25000 et seq.) establishes the California Energy Resources Conservation and Development Commission, now known as the California Energy Commission (CEC). The Act establishes a State policy to reduce wasteful, uneconomical, and unnecessary uses of energy by employing a range of measures.

California Public Utilities Commission

The California Public Utilities Commission (CPUC) regulates Investor-Owned Utilities (IOUs) including those that offer electric, natural gas, steam, and petroleum service to consumers. The CPUC regulates both electric and natural gas rates and services provided by these utilities including in-state transportation over the utilities' transmission and distribution pipeline systems, storage, procurement, metering and billing. Natural gas regulations are found in General Orders 58, 94, 96, and 112, while electrical distribution regulations are found in General Orders 95, 128, 131, 165, and 166.

Regional and Local Regulations

Joint Policy Committee

In the Bay Area, the Joint Policy Committee (JPC) coordinates the regional planning efforts of the Association of Bay Area Governments (ABAG), the Bay Area Air Quality Management District (BAAQMD), the Bay Conservation and Development Commission (BCDC) and MTC. In fall 2006, the JPC commenced a six-month program to study the issue of climate change and to recommend an initial set of actions to be pursued jointly by the four regional agencies. The study recommends that the regional agencies build their Joint Climate Protection Strategy in service of the following goal: "To be a model for California, the nation and the world." It then organizes initial actions by six strategy elements: establish

³⁵ CEC, CARB, 2003.

priorities, increase public awareness and motivate action, provide assistance, reduce unnecessary driving, prepare to adapt, and break old habits.³⁶

Contra Costa County

Contra Costa County adopted the long-term reduction target set by the U.S. Cool Counties Climate Stabilization Declaration in October 2007. This declaration calls for the County to work closely with local, state, and federal governments and other leaders to develop a regional plan to reduce county geographical GHG emissions to 80 percent below current levels by 2050.

IMPACT ANALYSIS

Significance Criteria

Implementation of the proposed Project would have a potentially significant adverse impact if it would:

- Criterion 1:** Cause a substantial increase in per capita or per service population energy consumption.
- Criterion 2:** Require a substantial increase in energy supply capacity or infrastructure the construction of which could cause adverse environmental effects.
- Criterion 3:** Conflict with any existing local, regional, State, or federal standards for energy production or efficiency.
- Criterion 4:** Exceed the per service population (residents + jobs) threshold of 6.6 MT CO₂e/year.
- Criterion 5:** Conflict with existing local, regional, or State efforts to implement AB 32 or SB 375.

Methodology and Assumptions

Both the energy and the greenhouse gas analyses are done at the citywide scale because there is inadequate data available at the Planning Area scale to describe energy use and GHG emissions. In particular, the transportation data on which part of the energy and GHG assessments are based is modeled citywide due to the regional and cumulative nature of transportation patterns. Furthermore, the policy approaches to reduce energy use and GHG emissions would also largely be applied citywide, and not specifically to this Planning Area.

Energy

This energy analysis focuses on the direct energy required to operate vehicles and to run residential and non-residential buildings. While there are other ways energy is used in the Planning Area—including indirect uses associated with the construction and maintenance of buildings, vehicles, and other infrastructure—these other indirect sources are considered too speculative to justify program EIR analysis. For purposes of this analysis, direct sources are considered reasonably comprehensive in scope and representative of the influence of the proposed Specific Plan.

³⁶ Joint Policy Committee, 2007.

The energy analysis begins with existing conditions of non-transportation energy use in the city taken from the San Pablo GHG inventory, which reports energy in British Thermal Units (Btu) for residential, commercial, and industrial uses. Government buildings are included in these numbers. The analysis then projects non-transportation energy use into the future using per capita (for residential development) and per job (for non-residential development) estimates from existing conditions, and creates an average per service population estimate from those results.

For transportation energy use the analysis uses Dowling Associates estimates of VMT generated for existing conditions and for 2030 Specific Plan buildout, applies fuel efficiency assumptions to obtain fuel consumption, and multiplies by the amount of energy (in Btu) contained within a gallon of fuel. Fuel efficiency is assumed to be higher in the future than today, as a result of implementation of existing State policy. To the extent that the analysis incorporates transportation energy, it reflects a cumulative impact analysis because the projected future VMT assumes the implementation of the proposed Specific Plan as well as wider regional growth and development and regulatory efforts.

Finally, the analysis looks briefly at historic data to describe the variability of per capita energy use over time, comparing national, State, and local energy use trends, and drawing conclusions based on trends and the energy use profile of San Pablo in particular.

Greenhouse Gases

As described in the setting, San Pablo has a greenhouse gas inventory which estimates citywide emissions in 2005 and 2007. This inventory is a major tool for the preparation of this analysis. In harmony with the inventory, three components of the greenhouse gas inventory are treated separately in this analysis: residential development emissions, non-residential development emissions (which includes waste stream emissions), and transportation-related emissions.

For existing conditions, population and jobs estimates were compiled for the City of San Pablo. Residential emissions were reported from existing inventories at the city level, and per capita emissions rates from residential fuel use were estimated. Non-residential emissions were also reported from existing inventories and per job emissions rates from non-residential development were estimated. Finally, rather than using the city inventory transportation emissions estimate, the existing conditions VMT estimate from Dowling Associates was used to generate a new transportation emissions estimate because the Dowling Associates VMT estimates come from the county calibrated model rather than from the regional model, and they are consistent with the projections of future VMT also prepared by Dowling. The VMT were then used as inputs in the California Climate Action Registry General Reporting Protocol version 3.1, and the fuel efficiency assumption applied in this formula (17.9 miles per gallon average of gasoline and diesel) was chosen to match the fuel efficiency applied in the city inventory when they calculated transportation emissions for that purpose.

For 2030 residential and non-residential building energy emissions projections, the per capita and per job emissions rate estimates from existing conditions were multiplied by estimates of future population and jobs for the city under the future with the proposed Specific Plan and San Pablo 2030 General Plan (assumed to be adopted) in place. Preliminary analysis compared the results of using just San Pablo per capita and per job rates, as well as using an average of the Bay Area, county, and city rates. The most conservative (i.e. highest estimate) was used, in this case, the average of regional, countywide, and local

rates.³⁷ This estimate is also inherently conservative because it does not account for emissions savings that may result from better technologies, cleaner electricity, energy conservation efforts, etc.

For 2030 transportation emissions projections, the analysis uses VMT modeled by Dowling Associates for Specific Plan buildout, applies the General Reporting Protocol, and applies a future fuel efficiency estimate (27.3 miles per gallon) drawn from the regional Transportation 2035 Plan EIR which is adjusted to reflect the savings expected from complying with Pavley rules I and II.

The total future emissions estimate was then converted to a per service population rate, and compared to the BAAQMD threshold of 6.6 MTCO₂e in order to determine if the GHG emissions impact would be significant.

Impact Summary

Direct Energy Use

Implementation of the proposed San Pablo Avenue Specific Plan, combined with anticipated regional growth and improvements in vehicle technology, would result in a slight increase in per service population energy use (relative to existing conditions) related to residential, commercial, and industrial development, while at the same time a substantial decrease in per service population energy use (relative to existing conditions) from transportation, largely as a result of implementation of existing State policy. The overall conclusion is that the impact of the proposed Specific Plan on per service population energy use is less than significant.

Greenhouse Gas Emissions

The rate of greenhouse gas emissions under proposed Specific Plan buildout is estimated to be approximately 5.99 MTCO₂e per service population using no policy-related reductions. This is higher than existing conditions (5.31 MTCO₂e), but less than the threshold of significance for plan level impacts established by the BAAQMD (6.6 MTCO₂e). If reasonably expected policy-related reductions are factored in according to Air District guidance, the per service population rate is estimated at only 4.4 MTCO₂e per year, which also meets the Air District's project level threshold for significance. Therefore, the impact of the proposed Project on greenhouse gas emissions is less than significant.

Energy Infrastructure Capacity

In 2007, San Pablo electricity use represented only 1 percent of countywide electricity use as reported on the CEC Energy Consumption Data Management System (<http://ecdms.energy.ca.gov>). Likewise, San Pablo natural gas use represented less than 1 percent of countywide natural gas use that year. While overall energy use will increase 24 percent in San Pablo between 2007 and 2030, that increase represents a very, very small fraction of the overall energy demand (and growth in demand) in the County, a change which, as far as larger infrastructure investments are concerned, would be de minimus. This impact is thus not analyzed further in this EIR.

³⁷ One exception is that county-specific non-residential development emissions rate isolated from the regional inventory was omitted from the per-job emissions rate average because it is so heavily influenced by the oil refineries and other major industrial operations that are specific to Contra Costa County. These were not deemed reflective of the job-related emissions that could be expected in San Pablo. The county-only inventory per job rate was more in line with the region as a whole because the county inventory did not include these major industrial emitters.

Policy Consistency

Furthermore, as new development must meet California's Title 24 energy efficiency and green building requirements, development under the proposed Specific Plan will not result in wasteful, inefficient, or unnecessary consumption of energy. This impact is not analyzed further in this EIR.

Impacts and Mitigation Measures

Impact

3.4.1 Implementation of the proposed Specific Plan would result in an increase in per service population (residents + jobs) energy consumption as measured citywide. *(Less than Significant)*

The projection of non-transportation energy use at Specific Plan buildout uses existing per capita and per job energy use rates multiplied by future population or jobs, respectively. No energy use deductions are taken based on Plan policy direction. Using this approach, the result is a potential 24 percent increase in overall non-transportation energy consumption in San Pablo by 2030 as a direct result of population and employment growth in the Planning Area.

While non-transportation energy use overall (**Table 3.4-7**) is expected to increase, the per service population rate of energy use is expected to increase only slightly—from 22.9 to 24.2 MMBtu per service population per year. This increase is the result of there being a somewhat larger projected increase in jobs than in population, with jobs—especially commercial jobs—responsible for higher rates of energy use per person than residents or other kinds of jobs.

TABLE 3.4-7 NON-TRANSPORTATION ENERGY USE BY TYPE AND SECTOR, 2007-2030 (MMBTU)

SECTOR	ELECTRICITY		NATURAL GAS		EXISTING CONDITIONS ENERGY USE	SPECIFIC PLAN BUILDOUT ENERGY USE	CHANGE IN ENERGY USE
	ENERGY USE	RATE PER	ENERGY USE	RATE PER			
Residential (capita)	132,183	4.3	358,153	11.6	490,340	556,115	13%
Commercial (job)	148,168	24.2	141,673	23.1	289,865	403,372	39%
Industrial (job)	27,515	4.5	39,177	6.4	66,696	92,815	39%
Subtotal (service population)	307,866	8.3	539,003	14.6	846,902	1,052,303	24%

Source: San Pablo GHG inventory data, 2010; Dyett & Bhatia, 2010.

One can also look separately at transportation energy use (**Table 3.4-8**) and discover that it is reasonable to assume per service population energy use will actually decline over time. This is because enforcement of the Pavley fuel efficiency regulations (which are consistent with and reinforced by new federal CAFE standards) is expected to cause greater fuel efficiency across the fleet, which means using less energy per mile traveled. The result is that total direct transportation energy use is actually expected to decrease by about 20 percent, even though vehicle miles traveled is expected to increase.

TABLE 3.4-8 TRANSPORTATION ENERGY USE, 2000-2030 (BTU)

	DAILY VMT GENERATED	DAILY GALLONS OF FUEL USED	DAILY BTU	ANNUAL MMBTU	MMBTU PER SERVICE POPULATION
Existing Conditions	670,000	37,430	4,704,410,615	1,717,110	46.5
Specific Plan	950,000	34,799	4,373,653,846	1,596,384	36.7

Notes: Fuel efficiency used for existing conditions is 17.9 mpg, consistent with the City GHG emissions inventory assumptions and regional estimates, while the fuel efficiency used for 2030 is 27.3, based on implementation of Pavley rules.

1 gallon of gasoline = 125,000 btu, while 1 gallon of diesel = 138,700 btu

Sources: Dowling Associates, 2010; USDOE, *Transportation Energy Data Book*, 27th ed.; Table B.4; MTC, 2009; Dyett & Bhatia, 2010.

Taken together, the result is an anticipated decrease in overall per service population energy use in the future (Table 3.4-9).

TABLE 3.4-9 CHANGE IN TOTAL ENERGY USE BETWEEN EXISTING AND FUTURE CONDITION

	EXISTING CONDITIONS		PROPOSED PROJECT	
	MMBTU	PER SERVICE POPULATION	MMBTU	PER SERVICE POPULATION
Non-Transportation Subtotal	846,902	22.9	1,052,303	24.2
Transportation Subtotal	1,717,110	46.5	1,596,384	36.7
Total Energy Use	2,564,012	69.4	2,648,686	60.9

Source: Dyett & Bhatia, 2010.

Indeed, national data suggest that per person energy use has held fairly steady since about 1988.³⁸ Furthermore, as indicated in Table 3.4-2, overall San Pablo energy use was about 117 million Btus (MMBtu) per person per year in 2007, substantially less than both the national per capita rate (around 337) and the State per capita rate (233) (and California's rate is among the lowest in the nation). The San Pablo per capita consumption rate is lower still in part because there are no local large commercial users that may be present elsewhere in the county or the region. Indeed, relative to larger communities or jurisdictions, San Pablo's per person energy consumption may be assumed to stay particularly steady over time because the major contributors to energy use in the city are transportation energy and residential building energy, both of which tend to increase in line with population and job growth. The proposed Specific Plan does not plan for the development of any new, large-scale energy users in San Pablo, but rather for a reasonable amount of population and employment growth consistent with the character of the community and compatible with existing neighborhoods. This assessment therefore assumes that per capita and per job energy use will stay relatively constant over time absent policy changes.

Furthermore, the proposed Specific Plan proposes new policies that aim to reduce building and transportation energy use. This, taken in conjunction with State and national policies to increase vehicle fuel efficiency and State green building standards would most likely lead to reduced per capita and per job energy consumption over time.

³⁸ EIA, 2009.

Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

- C-I-6 In consultation with PG&E, study the feasibility of a program for converting city-owned street lights to light-emitting diode (LED) technology, and take advantage of rate reductions and rebates, as applicable.
- C-I-14 Expand and maintain a safe and comprehensive bicycle system that connects the city's neighborhoods to regional bicycle routes.
- C-I-16 Require the provision of bicycle parking and related facilities in new employment-generating development to facilitate multi-modal commute choices.
- C-I-21 Complete and enhance the pedestrian network with an interconnected system of walkways, continuous sidewalks on both sides of the street, and pedestrian crossings.
- C-I-26 Continue coordination efforts with public transit providers to maintain transit service that is safe and efficient with convenient connections to high use and activity intersections in the city.
- C-I-27 Work with public transit providers to advocate the expansion of transit service to underserved areas in the City.
- C-I-33 Amend the Zoning Ordinance to establish "green" parking design standards that have multiple benefits, such as shared parking for mixed use projects, passive solar on parking structures to generate energy for parking lot lighting, landscaping and trees in surface parking, and pervious paving to improve groundwater recharge and promote innovative surface parking design that avoids the appearance of a "sea of asphalt" and reduces environmental impacts.
- OSC-I-26 Promote energy efficiency in architectural design for new construction including building orientation to take advantage of wind and sun, and site design features (such as clustering of uses), pre-wiring for optional photovoltaic or solar heating systems, etc.
- HEA-I-4 Act as a model to other large employers by selecting and implementing a suite of transportation demand management (TDM) programs designed to reduce single-occupant vehicle trips and overall vehicle emissions generated by trips that start or end in San Pablo. Programs may include, but are not limited to: installation of showers, lockers, and secure bike parking facilities in city-owned buildings; designation of preferred parking spaces for carpools, carshare programs, and clean fuel vehicles; and provision of transit benefits that reduce direct employee public transportation costs.
- HEA-I-11 Support the use of clean fuel, "climate friendly" vehicles in order to reduce energy use, energy costs, and greenhouse gas emissions by residents, businesses, and City government activities.

In addition, several water conservation and waste reduction policies from Chapter 6 of the General Plan would also contribute to per capita and per job energy savings in San Pablo.

Proposed Specific Plan Policies that Reduce the Impact

The following policies related to transportation demand management and transit, pedestrian, and bicycle improvements would help to reduce energy use in the Specific Plan Area.

- 3-G-1 *Establish the San Pablo Avenue transit hub as a major transit destination, with improved pedestrian and streetscape facilities, safety measures, and visibility.*
- 3-G-2 *Improve the quality, visibility, and safety of transit stops along the San Pablo Avenue corridor.*
- 3-G-3 *With new construction, ensure access to transit is provided for seniors, families with children, and persons with disabilities throughout the Planning Area.*
- 3-I-1 Work with AC Transit and West CAT to establish a station of consolidated bus stops that best serves Contra Costa College and existing and planned high-density residential development. This may be located at College Lane, El Portal Drive, or along San Pablo Avenue. Formalize the transit hub by consolidating stops to one location, installing shelters, signage with system information and next-bus updates, bus pull-out areas, and expanded pedestrian furnishings and pedestrian-scaled lighting for visibility and security.
- 3-I-2 Coordinate with AC Transit and West CAT to implement bus service modifications to improve service and increase accessibility to transit for new higher-intensity development in the Planning Area.
- 3-I-3 Identify direct paths to bus stops for pedestrians and bicyclists, and identify opportunities for implementation—either new connections through redevelopment or improvements to existing development.
- 3-I-4 Work with Contra Costa College to develop and improve connections to the proposed Transit Hub near the college, by designating paths and improving signage.
- 3-I-5 Provide way finding signage to indicate pathways to and location of major bus stops.
- 3-I-6 Improve the pedestrian crosswalks at El Portal Drive and Rumrill Boulevard to ensure accessibility for persons with disabilities and provide greater connectivity near high density mixed-use development, such as the potential student housing at Mission Plaza.
- 3-I-7 Provide signalized pedestrian crosswalks at mid-block crossings and countdown signals at wide crosswalks or near bus stop locations.
- 3-I-8 Improve streetscape design to establish greater pedestrian comfort and access to transit stations. See Chapter 4, Section 4.2: Streetscape Design for specific measures.
- 3-I-9 Provide bus shelters, seating, lighting, trash receptacles, signage and kiosks, lighting and enhanced landscaping (for shade and aesthetics) at all bus stops.
- 3-G-4 *Provide continuous pedestrian sidewalks and safe bike travel routes throughout the Planning Area and within development projects.*
- 3-G-5 *Improve pedestrian and bicycle amenities throughout the Planning Area to encourage walking and bicycle trips along the corridor.*
- 3-G-6 *Ensure that private development integrates pedestrian and bicycle connections to transit, open space, and key destinations.*
- 3-I-12 Create internal streets within new mixed-use developments that maximize safe and efficient pedestrian circulation by incorporating design elements such as wider landscaped sidewalks, reduced vehicular speed limits, pedestrian-oriented lighting, bulb-outs, curb extensions at intersections, high visibility crosswalks, and on-street parking to buffer pedestrians from moving vehicles.

- 3-I-13 Provide mid-block connections through new developments that accommodate bicyclists and pedestrians, or all modes, to facilitate access to transit stops and major public destinations.
- 3-I-14 Consider connections and extensions to future bike and walking trails in anticipation of future amenities and improvements at Wildcat, San Pablo, and Rheem creeks, and potential park sites.
- 3-I-15 Enhance pedestrian connections and amenities and prioritize pedestrian access and circulation in Pedestrian Priority Zones.
- 3-I-16 Provide signage that clearly and explicitly indicates connections to local and regional bicycle facilities.
- 3-I-17 Provide secure short- and long-term bicycle parking at transit stops.
- 3-I-18 Encourage provision of bike racks and locking systems in all multi-family residential developments, multi-tenant retail and office developments, and government and institutional uses.
- 3-I-19 Incorporate a one-foot buffer, distinguished through color or paving, between the bicycle lane and the adjacent travel lane along the length of San Pablo Avenue, to enhance visibility and safety for bicyclists.
- 3-I-20 Maintain bike lanes along San Pablo Avenue, including pavement condition as well as clearing of debris.
- 3-G-13 *Encourage use of Transportation Demand Management strategies to minimize traffic contributions from new and existing development.*
- 3-G-14 *Promote public and privately-run alternative modes of transit, such as shuttles, along the San Pablo Avenue corridor.*
- 3-I-45 Encourage and support carpooling and vanpooling by providing preferential parking at employment sites for carpools and vanpools.
- 3-I-46 Explore the feasibility of shuttles. This could include:
 - As part of a comprehensive transportation demand management strategy, employer-based shuttles that provide service to and from the Richmond and El Cerrito Del Norte BART stations for new large developments. At a minimum, employer shuttles should operate during the morning and evening peak periods. Shuttle schedules should be timed to facilitate transfer from northbound BART trains in the morning and southbound BART trains in the evening.
 - A shuttle program to serve San Pablo Avenue that links Mission Plaza to South San Pablo Avenue as well as Contra Costa College, College Center, City Hall, Circle S, the Casino, and Doctor's Medical Center. This could be similar to the free shuttle in Oakland along Broadway that connects portions of Downtown Oakland and is funded by contributions from recent developments and a grant from the Bay Area Air Quality Management District.
 - A shuttle that runs between commercial centers located in neighboring cities, including Pinole, El Cerrito, and Richmond (to the Hilltop Mall, for example).

- 3-I-47 Work with the West Contra Costa Transportation Advisory Committee TDM Program Manager to promote the ridesharing and Guaranteed Ride Home Program provided through 511 Contra Costa, the comprehensive transportation demand management program for Contra Costa County.
- 3-I-48 Work with Contra Costa College to develop transportation demand management strategies to reduce single-occupancy vehicle trips to the campus, through use of improved bus and shuttle services, as well as improved pedestrian and bicycle connectivity from nearby student housing.
- 3-I-49 As development occurs within the Planning Area, require transportation demand management strategies as part of the approval process, including:
 - Provisions for transit passes
 - Carsharing
 - Parking cash out
- 3-I-50 Provide incentives to existing employers to develop transportation demand management programs.
- 3-I-51 Draft and adopt a Commuter Benefit Ordinance to allow employers and workers citywide to tap into an existing federal program to pay for transit passes and vanpool. This would be similar to ordinances in cities of Richmond, San Francisco, and Berkeley.

In addition, these policies related to sustainable building design would also help to reduce energy use.

- DG-41 Incorporate the adaptive reuse of existing materials, façades, and buildings. Use sustainable surface materials for paving, such as reclaimed pavers, locally-produced materials, or concrete and asphalt with fly ash content.
- DG-42 Utilize materials which have low embodied energy, are rapidly renewable, locally available, and do not give off harmful vapors.
- DG-43 Install water saving appliances and systems such as gray water systems, moisture-sensitive irrigation rainwater cisterns, low-flow toilets and faucets.
- DG-44 Use water-pervious materials for parking areas, driveways and pathways to the extent such that they reduce runoff and do not cause damage to public streets or other infrastructure.
- DG-45 Manage stormwater on-site through green roofs and/or rooftop gardens or water catchment systems to be used for irrigation.
- DG-46 Use energy-efficient and low emission heating, ventilation and air conditioning (HVAC) systems, if mechanical systems are necessary.
- DG-47 Provide operable windows that allow natural ventilation and potentially eliminate the need for mechanical ventilation.
- DG-48 Divert waste from landfills by promoting reduction, reuse, recycling, and composting of materials during construction and through building materials selection.
- DG-49 All development is subject to Alameda County's StopWaste.Org waste diversion, recycling, and composting standards, as adopted by City Council.

Mitigation Measures

None required.

Cumulative Impact

3.4-2 Implementation of the proposed Specific Plan, combined with citywide and regional growth, could cause the City of San Pablo to exceed the per service population (residents + jobs) GHG emissions threshold of 6.6 MT CO₂e/year established by BAAQMD for plan-level impacts, or the 4.6 MT CO₂e/year threshold established for project-level impacts. (*Less than Significant*)

Total GHG emissions in San Pablo are conservatively³⁹ projected to increase from about 196,000 MTCO₂e today to 261,000 at proposed Project buildout, which also coincides with buildout of the San Pablo General Plan. While this represents about a third more emissions overall than existing conditions, it is only a slight increase in the per service population emissions rate, from 5.31 to 5.99 MTCO₂e per year. The slight increase in per service population emissions rate is a result of the difference between the per capita emissions rate associated with residential development and the per job emissions rate associated with non-residential development, and the difference in growth rates of residents and jobs. Generally speaking, the per-job rates are higher than the per capita rates, and jobs are expected to grow faster in the San Pablo Avenue corridor than population. Nonetheless, with buildout of the Specific Plan and the General Plan (assumed to be adopted), the 2030 per service population rate is still anticipated to fall below the BAAQMD threshold for a significant plan level impact (6.6 MTCO₂e per year). **Table 3.4-10** documents the anticipated change in emissions citywide from existing conditions to future buildout, considering growth in population and jobs, and their associated vehicle trips, as a result of implementation of the Specific Plan and General Plan. Again, this table reflects a conservative estimate of emissions consistent with the Impact 3.4-1 energy analysis, taking no deductions based on Plan policy direction.

³⁹ This estimate is very conservative because it does not assume emissions reductions based on plan policy, nor based on any statewide policies except for the transportation fuel efficiency improvements also enforced by new federal CAFE standards.

TABLE 3.4-10 EXISTING AND FUTURE GREENHOUSE GAS EMISSIONS, CITYWIDE¹

Existing Conditions		
Existing Emissions	Population (from inventories' assumptions)	30,816
	Jobs (from ABAG Projections 2009)	6,122
	Residential GHGs (space-, food-, water-heating)	30,264
	Non-Residential GHGs (includes waste)	45,434
	Total Non-Transportation Emissions	75,698
	Per Capita Residential Emissions	0.98
	Per Job Non-residential Emissions	7.42
	Transportation Emissions	120,362
	Per Service Population Emissions	3.26
	Total Baseline Emissions Projection	196,060
	<i>Baseline Per Service Population</i>	<i>5.31</i>
Projections		
2030 Emissions	2030 Population (ABAG Projections 2009, GP & SP)	34,950
	2030 Jobs (ABAG Projections 2009)	8,520
	Residential Emissions Projection	39,815
	Non-Residential Emissions Projection	108,800
	Transportation Emissions Projection	111,900
	Total Future Emissions Projection	260,515
	<i>Future Per Service Population</i>	<i>5.99</i>
1. GHG emissions, like energy use, were quantified citywide rather than for just the Planning Area because transportation-related energy use and emissions are based on data that is regional and cumulative in nature (the generation of vehicle miles traveled). 2. Transportation emissions reflect future fuel efficiency consistent with full implementation of Pavley rules and federal CAFE standards (same approach used in energy analysis for Impact 3.4-1).		

Sources: 2010 Update of the Source Inventory of Bay Area Greenhouse Gas Emissions (2007 inventory); June 2008 Contra Costa County Greenhouse Gas Emissions Inventory Report (2005 inventory); ABAG Projections 2009; Dowling Associates, 2010.

Despite the fact that the San Pablo Specific Plan encompasses the entire San Pablo Avenue corridor through the city, and the Specific Plan generates and hosts almost all of the new development expected through buildout of the General Plan, the Air District CEQA Guidelines ask lead agencies to use project level thresholds to evaluate the impact of a Specific Plan rather than plan level thresholds.⁴⁰ As the Specific Plan areas is far too large to meet any of the screening criteria for the project level, a project level analysis would hold the Specific Plan to a per service population emissions rate of 4.6 MTCO₂e per year. This rate is substantially lower than the rate applied to the city as a whole in the San Pablo General Plan EIR analysis.

The General Plan analysis took the conservative approach and accounted for no reductions in emissions based on policy direction, and very little reduction based on state and federal law (see earlier footnote).

⁴⁰ Bay Area Air Quality Management District CEQA Guidelines, June 2010, pages 9-1 and 9-4.

However, for purposes of a project level analysis, including reasonably expected reductions is an important way to demonstrate consistency with air quality objectives. The Air District’s CEQA Guidelines offer a suite of measures that would reduce operational-related emissions of criteria air pollutants, precursors, and GHGs from mobile, area, and stationary sources, including estimated emission reductions for each measure. For a project level assessment of the proposed Specific Plan, it would be appropriate to apply these project level mitigation measures, and their associated reductions, as described in the Air District’s CEQA Guidelines pages 4-13 through 4-19. The following **Table 3.4-11** lists a subset of the Air District measures that are already applicable through the Specific Plan or the General Plan (assumed to be adopted), the relevant policies that enforce those measures, the emissions sector, and the anticipated reduction as a percent of the emission from that sector. Not all applicable Air District measures are included here; rather, the table focuses on those measures with the most certainty in terms of emissions reduction and policy support.

TABLE 3.4-11 BAAQMD MITIGATION MEASURES, GHG REDUCTIONS, AND CORRESPONDING PLAN POLICIES

AIR DISTRICT MITIGATION	REDUCTION	SECTOR	PROPOSED SPECIFIC PLAN
Mix of Uses	9%	mobile sources	The proposed Plan will allow for mixed use development within the Planning Area, with several new mixed use centers to replace commercial-only traditional strip development.
Local serving retail within 1/2 mile of project	2%	mobile sources	The proposed Plan will include accommodate local serving retail in the Planning Area. Supportive policies include:
Transit Service	10%	mobile sources	The Planning Area is served by numerous AC Transit lines that run down the corridor. Supportive policies include:

Specific Plan:

3-I-1 Work with AC Transit and West CAT to establish a station of consolidated bus stops that best serves Contra Costa College and existing and planned high-density residential development. This may be located at College Lane, El Portal Drive, or along San Pablo Avenue. Formalize the Transit Hub by consolidating stops to one location, installing shelters, signage with system information and next-bus updates, bus pull-out areas, and expanded pedestrian furnishings and pedestrian-scaled lighting for visibility and security.

3-I-2 Coordinate with AC Transit and West CAT to implement bus service modifications to improve service and increase accessibility to transit for new higher-intensity development in the Planning Area.

3-I-3 Identify direct paths to bus stops for pedestrians and bicyclists, and identify opportunities for implementation—either new connections through redevelopment or improvements to existing development.

3-I-4 Work with Contra Costa College to develop and improve connections to the proposed Transit Hub near the college, by designating paths and improving signage.

3-I-5 Provide way finding signage to indicate pathways to

TABLE 3.4-11 BAAQMD MITIGATION MEASURES, GHG REDUCTIONS, AND CORRESPONDING PLAN POLICIES

AIR DISTRICT MITIGATION	REDUCTION	SECTOR	PROPOSED SPECIFIC PLAN
			and location of major bus stops. 3-I-6 Improve the pedestrian crosswalks at El Portal Drive and Rumrill Boulevard to ensure accessibility for persons with disabilities and provide greater connectivity near high density mixed-use development, such as the potential student housing at Mission Plaza. 3-I-7 Provide signalized pedestrian crosswalks at mid-block crossings and countdown signals at wide crosswalks or near bus stop locations. 3-I-8 Improve streetscape design to establish greater pedestrian comfort and access to transit stations. See Chapter 4, Section 4.2: Streetscape Design for specific measures. 3-I-9 Provide bus shelters, seating, lighting, trash receptacles, signage and kiosks, lighting and enhanced landscaping (for shade and aesthetics) at all bus stops. 3-I-10 Employ technologies such as “next-bus” to provide real-time system updates to increase user convenience at all bus stops. 3-I-11 Allow advertisements on bus shelters in cooperation with transit providers, as a means of cost recovery. 3-I-49 As development occurs within the Planning Area, require transportation demand management strategies as part of the approval process, including: Provisions for transit passes, Carsharing, Parking cash out.
Bike & Pedestrian (Credit is given based on intersection density, sidewalk completeness, and bike network completeness; No reduction if entire area within 1/2 mile is single use)	9%	mobile sources	Supportive policies include: Specific Plan: 3-I-12 Create internal streets within new mixed-use developments that maximize safe and efficient pedestrian circulation by incorporating design elements such as wider landscaped sidewalks, reduced vehicular speed limits, pedestrian-oriented lighting, bulb-outs, curb extensions at intersections, high visibility crosswalks, and on-street parking to buffer pedestrians from moving vehicles. 3-I-13 Provide mid-block connections through new developments that accommodate bicyclists and pedestrians, or all modes, to facilitate access to transit stops and major public destinations. 3-I-14 Consider connections and extensions to future bike and walking trails in anticipation of future amenities and improvements at Wildcat, San Pablo, and Rheem creeks, and potential park sites. 3-I-15 Enhance pedestrian connections and amenities and prioritize pedestrian access and circulation in Pedestrian Priority Zones.

TABLE 3.4-11 BAAQMD MITIGATION MEASURES, GHG REDUCTIONS, AND CORRESPONDING PLAN POLICIES

AIR DISTRICT MITIGATION	REDUCTION	SECTOR	PROPOSED SPECIFIC PLAN
			3-I-16 Provide signage that clearly and explicitly indicates connections to local and regional bicycle facilities. 3-I-17 Provide secure short- and long-term bicycle parking at transit stops. 3-I-18 Encourage provision of bike racks and locking systems in all multi-family residential developments, multi-tenant retail and office developments, and government and institutional uses. 3-I-19 Incorporate a one-foot buffer, distinguished through color or paving, between the bicycle lane and the adjacent travel lane along the length of San Pablo Avenue, to enhance visibility and safety for bicyclists. 3-I-20 Maintain bike lanes along San Pablo Avenue, including pavement condition as well as clearing of debris. See also complete streets measures below.
Meet GBC standards in all new construction	17%	R electricity	The California Green Building Code is now mandatory for all new construction; these reductions should be achievable for all new development. Examples of green-building supportive policies include: General Plan: C-I-33 Amend the Zoning Ordinance to establish “green” parking design standards that have multiple benefits, such as shared parking for mixed use projects, passive solar on parking structures to generate energy for parking lot lighting, landscaping and trees in surface parking, and pervious paving to improve groundwater recharge and promote innovative surface parking design that avoids the appearance of a “sea of asphalt” and reduces environmental impacts. OSC-I-26 Promote energy efficiency in architectural design for new construction including building orientation to take advantage of wind and sun, and site design features (such as clustering of uses), pre-wiring for optional photovoltaic or solar heating systems, etc. Specific Plan: DG-41 Incorporate the adaptive reuse of existing materials, façades, and buildings. Use sustainable surface materials for paving, such as reclaimed pavers, locally-produced materials, or concrete and asphalt with fly ash content. DG-42 Utilize materials which have low embodied energy, are rapidly renewable, locally available, and do not give off harmful vapors. DG-43 Install water saving appliances and systems such as gray water systems, moisture-sensitive irrigation rainwater cisterns, low-flow toilets and faucets.

TABLE 3.4-11 BAAQMD MITIGATION MEASURES, GHG REDUCTIONS, AND CORRESPONDING PLAN POLICIES

AIR DISTRICT MITIGATION	REDUCTION	SECTOR	PROPOSED SPECIFIC PLAN
			DG-44 Use water-pervious materials for parking areas, driveways and pathways to the extent such that they reduce runoff and do not cause damage to public streets or other infrastructure. DG-45 Manage stormwater on-site through green roofs and/or rooftop gardens or water catchment systems to be used for irrigation. DG-46 Use energy-efficient and low emission heating, ventilation and air conditioning (HVAC) systems, if mechanical systems are necessary. DG-47 Provide operable windows that allow natural ventilation and potentially eliminate the need for mechanical ventilation. DG-48 Divert waste from landfills by promoting reduction, reuse, recycling, and composting of materials during construction and through building materials selection. DG-49 All development is subject to Alameda County's StopWaste.Org waste diversion, recycling, and composting standards, as adopted by City Council.
Meet GBC standards in all new construction	7%	C electricity	The California Green Building Code is now mandatory for all new construction; these reductions should be achievable for all new development.
Meet GBC standards in all new construction	9%	R natural gas	The California Green Building Code is now mandatory for all new construction; these reductions should be achievable for all new development.
Meet GBC standards in all new construction	3%	C natural gas	The California Green Building Code is now mandatory for all new construction; these reductions should be achievable for all new development.
100% increase in diversity of land use mix	5%	mobile sources	The proposed Plan will allow for mixed use development within the Planning Area, allowing for residential, commercial, office, and public uses within the Planning Area.
100% increase in design (i.e., presence of design guidelines for transit oriented development, complete streets standards)	3%	mobile sources	The proposed Plan includes design guidelines for the Planning Area, which provides guidance for achieving high quality design of private and the public realm. See numerous policies listed above under bike and ped, as well as policies listed below under complete streets.

TABLE 3.4-11 BAAQMD MITIGATION MEASURES, GHG REDUCTIONS, AND CORRESPONDING PLAN POLICIES

AIR DISTRICT MITIGATION	REDUCTION	SECTOR	PROPOSED SPECIFIC PLAN
Complete streets (i.e., bike lanes and pedestrian sidewalks on both sides of streets, traffic calming features such as pedestrian bulb-outs, crosswalks, traffic circles, and elimination of physical and psychological barriers (e.g., sound walls and large arterial roadways, respectively).)	5%	mobile sources	Supportive policies include: General Plan: C-I-1 Design and operate city streets based on a “Complete Streets” concept that enables safe, comfortable, and attractive access and travel for pedestrians, bicyclists, motorists, and transit users of all ages and abilities. C-I-2 Include “Complete Street” considerations in the design of all circulation improvement projects. C-I-13 Expand and maintain a safe and comprehensive bicycle system that connects the city’s neighborhoods to regional bicycle routes. C-I-14 Expand and maintain a safe and comprehensive bicycle system that connects the city’s neighborhoods to regional bicycle routes. C-I-15 Require the provision of bicycle parking and related facilities in new employment-generating development to facilitate multi-modal commute choices. C-I-16 Require the provision of bicycle parking and related facilities in new employment-generating development to facilitate multi-modal commute choices. C-I-21 Complete and enhance the pedestrian network with an interconnected system of walkways, continuous sidewalks on both sides of the street, and pedestrian crossings. C-I-26 Continue coordination efforts with public transit providers to maintain transit service that is safe and efficient with convenient connections to high use and activity intersections in the city. C-I-27 Work with public transit providers to advocate the expansion of transit service to underserved areas in the City. Specific Plan: 3-I-1 Work with AC Transit and West CAT to establish a station of consolidated bus stops that best serves Contra Costa College and existing and planned high-density residential development. This may be located at College Lane, El Portal Drive, or along San Pablo Avenue. Formalize the Transit Hub by consolidating stops to one location, installing shelters, signage with system information and next-bus updates, bus pull-out areas, and expanded pedestrian furnishings and pedestrian-scaled lighting for visibility and security. 3-I-2 Coordinate with AC Transit and West CAT to implement bus service modifications to improve service and increase accessibility to transit for new higher-intensity development in the Planning Area. 3-I-3 Identify direct paths to bus stops for pedestrians and

TABLE 3.4-11 BAAQMD MITIGATION MEASURES, GHG REDUCTIONS, AND CORRESPONDING PLAN POLICIES

AIR DISTRICT MITIGATION	REDUCTION	SECTOR	PROPOSED SPECIFIC PLAN
			bicyclists, and identify opportunities for implementation—either new connections through redevelopment or improvements to existing development. 3-I-4 Work with Contra Costa College to develop and improve connections to the proposed Transit Hub near the college, by designating paths and improving signage. 3-I-5 Provide way finding signage to indicate pathways to and location of major bus stops. 3-I-6 Improve the pedestrian crosswalks at El Portal Drive and Rumrill Boulevard to ensure accessibility for persons with disabilities and provide greater connectivity near high density mixed-use development, such as the potential student housing at Mission Plaza. 3-I-7 Provide signalized pedestrian crosswalks at mid-block crossings and countdown signals at wide crosswalks or near bus stop locations. 3-I-8 Improve streetscape design to establish greater pedestrian comfort and access to transit stations. See Chapter 4, Section 4.2: Streetscape Design for specific measures. 3-I-9 Provide bus shelters, seating, lighting, trash receptacles, signage and kiosks, lighting and enhanced landscaping (for shade and aesthetics) at all bus stops. 3-I-10 Employ technologies such as “next-bus” to provide real-time system updates to increase user convenience at all bus stops. 3-I-11 Allow advertisements on bus shelters in cooperation with transit providers, as a means of cost recovery. 3-I-25 Ensure that new developments provide fine grain street grids, creating shorter blocks and more route options that emphasize pedestrian connectivity to and from San Pablo Avenue, transit, and key destinations. 3-I-26 Establish a street grid that covers the entire site and allows visual access into the development from San Pablo Avenue. The grid should organize all development within the site, provide a direct connection to Church Lane to the north, and provide a potential connection through to Vale Road to the south and potentially to the Casino. 3-I-27 Establish a central pedestrian-oriented street that provides a direct link from San Pablo Avenue to improved open space along Wildcat Creek. 3-I-28 As part of any redevelopment of Towne Center, establish a street grid for the site that provides access points to San Pablo Dam Road, San Pablo Avenue, and Willow Road. 3-I-29 Establish a pedestrian-only axis that leads directly from the Casino through the site in order to create a single,

TABLE 3.4-11 BAAQMD MITIGATION MEASURES, GHG REDUCTIONS, AND CORRESPONDING PLAN POLICIES

AIR DISTRICT MITIGATION	REDUCTION	SECTOR	PROPOSED SPECIFIC PLAN
			cohesive entertainment district. 3-I-30 Provide vehicular access to off-street parking from San Pablo Avenue via a new pedestrian-oriented roadway through the site.

Source: Bay Area Air Quality Management District, 2010; Dyett & Bhatia, 2011.

An addition reduction for which this analysis should account is the impact of implementation of the statewide Renewable Portfolio Standard for electricity. Under this standard, the electricity generation portfolio should transition to 33 percent renewable by 2020. Our analysis assumes, again conservatively, that this goal is reached by 2030 buildout of the Specific Plan. Based on best available data from the California Energy Commission and Public Utilities Commission, the current portfolio renewable share is estimated at 14 percent, which means this analysis includes a reduction in electricity emissions of an additional 19 percent as the portfolio standard is met in future.

Table 3.4-12 shows how reductions described in Table 3.4-11 and for the Renewable Portfolio Standard may be applied to each emissions sector in the unadjusted estimate from Table 3.4-10. In this table residential and non-residential emissions are further subdivided into electricity and natural gas because several emissions reductions are applied in this way. For instance, based on the City's 2007 inventory, about 75 percent of the residential emissions inventory is from natural gas, while only 25 percent is from electricity use. Based on this information, the projected residential emissions by sector are split in this proportion. The Renewable Portfolio Standard 19 percent reduction is applied only to the electricity sub-sectors of residential and non-residential emissions. Likewise, when applying policy-based reductions based on Air District guidance, those available for transportation are only applied to transportation emissions, and so on. The total emissions by sector after reductions are summed, and a revised per service population estimate is made.

TABLE 3.4-12 REVISED GHG EMISSIONS ESTIMATE WITH REDUCTIONS CREDITED

SECTOR	EMISSIONS WITHOUT REDUCTIONS	PERCENT REDUCTION AVAILABLE	EMISSIONS WITH REDUCTIONS
Residential – Electricity	9,954	19%* + 17% = 36%	6,371
Residential – Gas	29,861	9%	27,174
Non-residential – Electricity	54,400	19%* + 7% = 26%	40,256
Non-Residential – Gas	54,400	3%	52,768
Transportation	111,900	43%	63,783
Total	260,515		190,352
Per Service Population	5.99		4.39

*Renewable Portfolio Standard reduction.

Source: Bay Area Air Quality Management District, 2010; Dyett & Bhatia, 2011.

By taking credit for reductions that may be expected through Specific Plan and General Plan policies, this analysis suggests that a reasonable estimate of the per service population emissions rate for the Specific Plan Area in particular would be 4.4 MTCO₂e per year, in particular as the streetscape design, pedestrian, bicycle, transit, and TDM measures are expected to be most effective and fully implemented in the Specific Plan area. This emissions rate falls below the Air District's threshold of significance for project-level impacts.

Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

In addition to policies cited above, implementation of this General Plan policy will help to reduce GHG emissions in the future.

OSC-I-17 Prepare a Greenhouse Gas Emissions Reduction Plan that focuses on feasible actions the City can take to minimize the adverse impacts of growth and development on climate change and air quality. The plan would include, but not be limited to:

- A baseline inventory of all known or reasonably discoverable sources of greenhouse gases (GHGs) that currently exist in the city and sources that existed in 1990.
- A projected inventory of the GHGs that can reasonably be expected to be emitted in the city in the year 2030 in accordance with discretionary land use decisions pursuant to this Specific Plan update and foreseeable communitywide and municipal operations.
- A target for the reduction of emissions from those identified sources reasonably attributable to the City's discretionary land use decisions and municipal operations, in line with site goals and targets established by the Air Resources Board.
- A list of feasible GHG reduction measures whose purpose shall be to meet the established local reduction target, including energy conservation and "green building" requirements in municipal buildings and private development.

Furthermore, all policies listed under Impact 3.4-1 would also reduce GHG emissions as they reduce energy use.

Proposed Specific Plan Policies that Reduce the Impact

In addition to policies reported in Table 3.4-11, all policies listed under Impact 3.4-1 would also reduce GHG emissions as they reduce energy use.

Lastly, please refer to the air quality assessment in section 3.3 of this EIR for another detailed table showing Specific Plan policy consistency with the Air District's Clean Air Plan. Without duplicating here, that table further complements the GHG analysis because consistency is shown with Air District transportation control measures, mobile source control measures, land use and local impact measures, and energy and climate measures.

Mitigation Measures

None required.

3.5 *Hydrology, Flooding, and Water Quality*

This section provides a programmatic analysis of the impacts of the proposed San Pablo Avenue Specific Plan on surface and ground water resources in the city, as well as the potential for the proposed Project to increase area vulnerability to flooding. Issues assessed include the Project's potential to reduce water quality through sedimentation or increased pollutant loads, alter existing drainage patterns, increase stormwater runoff rates, decrease groundwater recharge rates, or contribute to flooding vulnerability. Existing water bodies, drainage patterns, groundwater basins, stormwater systems, and applicable plans, policies, and regulations are described. For information on water supply, see Section 3.8: Public Services, Facilities, and Utilities.

ENVIRONMENTAL SETTING

Physical Setting

Climate

The Planning Area experiences a moderate climate with a precipitation average of approximately 23 inches per year as recorded in nearby Richmond, the closest weather station.¹ The climate is characterized by relatively cool summers and mild winters. In summer, a steady marine wind blows through the Golden Gate and up the Carquinez Strait. This moderating influence is reflected in average July temperatures of 65 degrees Fahrenheit (°F) in Richmond.² Similarly, marine air results in generally warm bayside temperatures in the winter, with average January temperatures of 50°F in Richmond.

Regional Hydrology

The region is bordered by San Pablo Bay, San Francisco Bay and the Delta. The San Francisco Bay estuary includes deepwater channels, tidelands, and marshlands that provide a unique receiving body for drainage from the surrounding landform. The hydrology of the Planning Area is dominated by these regional water features. San Francisco Bay receives runoff from approximately 40 percent of California, including the entirety of Contra Costa County, either directly or indirectly.

¹ Western Regional Climate Center (WRCC), accessed December 4, 2009.

² *Ibid.*

The San Francisco Bay Regional Water Quality Control Board's (San Francisco Bay RWQCB) Water Quality Control Plan (Basin Plan) segments the Bay Area into seven broad watershed basins based upon topography and drainage patterns. The Planning Area is located within the West County Major Watershed Area, and lies within the San Pablo Basin planning region.³ Three distinct watersheds (Wildcat Creek, San Pablo Creek, and Rheem Creek) are at least partially located within the City of San Pablo.⁴ Boundaries between these watersheds are created by the topographic features that shape surface water drainage patterns. The San Pablo Creek watershed is the largest watershed of the West County Major Watershed Area covering about 44 square miles. The major water bodies in the watershed include Bear, Cascade, Castro, Lauterwasser, and Wilkie creeks as well as San Pablo and Briones reservoirs. The watershed is comprised of mostly residential and open space uses, and the majority of the creek channels contain natural creek banks. The 11-square-mile Wildcat Creek watershed consists of two main sections, lower and upper, which are characteristic of both San Pablo and Pinole watersheds to the north, and includes Wildcat Creek, Jewel Lake, and Lake Anza.⁵ The lower watershed, which intersects the Planning Area, empties into Wildcat Marsh and San Francisco Bay. The Rheem Creek watershed covers nine square miles that is mostly comprised of urbanized areas within Richmond, Pinole and San Pablo. Rheem Creek only passes through San Pablo for a one mile stretch before continuing on into the City of Richmond, but it does pass through northernmost portion of the Planning Area.

Surface Water Bodies

Surface waters within the western, urbanized portion of the county discharge into San Pablo or San Francisco bays. The surface waters throughout the region include freshwater intermittent streams, drainages, canals, and estuarine waters. The San Francisco Bay RWQCB Basin Plan establishes beneficial uses for surface water resources (including marshes) in the region. These beneficial uses include municipal and domestic supply, agricultural supply, and industrial service and process supply; ground water recharge; navigation; recreation; sport fishing; habitat for warm and cold freshwater biota, wildlife, and rare and endangered species; fish migration, spawning, and harvesting. Water bodies in the vicinity of the Planning Area for which beneficial uses have been established include San Pablo Creek, Wildcat Creek, San Pablo Reservoir, Briones Reservoir, and San Pablo Bay.

Prior to development of the area, the region was sparsely populated and predominantly rural, with creeks and streams that flowed uninterrupted from the coastal hills to the Bay and Delta. These watercourses supported a wide variety of plant, animal, and aquatic life. Urban conversion led to paving, roofs, modern roadway networks, and modern drainage systems. Permeable ground surfaces were replaced with impervious surfaces, which reduced the proportion of rainfall percolating into the ground and increased the volume and velocity of surface runoff carried in creek channels. This has resulted in increased flood frequency and severity, channel incision, loss of vegetation in upper watersheds, and sedimentation in lower channels.

With increased development, a wide variety of nutrients and toxic substances have been introduced into local waters. Pollutants contained in urban runoff include street litter, sediment, oil and grease, oxygen-demanding substances, pathogenic microorganisms, metals, and pesticides. Erosion and sedimentation often inflict heavy public costs for flood control, harbor and channel dredging, post-flood clearing and

³ San Francisco Bay Regional Water Quality Control Board (RWQCB), 2007.

⁴ Contra Costa Clean Water Program (CCCWP), 2004.

⁵ *Ibid.*

private property damage, besides damaging aquatic life and carrying toxic substances into public and private water supplies. Nutrient wastes in the form of sewage, agricultural fertilizers, and manure lead to reduced dissolved oxygen in surface waters and limit the capacity of water to support aquatic organisms. Toxic substances, such as industrial wastes, automobile fluids and metals, insecticides and herbicides, can poison wildlife and become concentrated in the food chain.

The San Francisco Bay RWQCB has included San Pablo Creek and Wildcat Creek, among others, as impaired water bodies, as discussed below in the Regulatory Setting. The pollutant identified as causing impairment is *diazinon*, related to urban runoff and storm sewers. San Pablo Reservoir has also been listed as an impaired water body for mercury from atmospheric deposition.⁶

Groundwater

Shallow groundwater aquifers are closely linked to the local surface waters. As surface water runoff flows from the East Bay Hills toward the Bay, it percolates through permeable alluvial soils into underlying shallow groundwater systems. Deeper groundwater aquifers are also present, separated in areas from shallow groundwater by low permeability soil layers. San Pablo is part of the East Bay Plain groundwater basin.⁷ The East Bay Plain basin is part of the Santa Clara Valley Groundwater Basins, as defined by the Department of Water Resources (DWR). The East Bay Plain Subbasin is bounded by San Pablo Bay to the north, sedimentary basement rocks to the east, the Niles Cone Groundwater Basin to the south, and extends under San Francisco Bay to the west. The subbasin is underlain by Quaternary-age unconsolidated alluvial deposits which are approximately 1,000 feet thick. This subbasin has been identified as having a potential use as municipal, industrial, or agricultural water sources.⁸ In general, shallow groundwater for most of the county is typically saline due to proximity to the Bay. This water is not used for domestic purposes, but serves as a wetland resource in the area.

Since the 1950s, groundwater levels in the deep (more than 500 feet) aquifer of the subbasin have been between 10 and 140 feet below mean sea level, with historic lows around 1962.⁹ Groundwater levels are generally lowest during the summer months and highest during the winter months. Water quality testing conducted on samples collected from water supply wells in the subbasin indicate groundwater generally does not exceed maximum contaminant levels (MCL) although 15 of 29 wells had Total Dissolved Solid levels above the 500 milligrams per liter recommended MCL.¹⁰ Groundwater use is limited within the East Bay Plain by several factors, including existing high salts in shallow San Francisco Bay margin groundwater, the potential for saltwater intrusion, and the availability of high-quality imported surface water. Shallow groundwater use is limited in the artificial fill and shallow bay-margin deposits in the area because these units are largely saturated by brackish Bay water.

Flooding

Flood-prone areas in the San Pablo Avenue Specific Plan Planning Area are generally located in topographically low areas and in areas close to creeks. Flood zone mapping done by the Federal Emergency Management Authority (FEMA) indicates that the area is most prone to flooding where San

⁶ RWQCB, 2007.

⁷ Department of Water Resources (DWR), 2004.

⁸ RWQCB, 2007

⁹ DWR, 2004.

¹⁰ DWR, 2004.

Pablo and Wildcat creeks cross the city boundary on the west, however, there also are flood zones where the creeks pass through or are adjacent to the Planning Area, as shown on **Figure 3.5-1**. According to FEMA maps, a total of 5 percent of the Planning Area (13 acres) is located within the 100-year floodplain and 13 percent (33 acres) is located within the 500-year floodplain. The remaining 82 percent (215 acres) lies outside the 500-year floodplain.

San Pablo Creek is a year-round watercourse and is regulated in its upper reaches by two dams –Briones Dam and Reservoir and San Pablo Dam and Reservoir. A flood study compiled by ABAG (2009), shows that 1,383 acres of land in the City of San Pablo are subject to flooding should both dams experience a catastrophic failure. The scenario may be triggered by a rupture of the Hayward fault, which lies partially under the city. If a 7.5 earthquake occurred on this fault, the study predicts that the San Pablo Dam would slump and decrease in height, allowing water to flow over the top, resulting in flooding downstream. If such a disaster were to occur, 51 miles of roadway and almost all schools and government buildings in the city would be inundated.

The State of California Division of Safety of Dams (DSOD) oversees flood and earthquake safety for the East Bay dams. To ensure dam safety, DSOD has asked EBMUD to lower the water level behind the San Pablo Dam by 20 feet to protect downstream communities from flooding. Recently, EBMUD began a retrofit of the earthen dam to strengthen its superstructure and embankment. Construction started in July of 2008 and is expected to continue for approximately two years. Similar to San Pablo Dam, Briones Dam also poses a flood risk to the Planning Area. However, the risk from this dam is comparatively less significant due to its greater distance from the city. Additionally, Briones Dam is a newer dam (constructed in 1964) compared to the San Pablo Dam (constructed in 1920), and its flood waters are expected to drain southwards of its location as well as into San Pablo Dam and Reservoir in the case of dam failure. Also, the San Pablo Dam has recently received seismic upgrades in accordance with DSOD requirements. **Figure 3.5-1** depicts generalized areas within the Planning Area located within FEMA-designated 100-year storm flood hazard zones.¹¹

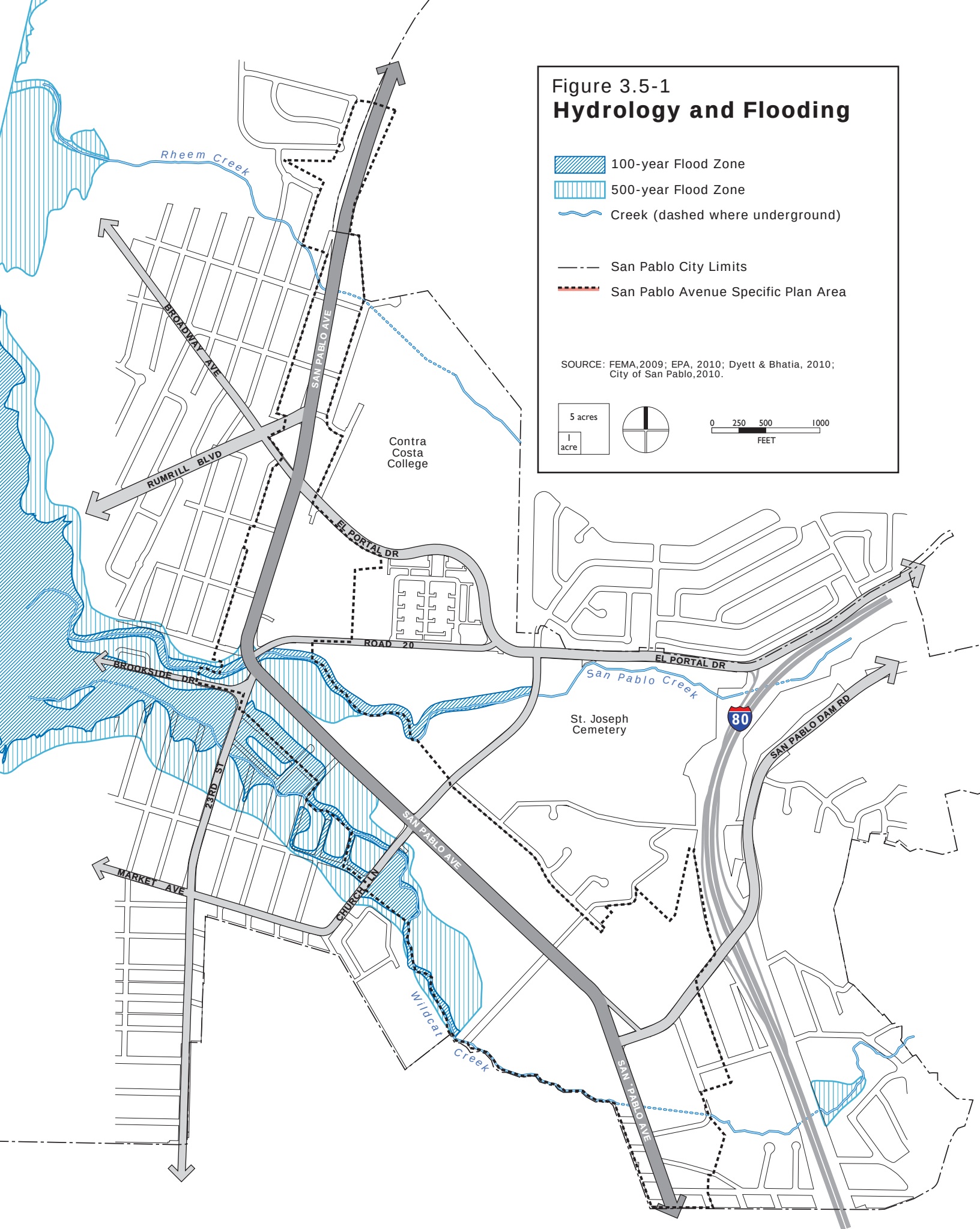
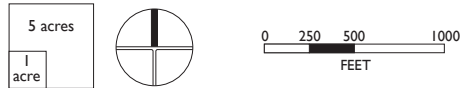
¹¹ Federal Emergency Management Agency (FEMA) Map Service, data based on Flood Insurance Rate Map, effective date 6/16/2009.

**Figure 3.5-1
Hydrology and Flooding**

-  100-year Flood Zone
-  500-year Flood Zone
-  Creek (dashed where underground)

-  San Pablo City Limits
-  San Pablo Avenue Specific Plan Area

SOURCE: FEMA, 2009; EPA, 2010; Dyett & Bhatia, 2010;
City of San Pablo, 2010.



Sea Level Rise

Sea level rise is another kind of flooding, primarily a result of two processes: the thermal expansion of ocean water as temperature increases, and the melting of land ice into the oceans. The IPCC Fourth Assessment Report published in 2007 projected an average sea level rise of anywhere from seven to 23 inches by the end of the century.¹² Some more recent studies suggest that this assessment may be conservative for a variety of reasons, including the observation of an accelerated land ice melt.

Sea level rise is also a local phenomenon. Some regions show a sea level rise substantially more than the global average, and others a sea level fall.¹³ Historical records show that sea level in San Francisco Bay has risen seven inches over the past 150 years. The San Francisco Bay Conservation and Development Commission (BCDC) has conducted an analysis to identify those areas vulnerable to projected sea level rise. The analysis projects a sea level rise of approximately 55 inches by the end of the century period of 2080 to 2100 from global warming.¹⁴ BCDC also identified a projected sea level rise for the mid-century period of 2040 to 2060 of 16 inches. For its analysis, BCDC used data developed by USGS to identify areas vulnerable to climate change and inundation by sea level rise. USGS developed a hydrodynamic model integrating elevation data, historic (1996-2007) tidal data, and estimated increases in sea level based on the relationship between sea level rise and global mean surface temperature. While this model shows some areas of coastal Contra Costa County inundated, no part of the Specific Plan Planning Area is directly affected by sea level rise.

Regulatory Setting

There is a well established regulatory framework of State and federal laws for the protection of water resources. These regulations establish criteria for the protection of human health and the environment, including stormwater discharges to surface water. These regulations are discussed below.

Federal Regulations

Clean Water Act

The federal Clean Water Act (CWA) of 1972 requires the U.S. Environmental Protection Agency (EPA) to develop, publish, and periodically update ambient water quality criteria for the protection of human health. In 1980, the EPA published water quality criteria for 64 pollutants and pollutant classes and considered non-cancer, cancer, and taste and odor effects. Over the years, these criteria have evolved and have included additional pollutants and pollutant classes. During the last decade, policy has shifted from a program-by-program, source-by-source, pollutant-by-pollutant approach to more watershed-based strategies. Ultimately, these criteria are used by states for establishing water quality standards under Section 303 (c) of the CWA and provide a basis for controlling discharges or releases of pollutants.

National Pollutant Discharge Elimination System Waste Discharge Regulations

The federal CWA and subsequent amendments, under the enforcement authority of the EPA, also established the National Pollutant Discharge Elimination System (NPDES) program to protect water quality of receiving waters. Under the Clean Water Act, discharge of pollutants to receiving waters is prohibited unless the discharge is in compliance with an NPDES permit. Discharge of municipal and

¹² Intergovernmental Panel on Climate Change, 2007.

¹³ *Ibid.*

¹⁴ San Francisco Bay Conservation and Development Commission, 2008.

industrial wastewater, as well as stormwater runoff, are regulated under NPDES permit requirements. The NPDES permit specifies discharge prohibitions, effluent limitations and other provisions (such as monitoring programs) deemed necessary to protect water quality. In California, the EPA has delegated the implementation and enforcement of the NPDES program to the State Water Resources Control Board and the California Regional Water Quality Control Boards. Both the San Francisco Bay and Central Valley RWQCBs consider the beneficial uses of receiving water in establishing NPDES permit requirements in Contra Costa County.

Coastal Zone Management Act

The Coastal Zone Management Act (CZMA) of 1972, as amended, sets forth the national policy that State coastal management programs should provide for public access to the coasts for recreational purposes. While boating and associated activities, such as marinas, are an important means of public access, they may also pose a threat to the health of aquatic systems if poorly planned or managed. In 1990, Congress passed the Coastal Zone Act Reauthorization Amendments (CZARA) to address non-point source pollution problems in coastal waters. Section 6217 of CZARA and Section 319 of the Clean Water Act require California and 28 other states to develop Coastal Nonpoint Source Pollution Control programs, incorporating required management measures to reduce or prevent polluted runoff to coastal waters from specific sources.

Federal Emergency Management Agency

FEMA administers the National Flood Insurance Program. The program provides subsidized flood insurance to communities that comply with FEMA regulations to limit development in floodplains. FEMA issues Flood Insurance Rate Maps, which classify flood zones, for communities participating in the National Flood Insurance Program.

Many local jurisdictions regulate development within floodplains. Construction standards are established within local ordinances and planning elements to reduce flood impedance, safety risks and property damage. Historic flooding in the San Francisco Bay region has also led local flood control agencies and the U. S. Army Corps of Engineers to establish extensive flood control projects including dams and improved channels.

State Regulations

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Division 7 of the California Water Code) regulates water quality within California and establishes the authority of the State Water Resources Control Board (SWRCB) and the nine San Francisco Bay Regional Water Quality Control Boards (RWQCBs). Water resources of Contra Costa fall under the jurisdiction of two RWQCBs; the San Francisco Bay RWQCB covers most of Contra Costa County, while water resources in the eastern part of the County fall under the jurisdiction of the Central Valley RWQCB.

Construction Stormwater NPDES Permit

Stormwater discharges from construction activities on one acre or more are regulated by the RWQCB and are subject to the permitting requirements of the NPDES General Permit for Discharges of Stormwater Runoff Associated with Construction Activity (General Construction Permit, 99-08-DWQ). Effective July 1, 2010 all dischargers were required to obtain coverage under the Construction General Permit Order 2009-0009-DWQ adopted on September 2, 2009. The RWQCB established the General

Construction Permit program to reduce surface water impacts from construction activities. How development associated with the Specific Plan would be required to comply with the current NPDES permit requirements to control stormwater discharges from construction sites. The General Construction Permit requires the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) for construction activities. The SWPPP must be prepared before the construction begins, and in certain cases, before demolition begins. The SWPPP must include specifications for Best Management Practices (BMPs) that would be required during project construction. BMPs are measures that are undertaken to control degradation of surface water by preventing soil erosion or the discharge of pollutants from construction areas. The SWPPP must describe measures to prevent or control runoff after construction is complete and identify procedures for inspecting and maintaining facilities or other project elements. Required elements of a SWPPP include:

1. Site description addressing the elements and characteristics specific to the site;
2. Descriptions of BMPs for erosion and sediment controls;
3. BMPs for construction waste handling and disposal;
4. Implementation of approved local plans;
5. Proposed post-construction controls; and
6. Non-stormwater management.

Examples of typical construction BMPs include: scheduling or limiting activities to certain times of year; installing sediment barriers such as silt fence and fiber rolls; maintaining equipment and vehicles used for construction; tracking controls such as stabilizing entrances to the construction site; and developing and implementing a spill prevention and cleanup plan. Non-stormwater management measures include installing specific discharge controls during certain activities, such as paving operations, and vehicle and equipment washing and fueling. The California Stormwater Quality Association established BMPs for the State of California in the California Stormwater Best Management Practice Handbook (2003).

Nonpoint Source Pollution Control Program Plan

California's Nonpoint Source Pollution Control Program Plan 1998 – 2013 was developed by the SWRCB and California Coastal Commission, in cooperation with the nine Regional Water Quality Control Boards, to conform to the requirements of CZARA and the Clean Water Act.¹⁵ The plan is intended to protect the State's water quality by expanding its polluted runoff control efforts. It specifies 60 management measures to prevent or reduce water quality degradation from agriculture, forestry, urban areas, marinas and boating, hydromodification, and wetlands. The Plan provides a single unified, coordinated statewide approach to dealing with Nonpoint Source (NPS) pollution. A total of 28 State agencies are working collaboratively through the Interagency Coordinating Committee to implement the NPS Pollution Control Program Plan.

¹⁵ State Water Resources Control Board (SWRCB) and California Coastal Commission (CCC), 2000.

State Water Quality Certification Program

The RWQCBs also coordinate the State Water Quality Certification Program, or Section 401 of the CWA. Under Section 401, states have the authority to review any permit or license that will result in a discharge or disruption to wetlands and other waters under state jurisdiction, to ensure that the actions will be consistent with the state's water quality requirements. This program is most often associated with Section 404 of the CWA, which obligates the U. S. Army Corps of Engineers to issue permits for the movement of dredge and fill material into and from the "waters of the United States." Additionally, Section 404 requires permits for activities affecting wetlands. Prospective alterations of hydrologic features such as wetlands, rivers, and ephemeral creek beds resulting from construction require Section 404 permits.

Regional Regulations

San Francisco Bay Regional Water Quality Control Board

San Francisco Bay waters are under the jurisdiction of the San Francisco Bay RWQCB. The San Francisco RWQCB established regulatory standards and objectives for water quality in the Bay in the Basin Plan for the San Francisco Bay Basin, as previously discussed.¹⁶ The Basin Plan identifies existing and potential beneficial uses and provides numerical and narrative water quality objectives designed to protect those uses.

The San Francisco Bay RWQCB has listed all segments of San Francisco Bay and many freshwater creeks and streams as impaired water bodies, as required under Section 303 (d) of the CWA. The Central Valley RWQCB has similarly listed many water bodies as impaired. Impaired waters are defined as those that do not meet water quality standards, even after point sources of pollution have implemented pollution control technology. The CWA requires the development of action plans, known as Total Maximum Daily Loads (TMDL), to improve water quality in water bodies designated as impaired. The TMDL is a calculation of the total amount of a pollutant that a water body can receive and still meet water quality objectives for a pollutant identified as causing impairment. The TMDL report allocates permissible quantities for discharge from specific sources. Within the San Francisco RWQCB region, the 2006 303(d) list includes more than 270 listings in 88 water bodies. RWQCB staff is currently developing TMDL projects to address more than 160 of the 270 listings within the 88 impaired water bodies.¹⁷ One TMDL may address multiple listings such as Diazinon/Pesticide Toxicity which for urban creeks addresses more than 30 impaired creeks or creek segments. The TMDL reports and associated implementation plans include considerations for future amendments to the Basin Plan to adopt the TMDL and all its related parts.

Contra Costa County Clean Water Program and Municipal Stormwater NPDES Permit

To comply with the regulations outlined above, Contra Costa County, all 19 of its incorporated cities and the Contra Costa County Flood Control & Water Conservation District joined together to form the Contra Costa Clean Water Program. The Contra Costa Clean Water Program initially obtained a Joint Municipal NPDES Permit from the San Francisco Bay and Central Valley Regional Water Quality Control Boards in September 1993 and January 1994, respectively. The permits, issued for a five-year period, contain a comprehensive plan to reduce the discharge of pollutants to the "maximum extent practicable" (MEP).

¹⁶ San Francisco Bay Regional Water Quality Control Board (RWQCB), 2007.

¹⁷ *Ibid.*

The current Municipal Regional Stormwater (MRP) National Pollutant Discharge Elimination System (NPDES) Permit was adopted by the RWQCB on October 14, 2009. The new NPDES permit (Order R2-2009-0074 Permit No. CAS612008) issued by the RWQCB is designed to enable the Contra Costa Clean Water Program (CCCWP) agencies to meet CWA requirements. The permit addresses the following major program areas: regulatory compliance; focused watershed management; public information/participation; municipal maintenance activities; new development and construction controls; illicit discharge controls, industrial and commercial discharge controls; monitoring and special studies, control of specific pollutants of concern, and performance standards. The permit also includes performance standards for new development and construction activities also referred to as Provision C.3 requirements. The C.3 requirements include measures for Permittees to use in planning appropriate source controls in site designs. Such measures include stormwater treatment in new development and redevelopment projects to address both soluble and insoluble stormwater runoff pollutant discharges. An additional goal is to prevent increases in runoff flows primarily accomplished through implementation of low impact development (LID) techniques.

“Redevelopment” is defined as a project on a previously developed site that results in the addition or replacement of impervious surface. According to the C.3 provision in the CCCWP NPDES permit, the proposed project falls in the “significant redevelopment projects” category under Group 1 Projects. A significant redevelopment project is defined as a project on a previously developed site that results in addition or replacement of a total of 43,560 square feet (one acre) or more of impervious surface. The permit requires that in the case of a significant redevelopment project that would result in an increase of, or replacement of, more than 50 percent of the impervious surface of a previously existing development, and the existing development was not subject to stormwater treatment measures, the entire project be included in the treatment measure design.

The C.3 provision also requires preparation of a hydrograph modification management plan (HMP) in cases where the changes in the amount and timing of runoff would increase stormwater discharge rates and/or duration and increase the potential for erosion or other significant adverse impacts to beneficial uses. The applicant is required to comply with the provisions of the CCCWP NPDES Permit.

Contra Costa County Stormwater Management and Discharge Control Ordinance

Contra Costa County Stormwater Management and Discharge Control Ordinance No. 2005-01 was adopted to comply with the requirements of Provision C.3 of the County’s NPDES Stormwater Permit.

The County permit requires the implementation of source control and site design measures for all new construction projects that create more than an acre of impervious surface. In August 2006, this surface coverage threshold was reduced to 10,000 square feet. The fundamental goals of the County ordinance are:

- Eliminating, to the maximum extent practical, illicit discharges to the stormwater system that could degrade the water quality of local streams;
- Minimizing increases in nonpoint-source pollution caused by stormwater runoff from development that could degrade local water quality;
- Controlling discharges to the County’s stormwater system resulting from spills, dumping, or the disposal of materials other than stormwater;

- Reducing stormwater runoff rates and volumes and nonpoint-source pollution whenever possible through stormwater management controls and ensuring that the management controls are properly maintained and pose no threat to public safety; and
- Promoting the “no adverse impact” policies developed by FEMA and the Association of State Floodplain Managers, to the maximum extent practical, in an effort to minimize the adverse impacts of new development on stormwater quality and quantity;

Applications for rezoning, conditional use permits, variances, and design review that meet the impervious surface requirements are also subject to the runoff requirements in the County’s NPDES permit. Applications are not deemed complete until a stormwater control plan meeting all the County requirements has been reviewed and approved.

Contra Costa County General Plan Policies

The Contra Costa County General Plan also contains various policies for guidance regarding degradation of water quality. The County’s water resources are to be protected from degradation by avoiding the placement and generation of potential pollutant sources in areas near the resources or in areas where conveyance of the pollutants to the resources is possible.

The Contra Costa County General Plan (2005) contains various policies for guidance regarding potential flooding. Development within flood hazard areas is considered inappropriate unless a flood management plan has been adopted and flood-proofing of structures is feasible. Riparian habitat is also to be protected by providing sufficient channel and floodplain areas to allow the free passage of 100-year flow events. Waterways are to be protected and preserved in their natural state where feasible.

Contra Costa County Public Works Flood Control

Flood control within Contra Costa County is the responsibility of the County Flood Control Engineering Division, which provides technical support for the Contra Costa Flood Control and Water Conservation District (District) through various division sections. District staff coordinates and assists in the development and implementation of drainage systems within Contra Costa County, including preparing conceptual plans for drainage systems, preparing ordinances for drainage fee areas, collecting and analyzing precipitation and runoff data, and preparing hydrological analysis of watershed data and engineering charts for use in project development. District staff reviews the drainage aspects of land development applications, flood control and drainage permit applications, and environmental impact documents, and coordinates with the U.S. Army Corps of Engineers for construction of large flood control improvement projects. They also make recommendations for drainage improvements and review plans for land development projects that have a regional drainage impact. Federal Flood Control Project Section staff is responsible for coordinating large federal flood control projects including utility identification and acquisition of required right-of-way.

Contra Costa County Water Agency

The County Water Agency develops water policy and oversees ship channel navigation projects. This agency is responsible for the protection of water rights, water supply and water quality for County residents.

City of San Pablo Ordinances

The following two ordinances of the City of San Pablo address well abandonment and stormwater management.

8.34–Well Abandonment Ordinance

To prevent contamination of groundwater and other dangers, every person wholly or partially responsible for abandoning a well or having entire or partial right of ownership or possession of the land or premises on which an abandoned well is situated shall destroy the well as specified in Part III, Section 23 of the State of California, Department of Water Resources, Bulletin Number 74, a copy of which is on file in the city of San Pablo.

8.40–Stormwater Management and Discharge Control

- A. The intent of this chapter is to protect and enhance the water quality in the city of San Pablo's watercourses pursuant to, and consistent with the Porter-Cologne Water Quality Control Act (Water Code Section 13000 et seq.) and the Federal Clean Water Act (33 U.S.C. Section 1251 et seq.).
- B. This chapter also carries out the conditions in the city's National Pollutant Discharge Elimination System (NPDES) permit that require effective February 15, 2005 implementation of appropriate source control and site design measures and stormwater treatment measures for projects that create or replace one acre or more of impervious surface, and that effective August 15, 2006 reduce the threshold to projects that create or replace ten thousand square feet or more of impervious surface.
- C. It is the purpose of the city council in enacting this chapter to protect the health, safety and general welfare of San Pablo's citizens by:
 - 1. Minimizing non-stormwater discharges, whose pollutants would otherwise degrade the water quality of local streams, to the stormwater system;
 - 2. Minimizing increases in nonpoint source pollution caused by stormwater runoff from development that would otherwise degrade local water quality;
 - 3. Controlling the discharge to the city's stormwater system from spills, dumping or disposal of materials other than stormwater;
 - 4. Reducing stormwater run-off rates and volumes and nonpoint source pollution whenever possible, through stormwater management controls and ensuring that these management controls are properly maintained and pose no threat to public safety.

Flood Damage Prevention Ordinance

The City adopted a Flood Damage Prevention Ordinance in 1987 in compliance with requirements of the National Flood Insurance Program (NFIP) and FEMA for development in flood-plain areas. The stated purpose of the Ordinance is to promote public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas.

The Municipal Code establishes controls on development in flood hazard areas, such as creek setback requirements and minimum floor elevations above the base flood elevation. The intent of the regulations

is to avoid exposing new development to flood hazards and reduce the need for future flood control protective work. The Code is amended as needed to maintain compliance with State and federal regulations.

Floodplain Management and the Local Hazards Mitigation Plan

The City's Building Inspection Division is responsible for providing floodplain management for the Planning Area. Its responsibilities include ensuring compliance with the NFIP and maintenance and enforcement of the Flood Damage Prevention Ordinance. The City's Public Works Division is responsible for planning and construction of flood control projects. Additionally, the department helps prepare and carry out policies in the Multi Jurisdictional Local Hazards Mitigation Plan (MJ-LHMP), which provides additional planning and direction for flood hazards in the city. The MJ-LHMP focuses on the assessment of identified risks and implementation of loss reduction measures to ensure critical City services and facilities survive a disaster.

IMPACT ANALYSIS

Significance Criteria

Implementation of the proposed San Pablo Avenue Specific Plan would have a potentially significant adverse impact if it would:

- Criterion 1:** Violate any water quality standard or waste discharge requirement.
- Criterion 2:** Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).
- Criterion 3:** Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.
- Criterion 4:** Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.
- Criterion 5:** Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
- Criterion 6:** Otherwise substantially degrade water quality.
- Criterion 7:** Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.

Criterion 8: Place within a 100-year flood hazard area structures which would impede or redirect flood flows.

Criterion 9: Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, sea level rise, or inundation by seiche, tsunami, or mudflow.

Methodology and Assumptions

This analysis of hydrologic and water quality impacts is based on a determination of the potential for water quality degradation and increased erosion, sedimentation, and adverse conditions associated with changes to stormwater runoff attributable to implementation of the proposed Specific Plan, with consideration of existing legally-mandated requirements for protecting water quality. The Planning Area is located sufficiently inland to be out of what would be considered a potential hazard area for seiches, tsunamis, and sea level rise, and therefore no impact discussion for these hazards is included below. In addition, the gentle topography and location of the Planning Area make the potential for mudflows remote. Therefore, this hazard is also not discussed.

Impact Summary

PROPOSED PROJECT IMPACT	MITIGATION MEASURE	SIGNIFICANCE AFTER MITIGATION
Implementation of the proposed San Pablo Avenue Specific Plan could adversely affect water quality and drainage patterns in the short term due to erosion and sedimentation during construction activities.	None required	Less than significant
Implementation of the proposed San Pablo Avenue Specific Plan could result in degradation of water quality and depletion of groundwater supplies through creation of new impervious surfaces which could increase nonpoint sources pollutants and sedimentation in stormwater runoff, and reduce groundwater recharge.	None required	Less than significant
Implementation of the proposed San Pablo Avenue Specific Plan could result in additional runoff exceeding the capacity of existing stormwater facilities and increasing potential flooding of receiving waters and areas in downstream.	None required	Less than significant
Implementation of the proposed San Pablo Avenue Specific Plan could result in the placement of housing in the 100 year floodplain or structures that would impede flood flows exposing people to injury or death.	None required	Less than significant
Implementation of the proposed San Pablo Avenue Specific Plan would expose people or structures to risk of flooding due to the failure of a dam.	None required	Less than significant
Implementation of the proposed San Pablo Avenue Specific Plan in combination with past, present, and foreseeable future development in the surrounding communities and with other agencies in the County, could adversely affect water quality of regional water bodies.	None required	Less than significant

Impacts and Mitigation Measures

Impact

3.5-1 Implementation of the proposed San Pablo Avenue Specific Plan could adversely affect water quality and drainage patterns in the short term due to erosion and sedimentation during construction activities. (*Less than Significant*)

Construction activities undertaken to implement subsequent development projects in the Specific Plan could include excavation, soil stockpiling, boring, and/or grading activities that strip existing vegetation prior to the installation of impervious surfaces. Soil erosion is probable during construction and resulting water quality problems in receiving waters could include turbidity, increased algal growth, oxygen depletion, or sediment buildup, thereby degrading aquatic habitats. Sediment from project-induced erosion could also ultimately accumulate in downstream drainage facilities and interfere with stream flow, thereby aggravating downstream flooding conditions.

Depending on the project location, impaired stormwater runoff could be intercepted by local storm drain catch basins, culverts, flood control channels, and ultimately discharged into receiving waters. Most runoff in urban areas is eventually directed to either a storm drain or water body, unless allowed to stand in a detention area and filter into the ground. For this reason, even projects not directly adjacent to or crossing a sensitive area could have an impact. However, all projects that would disturb one acre or more are required to prepare and implement a SWPPP, in accordance with the SWRCB's General Construction Permit. The SWPPP would include erosion control measures such as those listed below:

- Limiting excavation and grading activities during the dry season only (April 15 to October 15), to the extent possible. This would reduce the chance of severe erosion from intense rainfall and surface runoff, as well as the potential for soil saturation in swale areas.
- If excavation does occur during the rainy season, stormwater runoff from the construction area can be regulated through a stormwater management/erosion control plan that may include temporary on-site silt traps and/or basins with multiple discharge points to natural drainages and energy dissipaters. Stockpiles of loose material are generally covered and runoff diverted away from exposed soil material. Sediment basin/traps would be located and operated to minimize the amount of offsite sediment transport. Any trapped sediment would be removed from the basin or trap and placed at a suitable location on-site, away from concentrated flows, or removed to an approved disposal site.
- Temporary erosion control measures would be provided until perennial revegetation or landscaping is established that can minimize discharge of sediment into receiving waterways.
- After completion of grading, erosion protection would be provided on all exposed soils either by revegetation or placement of impervious surfaces. Revegetation would be facilitated by mulching, hydroseeding, or other methods and initiated as soon as possible after completion of grading and prior to the onset of the rainy season (by October 15).
- Permanent revegetation/landscaping shall emphasize drought-tolerant perennial ground coverings, shrubs, and trees.

- BMPs selected and implemented for the project shall be in place and operational prior to the onset of major earthwork on the site. The construction phase facilities shall be maintained regularly and cleared of accumulated sediment as necessary.
- Hazardous materials such as fuels and solvents used on the construction sites shall be stored in covered containers and protected from rainfall, runoff, and vandalism. A stockpile of spill cleanup materials shall be readily available at all construction sites. Employees shall be trained in spill prevention and cleanup, and individuals should be designated as responsible for prevention and cleanup activities.

Incorporation of these or equivalent practices in accordance with the requirements of the SWRCB's General Construction Permit process would reduce this potentially significant impact on water resources during construction to a less-than-significant level.

Proposed Specific Plan Policies that Reduce the Impact

None required.

Mitigation Measures

None required.

Impact

3.5-2 Implementation of the proposed San Pablo Avenue Specific Plan could result in degradation of water quality and depletion of groundwater supplies through creation of new impervious surfaces which could increase nonpoint sources pollutants and sedimentation in stormwater runoff, and reduce groundwater recharge.. (*Less than Significant*)

New development or redevelopment projects in the Specific Plan area could result in the expansion or reconfiguration of existing development that might increase the overall amount of impervious surface areas. Increasing the total area of impervious surfaces could result in a number of potential impacts associated with a greater potential to introduce pollutants to receiving waters and reduced groundwater recharge. Urban runoff can carry a variety of pollutants, such as oil and grease, metals, sediment, and pesticide residues from roadways, parking lots, rooftops, landscaped areas, and other surfaces, and deposit them in adjacent waterways. Pollutant concentrations in urban runoff are extremely variable and are dependent on storm intensity, land use, elapsed time between storms, and the volume of runoff generated in a given area that reaches receiving waters. The most critical time for urban runoff effects is in autumn under low flow conditions. Pollutant concentrations are typically highest during the first major rainfall event after the dry season, known as the "first flush."

Water quality in stormwater runoff is regulated locally by the Contra Costa County Clean Water Program and the municipal stormwater requirements set by the RWQCB. Adherence to these requirements results in new development and redevelopment projects incorporating treatment measures and other appropriate source control and site design features that reduce pollutants in runoff to the maximum extent practical. Many of these requirements result in the construction of Low Impact Development (LID) techniques such as use of on-site infiltration through landscaping or vegetated swales that reduce pollutant loading in off-site discharges. Incorporation of these types of source control design measures can even potentially improve upon existing conditions.

The Specific Plan area is already largely developed and widely covered by impervious surfaces, and therefore any increase in impervious surfaces due to redevelopment is anticipated to be small. A net increase in impervious surfaces might affect the amount of precipitation that is recharged to the shallow aquifer. Groundwater within the Specific Plan area is not used for water supply use but is considered by the RWQCB as a potential resource. However, as new development and redevelopment occurs, on-site drainage plans would be designed to retain, capture and convey increased runoff in accordance with the local county design standards that include C.3 site control features. As a result, stormwater flows generated from the Specific Plan area would generally remain unchanged, or potentially decrease, following implementation of required source control measures, which would therefore not affect the drainage system in the Specific Plan area. Groundwater recharge would not be expected to be significantly affected due to the built-out nature of the city and the current amount of impervious surface area. Adherence to these stringent requirements that are also reinforced by the proposed policies below would result in a less than significant impact related to water quality in stormwater runoff, groundwater recharge, and generally altering drainage patterns.

Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

PSCU-G-5 *Continue to ensure the successful provision, maintenance, and operation of City-owned public infrastructure and utilities.*

PSCU-G-6 *Support the efficient use and conservation of water.*

PSCU-G-7 *Maintain a comprehensive storm drainage system to protect life and property.*

OSC-G-3 *Protect and enhance wetlands, creek systems, and rare and endangered species and their habitats.*

OSC-G-4 *Ensure both access and ecological functionality of the creek system in San Pablo.*

OSC-G-5 *Protect water supply and quality through conservation and good stormwater management practices.*

PSCU-I-26 **Adopt a Water Conservation Ordinance to conserve water and reduce water waste in San Pablo.*

The Water Conservation Ordinance will establish restrictions on water uses such as lawn and landscape watering and the filling of fountains and swimming pools, as well as penalties for violations. It also will establish consumption reduction measures to be adopted when State or countywide water rationing is in effect. Landscape water conservation standards will apply to new development of more than 10,000 square feet. This ordinance also will:

- *Require commercial and public right-of-way projects to submit planting plans, irrigation plans, irrigation schedules and water use estimates for City approval prior to issuance of building permits; and*
- *Require industrial projects to submit plans for water recycling and explain how water use will meet requirements of the National Pollutant Discharge Elimination System*

program during the plan review process. They are also required to submit irrigation plans for proposed landscaping.

PSCU-I-34 Update zoning standards to minimize storm water runoff rates and volumes, control water pollution, and maximize recharge of local groundwater aquifers. New development will be required to include features that reduce impermeable surface area and increase infiltration. Such features may include, but are not limited to:

- Canopy trees or shrubs to absorb rainwater;
- Grading that lengthens flow paths and increases runoff travel time to reduce the peak hour flow rate;
- Removing curbs and gutters from parking areas where appropriate to allow stormwater sheet flow into vegetated areas;
- Permeable paving and parking area design;
- Stormwater detention and retention basins to facilitate infiltration; and
- Integrated or subsurface water retention facilities to capture rainwater for use in landscape irrigation and other non-potable uses.

Detailed recommendations are provided in the Bay Area Stormwater Management Agency's "Start at the Source Design Guidance Manual for Stormwater Quality Protection."

OSC-I-10 Maintain, protect, and enhance San Pablo's creeks, including Rheem, San Pablo, and Wildcat creeks, as local environmental and aesthetic resources, with approaches including, but not limited to:

- Establishing a Creek Improvement Program to widen, day-light, and improve San Pablo and Wildcat creeks for the enjoyment of residents;
- Strengthening stormwater management requirements for properties adjacent to the creek areas by applying techniques that maintain or restore nature character;
- Enforcing restrictions on the planting of invasive species near creek areas;
- Identifying and working with property owners to take advantage of unique opportunities where human active use (e.g. through trail development) would enhance creek appreciation without disrupting ecological function;
- Working with developers to "daylight" portions of creeks that have historically been channelized underground under existing paved areas (e.g. parking lots); and
- Requiring minimum setbacks from the top of the creek bank for development proposed adjacent to creeks, in keeping with City regulations and Best Management Practices.

OSC-I-11 Require property owners with properties adjacent to creeks to pay for creek improvement maintenance.

- OSC-I-12 Continue to work with the Regional Water Quality Control Board (RWQCB) to protect and improve ground- and surface-water quality in the region.

Proposed Specific Plan Policies that Reduce the Impact

- 5-I-3 Promote efficient use of and conservation of water in the design of new streetscape and landscaped areas. This includes the installation of drought-resistant plant palettes.

Use the California Model Water Efficient Landscape Ordinance (Division 2, Title 23, California Code of Regulations Chapter 2.7, Sections 490-495) during project review to ensure irrigation plans achieve all feasible water savings.

- 8-G-1 *Use development in the San Pablo Avenue corridor to improve local hydrology and water quality.*

- 8-I-1 Require development in the San Pablo Avenue Specific Plan Planning Area to include low impact development features to reduce stormwater pollutant loads and increase on-site infiltration, consistent with General Plan policy PSCU-I-34. Features should be drawn from the Bay Area Stormwater Management Agency's "Start at the Source Design Guidance Manual for Stormwater Quality Protection." Ensure the update of zoning stormwater management standards pursuant to General Plan policy PSCU-I-34 includes provisions for stronger stormwater management on sites within 300 feet of creeks in the Planning Area, with an emphasis on maintaining or restoring the natural character of the water feature.

- 8-I-2 In accordance with the San Pablo Avenue Specific Plan Land Use Diagram, and General Plan policy OSC-I-10, ensure that redevelopment plans are designed to restore natural ecological systems wherever possible, including such techniques as "daylighting" Wildcat Creek immediately east of San Pablo Avenue in accordance with the Specific Plan Land Use Diagram, and integrating natural features and processes in the public experience throughout the Planning Area. These design efforts up front will improve both the ecological and aesthetic values of local hydrological resources.

- DG-22 Limit hardscape to a maximum of 50% of required private common open space. Encourage the use of pervious materials to assist in stormwater management.

Mitigation Measures

None required.

Impact

- 3.5-3 Implementation of the proposed San Pablo Avenue Specific Plan could result in additional runoff exceeding the capacity of existing stormwater facilities and increasing potential flooding of receiving waters and areas in downstream. (*Less than Significant*)**

Development under the proposed Specific Plan could result in construction of structures on land that is currently vacant, thus introducing additional impervious surfaces. Streets, traditional parking lots, and rooftops prevent the natural drainage and infiltration of stormwater through the soil. Surface water runoff

volumes and rates generated from undeveloped, unpaved areas can increase significantly when sites are paved and the capability of surface water infiltration is reduced or eliminated. Depending on the capacities of existing stormwater drainage facilities, any increase in runoff could potentially cause flooding on or downstream of newly constructed sites and near local drainage facilities. In addition, runoff from built-out areas could be discharged more swiftly, decreasing the time it takes to reach downstream facilities and altering the existing peak flood timing.

Unless improvements to drainage conditions are undertaken, increased development could contribute to increased risk of storm flooding in these areas. However, as mentioned under Impact 3.5-2 above, the developed nature of the Planning Area, coupled with incorporation of source control stormwater features that are designed to retain or infiltrate as much runoff as possible, mean the proposed Specific Plan is not expected to cause major changes in flows that exit building sites. Redevelopment, under the requirements of CCCWP and the C.3 post construction stormwater requirements which are also included in the proposed policies identified below, would potentially reduce total stormwater flows. The policies below would also require developers to improve undersized facilities in accordance with the proposed size of the project to ensure adequate capacities of infrastructure. Therefore, with adherence to these requirements and the proposed policies of the Specific Plan, the potential impact from exceeding the capacity of stormwater facilities would be less than significant.

Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

- PSCU-I-31 Require, as a condition of project approval, stormwater drainage and sewer improvements in proportion to a project's impacts, including upgrades, replacements, or repairs to older stormwater collection systems, as necessary.
- PSCU-I-32 Maintain master storm drain system maps that identify locations where easements should be reserved for eventual installation of pipes and structures to ensure appropriate storm drainage management.
- PSCU-I-33 Coordinate with the West County Wastewater District to address planning capacity and identify deficiencies in the waste water collection system.

Proposed Specific Plan Policies that Reduce the Impact

Proposed policies listed under Impact 3.5-2 also help to reduce this potential impact.

Mitigation Measures

None required.

Impact

3.5-4 Implementation of the proposed San Pablo Avenue Specific Plan could result in the placement of housing in the 100-year floodplain or structures that would impede flood flows exposing people to injury or death. (*Less than Significant*)

Although the majority of the Planning Area is located outside of the 100-year floodplain, there are small areas where new development could be located within the floodplain, for instance, the multifamily residential parcels south of San Pablo Avenue between 23rd Street and Church Lane. However, not only

would there be design requirements for new development, but there also would be assurances of adequate storm drainage capacities, and the continued improvements of the flood control projects associated with San Pablo and Wildcat creeks. With implementation of the policies and mitigation measure below, the potential impact from flooding would be less than significant.

Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

- SN-G-2 *Minimize the risks to property, life, and the environment due to flooding hazards.*
- SN-I-7 Continue to minimize the risk of flooding to development through the development review process. Require new development within a flood plain to comply with the City's Floodplain Management and Flood Damage Prevention Ordinance and to submit hydrologic studies, identify site development and construction methods, and implement appropriate mitigation measures to minimize surface water run-off.
- Developers will be required to provide an assessment of a project's potential impacts on the local storm drainage system as part of the development review process. If development is found to have a negative impact on storm drainage, mitigation measures, such as the creation of permanent or temporary detention or retention basins, provision of additional landscaped areas and green roofs, installation of pump stations, and the use of permeable paving in driveways, walkways and parking areas, may be required.*
- SN-I-8 Annually review the Land Use Element to identify whether any additional areas subject to flooding have been defined in updated flood plain maps prepared by the Federal Emergency Management Agency (FEMA) or the State Department of Water Resources (DWR) and adopt amendments to the General Plan or the Zoning Ordinance, as warranted.
- SN-I-9 Continue to participate in the National Flood Insurance Program and ensure that local regulations are in full compliance with Federal.
- SN-I-10 Periodically review National Flood Insurance Program maps to ensure that the City's zoning and building regulations reduce potential risks from flooding pursuant to the National Flood Insurance Program of 1968.
- SN-I-11 Inform households and businesses located in flood-prone areas about opportunities to purchase flood insurance.
- The City will regularly remind residents of the value of flood insurance for vulnerable properties through newsletters and other educational materials. Purchase of flood insurance is required for buildings in Special Flood Hazard Areas defined by the Flood Insurance Rate Map when a federally regulated lender holds the mortgage on the building.*
- SN-I-12 Site new essential public facilities outside of the 100-year flood plains, including hospital and healthcare facilities, emergency shelters, police and fire stations, and emergency communications facilities to minimize exposure to 100-year floods.

- SN-I-13 Cooperate with the County Flood Control District, California Department of Transportation, and the Army Corp of Engineers to mitigate potential flooding risks, including flood control projects on Wildcat and San Pablo creeks and the maintenance of drainage facilities and infrastructure.

Flood control projects will be designed to support the City's efforts to reestablish natural conditions in these creek corridors.

- SN-I-14 Work with railroad operators on minimizing downstream flooding related to limited number of culverts.

Proposed Specific Plan Policies that Reduce the Impact

- 5-I-4 Design creek-side open space improvements to prevent flooding within the public right-of-way and near open space amenities.
- 5-I-5 Require all new private development located along above-ground creeks to prevent flooding with ample setbacks.

Mitigation Measures

None required.

Impact

3.5-5 Implementation of the proposed San Pablo Avenue Specific Plan would expose people or structures to risk of flooding due to the failure of a dam. (*Less than Significant*)

Several reservoirs are located upstream of the Planning Area including the San Pablo and Briones reservoirs. However, the dams on these reservoirs are under the jurisdiction of the Division of Safety of Dams (DSOD), which imposes strict standards for the design, maintenance, and monitoring of its facilities. A seismic upgrade of the dam at San Pablo Dam Reservoir was recently completed to increase its stability and minimize the potential for liquefaction to cause any slump or failure of the embankment. Furthermore, DSOD requirements for siting, engineering, construction, and monitoring of dams are continually improved as knowledge increases as to how and why dams fail.

Another factor in this analysis is the relative change in risk associated with the proposed Project. While the proposed Specific Plan will increase population and employment within a potential dam inundation area, this region is already densely populated and developed with urban uses. Improvements in the Planning Area associated with the proposed Project will allow the latest building code to be implemented on parcels that may currently contain older or dilapidated structures. These improvements would thus also add to the resilience of the urban fabric. Weighing risk, the potential for catastrophic failure of either dam is considered low and the potential impacts less than significant.

Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

The policies listed above under impacts 3.5-1 through 3.5-4 also help to reduce this potential impact.

Proposed Specific Plan Policies that Reduce the Impact

The policies listed above under impacts 3.5-1 through 3.5-4 also help to reduce this potential impact.

Mitigation Measures

None required.

Cumulative Impact

3.5-6 Implementation of the proposed San Pablo Avenue Specific Plan in combination with past, present, and foreseeable future development in the surrounding communities and with other agencies in the County, could adversely affect water quality of regional water bodies. (*Less than Significant*)

Implementation of the proposed Specific Plan would include policy provisions as well as compliance with the city's Grading and Drainage Ordinance which would reduce the city's contribution to cumulative water quantity and quality impact to a less than cumulatively considerable level. This impact is also mitigated through the implementation of CCCWP requirements and NPDES C.3 requirements which address the use of water quality and quantity control through design measures and use of BMPs. Effective BMPs relate to site preparation, runoff control, sediment retention, and other similar features. The effectiveness of BMPs has been recognized in the California Stormwater Quality Association, California Stormwater Best Management Practice Handbooks. Therefore, with adherence to the existing regulatory requirements regarding stormwater control and the policies identified above, the cumulative contribution of the proposed Specific Plan would be less than significant.

Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

The policies listed above under impacts 3.5-1 through 3.5-5 help to reduce this potential cumulative impact.

Proposed Specific Plan Policies that Reduce the Impact

The policies listed above under impacts 3.5-1 through 3.5-5 help to reduce this potential cumulative impact.

Mitigation Measures

None required.

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3.6 *Biological Resources*

This section presents the environmental setting and impact analysis related to biological resources within the San Pablo Avenue Specific Plan Planning Area, and vicinity. Within this chapter, existing biological resources are identified; the federal, State, and local regulations pertaining to biological resources within the region are described; and potential Project impacts on biological resources are identified.

ENVIRONMENTAL SETTING

Physical Setting

The City of San Pablo is located near the southeast side of San Pablo Bay in the Bay Area-Delta bioregion.¹ This bioregion contains the populous San Francisco Bay Area and the Sacramento-San Joaquin River Delta. The Bay Delta System is regarded as the most important water body in California, supporting recreational, commercial, biological, agricultural, and urban uses.² A variety of natural communities that range from the open waters of the Bay and Delta to salt and brackish marshes to chaparral and oak woodlands are located in this bioregion. The temperate climate is Mediterranean in nature, with relatively mild, generally wet winters and warm, dry summers.

The City of San Pablo is surrounded almost entirely by the City of Richmond which is a mosaic of developed urban, industrial, and residential areas. To the west, a narrow portion of the City of Richmond and unincorporated County land separates the City of San Pablo from San Francisco Bay. To the east, San Pablo extends to Alvarado Park and Wildcat Canyon Regional Park, located within the City of Richmond. The majority of the land in San Pablo has been highly altered, and little undisturbed, native habitat remains. This remaining higher quality habitat is associated with several streams that traverse the city; San Pablo Creek, Wildcat Creek, Rheem Creek, and an un-named drainage. San Pablo Creek is a perennial stream; Wildcat Creek is an intermittent stream; Rheem Creek is a channelized, intermittent stream; and the un-named drainage is also intermittent. San Pablo and Wildcat creeks are in a relatively natural state. All of these streams connect the city with the bay.

¹ California Natural Resources Agency, 2008.

² Contra Costa County, 2005.

Habitats

The only natural habitat types that occur within the Planning Area are annual grassland and valley foothill riparian.³ The most prevalent habitat type is urban, which covers the majority of the Planning Area and is contiguous to the north, west, and south with the neighboring cities and districts of Richmond, Rollingwood, El Sobrante, and Pinole. Developed lands, however, have much less to offer as nesting and foraging habitat. Urban areas have been cleared for housing, commercial buildings, transportation and infrastructure networks, recreational areas, ornamental plantings, and lawns. While agricultural areas such as pastures, croplands, orchards and vineyards still offer habitat for birds and animals, land alteration and development decreases animal diversity and has caused most native species to decline. There are no Significant Ecological Areas (SEAs) located within the Planning Area, as identified by Contra Costa County.⁴

*Annual Grassland*⁵

Annual grasslands include native and non-native annual, alkali, and ruderal, grassland communities, and are the most common vegetation community in Contra Costa. Annual grassland habitat can be open and mainly grass or an understory to another community such as oak woodland. Non-native annual grasslands have replaced native perennial grassland areas. These annual grassland areas are now dominated by grasses in the genera *Bromus*, *Avena*, *Lolium*, and *Vulpia*, and forbs in the genera *Erodium*, *Brassica*, *Centaurea*, *Lepidium* and *Castilleja*, though native wildflowers may persist. Alkali grasslands occur on alkaline soils, usually in small, scattered patches within other grassland communities. Ruderal grasslands are highly disturbed “waste” areas found in urban settings, erosion control areas, storm channels, fallow agricultural areas, and other locations. Exotic and invasive plants are prevalent in these areas. Grasslands are used by a variety of wildlife species such as lizards, snakes, small mammals, and birds, for refuge, foraging, or nesting. Special-status species associated with grasslands include California tiger salamander (*Ambystoma californiense*), burrowing owl (*Athene cunicularia*), and California red-legged frog (*Rana draytonii*).

Valley/Foothill Riparian

Valley/foothill riparian habitat consists of all successional stages of woody vegetation within the active and historical floodplains of low-gradient reaches of streams and rivers. This habitat type is found in valleys and floodplains with gently sloping topography below an elevation of 5,000 feet. The valley/foothill riparian habitat is comprised of four vegetative layers; canopy, sub-canopy, shrub, and groundcover. Deciduous trees dominate the canopy and sub-canopy. Tree species typically found in these layers include black cottonwood, California sycamore, valley oak, white alder, box elder, and Oregon ash. The shrub layer includes willows, toyon, California blackberry, poison oak, and dogwood. The herbaceous ground cover species include sedges, rushes, grasses, and a variety of herbs. A wide range of wildlife species can be found in this habitat type because of its diverse ecological composition. The multiple vegetative layers provide niches for different birds, reptiles, and mammals; and the hydrologic variety provides potential habitat for different fish, amphibians, and reptiles.

³ Zeiner et al., 1990.

⁴ Contra Costa County, 2005.

⁵ Mayer and Laudenslayer, 1988.

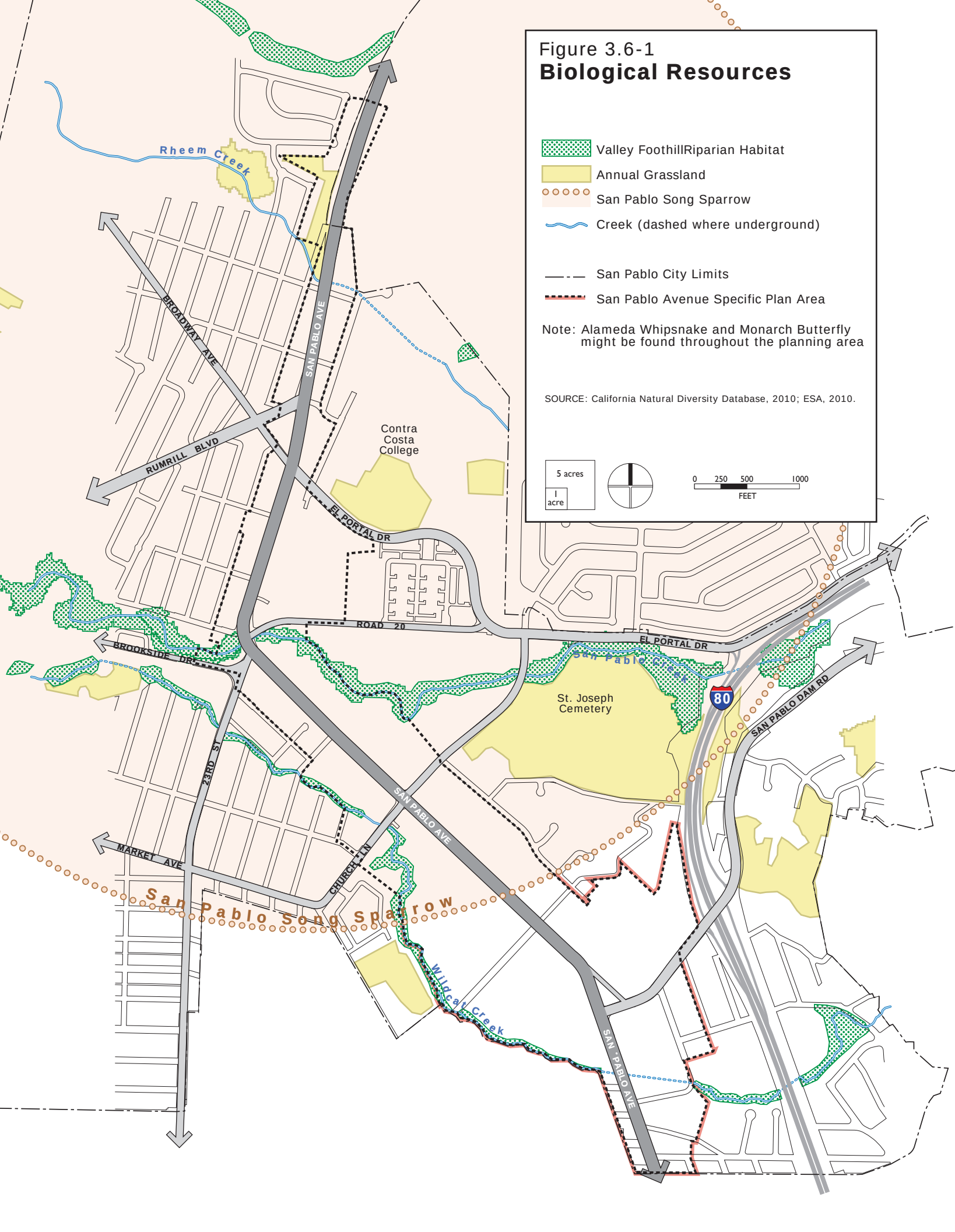
Figure 3.6-1
Biological Resources

-  Valley Foothill Riparian Habitat
-  Annual Grassland
-  San Pablo Song Sparrow
-  Creek (dashed where underground)

-  San Pablo City Limits
-  San Pablo Avenue Specific Plan Area

Note: Alameda Whipsnake and Monarch Butterfly might be found throughout the planning area

SOURCE: California Natural Diversity Database, 2010; ESA, 2010.



Special-Status Species

The CNDDDB has only one record of a special-status species occurring in the Planning Area, the San Pablo song sparrow (*Melospiza melodia samuelis*). This song sparrow subspecies is presumed to be extant in the area. It is not federally- or State-listed, but it is considered to be a California Species of Special Concern. Although the species itself is widespread and common, the San Pablo subspecies is endemic to California and confined to the tidal marshes of San Pablo Bay. It is threatened by habitat loss, fragmentation, and predation by house cats (*Felis catus*), Norway rats (*Rattus norvegicus*), red foxes (*Vulpes fulva*), American crows (*Corvus brachyrhynchos*), common raven (*Corvus corax*), and raccoons (*Procyon lotor*). Song sparrows can also be negatively affected by disturbances including recreational activities. **Figure 3.6-1** shows the location where this species can be found within the Planning Area.

The National Marine Fisheries Service (NMFS) has also reported that Central California coast steelhead/Central Valley steelhead (*Oncorhynchus mykiss*) (federally threatened and a California Species of Special Concern) occur in both San Pablo and Wildcat creeks. According to the CNDDDB (2010), Central Valley spring run Chinook salmon (*Oncorhynchus tshawytscha*) (federally- and State-listed as threatened), Central Valley fall/late fall-run Chinook salmon (*Oncorhynchus tshawytscha*) (a Former Fish and Wildlife Service Species of Concern, and a California Species of Special Concern), Sacramento perch (*Archoplites interruptus*) (a California Species of Special Concern), and Central California Coast Coho salmon (*Oncorhynchus kisutch*) (federally- and State-listed as endangered) may also be present in the creeks of the Planning Area. NMFS has listed steelhead in the Central California Coastal Evolutionary Significant Unit as threatened.⁶ This includes streams tributary to the San Francisco Bay and Estuary, such as San Pablo and Wildcat creeks which Steelhead use to migrate upstream for spawning and rearing young. These creeks are therefore important to their survival.

Additional species that have been recorded adjacent to the Planning Area, within habitats similar to those found in the Planning Area, are described below and listed in Appendix C. In general, those species described below have at least a moderate potential to occur in the Planning Area.

Federally-Listed

Several species recorded adjacent to the Planning Area are federally-listed, but of those federally-listed, only the California red-legged frog (*Rana draytonii*) (also a California Species of Special Concern) has the potential to be found within the Planning Area. Nonetheless, even species that do not use habitat in San Pablo may still be affected by management decisions within the Planning Area. In particular, species found in downstream marshes and wetlands may be susceptible to alteration of riparian habitat and changes in water quality. Grassland and woodland areas may also be sensitive to management of the Planning Area. For example, establishment of invasive species in the Planning Area may encroach onto sensitive habitats on San Pablo Ridge. Thus, considerations must be made of outside communities when managing within the Planning Area.

California red-legged frog (*Rana aurora draytonii*). This species has a federal designation of “threatened” and is also a California Species of Special Concern. The Planning Area does not occur within the designated critical habitat units for this species in Contra Costa County. Red-legged frogs reside in

⁶ Leidy, 2007.

lowlands and foothills in or near permanent or semi-permanent water sources, such as lakes, stock ponds, and slow moving streams with deep pools and dense shrubs or emergent aquatic vegetation. Where water sources are not permanent, red-legged frogs require access to dry-season upland aestivation habitat in the form of mammal burrows. Red-legged frogs require at least 11 weeks of permanent water after egg laying for larval development. San Pablo and Wildcat Creeks, as well as adjacent wetlands, may provide potential habitat for this species.

Western pond turtle (*Actinemys marmorata*). The northwestern pond turtle, a former federal Species of Concern and California Species of Special Concern, is a thoroughly aquatic turtle found in permanent ponds, rivers, streams, channels, and irrigation ditches with rocky or muddy bottoms, and emergent vegetation. Basking areas used by this species include partially submerged logs, rocks, vegetation mats, and open mud banks. Habitat destruction and stream course degradation are the primary threats to this species. Potentially suitable habitat for this species occurs in and on the banks of San Pablo and Wildcat creeks.

Bridges coast range shoulderband (*Helminthoglypta nickliniana bridgesi*). The Bridges coast range shoulderband snail is a former federal Species of Concern and tends to inhabit tall grasses and weeds. The CNDDDB shows three recorded occurrences for this species of snail; the closest of which is located approximately one mile east of the city along San Pablo Creek; this record was updated in 2005.

California Listed

Loma prieta hoita (*Hoita strobilina*). Loma prieta hoita is a California native plant society (CNPS) list 1B.2 species and is considered rare and fairly threatened in California. This perennial species is a member of the pea family and has a purple inflorescence visible from May through October. Habitat particular to this species is located on serpentine soils within chaparral, cismontane woodland, and riparian woodland areas. It is unlikely that serpentine soils located within riparian woodland habitats are within San Pablo; therefore it is unlikely that this species would grow in the city. However, the CNDDDB shows one recorded occurrence for this species (dated 2004) approximately 1.4 miles east of the Planning Area.

Monarch butterfly (*Danus plexippus*). Monarch butterflies are listed on CDFG's Special Animal List. This species migrates from north and south similar to bird migration routes. Monarch butterflies spend summer and spring in areas with lots of milkweed since in their caterpillar form, the species relies on milkweed for food. In the winter monarch butterflies inhabit areas with lots of trees. The CNDDDB shows four recorded occurrences for this species in the vicinity of the Planning Area..

Central Valley and central California coast steelhead (*Oncorhynchus mykiss*). Steelhead populations in the Central California Coast ESU and Central Valley Distinct Population Segments (DPS) are listed as threatened under the federal Endangered Species Act. Steelhead possesses the ability to spawn repeatedly, maintaining the mechanisms to return to the Pacific Ocean after spawning in freshwater. Juvenile steelhead may spend up to four years in fresh water prior to first migrating to the ocean (at which stage they are called "smolts"). Both steelhead DPSs migrate through San Pablo Straight waters between freshwater spawning and rearing areas and the Pacific Ocean. Both San Pablo and Wildcat Creek once supported steelhead runs.

Special-status Bat Species

The Planning Area provides potential foraging and roosting habitat for three special-status bat species. **Yuma myotis (*Myotis yumanensis*)** roost in buildings and mines and have been observed roosting in

abandoned swallow nests and under bridges.⁷ The **fringed myotis** (*Myotis thysanodes*) occurs throughout California and is most frequent in coastal and montane forests and near mountain meadows.⁸ This species uses echolocation to find moths, beetles, and other prey and forms nursery colonies in caves and old buildings.⁹ The **long-eared myotis** (*Myotis evotis*) inhabits nearly all brushlands, woodlands, and forests, seeming to prefer coniferous forests and woodlands. Roosts include caves, buildings, snags, and crevices in tree bark. This species is highly maneuverable in its forays for arthropods over water, open terrain, and in habitat edges. These bat species may utilize vacant or underutilized buildings, eucalyptus trees, or trees along the riparian corridors in the Planning Area for roosting and may forage over open areas and along stream corridors. These, as well as other special-status bat species found in, or with suitable habitat, adjacent to the Planning Area are listed in Appendix C.

Protected Nesting Birds

Cooper's Hawk (*Accipiter cooperii*). The Cooper's hawk is protected under CDFG's 3503.5 – Protection for nesting species of Falconiformes (hawks) and Strigiformes (owls) and is listed on CDFG's Special Animals List. The Cooper's hawk ranges over most of North America, and may be seen throughout California. It is more common as a winter migrant, and nesting pairs have declined throughout the lower elevation, more populated, parts of the State; however, Cooper's hawks likely breed in Contra Costa County. The Cooper's hawk forages in open woodlands, wood margins¹⁰, nests in tall trees, often in riparian areas, and can be found in wooded/shrubby suburbs.

Allen's hummingbird (*Selasphorus sasin*). The Allen's hummingbird is a former United States Fish and Wildlife Service (USFWS) Species of Concern and is similar in appearance to the Rufous Hummingbird, but its breeding range is limited to coastal scrub, forests, and riparian areas along California and southern Oregon. This species spends winters near forest edges. The CNDDDB does not show any recorded occurrences for this species within five miles of the Planning Area; however, potential habitat is present near and within the Planning Area.

American kestrel (*Falco sparverius*). The American kestrel is protected under CDFG's 3503.5 and is listed on CDFG's Special Animals List. The American kestrel is a small, common, raptor that migrates from Alaska to Tierra del Fuego. American kestrels use tall trees or telephone poles to perch from when looking for prey. This raptor is a cavity nesting bird and can be found in trees, buildings, and nest boxes. There is habitat present near and within the Planning Area.

Great horned owl (*Bubo virginianus*). The great horned owl is protected under CDFG's 3503.5 and is listed on CDFG's Special Animals List. Great horned owls occur throughout North America and are found in a variety of wooded habitats. These large raptors prey on small- to medium-sized mammals such as voles, rabbits, skunks, and squirrels. Great horned owls can often be seen and heard at dusk, perched in large trees. They roost and nest in large trees such as pines or eucalyptus. They often use the abandoned nests of crows, ravens, or sometimes squirrels.¹¹ Great horned owls may use large eucalyptus located

⁷ Zeiner et al., 1990.

⁸ Peeters and Peeters, 2005.

⁹ *Ibid.*

¹⁰ Robbins et al., 1966.

¹¹ Sibley, 2000.

within the Planning Area, as well as larger trees along the riparian corridors for roosting or nesting and may forage over grasslands and marsh habitat along the creeks for voles and other small mammals.

Red-tailed hawk (*Buteo jamaicensis*). The red-tailed hawk is protected under CDFG's 3503.5 and is listed on CDFG's Special Animals List. Red-tailed hawks are commonly found in woodlands and open country with scattered trees. These large hawks feed primarily on small mammals, but will also prey on other small vertebrates, such as snakes and lizards, as well as on small birds and invertebrates. Red-tailed hawks nest in a variety of trees in urban, woodland, and agricultural habitats. Larger trees along San Pablo and Wildcat Creeks as well as taller non-native trees such as eucalyptus, may be used by red-tailed hawks for nesting within the Planning Area. This species was observed along Wildcat Creek by ESA.

Red-shouldered hawk (*Buteo lineatus*). The red-shouldered hawk is protected under CDFG's 3503.5 and is listed on CDFG's Special Animals List. Red-shouldered hawks are relatively common in both rural and urban situations and can be found in residential neighborhoods and along riparian corridors or other water bodies. These hawks hunt primarily for mammals, reptiles, and amphibians.¹² Large eucalyptus and trees along the riparian corridors in the Planning Area provide potential nesting habitat for this species.

Saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*). The common yellowthroat is a former USFWS Species of Concern and a California Species of Special Concern. This is a small warbler with a complex of subspecies. The salt marsh subspecies is recognized as a distinct breeding population, with geographic distribution, habitats, and subtle differences in morphological traits that distinguish it from other subspecies. It inhabits tidal salt and brackish marshes in winter, but breeds in freshwater to brackish marshes and riparian woodlands during spring to early summer. Nests are placed on or near the ground in dense emergent vegetation or shrubs. The subspecies is a State species of concern due to major decline of both habitat and populations in the past decade, but is not currently listed as endangered or threatened. The common yellowthroat is also protected under the Migratory Bird Treaty Act. This species is known in the Wildcat and San Pablo marshes and may use freshwater marsh and riparian habitat along the creeks within the Planning Area for breeding.

San Pablo song sparrow (*Melospiza melodia samuelis*). The San Pablo song sparrow is a California Species of Special Concern. The San Pablo song sparrow is one of three morphologically distinct song sparrow subspecies that occur in the San Francisco Bay region. This particular subspecies is endemic to the marshes bordering San Pablo Bay. Intermixed stands of bulrush (*Scirpus* spp.), cattail (*Typha* spp.), and other emergent vegetation provide suitable habitat in brackish marshes. San Pablo song sparrows nest in tall tules with local pickleweed.

This special-status species list, presented in complete form in Appendix C, does not constitute an exhaustive list of the special-status species which could potentially occur in the Planning Area or the vicinity, but only refers to those with documented sightings listed in the CNDDDB. More detailed surveys may be necessary as part of subsequent project-specific CEQA review.

¹² Sibley, 2001.

Bird Strikes

It is estimated that, in North America alone, millions of songbirds are killed due to collisions with buildings and other structures each year.¹³ Collisions are currently recognized as one of the leading causes of bird population declines worldwide.¹⁴ Daytime collisions occur most often when birds fail to recognize window glass as a barrier. Recent increases in glass surfaces used to better daylight buildings can be considered a “biologically significant” issue, potentially affecting the viability of local and regional bird populations.¹⁵ Nighttime collisions occur due to artificial lighting.¹⁶ Collisions are considered a potential direct effect to migrating birds and can lead to death or injury. Indirect effects may include delayed arrival at breeding or wintering grounds, and reduced energy stores necessary for migration, winter survival, or subsequent reproduction.¹⁷ Both special-status bird species and other birds are affected.

Regulatory Setting

This section describes federal and State regulations, and local plans and policies relevant to biological resources in the Planning Area.

Definitions

Special-Status Species. The term “special-status species” as used in this section is defined to include the following:

- Plants and animals that are legally protected or proposed for protection under the California Endangered Species Act or Federal Endangered Species Act;
- Plants and animals defined as endangered or rare under Section 15380(b) of the state CEQA Guidelines;
- Plants and animals designated as species of special concern by the U.S. Fish and Wildlife Service or California Department of Fish and Game;
- Species designated “special animals” by the State;¹⁸
- Animals listed as “fully protected” in the Fish and Game Code of California (Sections 3511, 4700, 5050, and 5515);¹⁹

¹³ Lochhead, 2008.

¹⁴ Brown et al., 2010.

¹⁵ New York City Audubon Society, 2007.

¹⁶ Ogden, 1996.

¹⁷ Gauthreaux and Belser, 2006.

¹⁸ Species listed on the current CDFG Special Animals List (July 2009), which includes 883 species. This list includes species that CDFG considers “those of greatest conservation need.” The list is available at http://www.dfg.ca.gov/biogeodata/cnddb/plants_and_animals.asp; reviewed September 14, 2009.

¹⁹ These sections prohibit the “take or possession” of designated species, except for scientific research (or for livestock protection, in the case of bird relocation). The “fully protected” designation, dating from the 1960s, before enactment of the federal or state endangered species acts, was California’s earliest effort in to identify and protect rare animals and those possibly facing extinction. Most “fully protected” species have also subsequently been listed as threatened or endangered species under endangered species laws and regulations. About three dozen species are “fully protected.”

- Raptors (birds of prey), which are specifically protected by CDFG's Code Section 3503.5, which prohibits the take, possession, or killing of raptors and owls, their nests, and their eggs;²⁰ and
- Plants listed in the California Native Plant Society's Electronic Inventory of Rare and Endangered Vascular Plants of California.

Take. "Take," as defined in Section 9 of the federal Endangered Species Act, is broadly defined to include intentional or accidental "harassment" or "harm" to wildlife. "Harass" is further defined by the U.S. Fish and Wildlife Service as an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, and sheltering. "Harm" is defined as an act which actually kills or injures wildlife. This may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

Federal Regulations

Federal Endangered Species Act

The USFWS, which has jurisdiction over plants, wildlife, and most freshwater fish, and the National Marine Fisheries Service (NMFS), which has jurisdiction over anadromous²¹ fish, marine fish, and mammals, oversee implementation of the federal Endangered Species Act. Section 7 of the Act mandates that all federal agencies consult with the USFWS and NMFS to ensure that federal agencies actions do not jeopardize the continued existence of a listed species or destroy or adversely modify critical habitat for listed species. A federal agency is required to consult with USFWS and NMFS if it determines a "may effect" situation will occur in association with the proposed project. The Endangered Species Act prohibits the "take" of any fish or wildlife species listed as threatened or endangered, including the destruction of habitat that could hinder species recovery.

Under Section 9 of the Endangered Species Act, the take prohibition applies only to wildlife and fish species. However, Section 9 does prohibit the removal, possession, damage or destruction of any endangered plant from federal land. Section 9 also prohibits acts to remove, cut, dig up, damage, or destroy an endangered plant species in nonfederal areas in knowing violation of any state law or in the course of criminal trespass. Candidate species, and species that are proposed or under petition for listing, receive no protection under Section 9 of the Act.

Section 10 of the Act requires the issuance of an "incidental take" permit before any public or private action may be taken that would potentially harm, harass, injure, kill, capture, collect, or otherwise hurt (i.e., take) any individual of an Endangered or Threatened species. The permit requires preparation and implementation of a habitat conservation plan that would offset the take of individuals that may occur,

²⁰ The inclusion of birds protected by CDFG Code Section 3503.5 is in recognition of the fact that these birds are substantially less common in California than most other birds, having lost much of their habitat to development, and the recognition that the populations of these species are therefore substantially more vulnerable to further loss of habitat and to interference with nesting and breeding than are most other birds. It is noted that a number of raptors and owls are already specifically listed as threatened or endangered by state and federal wildlife authorities.

²¹ Anadromous fish live in the ocean mostly, and breed in fresh water.

incidental to implementation of the project by providing for the overall preservation of the affected species through specific mitigation measures.

Critical Habitat

The USFWS designates critical habitat for species listed under the federal Endangered Species Act. Critical habitat areas are occupied by the species, are located within a specific geographic region determined to be critical for survival, and are protected from destruction and adverse modification. The Federal Endangered Species Act allows the USFWS to designate critical habitat for threatened and endangered species. Critical habitat has been established in Contra Costa County for the longhorn fairy shrimp, vernal pool fairy shrimp, Delta smelt, Alameda whipsnake, California red-legged frog, Santa Cruz tarplant, Antioch Dunes evening-primrose, Contra Costa wallflower, Contra Costa goldfields, and soft bird's beak. None of these habitats are within the Planning Area.

Central California Coho salmon were listed June 2005 (70 FR 37160). Critical habitat for the Central California Coho salmon was designated in May 1999 (64 FR 24049) and includes all river reaches accessible to listed coho salmon from Punta Gorda in northern California south to the San Lorenzo River in central California, including Arroyo Corte Madera Del Presidio and Corte Madera Creek, and tributaries to San Francisco Bay.

Central California coast steelhead was listed January 2006 (71 FR 834). Critical habitat for the Central California coast steelhead was designated September 2005 (70 FR 52488) and includes all river reaches and estuarine areas accessible to listed steelhead in coastal river basins from the Russian River to Aptos Creek, California (inclusive), and the drainages of San Francisco and San Pablo Bays. Also included are all waters of San Pablo Bay westward of the Carquinez Bridge and all waters of San Francisco Bay from San Pablo Bay to the Golden Gate Bridge. Excluded is the Sacramento-San Joaquin River Basin of the California Central Valley as well as other areas such as dams. Steelhead is mapped as being present within Wildcat and San Pablo creeks.

California Central Valley steelhead were listed as federally threatened January 2006 (71 FR 834) and critical habitat was designated on September 2005 (70 FR 52488). Critical habitat for the California Central Valley steelhead is designated to include all river reaches accessible to listed steelhead in the Sacramento and San Joaquin Rivers and their tributaries in California. Also included are the river reaches and estuarine areas of the Sacramento-San Joaquin Delta, all waters from Chipps Island westward to Carquinez Bridge, including Honker Bay, Grizzly Bay, Suisun Bay, and Carquinez Strait, all waters of San Pablo Bay westward of the Carquinez Bridge, and all waters of San Francisco Bay (north of the San Francisco/Oakland Bay Bridge) from San Pablo Bay to the Golden Gate Bridge. Steelhead salmon are mapped as being present within Wildcat and San Pablo creeks.

Sacramento winter-run Chinook salmon was listed January 1994 (59 FR 440). Critical habitat was designated June 1993 (58 FR 33212) for the Sacramento winter-run Chinook salmon and includes the Sacramento River from Keswick Dam to Chipps Island at the westward margin of the Sacramento-San Joaquin Delta, all waters from Chipps Island westward to Carquinez Bridge, all waters of San Pablo Bay north of the San Francisco/Oakland Bridge.

Central Valley spring-run Chinook salmon populations were listed June 2005 (70 FR 37160). Central Valley spring-run Chinook salmon critical habitat was designated September 2005 (70 FR 52488) and includes Contra Costa County. Critical habitat for the Central Valley spring run Chinook is designated

to include stream habitat in the Sacramento River basin and 254 square miles of estuary habitat in the San Francisco-San Pablo-Suisun Bay complex.

Federal Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (16 USC, Section 703, Supplement I, 1989) implements various treaties and conventions between the U.S. and Canada, Japan, Mexico, and the former Soviet Union for the protection of migratory birds. Under the Act, taking, killing or possessing migratory birds is unlawful. Unless permitted by regulations, the Act provides that it is unlawful to pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product, manufactured or not. If a project site contains vegetation which supports nesting birds, the removal of that vegetation during the nesting season could result in a violation of the MBTA.

Waters of the United States

The term “waters of the United States,” as defined in the Code of Federal Regulations (33 CFR Section 328.3[a]; 40 CFR Section 230.3[s]), refers to:

1. All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce including any such waters:
 - which are or could be used by interstate or foreign travelers for recreational or other purposes; or
 - from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - which are used or could be used for industrial purposes by industries in interstate commerce.
4. All impoundments of waters otherwise defined as waters of the United States under the definition;
5. Tributaries of waters identified in paragraphs (1) through (4);
6. Territorial seas; and
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (1) through (6).
8. Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area’s status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA (33 CFR 328.3[a][8]).

Wetlands are ecologically productive habitats that support a rich variety of both plant and animal life. The importance of wetlands has increased due to their value as recharge areas and filters for water supplies

and to their widespread filling and destruction to enable urban and agricultural development. Examples of wetlands may include freshwater marsh, seasonal wetlands, and vernal pool complexes that are adjacent to waters of the United States. In a jurisdictional sense, there are two commonly used wetland definitions, one adopted by the USEPA and U.S. Army Corps of Engineers (Corps) and a separate definition, originally developed by USFWS, which has been adopted by agencies in the State of California that have regulatory authority over wetlands. Both definitions are presented below.

Federal Wetlands

Under federal law, wetlands are a subset of “waters of the United States” and receive protection under Section 404 of the Clean Water Act (CWA). Wetlands are defined as those areas that are inundated or saturated by surface or ground water at a frequency and duration that are sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetland determination under the federal wetland definition adopted by the Corps requires the presence of three factors: (1) wetland hydrology; (2) plants adapted to wet conditions; and (3) soils that are routinely wet or flooded [33 C.F.R. § 328.3(b)]. In January 2001, the Supreme Court of the United States ruled that certain isolated wetlands do not fall under the jurisdiction of the CWA (*Solid Waste Agency of Northwestern Cook County v. United States Army Corps of Engineers et al.*).

Other Waters of the United States

“Other waters of the United States” refers to additional features that are regulated by the CWA but are not wetlands (33 CFR 328.4). To be considered jurisdictional, these features must exhibit a defined bed and bank and an ordinary high water mark. The term ordinary high water mark refers to a line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other means appropriate to the characteristics of the surrounding areas. Examples of other waters of the United States include rivers, creeks, ponds, and lakes.

U.S. Army Corps of Engineers and U.S. Environmental Protection Agency Regulations

The U.S. Army Corps of Engineers (Corps) and the U.S. Environmental Protection Agency (EPA) regulate the discharge of dredged or fill material into waters of the United States, including wetlands, under Section 404 of the CWA. Projects that would result in the placement of dredged or fill material into waters of the United States require a Section 404 permit from the Corps. Some classes of fill activities may be authorized under General or Nationwide permits if specific conditions are met. Nationwide permits do not authorize activities that are likely to jeopardize the existence of a threatened or endangered species (listed or proposed for listing under the federal Endangered Species Act). In addition to conditions outlined under each Nationwide Permit, project-specific conditions may be required by the Corps as part of the Section 404 permitting process. When a project’s activities do not meet the conditions for a Nationwide Permit, an Individual Permit may be issued.

Section 401 of the CWA requires an applicant for a Corps permit to obtain state certification that the activity associated with the permit will comply with applicable state effluent limitations and water quality standards. In California, water quality certification, or a waiver, must be obtained from the Regional Water Quality Control Board (RWQCB) for both Individual and Nationwide Permits.

The federal government also supports a policy of minimizing “the destruction, loss, or degradation of wetlands.” Executive Order 11990 (May 24, 1977) requires that each federal agency take action to

minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands.

In recent years several Supreme Court cases have challenged the scope and extent of the Corps' jurisdiction over waters of the United States and have led to several reinterpretations of that authority. The most recent of these decisions are the case of *Solid Waste Agency of Northern Cook County (SWANCC) v. the Army Corps of Engineers* (January 9, 2001) and *Rapanos v. United States* (June, 2006). The SWANCC decision found that jurisdiction over non-navigable, isolated, intrastate waters could not be based solely on the use of such waters by migratory birds. The reasoning behind the SWANCC decision could be extended to suggest that waters need a demonstrable connection with a 'navigable water' to be protected under the CWA. The introduction of the term 'isolated' has led to the consideration of the relative connectivity between waters and wetlands as a jurisdictionally relevant factor. The more recent *Rapanos* case further questioned the definition of "waters of the United States" and the scope of federal regulatory jurisdiction over such waters but resulted in a split decision which did not provide definitive answers but expanded on the concept that a 'significant nexus' with traditional navigable waters was needed for certain waters to be considered jurisdictional.

On June 5, 2007 the EPA and the Corps released guidance on CWA jurisdiction in response to the *Rapanos* Supreme Court decisions, which can be used to support a finding of CWA coverage for a particular water body when either a) there is a significant nexus between the stream or wetland in question and navigable waters in the traditional sense; or b) a relatively permanent water body is hydrologically connected to traditional navigable waters and/or a wetland has a surface connection with that water. According to this guidance the Corps and the U.S. EPA will take jurisdiction over the following waters: 1) Traditional navigable waters, which are defined as all waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; 2) Wetlands adjacent to traditional navigable waters; including adjacent wetlands that do not have a continuous surface connection to traditional navigable waters; 3) Non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months); and 4) Wetlands adjacent to non-navigable tributaries as defined above; that have a continuous surface connection to such tributaries (e.g. they are not separated by uplands, a berm, dike, or similar feature).

The EPA and the Corps decide jurisdiction over the following waters based on a fact-specific analysis to determine if there is a significant nexus, as defined below, to a traditional navigable water: a) Non-navigable tributaries that are not relatively permanent; b) Wetlands adjacent to non-navigable tributaries that are not relatively permanent; and c) wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary.

The EPA and the Corps *generally* do not assert jurisdiction over: 1) swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent, or short duration flow) or 2) ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

The EPA and the Corps have defined the significant nexus standard as follows:

- A significant nexus analysis assesses the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters;
- Significant nexus analysis includes consideration of hydrologic and ecologic factors including: a) volume, duration, and frequency of flow, including consideration of certain physical characteristics of the tributary; b) proximity to a traditional navigable water; c) size of the watershed; d) average annual rainfall; e) average annual winter snow pack; f) potential of tributaries to carry pollutants and flood waters to traditional navigable waters; g) provision of aquatic habitat that supports a traditional navigable water; h) potential of wetlands to trap and filter pollutants or store flood waters; and i) maintenance of water quality in traditional navigable waters.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Act transfers oversight authority of the CWA NPDES program from the federal EPA to the state California State Water Resources Control Board (SWRCB). California oversees this federal program within and throughout the State via Regional Water Quality Control Boards (RWQCB).

State Regulations

California Endangered Species Act

Under the California Endangered Species Act, CDFG has the responsibility for maintaining a list of threatened and endangered species (California Fish and Game Code 2070). CDFG also maintains a list of “candidate species,” which are species formally noticed as being under review for addition to either the list of endangered species or the list of threatened species. In addition, CDFG maintains lists of “species of special concern,” which serve as “watch lists.” Pursuant to the requirements of the California Endangered Species Act, an agency reviewing a proposed project within its jurisdiction must determine whether any State-listed endangered or threatened species could be present on the Planning Area and determine whether the proposed project could have a potentially significant impact on such species. In addition, CDFG encourages informal consultation on any proposed project that may impact a candidate species.

California Native Plant Protection Act

State listing of plant species began in 1977 with the passage of the California Native Plant Protection Act (NPPA), which directed CDFG to carry out the legislature’s intent to “preserve, protect, and enhance endangered plants in this state.” The NPPA gave the California Fish and Game Commission the power to designate native plants as endangered or rare and to require permits for collecting, transporting, or selling such plants. The California Endangered Species Act expanded upon the original NPPA and enhanced legal protection for plants. The Act established threatened and endangered species categories, and grandfathered all rare animals—but not rare plants—into the act as threatened species. Thus, there are three listing categories for plants in California: rare, threatened, and endangered.

California Fish and Game Code

Fully Protected Species. CDFG Code sections 3511, 4700, 5050, and 5515 designate fully protected species and protection measures. Fully protected species may not be taken or possessed at any time, and no licenses or permits may be issued for their take except when collecting these species is necessary for scientific research and relocation of bird species is necessary for livestock protection.

Protection of Nesting Birds. Nesting birds are protected under CDFG Code Section 3503, which makes it (1) unlawful to take, possess, or destroy the nests or eggs of any such bird of prey (i.e., species in the order Falconiformes and Strigiformes) except as otherwise provided by the code; and (2) protect the active nests of all other birds (except English sparrow (*Passer domesticus*) and European starling (*Sturnus vulgaris*)). Disturbance that causes nest abandonment and/or reproductive failure is considered a take. No take permits are issued under these statutes.

Species of Special Concern. The CDFG designates species of special concern, which are species with limited distribution, diminishing habitat, and declining populations, or species that otherwise possess unusual scientific, recreational, or educational value. The Species of Special Concern list is intended to be a land-use management tool.

Special-Status Natural Communities

Special-status natural communities are identified as such by CDFG's Natural Heritage Division and include those that are naturally rare and those whose extent has been greatly diminished through changes in land use. The California Natural Diversity Database (CNDDB) tracks 135 such natural communities in the same way that it tracks occurrences of special-status species: information is maintained on each site in terms of its location, extent, habitat quality, level of disturbance, and current protection measures. CDFG is mandated to seek the long-term perpetuation of the areas in which these communities occur. While there is no statewide law that requires protection of all special-status natural communities, CEQA requires consideration of the potential impacts of a project to biological resources of statewide or regional significance.

California Native Plant Protection Act (NPPA). CDFG Code sections 1900-1913 comprise the NPPA and seek to preserve, protect, and enhance rare or endangered California plants. The agency is responsible for establishing criteria to determine what native plants are rare or endangered, and for governing the take, possession, propagation or sale of such plants. The California Native Plant Society (CNPS) also identifies rare or endangered plants and lists them as 1A, 1B, 2, 3, and 4 species. Plants appearing on CNPS List 1A, 1B, or 2 meet CEQA significance criteria and CDFG sections 1901, 2062, and 2067 criteria as rare or endangered species.

California's Natural Communities Conservation and Planning Act (NCCPA). This act exists as a natural community conservation planning tool and was initiated to help declining species by conserving natural communities and by allowing complimentary land uses. It is designed to identify and protect individual species that have already declined significantly mainly because the endangered species listing process is long and extensive and often highly controversial. The CDFG takes jurisdiction under CDFG Section 2800-2835.

California Wetland Definition

The CDFG and the California Coastal Commission (CCC) have adopted the USFWS Cowardin (1979) definition of wetlands. While the federal definition of wetlands requires three wetland identification parameters to be met, the Cowardin definition can be satisfied under some circumstances with the presence of only one parameter. Thus, identification of wetlands by State agencies may include areas that

are permanently or periodically inundated or saturated and without wetland vegetation or soils, such as rocky shores, or areas that presume wetland hydrology based on the presence of at least one of the following: a) a seasonal or perennial dominance by hydrophytes²² or b) the presence of hydric²³ soils. CDFG does not normally assert jurisdiction over wetlands unless they are subject to Streambed Alteration Agreements (CDFG Code Sections 1600–1616) or they support State-listed endangered species.

State regulation of activities in waters and wetlands resides primarily with CDFG and the State Water Resources Control Board (SWRCB). In addition, the CCC has review authority for wetland permits within its planning jurisdiction. CDFG provides comment on Corps permit actions under the Fish and Wildlife Coordination Act. CDFG is also authorized under the California Fish and Game Code, Sections 1600-1616, to enter into a Streambed Alteration Agreement with applicants and to develop mitigation measures when a proposed project would obstruct the flow or alter the bed, channel, or bank of a river or stream in which there is a fish or wildlife resource, including intermittent and ephemeral streams.

The SWRCB, acting through the nine RWQCBs, must certify that a Corps permit action meets State water quality objectives (Section 401, Clean Water Act).

Other Plans and Policies

City of San Pablo Municipal Code-Tree removal

The City of San Pablo regulates tree removal and pruning within Chapter 12.6 – Trees, Shrubs, and Plants in Public Places of their municipal code.

12.16.010 – Permit – Required to trim, cut or remove – Supervision authorized.

- It is unlawful for any person to cut, trim, remove, mutilate, injure or in any way impair the growth of any tree, shrub or plant being or growing in or on public ground or parking strip in the city without a permit issued by the director of public works, who may refuse such permit upon reasonable and lawful grounds.
- The director of public works may require the work mentioned in subsection A of this section or any part thereof to be done under his supervision.

IMPACT ANALYSIS

Significance Criteria

Implementation of the proposed San Pablo Avenue Specific Plan would have a potentially significant impact on the environment if it would:

²² A hydrophyte is, literally, a water loving plant, i.e., one that is adapted to growing in conditions where the soil lacks oxygen, at least periodically during the year, due to saturation with water.

²³ A hydric soil is one that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part of the soil profile.

- Criterion 1:** Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations; by the California Department of Fish and Game; or by the U.S. Fish and Wildlife Service, and found to have moderate or high potential to occur in the Planning Area.
- Criterion 2:** Have a substantial adverse effect on riparian habitat, federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.), or other sensitive natural community identified in local or regional plans, policies, and regulations; by the California Department of Fish and Game; or by the U.S. Fish and Wildlife Service, through direct removal, filling, hydrological interruption, or other means.
- Criterion 3:** Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- Criterion 4:** Conflict with the provisions of adopted local conservation policies, resource protection and conservation plans, or other applicable adopted local, regional, or State habitat conservation plans.

The following CEQA *Guidelines* sections provide further description of what may be found significant:

- Section 15065 states that the EIR must make mandatory findings of significance if projects “...substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, rare or threatened species...”
- Section 15380 states that a plant or animal species, even if not on an official list, may be treated as “rare or endangered” if, for example, it is likely to become so in the foreseeable future.

Methodology and Assumptions

Potential impacts resulting from implementation of the proposed San Pablo Avenue Specific Plan were evaluated based on a review of the following data sources:

- Existing resource information and aerial photographs of the Planning Area.
- Data presented in the CNDDDB,²⁴ CNPS Electronic Inventory of Rare and Endangered Vascular Plants of California,²⁵ and USFWS (2010) for the San Rafael and Novato USGS 7.5 minute topographic quadrangles, which include the preferred Planning Area and vicinity.

²⁴ CDFG, 2010.

²⁵ CNPS, 2010.

- Standard biological references.²⁶
- Previous environmental impact reports, other environmental documents, resources, and surveys for the City of San Pablo and the northern San Francisco Bay.
- Other available literature regarding the natural resources of the area.

Based on a review of relevant maps and biological resources documentation for the City of San Pablo, this EIR presents a list of special-status species that were observed or had the potential to occur in the Planning Area, due to the presence of the basic habitat types that they inhabit. A species is designated as having a “low potential” for occurrence if (1) their known current distribution or range is outside of the Planning Area, (2) only limited or marginally suitable habitat is present within the Planning Area, (3) their specific habitat requirements (e.g., serpentine grasslands, as opposed to grasslands occurring on other soils) are not present, or (4) they are presumed, based on the best scientific information available, to be extirpated from the study area or region. A species is designated as having a “moderate potential” for occurrence if there is low to moderate quality suitable habitat within the Planning Area or immediately adjacent areas, even though the species was not observed during biological surveys. A species would be designated as having a “high potential” for occurrence if (1) moderate to high quality habitat is present within the Planning Area, and (2) the Planning Area is within the known range of the species.

Impact Summary

PROPOSED PROJECT IMPACT	MITIGATION MEASURE	SIGNIFICANCE AFTER MITIGATION
Implementation of the San Pablo Avenue Specific Plan could result in effects, either directly or through habitat modifications on special-status species.	None required	Less than significant
Implementation of the San Pablo Avenue Specific Plan could result in the direct loss of nesting birds.	None required	Less than significant
Implementation of the San Pablo Avenue Specific Plan has the potential to affect migratory and breeding birds through building collisions and increases in night lighting.	None required	Less than significant
Implementation of the San Pablo Avenue Specific Plan may adversely impact special-status bat species through removal of potential roosting habitat and through increases in noise levels during construction.	None required	Less than significant
Implementation of the San Pablo Avenue Specific Plan could result in the filling of wetlands and other waters.	None required	Less than significant
Implementation of the San Pablo Avenue Specific Plan could result in could interfere substantially with the movement of native resident or migratory fish or wildlife species.	None required	Less than significant

²⁶ Hickman, 1993; Mayer and Laudenslayer, 1988; Sibley, 2001.

PROPOSED PROJECT IMPACT	MITIGATION MEASURE	SIGNIFICANCE AFTER MITIGATION
Subsequent development projects associated with the implementation of the San Pablo Avenue Specific Plan in conjunction with other past, present, pending and reasonably foreseeable development in the County of Contra Costa or the City of San Pablo could result in cumulative adverse impacts on special-status species, wetlands, or other waters of the United States.	None required	Less than significant cumulative impact

Impacts and Mitigation Measures

Impact

3.6-1 Implementation of the San Pablo Avenue Specific Plan could result in negative effects, either directly or through habitat modifications, on special-status species. (*Less than Significant*)

The monarch butterfly, California red-legged frog, the western pond turtle, the San Pablo song sparrow, and the Bridges coast range shoulderband snail are special-status animal species that may be present within the Planning Area, along with the plant known as Loma Prieta hoita.

The monarch butterfly, Bridges coast range shoulderband, and Loma Prieta hoita are most likely located within forested riparian areas. The Bridges coast range shoulderband may also be found within grasslands and weedy areas near creeks and the monarch butterflies may be found in eucalyptus groves. Habitat for these sensitive species is extremely limited within the Planning Area. However, riparian corridors associated with both San Pablo Creek and Wildcat Creek—which pass through the Planning Area—are identified as sensitive natural communities by the CNDDB and Significant Ecological Resource Areas by the Contra Costa County General Plan. These two creeks also provide potential habitat for both the California red-legged frog and the western pond turtle. While both creeks are surrounded by urban development, relatively undisturbed upstream habitats could contain breeding populations of California red-legged frog and western pond turtle. Individuals from upstream populations could move downstream and into sections of either creek within the Planning Area. Upland habitat for California red-legged frogs is only present in small, marginal patches, and it is not anticipated that individual frogs present in either creek would move upland from the riparian corridor.

Indirect impacts could occur through the loss of habitat or the introduction of non-native species within the vicinity which could contribute to the loss of sensitive species by out-competing. Also, discharge of hazardous materials into either creek could significantly reduce habitat quality for both species. However, several policies in the General Plan and proposed Specific Plan ensure that an adequate buffer is preserved on either side of the creeks, that hazardous discharge is avoided, and that habitats are enhanced rather than degraded by nearby development.

Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

OSC-G-3 *Protect and enhance wetlands, creek systems, and rare and endangered species and their habitats.*

- OSC-G-4 *Ensure both access and ecological functionality of the creek system in San Pablo.*
- OSC-G-5 *Protect water supply and quality through conservation and good stormwater management practices.*
- OSC-I-4 Require protection of sensitive habitat areas and “special status” species through measures implemented in new development in the following order: 1) avoidance, 2) on-site mitigation, and 3) offsite mitigation, and require assessments of biological resources prior to approval for any development within 300 feet of any creeks, wetlands, or other sensitive habitat areas.
- The City will coordinate with the U.S. Fish and Wildlife Service, National Marine Fisheries Service, California Department of Fish and Game, and Regional Water Quality Control Board to ensure City staff is providing developers with the best guidance and standards for project design to avoid impacts to creeks, wetland features, woodlands, or other sensitive natural features.*
- OSC-I-5 Develop a list of native plants and landscaping guidelines residents and business owners should use for public and private landscaping plans. Make this list and guidance accessible through the Planning Department, the Public Library, and the City website.
- Urban landscaping design and planting choices should be managed to maximize ecological and health benefits for the whole community.*
- OSC-I-6 Prohibit the use of invasive plant species, such as pampas grass and ivies, adjacent to wetlands, riparian areas, or other sensitive habitat.
- Invasive plants are introduced species that can thrive in areas beyond their natural range of dispersal. These plants are characteristically adaptable, aggressive, and have a high reproductive capacity. Their vigor combined with a lack of natural enemies often leads to outbreak populations that overwhelm local plant species.*
- OSC-I-7 Preserve and protect undeveloped hillside areas for their potential habitat value and as a visual and open space resource.
- OSC-I-10 Maintain, protect, and enhance San Pablo’s creeks, including Rheem, San Pablo, and Wildcat creeks, as local environmental and aesthetic resources, with approaches including, but not limited to:
- Establishing a Creek Improvement Program to widen, day-light, and improve San Pablo and Wildcat creeks for the enjoyment of residents;
 - Strengthening stormwater management requirements for properties adjacent to the creek areas by applying techniques that maintain or restore natural character;
 - Enforcing restrictions on the planting of invasive species near creek areas;
 - Identifying and working with property owners to take advantage of unique opportunities where human active use (e.g. through trail development) would enhance creek appreciation without disrupting ecological function;

	• Working with developers to “daylight” portions of creeks that have historically been channelized underground under existing paved areas (e.g. parking lots); and • Requiring minimum setbacks from the top of the creek bank for development proposed adjacent to creeks, in keeping with City regulations and Best Management Practices.
OSC-I-11	Require property owners with properties adjacent to creeks to pay for creek improvement maintenance.
OSC-I-12	Continue to work with the Regional Water Quality Control Board (RWQCB) to protect and improve ground- and surface-water quality in the region.
OSC-I-20	Require developers to use best management practices (BMPs) to reduce particulate emissions and dust associated with construction activities as a condition for approval of subdivision maps, site plans, and grading permits. These BMPs include, but are not limited to, regular materials and vehicle tire watering, covering, and dust prevention measures during clearing, grading, earth-moving, or excavation operations.
SN-I-36	Use the Community Noise Level Exposure Standards, shown in Table 9.6-1 in the General Plan, as review criteria for new land uses. Require all new development that would be exposed to noise greater than the “normally acceptable” noise level range to reduce interior noise through design, sound insulation, or other measures.
SN-I-37	Require proposed industrial, commercial, and other uses with potential noise and vibration-producing activities to submit a noise study report identifying noise and vibration mitigation measures that would reduce the adjacent noise level to acceptable ranges based on the Community Noise Environment Standards.
SN-I-38	Require new, fixed noise sources (e.g. mechanical equipment) to use best available control technology (BACT) to minimize noise and vibration. <i>Noise from mechanical equipment can often be reduced by applying soundproofing materials, mufflers, or other controls provided by the manufacturer.</i>
PSCU-I-34	Update zoning standards to minimize storm water runoff rates and volumes, control water pollution, and maximize recharge of local groundwater aquifers. New development will be required to include features that reduce impermeable surface area and increase infiltration. Such features may include, but are not limited to: • Canopy trees or shrubs to absorb rainwater; • Grading that lengthens flow paths and increases runoff travel time to reduce the peak hour flow rate; • Removing curbs and gutters from parking areas where appropriate to allow stormwater sheet flow into vegetated areas; • Permeable paving and parking area design;

- Stormwater detention and retention basins to facilitate infiltration; and
- Integrated or subsurface water retention facilities to capture rainwater for use in landscape irrigation and other non-potable uses.

Proposed Specific Plan Policies that Reduce the Impact

- 8-G-1 *Use development in the San Pablo Avenue corridor to improve local hydrology and water quality.*
- 8-G-2 *Strive for development in the San Pablo Avenue Specific Plan Planning Area that protects and improves the quality of habitat areas, particularly along San Pablo and Wildcat creeks.*
- 8-I-1 Require development in the San Pablo Avenue Specific Plan Planning Area to include low impact development features to reduce stormwater pollutant loads and increase on-site infiltration, consistent with General Plan policy PSCU-I-34. Features should be drawn from the Bay Area Stormwater Management Agency’s “Start at the Source Design Guidance Manual for Stormwater Quality Protection.” Ensure the update of zoning stormwater management standards pursuant to General Plan policy PSCU-I-34 includes provisions for stronger stormwater management on sites within 300 feet of creeks in the Planning Area, with an emphasis on maintaining or restoring the natural character of the water feature.
- 8-I-2 In accordance with the San Pablo Avenue Specific Plan Land Use Diagram, and General Plan policy OSC-I-10, ensure that redevelopment plans are designed to restore natural ecological systems wherever possible, including such techniques as “daylighting” Wildcat Creek immediately east of San Pablo Avenue in accordance with the Specific Plan Land Use Diagram, and integrating natural features and processes in the public experience throughout the Planning Area. These design efforts up front will improve both the ecological and aesthetic values of local hydrological resources.
- 8-I-3 Promote the development of new parks in the San Pablo Avenue Specific Plan Planning Area in accordance with the Land Use Diagram that provide both human and habitat services and which are contiguous with, and expand, existing Valley/foothill riparian habitat.
- 8-I-4 Prohibit siting of new hazardous materials handlers, such as gas stations, within 150 feet of any creeks within the Planning Area. This distance may be amended upon completion of the Creek Improvement Program described in General Plan policy OSC-I-10, but does not supersede the requirements for evaluation of biological resources within 300 feet of creeks pursuant to General Plan policy OSC-I-4.

Mitigation Measures

None required.

Impact

3.6-2 Implementation of the San Pablo Avenue Specific Plan could result in the direct loss of nesting birds. (*Less than Significant*)

Some nesting birds have adapted to urbanized areas and can be found utilizing trees, shrubs, or even buildings for nesting habitat. Other species of birds are more sensitive and tend to utilize less disturbed areas. The forested riparian corridors associated with San Pablo and Wildcat creeks are ideal habitat for nesting birds and raptors.

Most migratory birds, their nests, and their eggs are protected under the Migratory Bird Treaty Act. In addition, CDFG Code Section 3503 prohibits the destruction of nests or eggs of most bird species, including all raptors. Destruction of active nests or overt interference with nesting activities is prohibited. Although San Pablo is a highly urbanized, developed area, there is the possibility that common bird species may use any vegetation for nesting. With the exception of English sparrow (*Passer domesticus*), European starling (*Sturnus vulgaris*), and rock dove (pigeon, *Columba livea*), the nests, eggs, and nestlings of all birds are protected under the California Fish and Game Code. Development in line with the proposed San Pablo Avenue Specific Plan could have direct and indirect effects on nesting birds through removal of vegetation, equipment noise or vibration, or through the creation of environments more suitable for opportunistic avian species such as European starlings. These effects, when applied to nesting special-status bird species, including raptors, would be considered significant.

Adherence to the existing regulations above and to General Plan policies would ensure that potential impacts to nesting birds and raptors would be less than significant.

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OSC-I-8 If site work or construction (i.e., ground clearing or grading, including removal of trees or shrubs) activities are to occur during the nesting bird breeding season (February 1 through August 31), the City will require a pre-construction survey by a qualified wildlife biologist, assessing potential special-status bird nesting habitat within 500 feet of the project site, no more than two weeks in advance, of the planned activity. All identified nests should be buffered from the construction activity as recommended by the biologist and confirmed by City staff, in accordance with the nature of the construction and nesting activities.

Construction activities scheduled to occur during the non-breeding season (September 1 through January 31) do not require a survey. Construction activities commencing during the non-breeding season and continuing into the breeding season also do not require surveys. Nests initiated during construction activities would be presumed to be unaffected by the activity, and a buffer zone around such nests would not be necessary. However, a nest initiated during construction cannot be moved or altered.

Furthermore, General Plan policies listed under Impact 3.6-1 would also help to reduce this potential impact to a level that is less than significant.

Proposed Specific Plan Policies that Reduce the Impact

Proposed Specific Plan policies listed under Impact 3.6-1 would also help to reduce this potential impact to a level that is less than significant.

Mitigation Measures

None required.

Impact

3.6-3 Implementation of the San Pablo Avenue Specific Plan has the potential to affect migratory and breeding birds through building collisions and increases in nighttime lighting. (*Less than Significant*)

The proposed Specific Plan would accommodate infill development and intensification within the San Pablo Avenue corridor, but does not contemplate large-scale increases in intensity or substantive increases in building heights, compared to existing conditions. The Specific Plan envisions an entertainment district along San Pablo Avenue near San Pablo Dam Road, along with other intensification of land use along San Pablo Avenue. Focus areas along San Pablo Avenue are anticipated to increase from 1-2 stories in height today to 2-5 stories in height at General Plan buildout. According to the Massachusetts Audubon Society, birds hit every size window, and at any height, but many deaths occur when birds fly into illuminated high-rise buildings.²⁷ This analysis concludes that the increase from 1-2 stories to 2-5 stories in specific focus areas of San Pablo is not a substantial enough change in building heights to suggest a potentially significant effect.

These density and intensity changes would also increase nighttime lighting along San Pablo Avenue. However, San Pablo Avenue is already a developed commercial corridor with businesses and nighttime lighting. The anticipated development intensification would not substantially increase night lighting levels beyond those that now exist in this urbanized location, and General Plan policy would work to reduce the overall impact of light pollution and glare.

Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

PSCU-I-7 Provide security lighting to illuminate communal areas and pathways in all parks to ensure safety, and where feasible, select lighting fixtures that will not produce glare or illuminate the night sky.

Whenever possible, the City will select lighting fixtures that are shielded, are solar-powered, and/or can turn on automatically in low light conditions.

Furthermore, General Plan policies listed under impacts 3.6-1 and 3.6-2 would also help to reduce this potential impact to a level that is less than significant.

²⁷ Massachusetts Audubon Society, website: <http://www.massachusettsaudubonsociety.com>

Proposed Specific Plan Policies that Reduce the Impact

- 2-I-16 Encourage structured or underground, or tuck-under parking in new development, to maximize occupied uses and open space at the ground level. Discourage new or expanded surface parking lots.
- 4-I-59 Maximize lighting for safety, especially along connections between transit facilities, in public plazas, pedestrian-oriented destinations, parking areas, and other major public destinations.
- DG-37 Ensure that all exterior lighting is shielded from surrounding use and directed downward except where safety and security purposes require otherwise.

Mitigation Measures

None required.

Impact

3.6-4 Implementation of the proposed San Pablo Avenue Specific Plan may adversely impact special-status bat species through removal of potential roosting habitat and through increases in noise levels during construction. (*Less than Significant*)

Three species of special-status bats, including western red bat, long-eared myotis, and fringed myotis, could potentially roost and breed in conifers, oak trees, eucalyptus, or old buildings within the Planning Area. Tree removal or demolition of buildings could result in the direct mortality of special-status bats, if they are present. Such activities also have the potential to result in disturbance of maternity roosts through an increase in noise and human activity during construction periods. Policy OSC-I-9 in the General Plan was crafted specifically to reduce this impact throughout the city, and applies equally to the Specific Plan Planning Area.

Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

- OSC-I-9 For any development projects involving removal of mature trees and/or demolition of vacant buildings (both potential habitats for special-status bats), require a pre-construction survey by a qualified wildlife biologist to determine if bats are present using an acoustic detector. Require implementation of feasible recommendations of the biologist on removal of trees with signs of bat activity during a period least likely to adversely affect the bats, or the creation of a “no disturbance” buffer, if a viable alternative.

With implementation of this General Plan policy, no additional policies would be necessary at the Specific Plan level, and the impact would be less than significant.

Mitigation Measures

None required.

Impact

3.6-5 Implementation of the San Pablo Avenue Specific Plan could result in the filling of wetlands and other waters. (*Less than Significant*)

The Planning Area contains streams and associated riparian habitat, San Pablo Creek, Wildcat Creek, Rheem Creek, and an un-named tributary. Seasonal wetlands, while not recorded in the Planning Area, may be associated with these streams. Excavation, grading, placement of riprap, temporary dewatering, or other earthmoving activities within the boundary of jurisdictional waters would constitute “fill.” Development and redevelopment of property within the Planning Area could increase surface runoff and could increase seasonal flows within the creeks which could impact the jurisdictional waters. New structures and riprap within streams or on stream banks could also disrupt natural hydrology and erode the banks, exposing the root masses of riparian vegetation and leaving it vulnerable. If vegetation is not restored properly following construction, invasive plant species can become established in and near jurisdictional waters, further degrading these complex systems. During and after construction of projects implemented pursuant to the San Pablo Avenue Specific Plan, rainfall could erode banks and sediment could be deposited within jurisdictional waters. There would also be potential for hazardous materials spills into jurisdictional waters from refueling, leaks from machinery, or products used in construction, such as adhesives, solvents, paints, and drilling and petroleum lubricants. Discharge of fill into State- or federal jurisdiction waters, whether temporary or permanent, would be a significant impact.

Any project resulting in permanent or temporary fill of jurisdictional waters is subject to provisions of sections 401 and 404 of the Clean Water Act, sections 1600 through 1616 of the California Fish and Game Code, and Section 401 Regional Water Quality Control Board certification or waiver. Acquisition of these permits is a regulatory requirement and is not considered in and of itself mitigation for loss of waters of the United States. However, the processes for obtaining any State or federal wetlands permits involve the development of compensatory actions similar to CEQA-derived mitigation in scope and intent.

The San Pablo 2030 General Plan already offers several policies to help reduce the chance of fill of jurisdictional waters in the city, all of which apply equally to the San Pablo Avenue Specific Plan Planning Area.

Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

- OSC-I-20 Require developers to use best management practices (BMPs) to reduce particulate emissions and dust associated with construction activities as a condition for approval of subdivision maps, site plans, and grading permits. These BMPs include, but are not limited to, regular materials and vehicle tire watering, covering, and dust prevention measures during clearing, grading, earth-moving, or excavation operations.
- SN-I-6 Require erosion prevention of hillside areas by re-vegetation or other acceptable methods.
- SN-I-7 Continue to minimize the risk of flooding to development through the development review process. Require new development within a flood plain to comply with the City’s Floodplain Management and Flood Damage Prevention Ordinance and to submit hydrologic studies, identify site development and construction methods, and implement appropriate mitigation measures to minimize surface water run-off.

Developers will be required to provide an assessment of a project's potential impacts on the local storm drainage system as part of the development review process. If development is found to have a negative impact on storm drainage, mitigation measures, such as the creation of permanent or temporary detention or retention basins, provision of additional landscaped areas and green roofs, installation of pump stations, and the use of permeable paving in driveways, walkways and parking areas, may be required.

Furthermore, General Plan policies listed under impacts 3.6-1 through 3.6-4 would also help to reduce this potential impact to a level that is less than significant.

Proposed Specific Plan Policies that Reduce the Impact

- 5-I-4 Design creek-side open space improvements to prevent flooding within the public right-of-way and near open space amenities.
- 5-I-5 Require all new private development located along above-ground creeks to prevent flooding with ample setbacks.

Mitigation Measures

None required.

Impact

3.6-6 Implementation of the proposed San Pablo Avenue Specific Plan could interfere substantially with the movement of native resident or migratory fish or wildlife species. (*Less than Significant*)

While most of the City of San Pablo is heavily developed and lacks habitat value for most species, San Pablo Creek and Wildcat Creek represent important wildlife corridors connecting the bay salt marsh habitats with undeveloped oak savannah and annual grasslands in the Oakland hills. Development construction is not anticipated to directly modify these riparian habitats, but may increase water pollution or noise levels which could impact wildlife within the riparian corridors of both creeks. Additionally, San Pablo Creek and Wildcat Creek are included in the critical habitat of the Central California Coast steelhead. Steelhead critical habitat may be affected by any increase in runoff, pollution, or human disturbance related to the implementation of the San Pablo Avenue Specific Plan. Also, encroachment into the riparian area would further compromise steelhead habitat. This includes structures or materials crossing the stream or any fill in the riparian corridor.

Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

- SN-I-13 Cooperate with the County Flood Control District, California Department of Transportation, and the Army Corp of Engineers to mitigate potential flooding risks, including flood control projects on Wildcat and San Pablo creeks and the maintenance of drainage facilities and infrastructure.

Flood control projects will be designed to support the City's efforts to reestablish natural conditions in these creek corridors.

Furthermore, General Plan policies listed under impacts 3.6-1 through 3.6-5 would also help to reduce this potential impact to a level that is less than significant.

Proposed Specific Plan Policies that Reduce the Impact

Proposed Specific Plan policies listed under Impact 3.6-1 would also help to reduce this potential impact to a level that is less than significant.

Mitigation Measures

None required.

Cumulative Impact

3.6-7 Subsequent development projects associated with the implementation of the San Pablo Avenue Specific Plan in conjunction with other past, present, pending and reasonably foreseeable development in the County of Contra Costa or the City of San Pablo could result in cumulative adverse impacts on special-status species, wetlands, or other waters of the United States. (*Less than Significant Cumulative Impact*)

The geographic context for analysis of cumulative impacts to biological resources encompasses sites within and adjacent to the Planning Area. This analysis evaluates whether the impacts of the proposed San Pablo Avenue Specific Plan, together with the impacts of the assumed to be adopted General Plan, and cumulative regional growth and development, would result in a cumulatively significant impact on special-status species, wetlands and other waters of the United States, or other biological resources protected by federal, State, or local regulations or policies (based on the significance criteria and thresholds presented earlier). This analysis then considers whether or not implementation of the Specific Plan would make a substantial contribution to the cumulative impact.

Existing conditions in the City of San Pablo reflect the results of past development, which has filled or otherwise eliminated much of the original extent of the wet meadow and wetlands once present and resulted in loss and fragmentation of original habitat, as well as the introduction of night lighting and increased noise. Current commercial and residential uses in the Planning Area provide very little if any habitat value or ecological services, and existing planning documents make no accommodation for expanding habitat in the Planning Area in the future. However, the city contains two vegetated riparian corridors—around San Pablo and Wildcat creeks—that provide valuable wildlife habitat and that pass through the Planning Area, and the extent to which the proposed Project has the potential to cause degradation or improvement of these corridors is an important factor in the findings of significance of this impact.

While there is the potential for construction and operational noise, erosion, runoff, or lighting effects to result from the implementation of the Specific Plan and other reasonably foreseeable projects throughout the city and the region, the cumulative negative change for biological resources is likely to be very small within the Planning Area and throughout the city due to its current developed condition.

In terms of the proposed Project's contribution to cumulative effects, the San Pablo Avenue Specific Plan and other future projects within the cumulative geographic context of the Planning Area are all required to comply with local, State, and federal laws and policies and all applicable permitting requirements of the regulatory and oversight agencies intended to address potential impacts on biological resources,

including wetlands, other waters of the United States, and special-status species. In this respect, the potential project contribution would be expected to be no greater than any other proposed project held to State and federal standards.

Perhaps more importantly, the proposed Project itself may actually offer opportunities for improved conditions to the extent that Plan policies support the protection and enhancement of the riparian corridors, as well as the provision of several new parks within the Planning Area that do not yet exist. These parks would offer new vegetation for habitat and stormwater infiltration services. Sections of creeks proposed to be daylighted through Specific Plan implementation would offer more potential for ecological services than they do today buried underground. When considered relative to past, present, and reasonably foreseeable future development within the geographic context for this analysis, the contribution of the proposed Project in terms of biological resource disturbance or destruction would not be cumulatively considerable.

Mitigation Measures

None Required.

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3.7 *Geology and Seismicity*

This section discusses the effects of the proposed San Pablo Avenue Specific Plan as they relate to geology, soils, and seismicity. Topography, underlying geologic materials, and surficial soils within the Planning Area are described, as are landsliding, settlement, and soil-related issues such as erosion. Additionally, earthquake hazards including ground shaking, liquefaction, earthquake-induced landsliding, and tsunamis are assessed.

ENVIRONMENTAL SETTING

Physical Setting

Topography and Geography

The prominent San Andreas fault zone forms the boundary between the Pacific and North American crustal plates and locally separates two distinct bedrock complexes (basement rocks) underlying the region: the Franciscan Formation and the Salinian Block. Most of the Bay Area, including the major urbanized areas and all of Contra Costa County including San Pablo, lies to the east of the San Andreas Fault and is underlain by the Franciscan Formation. The Franciscan Formation is an assemblage of sedimentary, volcanic and metamorphic rocks that formed when the Pacific crustal plate descended beneath the North American plate during the Jurassic and Cretaceous ages (between 65 and 200 million years ago). These crumbled sea floor sediments form the bulk of the Coast Ranges, and rocks of the Franciscan Formation are exposed widely over much of the Bay Area.¹

Contra Costa County occupies portions of two geomorphic provinces, the Coast Ranges and the Great Valley. The western portion of the county, where San Pablo is located, lies within the Coast Ranges geomorphic province and is characterized by folds, thrusts, and faults that form a series of nearly parallel northwest-trending ridges, interspersed with alluvium-filled valleys. Terraces and alluvial fans skirt the ridges that border San Francisco and Suisun Bays and merge into tidal flats along the Bay margins.²

Flood Plains, Alluvial Fans, and Terraces in the Valleys

The youngest geologic units in the Bay Area are the thick unconsolidated alluvial deposits that underlie the valleys in the region, and the estuarine sediments that underlie San Francisco Bay and the Sacramento-San Joaquin River Delta. Alluvial deposits consist of gravel, sand, silt and clay that are many

¹ Graymer et al., 1994.

² USDA, 1977.

hundreds of feet thick in some areas. Estuarine deposits include soft, saturated bay mud and peat that underlie shoreline and former marsh areas. Considerable portions of urbanized areas within the region have been built on fill that was placed over soft bay mud deposits. In the county, those regions include the coastal areas of Richmond and between Martinez and Pittsburg.³ Most of the San Pablo Planning Area contains alluvial deposits consisting of unconsolidated and poorly to moderately consolidated sands, silts, clays, muds, and gravel near the surface. The alluvium varies in depth, but is generally deeper in the western and central parts of the city, and thinner as it approaches the low slopes of the bedrock hillsides.⁴

Hilly to Steep Uplands in the Coast Ranges

The upland areas of the Coast Ranges—which reach San Pablo in the northernmost and easternmost hilly sections of the city—are composed primarily of sedimentary rocks consisting of shale, siltstone, sandstone, clay stone, and conglomerate folded and faulted into steep slopes. Volcanic rocks are also present within the upland areas. Bedrock within the Coast Ranges in Contra Costa is lime-enriched (contains many seams of lime), and is easily fractured and susceptible to rapid weathering. Under certain conditions, for instance, saturation from precipitation, the steep slopes and varying soil types can promote slope failures including landslides, debris flows, and surface erosion, often more severe on cut and fill slopes. Soils in the upland areas of the Coast Ranges are primarily composed of fine silts or clays.

Seismicity and Regional Active Faults⁵

The San Francisco Bay Area is considered a region of high seismic activity. The U.S. Geological Survey (USGS) along with the California Geological Survey (CGS, formerly known as California Division of Mines and Geology) and the Southern California Earthquake Center formed the 2007 Working Group on California Earthquake Probabilities which has evaluated the probability of one or more earthquakes of magnitude 6.7 or higher occurring in the state of California over the next 30 years. The result of the evaluation indicated a 63 percent likelihood that such an earthquake event will occur in the Bay Area.⁶

The Bay Area contains both active and potentially active faults, four of which extend into Contra Costa County, as shown on **Figure 3.7-1**. Only one—the Hayward fault—extends into the Planning Area. The faults in or near the Planning Area are described below and listed in **Table 3.7-1**.

Hayward Fault

The Hayward fault extends northwestward along the western base of the East Bay Hills for a distance of 45 miles. The fault trace passes through a small portion of northern Santa Clara County, western Alameda County, and the northwestern portion of Contra Costa County, including through the northern portion of the Planning Area. The Hayward Fault is classified as a historically active fault because there is evidence of displacement in 1836 and 1968.⁷ The potential maximum estimated ground shaking from an earthquake on the Hayward fault ranges from moderate (MM VI) to strong (MM VII) in the eastern part of the County, to very strong (MM VIII) and very violent (MM X) in the western portions of the County nearest the fault. (See **Table 3.7-2** for explanation of MM scale.)

³ Helley, Graymer, 1997.

⁴ 1996 San Pablo GP EIR.

⁵ Expected ground shaking intensities in Contra Costa from an earthquake on specific faults within the Bay Area are derived from Earthquake Shaking Hazard Maps (ABAG, 2003a).

⁶ USGS, 2008.

⁷ Jennings, 1994, Radbruch, 1967.

Rodgers Creek Fault

The Rodgers Creek fault trends northwestward from San Pablo Bay up through Santa Rosa for approximately 39 miles within Sonoma County. The trend of the Rodgers Creek and Hayward faults are similar, suggesting that they may be related. The WGCEP 2007 places a 31 percent chance of an earthquake occurring on the Hayward/Rodgers Creek fault within the next 30 years. Potential ground shaking from an earthquake on the Rodgers Creek fault ranges from moderate (MM VI) to strong (MM VII) in most parts of the county, with very strong (VIII) ground shaking expected to occur along the margins of the Bay.

San Andreas Fault

The San Andreas Fault Zone is the largest in the State, extending from the Salton Sea in Southern California, near the border with Mexico, to north of Point Arena, where the fault trace extends into the Pacific Ocean. The main trace of the San Andreas Fault through the Bay Area trends northwest through the Santa Cruz Mountains and the eastern side of the San Francisco Peninsula. The San Andreas Fault Zone was the source of the two major seismic events in recent history that resulted in widespread damage throughout the San Francisco Bay region: the 1906 San Francisco earthquake, and the more recent 1989 Loma Prieta earthquake. The estimated maximum ground shaking from an earthquake on the San Andreas Fault is moderate (MM VI) throughout the majority of the county, although areas bordering the Bay are expected to experience very strong (MM VIII) to violent (MM IX) ground shaking.

Concord-Green Valley Fault

This fault is located approximately 15 miles northeast of San Pablo. Because they have similar alignments, it is believed that the Concord and Green Valley faults may be related. The Concord portion of the fault, found in Contra Costa, passes through Concord and trends in a northwestward direction into the Carquinez Strait. The total length of the fault is unknown but is thought to be between 11 and 14 miles long. The Green Valley portion of the fault lies north of Suisun Bay where it trends northwestward for approximately 24 miles from western Solano County up into the southeastern portion of Napa County. The potential maximum estimated ground shaking from an earthquake on the Concord-Green Valley fault ranges from very strong (MM VIII) to very violent (MM X) in the eastern part of the county nearest the fault, and moderate (MM VI) and strong (MM VII) elsewhere.

Calaveras Fault

The Calaveras fault splits from the San Andreas south of Hollister and trends northward along the eastern boundary of the Santa Clara Valley and into the Diablo Range. The 71-mile fault trace passes through Santa Clara County, Alameda County, and into the southern portion of Contra Costa County. The potential range of maximum estimated ground shaking from an earthquake on the Calaveras fault is moderate (MM VI) to strong (MM VII) in the majority of the county. Ground shaking intensity increases to very strong (MM VIII) along the Bay margins, and very strong (MM VIII) and very violent (MM X) in the south-central portions of the county nearest the fault.

Marsh Creek/Greenville Fault

The Marsh Creek/Greenville fault trends northwestward through Livermore Valley in eastern Alameda County and into central Contra Costa. The maximum estimated ground shaking from an earthquake on the Marsh Creek/Greenville fault ranges from light (MM V) to strong (MM VII) in the majority of the county, and very strong (MM VIII) to very violent (MM X) in the areas nearest the fault.

Mount Diablo Thrust Fault

The Mount Diablo blind thrust fault is a newly recognized earthquake source for the San Francisco Bay region, and was added to seismic probability calculations during the previous (2002) Working Group findings. It has been mapped on the western base of Mount Diablo on the eastern side of the San Ramon Valley. A blind thrust fault does not exhibit a surficial expression of displacement, and is therefore not zoned under the Alquist-Priolo Act, discussed below. Potential maximum estimated ground shaking from an earthquake on the Mount Diablo thrust fault ranges from moderate (MM VI) to strong (MM VII) in the majority of the county, to very strong (MM VIII) and violent (MM IX) in areas immediately adjacent to the fault.

TABLE 3.7-1 ACTIVE FAULTS IN THE VICINITY OF SAN PABLO AND THE PLANNING AREA

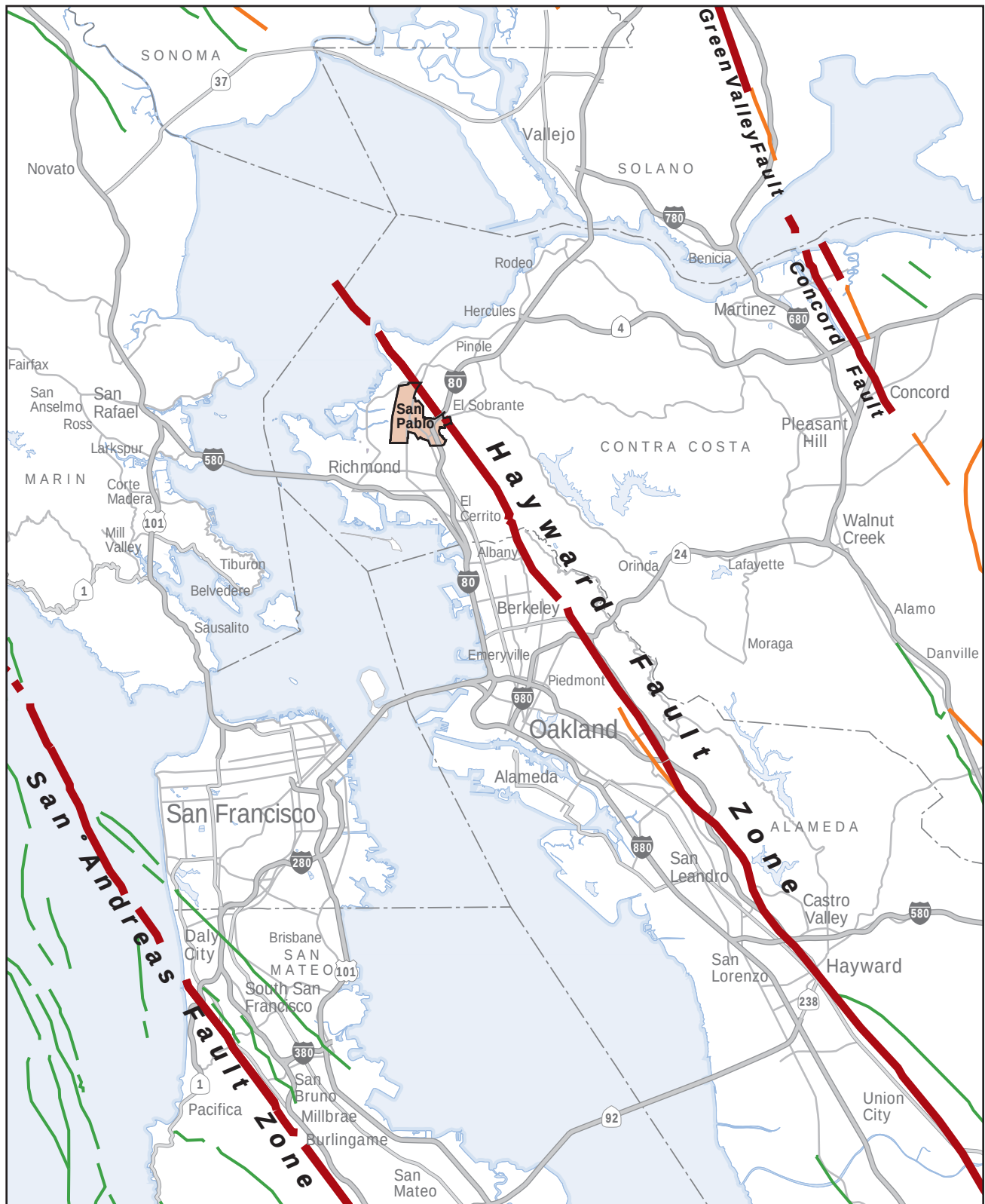
FAULT	DISTANCE AND DIRECTION FROM SAN PABLO	RECENCY OF MOVEMENT	FAULT CLASSIFICATION ¹	HISTORICAL SEISMICITY ²	MAXIMUM MOMENT MAGNITUDE EARTHQUAKE (MW) ³
Hayward	In Planning Area	Historic (1836; 1868 ruptures) Holocene	Active	M6.8, 1868 Many <M4.5	7.1
Rodgers Creek	14 miles northwest	Historic Holocene	Active	M6.7, 1898 M5.6, 5.7, 1969	7.0
San Andreas	15 miles west	Historic (1906; 1989 ruptures) Holocene	Active	M7.1, 1989 M8.25, 1906 M7.0, 1838 Many <M6	7.9
Concord–Green Valley	15 miles northeast	Historic (1955) Holocene	Active	Historic active creep	6.9
Calaveras	27 miles southeast	Historic (1861 rupture) Holocene	Active	M5.6–M6.4, 1861 M4–M4.5 swarms 1970, 1990	6.8
Marsh Creek–Greenville	In County	Historic (1980 rupture) Holocene	Active	M5.6 1980	6.9
Mt. Diablo Blind-Thrust	In County	Historic	Active	Slip rate 3mm/yr	6.6

¹ Footnote in text describes the qualities of active faults.

² Richter magnitude (M) and year for recent and/or large events. Magnitude is a measure of the energy released in an earthquake. The Richter magnitude scale reflects the maximum amplitude of a particular type of seismic wave.

³ The maximum moment magnitudes (Mw) represent characteristic earthquakes on Bay Area faults. The concept of “characteristic” earthquake means that we can anticipate, with reasonable certainty, the actual earthquake that can occur on a fault. Derived from the joint CGS/USGS Probabilistic Seismic Hazard Assessment for the State of California, 1996. (CGS OFR 96-08 and USGS OFR 96-706). Maximum moment magnitude for Mount Diablo Fault derived from USGS WGO2.

Source: Hart, 1997; Jennings, 1994; Peterson, 1996; USGS, 2002; distances not highlighted in yellow come from 1996 San Pablo General Plan EIR.



- Active Fault with Historic (last 200 years) Displacement
- Active Fault with Holocene (last 11,000 years) Displacement
- Potentially Active Fault with Quaternary (last 1,600,000 years) Displacement

Figure 3.7-1
Regional Faults

Types of Seismic Hazards

Fractures in the earth's surface along a fault are potentially very destructive in urban areas. However, the more common widespread effects of earthquakes are ground shaking and ground failures with associated damaging effects on structures and facilities. During severe earthquakes in the ocean, tsunamis (seismic sea waves) may occur due to the vertical displacement of the ocean floor. A seiche (pronounced *sayshe*) occurs in enclosed bodies of water and is formed by ground waves. Flooding may also be triggered by dam or levee failure, or by seismically induced settlement or subsidence (sinking).

Surface Fault Rupture

The magnitude and nature of fault rupture can vary for different faults or even along different strands of the same fault. Surface rupture can damage or collapse buildings, cause severe damage to roads and pavement structures, and cause failure of overhead as well as underground utilities. As a result of the damage, buildings can become uninhabitable, roads can close, and utility service can be disrupted for an undetermined length of time. Future faulting is generally expected along different strands of the same fault.⁸ Ground rupture is considered more likely along active faults. Within Contra Costa, the Hayward, Calaveras, Concord-Green Valley, and Marsh Creek-Greenville Faults are likely potential sources of surface fault rupture. These faults are zoned by the CGS as Fault Rupture Hazard Zones under the Alquist-Priolo Act, as discussed below under Regulatory Setting.

Ground Shaking

Earthquakes in the Bay Area have the potential to produce strong ground shaking. Ground movement during an earthquake can vary depending on the overall moment magnitude, distance to the fault, focus of earthquake energy, and type of geologic material. As a rule, the greater the earthquake magnitude and the closer the fault rupture to the site, the greater the intensity of ground shaking. However, different geologic materials respond differently to earthquake waves. The composition of underlying soils, even those relatively distant from faults, can intensify ground shaking. The Modified Mercalli (MM) intensity scale (see **Table 3.7-2**) is commonly used to measure earthquake effects due to ground shaking. The MM values for intensity range from I (earthquake not felt) to XII (damage nearly total), and intensities ranging from IV to X could cause moderate to significant structural damage.⁹ The strongest ground shaking anticipated to occur in San Pablo will be triggered by the North Hayward Fault, due to immediate proximity. Damage in areas near the fault and those underlain by estuarine deposits near creeks and the shoreline to the west could be extensive. Earthquakes on other faults will produce lower-intensity shaking in the city.

⁸ California Geological Survey, CMDG Note 32, 1997.

⁹ The damage level represents the estimated overall level of damage that will occur for various MM intensity levels. The damage, however, will not be uniform. Some buildings will experience substantially more damage than this overall level, and others will experience substantially less damage. Not all buildings perform identically in an earthquake. The age, material, type, method of construction, size, and shape of a building all affect its performance.

TABLE 3.7-2 MODIFIED-MERCALLI INTENSITY SCALE (GROUND SHAKING)

INTENSITY VALUE	INTENSITY DESCRIPTION	AVERAGE PEAK ACCELERATION
I	Not felt except by a very few persons under especially favorable circumstances.	< 0.0017 g
II	Felt only by a few persons at rest, especially on upper floors on buildings. Delicately suspended objects may swing.	< 0.014 g
III	Felt noticeably indoors, especially on upper floors of buildings, but many people do not recognize it as an earthquake. Standing motor cars may rock slightly, vibration similar to a passing truck. Duration estimated.	< 0.014 g
IV	During the day felt indoors by many, outdoors by few. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.	0.014–0.039 g
V	Felt by nearly everyone, many awakened. Some dishes and windows broken; a few instances of cracked plaster; unstable objects overturned. Disturbances of trees, poles may be noticed. Pendulum clocks may stop.	0.039–0.092 g
VI	Felt by all, many frightened and run outdoors. Some heavy furniture moved; and fallen plaster or damaged chimneys. Damage slight.	0.092–0.18 g
VII	Everybody runs outdoors. Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving motor cars.	0.18–0.34 g
VIII	Damage slight in specially designed structures; considerable in ordinary substantial buildings, with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Persons driving motor cars disturbed.	0.34–0.65 g
IX	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb; great in substantial buildings, with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken.	0.65–1.24 g
X	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations; ground badly cracked. Rails bent. Landslides considerable from riverbanks and steep slopes. Shifted sand and mud. Water splashed (slopped) over banks.	> 1.24 g
XI	Few, if any, (masonry) structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipelines completely out of service. Earth slumps and land slips in soft ground. Rails bent greatly.	> 1.24 g
XII	Damage total. Practically all works of construction are damaged greatly or destroyed. Waves seen on ground surface. Lines of sight and level are distorted. Objects are thrown upward into the air.	> 1.24 g

g (gravity) = 980 centimeters per second squared. 1.0 g of acceleration is a rate of increase in speed equivalent to a car traveling 328 feet from rest in 4.5 seconds.

Source: ABAG and California Geological Survey, 2003.

More remote faults, however, are still capable of producing earthquakes with ground shaking in Contra Costa that may achieve levels considered strong or very strong (MM VI–MM VIII). Of the historically

recorded earthquakes greater than moment magnitude 5.0 in the Bay Area since 1836, only two have been centered in Contra Costa: the 1889 Antioch earthquake with a moment magnitude of 5.6 and the 1955 Concord-Walnut Creek earthquake with a moment magnitude of 5.4.^{10,11}

Liquefaction

Areas with high liquefaction potential within Contra Costa are those underlain by Bay Mud or artificial fill along the shoreline of the Bay, the delta lowlands, and in areas of poorly drained soils on basins, valley fill, and floodplains, as shown on **Figure 3.7-2**. Most of the lowland areas of San Pablo are mapped as having potentially moderate, high, or very high liquefaction hazards, with the highest hazard areas occurring along the San Pablo and Wildcat creeks.¹²

Tsunami

Tsunamis affecting the Bay region would most likely originate west of the Bay, within the Pacific Rim. Areas that are highly susceptible to tsunami inundation tend to be located in low-lying coastal areas such as tidal flats, marshlands, and former Bay margins that have been artificially filled. Inundation or damage caused by tsunamis may disrupt highway traffic in those low-lying areas. According to the most recent tsunami inundation maps from July, 2009¹³, the City of San Pablo is not directly vulnerable, however nearby communities such as Richmond could see inundation which could indirectly affect the functioning of transportation systems and services for San Pablo as well.

Slope Instability and Failure

The susceptibility of land sliding/slope failure is dependent on the slope and geology as well as the amount of rainfall, excavation or seismic activities. An earthquake can also cause movement of active slides and can trigger new slides in the same general areas of previous slides. Land that has experienced sliding in the past is often more slide-prone and more sensitive to human-induced changes, such as grading, watering, removing or changing the type of vegetation, and changing drainage patterns. The CGS has not yet evaluated Contra Costa County for potential designation as a Seismic Hazard Zone for earthquake-induced landslides, discussed below.

¹⁰ USGS, 1983.

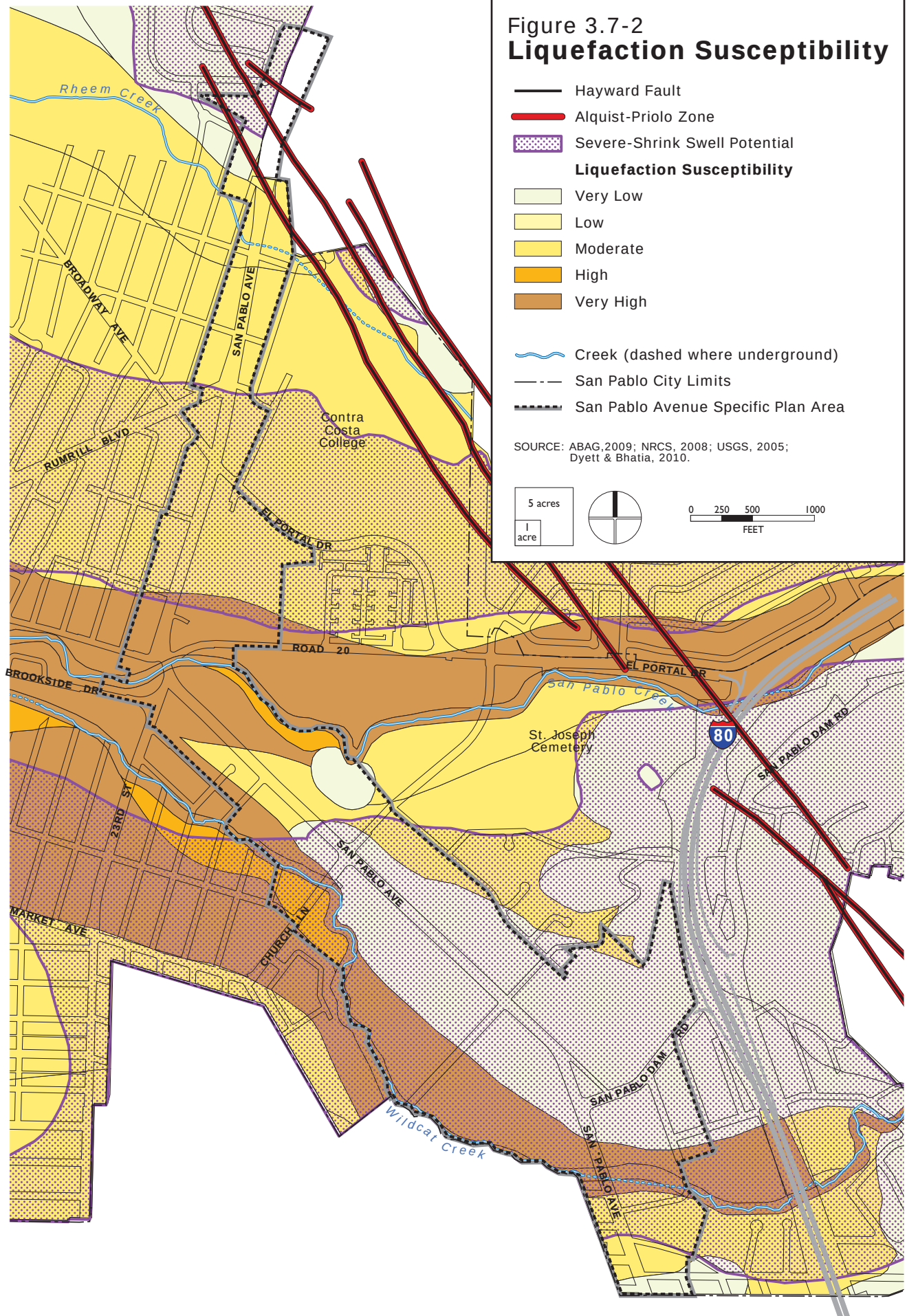
¹¹ Magnitude data before 1945 are incomplete and some earthquakes of magnitude greater than moment magnitude 5.0 may have gone unreported.

¹² ABAG, 2009.

¹³ Initial tsunami modeling was performed by the University of Southern California (USC) Tsunami Research Center funded through the California Emergency Management Agency (CalEMA) by the National Tsunami Hazard Mitigation Program. Local tsunami sources considered include offshore reverse-thrust faults, restraining bends on strike-slip fault zones and large submarine landslides capable of significant seafloor displacement and tsunami generation. Distant tsunami sources considered include great subduction zone events that are known to have occurred historically (1960 Chile and 1964 Alaska earthquakes) and others which can occur around the Pacific Ocean "Ring of Fire."

To enhance the result from the 75- to 90-meter inundation grid data, a method was developed utilizing higher-resolution digital topographic data (3- to 10-meters resolution) that better defines the location of the maximum inundation line (USGS, 1993; Intermap, 2003; NOAA, 2004). The location of the enhanced inundation line was determined by using digital imagery and terrain data on a GIS platform with consideration given to historic inundation information (Lander, et al., 1993). This information was verified, where possible, by field work coordinated with local county personnel. The accuracy of the inundation line shown on these maps is subject to limitations in the accuracy and completeness of available terrain and tsunami source information, and the current understanding of tsunami generation and propagation phenomena as expressed in the models. Thus it remains possible that actual inundation could be greater in a major tsunami event. This map does not represent inundation from a single scenario event. For this reason, all of the inundation region in a particular area will not likely be inundated during a single tsunami event.

Figure 3.7-2
Liquefaction Susceptibility



Weak Soils

Portions of San Pablo are underlain by Bay Mud, as well as portions of the communities of Richmond, Pinole, Hercules, Rodeo, Martinez, Pittsburgh, Antioch, Concord, Pleasant Hill, Alamo, Danville, San Ramon, the Tassajara Valley, Byron and Brentwood. In addition to liquefaction hazards, Bay Mud and other soft soils have a low bearing strength, often leading to foundation failure or excessive differential settlement.

Expansive Soils

About 70 percent of the soils that underlie the San Pablo Specific Plan Planning Area are expansive soils which possess severe building site restrictions based on their shrink-swell potential. **Table 3.7-3** lists soil types and the building site restrictions for each based on shrink-swell potential.

TABLE 3.7-3 PLANNING AREA SOILS AND BUILDING SITE DEVELOPMENT RESTRICTION

MAP SYMBOL/ SOIL NAME	BUILDING SITE DEVELOPMENT RESTRICTION ¹	ACRES	PERCENT OF PLANNING AREA ²
Cc/ Clear lake clay	Severe	155	59
CeA/ Conejo clay loam, 0 to 2 percent slopes	Moderate	48	18
CkB/ Cropley clay, 2 to 5 percent slopes	Severe	22	8
CnE/ Cut and fill land-los osos complex, 9 to 30 percent slopes	Severe	9	3
TaC/ Tierra loam, 2 to 9 percent slope	Moderate	27	10
Total		261	100

¹ Indicates development restrictions due to shrink-swell potential. Soils with shrink-swell rating of 0.5 are given a moderate rating while those with 1.00 are given a severe rating as it indicates the greatest negative impact on use.

² Totals may not add up due to rounding.

Source: US Department of Agriculture, Natural Resources Conservation Service. Soil Survey of Contra Costa County, 1977.

Regulatory Setting

Definitions

- **Active/Potentially Active Faults.** An “active” fault is defined by the State of California as a fault that has had surface displacement within Holocene time (approximately the last 10,000 years). A “potentially active” fault is defined as a fault that has shown evidence of surface displacement during the Quaternary (last 1.6 million years), unless direct geologic evidence demonstrates inactivity for all of the Holocene or longer. This definition does not mean that faults lacking evidence of surface displacement are necessarily inactive. “Sufficiently active” is also used to describe a fault if there is some evidence that Holocene displacement occurred on one or more of its segments or branches.¹⁴
- **Alluvial Fan.** An alluvial fan is an outspread, gently sloping mass of alluvium deposited by a stream. In geologic terms, an alluvial fan can be defined as: “A low, outspread, relatively flat to gently sloping mass of loose rock material, shaped like an open fan or a segment of a cone, deposited by a stream

¹⁴ Hart, 1997.

(esp. in a semiarid region) at the place where it issues from a narrow mountain valley upon a plain or broad valley, or where a tributary stream is near or at its junction with the main stream...”¹⁵

- **Alluvium.** Alluvium is “a general term for clay, silt, sand, gravel, or similar detrital material, deposited by a stream or other body of running water (during comparatively recent geologic time) as a sorted, semi-sorted, or stratified sediment in the bed of the stream or on its flood plain or delta, [or] as a cone or fan at the base of a mountain slope...”¹⁶
- **Expansive Soils.** Expansive soils swell in density and volume as they absorb water and contract as they lose water. Associated problems include cracking and deterioration of roadway surfaces, as they expand and contract during seasonal wet and dry cycles. Soils with high shrink swell potential are also poor candidates for construction of tall buildings or basements.
- **Geomorphic Provinces.** Geomorphic provinces are geologic regions that have distinctive characteristics of structure, relief, drainage and landscape. There are 11 geomorphic provinces within California.
- **Landslide/Slope Failure.** A landslide is a mass of rock, soil, and debris displaced down-slope by sliding, flowing or falling.
- **Liquefaction.** Liquefaction is the rapid transformation of sediment to a fluid-like state. It occurs when water-saturated, loose to medium dense, relatively clay-free sands and silts are subjected to earthquake ground motion. These ground vibrations tend to compact soils which increases water pressure on the soils, forcing the grains apart, and generating a “quicksand” or liquefied condition. The widespread destruction of property in the Marina District of San Francisco in the 1989 Loma Prieta earthquake was caused by the liquefaction of hydraulically placed fill material.¹⁷
- **Surface Fault Rupture.** Seismically induced surface fault rupture is defined as the physical displacement of surface deposits in response to an earthquake’s seismic waves.
- **Tsunami.** Tsunamis are long period waves that are caused by underwater seismic disturbances, volcanic eruptions, or submerged landslides.

State Regulations

Alquist-Priolo Earthquake Fault Zoning Act (1972)

The Alquist-Priolo Earthquake Fault Zoning Act (formerly the Alquist-Priolo Special Studies Zone Act) requires the delineation of zones along active faults in California. The purpose of the Alquist-Priolo Act is to regulate development on or near active fault traces to reduce the hazard of fault rupture; however, surface fault rupture is not necessarily restricted to the area within the Alquist-Priolo Zone. The Alquist-Priolo Act prohibits the location of most structures for human occupancy across active fault traces. Within these zones, cities and counties must regulate certain development, which includes withholding permits until geologic investigations demonstrate that development sites are not threatened by future surface displacement. The CGS has designated the Hayward fault as a Fault Rupture Hazard Zone. The extent of this zone within the Planning Area is depicted on **Figure 3.7-2**.

¹⁵ Bates and Jackson, *Glossary of Geology* 1987, p. 17.

¹⁶ *Ibid.*, p. 18.

¹⁷ Seed, et al, 1990.

Hospital Facilities Seismic Safety Act of 1973

The Alfred E. Alquist Hospital Facilities Seismic Safety Act (HSSA) was passed in 1973 to ensure that hospitals in California conform to high construction standards and are reasonably capable of providing services to the public after a disaster. The HSSA requires the establishment of rigorous seismic design regulations for hospital buildings and requires that new hospitals and additions to hospitals have the capacity, as far as is practical, to remain functional after a major earthquake. State law requires that all existing hospital buildings providing general acute care as licensed under provisions of Section 1250 of the California Health and Safety Code be in compliance with the intent of the HSSA by the year 2030.

This act applies to Doctor's Medical Center in San Pablo, however, as of an April 2008 article in the San Francisco Business Times, Doctors Medical Center in San Pablo is emerging from an October 2006 bankruptcy filing with help from a joint powers arrangement with Contra Costa County, a State emergency fund, Kaiser Permanente and John Muir Health. According to the article, Contra Costa County Supervisor John Gioia reported the budget for the next three years "does not build in any money for seismic," and neither the hospital nor the county had studied Doctors' seismic replacement needs and related costs. A January 2010 article on the same subject suggests that the medical center's ability to meet the HSSA deadline is still uncertain.¹⁸

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act was developed to protect the public from the effects of strong ground shaking, liquefaction, landslides, or other ground failure, and from other hazards caused by earthquakes. This act requires the State Geologist to delineate various seismic hazard zones and requires cities, counties, and other local permitting agencies to regulate certain development projects within these zones. Before a development permit is granted for a site within a Seismic Hazard Zone, a geotechnical investigation of the site must be conducted and appropriate mitigation measures incorporated into the project design. Geotechnical investigations conducted within Seismic Hazard Zones must incorporate standards specified by CGS Special Publication 117, Guidelines for Evaluating and Mitigating Seismic Hazards.¹⁹ The purpose of the Seismic Hazard Mapping Act is to identify where special provisions, beyond those contained in the UBC, are necessary to ensure public safety. This need has not been recognized for the hazard of ground shaking. Design provisions contained in the UBC are believed to be representative of current knowledge and capability in earthquake-resistant design.²⁰

Contra Costa County has not yet been investigated for delineation under the Seismic Hazards Mapping Act and is not included among areas that are planned for future mapping.

California Building Standards Code

The California Building Standards Code (CBC) has been codified in the California Code of Regulations (CCR) as Title 24, Part 2. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under State law, all building standards must be centralized in Title 24 or they are not enforceable. The purpose of the CBC is to establish minimum standards to safeguard the public health, safety and general welfare through structural strength, means of egress facilities, and general stability by regulating and controlling the design,

¹⁸ San Francisco Business Times, various dates.

¹⁹ CGS, 1997.

²⁰ CGS, 2004.

construction, quality of materials, use and occupancy, location, and maintenance of all building and structures within its jurisdiction. The 2010 CBC was published on July 4, 2010 and will be effective January 1, 2011. This is timed with the use of the 2009 IBC in CA. In addition, the CBC contains necessary California amendments which are based on the American Society of Civil Engineers (ASCE) Minimum Design Standards 7-05. ASCE 7-05 provides requirements for general structural design and includes means for determining earthquake loads as well as other loads (flood, snow, wind, etc.) for inclusion into building codes. The provisions of the CBC apply to the construction, alteration, movement, replacement, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California.

The earthquake design requirements take into account the occupancy category of the structure, site class, soil classifications, and various seismic coefficients which are used to determine a Seismic Design Category (SDC) for a project. The SDC is a classification system that combines the occupancy categories with the level of expected ground motions at the site and ranges from SDC A (very small seismic vulnerability) to SDC E/F (very high seismic vulnerability and near a major fault). Design specifications are then determined according to the SDC.

California Department of Transportation (Caltrans)

Jurisdiction of the California Department of Transportation (Caltrans) includes State and interstate routes within California. Any work within the right-of-way of a federal or State transportation corridor is subject to Caltrans regulations governing allowable actions and modifications to the right-of-way. Caltrans standards incorporate the California Building Code, and contain numerous rules and regulations to protect the public from seismic hazards such as surface fault rupture and ground shaking. In addition, Caltrans standards require that projects be constructed to minimize potential hazards associated with cut and fill operations, grading, slope instability, and expansive or corrosive soils, as described in the Caltrans Highway Design Manual (HDM).

Regional and Local Regulations

Multi-jurisdictional Local Hazard Mitigation Plan for the Bay Area (MJ-LHMP)

San Pablo participates in the preparation of the MJ-LHMP which covers the nine-county Bay Area. The last MJ-LHMP was prepared in 2005, and the 2010 update is expected to be adopted early this year. The document provides a compendium of natural hazard assessments and mitigation measures to reduce identified hazard risk. For each of the potential mitigation strategies, local governments have been asked to choose their own priority for the strategy. The priorities in each of these local government Annexes were selected based on: the level of hazard identified, the Bay Area preliminary risk assessment, supplementary hazard and risk assessment information developed by ABAG for each local government on the interactive internet site <http://quake.abag.ca.gov/mitigation>, and any specific studies conducted by the local government and included in that local government's Annex to this plan.

IMPACT ANALYSIS

Significance Criteria

Implementation of the proposed San Pablo Avenue Specific Plan would have a potentially significant adverse impact if it would:

- Criterion 1:** Increase exposure of people or structures to the risk of property loss, injury, or death involving: rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area, or based on other substantial evidence of a known fault; strong seismic ground shaking; seismic-related ground failure, including liquefaction; or landslides.
- Criterion 2:** Result in substantial soil erosion or topsoil loss.
- Criterion 3:** Be located on: a geologic unit or soil that is unstable or that would become unstable as a result of the project; expansive soils (high shrink-swell potential), as defined in Section 1802A.3.2 of the 2007 California Building Code; or weak, unconsolidated soils, creating substantial risks to life or property from on- or off-site landslide, lateral spreading, liquefaction, or collapse.
- Criterion 4:** Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State.
- Criterion 5:** Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

Methodology and Assumptions

This evaluation reviews applicable regulations and guidelines and published geologic, soils, and seismic maps and studies to determine the exposure of the Planning Area to geological and seismic risks. These documents and maps provide broad information on fault locations, estimated ground shaking response, and liquefaction potential. Programmatic impacts are consequently discussed in broad, qualitative terms. Due to the scale of these maps and programmatic level of project detail provided, this analysis should be used in the most general sense; and does not satisfy the need for subsequent site-specific surveys for individual projects.

Impact Summary

The entire Bay Area, including San Pablo and the Specific Plan Planning Area, is susceptible to impacts associated with seismic events on one of the many active or potentially active faults in the region. These faults could potentially generate seismic ground shaking capable of damaging existing and proposed structures. As a consequence, new structures would be exposed to both the direct and indirect effects of earthquakes, such as groundshaking, as well as other existing geological hazards such as landslides and unstable soils. New facility and structure designs would be required by existing building codes to make use of the latest information available on seismic hazards to structures.

Direct Impacts

Direct impacts associated with earthquakes include construction of new buildings and infrastructure that would be exposed to ground shaking, liquefaction, and earthquake-induced landslides. Over time, settlement of unconsolidated soils also can pose problems to facilities; however, building to current construction standards and prohibiting development of critical or habitable facilities within the Alquist-Priolo Earthquake Hazard Zone will ensure that these potential seismic impacts are less than significant.

Short-term impacts are those that could potentially occur during construction of buildings or infrastructure improvements. Soil erosion hazards could occur during preliminary stages of construction, especially during initial site grading. In addition to causing sedimentation problems in storm drain systems, rapid water erosion could remove topsoil, cause deeply incised gullies on slopes, or undermine engineered soils beneath foundations and paved surfaces. Use of appropriate construction methods, earthwork design, and road cut design can reduce this potential impact to a less-than-significant level.

Longer-term erosion impacts could be caused by projects on steep grades or those requiring substantial amounts of cut and fill would pose the greatest potential for slides and erosion impacts. Engineered soils could also erode due to poor construction methods and design features or lack of maintenance. Use of appropriate construction methods, earthwork design, and road cut design can reduce this potential impact to a less-than-significant level.

Indirect / Cumulative Impacts

The projected population increase in the Bay Area will result in increased travel on all modes of transportation. This then would result in an increased risk of exposure of people and property to the potentially damaging effects of strong seismic shaking, fault rupture, seismically-induced ground failure and slope instability on both existing and proposed buildings and infrastructure. However, proposed improvements would be constructed to current building and seismic engineering standards which are generally more conservative than those that have existed in the past. The cumulative impacts are essentially the same as the direct impacts outlined above.

Other Impacts

There are no known mineral resources within San Pablo or the Planning Area, and therefore the proposed Specific Plan has no impact to mineral resources or locally-important mineral resource recovery sites. These issues are discussed no further in this EIR.

Impacts and Mitigation Measures

Impact

3.7-1 Implementation of the proposed San Pablo Avenue Specific Plan could expose people or property to loss, injury, or death related to seismically-induced surface rupture, ground failure, ground shaking, liquefaction, landslides, or tsunamis. (*Less than Significant*)

The proximity of the planning area to the Hayward Fault makes new development under the proposed General Plan subject to damage from large earthquakes by means of liquefaction, lateral spreading/lurching, landsliding, ground shaking, and possibly inundation from dam failure in the headwaters of San Pablo Creek. What follows is a description of several types of seismic activities and their possible implications for the city under the proposed Project.

Surface Fault Rupture

Any new structures constructed across an active fault could be severely damaged or destroyed by fault rupture and creep. No structure of even the best design could withstand a substantial displacement of the earth on a fault without experiencing severe damage and possible collapse. The best approach to reducing damage potential is to avoid placing critical structures or buildings with large occupancies within the highest risk areas, notably, Alquist-Priolo Earthquake Hazard Zones.

However, a review of the proposed Specific Plan land use map reveals no instances where proposed new or changed land uses would overlap with the 50-meter Alquist-Priolo buffer around the Hayward Fault through the city. The land uses for parcels within the 50-meter Alquist-Priolo buffer have not been changed from their existing classifications and were not planned as opportunity sites for redevelopment under the proposed Specific Plan. The Specific Plan assumes adoption and implementation of General Plan policy SN-I-2 which directs the City to continue to review development project proposals in order to ensure no critical or habitable structures are built in this Hazard Zone.

Ground Shaking and Damage Susceptibility Zones

ABAG Earthquake Program maps (2009) indicate that all of San Pablo falls within the most severe shaking intensity zones in the Bay Area. These regions are near active faults (also depicted in the latest California Geological Survey Earthquake Fault Maps, 2010) and are expected on-average to experience stronger earthquake shaking more frequently than other parts of the Bay Area. This intense shaking can damage even strong, modern buildings. From this perspective, all proposed new development and redevelopment in the Planning Area is subject to very high earthquake shaking potential and thus has the potential to expose people and structures to personal or property loss, injury, or death associated with seismic activity.

As an example of how a large-scale earthquake could have severe consequences for San Pablo infrastructure systems, we can look at the impacts of the 1989 Loma Prieta earthquake on the San Andreas Fault, which caused the collapse of a nearly 1.5-mile long, two-tiered elevated section of Interstate 880 in Oakland and an upper deck panel on the Bay Bridge. Loma Prieta resulted in serious damage to other structures in San Francisco and nearer the epicenter in Santa Cruz County. Ground shaking levels in the Bay Area, and specifically Contra Costa, during the 1989 Loma Prieta earthquake were considerably smaller than estimated maximum ground shaking levels around this fault.

However, proposed new development and redevelopment will also be subject to the most current Uniform Building Code standards which require specific design parameters for construction in various seismic environments. The purpose of these parameters is to ensure construction of buildings that will resist collapse during an earthquake. These parameters do not protect buildings from all earthquake shaking hazards, but are designed to reduce hazards to a manageable level. Development and redevelopment under the proposed Specific Plan thus would be expected to reduce vulnerability compared to existing conditions by replacing older, non-conforming structures with ones that are fully “up to code.”

Liquefaction and Earthquake-Induced Landslides

ABAG Earthquake Program maps (2009) also indicate that much of San Pablo has moderate, high, or very high susceptibility to liquefaction. In terms of new or increased risk related specifically to the proposed Project, proposed redevelopment along Road 20 and at the intersection of Road 20 and San Pablo Avenue is subject to very high liquefaction risk, as is any redevelopment along 23rd Street north of Market Avenue. Similar to earthquake shaking hazard, however, redevelopment in this area is expected to reduce vulnerability in as much as new construction and retrofits must meet the latest building code standards.

Tsunamis and Seiches

Due to San Pablo's location inland from the borders of the Bay, there is no direct risk of loss to property, injury, or life due to tsunamis or seiches occurring in the Planning Area. However, destruction of transportation and other infrastructure closer to the shore would be expected to indirectly affect San Pablo through the potential for re-routing of traffic and other activity to routes inland.

Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

- SN-I-1 Amend the Zoning Ordinance to include provisions for a geologic hazards abatement district for hillside areas at risk of landslides in San Pablo.

The Geologic Hazard Abatement District is a potentially useful tool to effectively abate a landslide hazard that crosses property boundaries. It is a mechanism that responds to the physical realities of landslides, and allows property owners to cooperate in solving a common problem. It removes much of the stigma of legal liabilities among adjacent landowners and allows them to cooperate rather than litigate. It also provides for a cost-effective solution, requiring only one geotechnical engineering firm and one plan to solve the problems of several landowners.

- SN-I-2 Pursuant to the requirements of the Alquist-Priolo Earthquake Fault Zone Act, continue to review individual projects to prohibit the development of critical or habitable structures within the Fault Zone.

- SN-I-3 Continue to maintain and enforce appropriate standards in the Uniform Building Code to ensure new development is designed to meet current safety standards associated with seismic activity.

- SN-I-4 Continue to identify and catalogue structures that may be subject to serious structural damage in the event of a major earthquake, and provide information to property owners on ways to pay for rehabilitation of existing buildings, including available State and other financing resources.

- SN-I-5 Support efforts by State and regional agencies to promote public awareness of potential geologic and seismic hazards.

Regardless of whether the proposed Specific Plan is adopted, people who live and work in the Planning Area—as in nearby cities and counties—are subject to the risks associated with living in a seismically-active region. Furthermore, additional growth and development will occur in the Planning Area regardless of whether the proposed Specific Plan is adopted, increasing potential population exposure to this risk. As seismic activity is a risk throughout San Pablo, the San Pablo 2030 General Plan provides policies to proactively reduce this risk, for instance the creation of a Geologic Hazard Abatement District, the prohibition of critical or habitable development in the Alquist-Priolo Earthquake Hazard Zone around the Hayward Fault, and the identification of at-risk buildings and promotion of State and federal funding sources to support necessary safety retrofits. The General Plan is more comprehensive programmatic document within which it is appropriate to offer such policies that must be implemented citywide. The proposed Specific Plan is fully consistent with the General Plan.

Moreover, new development in the Planning Area is subject to the same stringent building standards as all development in California, and those stringent standards are designed to reduce vulnerability to seismic events for which California is well known. While this assessment does not assume all risk can be mitigated, mandatory compliance with the building codes and construction standards established in the California Building Code (based on the Uniform Building Code), the requirements of the City of San Pablo Municipal Code, and policies contained in the General Plan would reduce vulnerability to seismic-related ground shaking to an acceptable level that is less than significant.

Mitigation Measures

None required.

Impact

3.7-2 Implementation of the proposed San Pablo Avenue Specific Plan could require significant earthwork and road cuts, increasing the potential for short-term and long-term soil erosion and slope failure. (*Less than Significant*)

The Soil Survey for Contra Costa County indicates the hazard of erosion of site soils varies from slight where gently sloping, to moderate in the hilly areas at the northern and eastern edges of the Planning Area. However, erosion hazards are highest during construction activities because excavation, backfilling, grading, and demolition can remove stabilizing vegetation and expose areas of loose soil that, if not properly stabilized, can be subject to soil loss and erosion by wind and stormwater runoff. Concentrated storm water runoff, if not managed or controlled, can eventually result in significant soil loss that can threaten foundations and undermine sidewalks and roadways. Development and redevelopment projects that disturb areas that are greater than one acre are required to obtain a National Pollution Discharge Elimination System (NPDES) General Construction Permit which must include a Storm Water Pollution Prevention Plan (SWPPP). These SWPPPs typically contain numerous erosion control measures that effectively reduce the potential for erosion and loss of topsoil. Projects that are less than one acre, with implementation of the mitigation measure below would reduce the potential impact from erosion and loss of topsoil to less than significant levels.

All construction activities and design criteria are required to comply with applicable codes and requirements of the most current version of the California Building Code (Title 22), and applicable local construction and grading ordinances.

Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

SN-I-6 Require erosion prevention of hillside areas by re-vegetation or other acceptable methods.

Mitigation Measures

None required.

Impact

3.7-3 Implementation of the proposed San Pablo Avenue Specific Plan could cause new development to be built on highly compressible, expansive, or weak, unconsolidated soils, creating substantial risks to life or property from on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. (*Less than Significant*)

Slope failures could occur over time as a result of rainfall, seismic activity, or human activity such as earthwork and grading. Although construction in accordance with the proposed Project would likely occur within previously graded or developed areas, some projects could affect local slopes such as road cuts or hillside development. The creation of new loads such as fills or other improvements as well as the excavation of the toe of slopes can cause existing stable slopes to become unstable. However, by implementing appropriate slope conditioning measures such as compaction standards, slope terracing, drainage control, and other slope stability measures, any existing potential slope stability hazards can be reduced to less than significant levels through current geotechnical industry standards, local grading ordinances, and the California Building Code.

Likewise, inadequate soil and foundation engineering on weak or unconsolidated soils (such as poorly engineered artificial fill) could cause soils and overlying structures to settle unevenly, thereby weakening structural facilities. Low-strength soils subjected to settlement could, over time, cause damage to underground utilities such as pipelines and tunnels. Structures placed directly on expansive soils could be subject to seasonal shrink-swell effects, causing structural damage and possibly damage to underground utilities.

Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

General Plan policies listed under impacts 3.7-1 and 3.7-2 also reduce this impact to a level that is less than significant.

Mitigation Measures

None required.

Cumulative Impact

3.7-4 Implementation of the proposed San Pablo Avenue Specific Plan, combined with regional population growth, would result in an increased risk of exposure of people and property to geologic hazards. (*Less than Significant Cumulative Impact*)

Regardless of whether the proposed General Plan is adopted, people who live and work in San Pablo—as in nearby cities and counties—are subject to the risks associated with living in a seismically-active region. Additional growth and development will occur regardless of whether the proposed General Plan is adopted, increasing population exposure to this risk. The proposed Plan acknowledges the existence of that underlying regional risk, and provides policies to proactively reduce it, for instance the creation of a Geologic Hazard Abatement District, the prohibition of critical or habitable development in the Alquist-Priolo Earthquake Hazard Zone around the Hayward Fault, or the identification of at-risk buildings and promotion of State and federal funding sources to support necessary safety retrofits.

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3.8 *Public Services, Facilities, and Utilities*

This section presents the environmental setting and impact assessment for public services, facilities, and utilities in the City of San Pablo related to the San Pablo Avenue Specific Plan. The public services included in this EIR include public safety services and facilities, schools, parks, potable water, wastewater, and solid waste. Water quality and stormwater management are evaluated in Section 3.5 Hydrology, Flooding, and Water Quality.

ENVIRONMENTAL SETTING

Physical Setting

Fire and Other Emergency Services

The Contra Costa County Fire Protection District (CCCYPD) provides fire and emergency services to residents of the City of San Pablo, which includes the Specific Plan Planning Area. Besides fire fighting and rescue, the CCCYPD also provides first responder services such as supplemental basic life support (BLS) and advanced life support (ALS). Transportation is provided by American Medical Response (AMR), a private ambulance service contracted by the CCCYPD.

The District currently operates one fire station (Station #70) within the Specific Plan area. The Fire Station is located at 13928 San Pablo Avenue. The San Pablo Fire Station is actively manned 24 hours a day, 7 days a week. There are currently two engine companies (with a three-man team to each fire-engine) assigned to the San Pablo Fire Station. Countywide, the district employs a total of 364 personnel, including 325 uniformed personnel, 12 Battalion Chiefs, and approximately 39 civilian personnel. Each three-person firefighting crew includes a paramedic.¹

Fire dispatch is handled through the Contra Costa County Regional Communications Center. In addition to fire suppression and emergency medical services, overall capabilities and resources of the Fire District include vehicle extrication ("jaws of life"), trench rescue, water rescue, high-angle rescue, building

¹ Contra Costa County Fire Protection District website, <http://www.cccfpd.org/> accessed August 2, 2010.

collapse, confined space rescue, fire and arson investigation, code enforcement, building plan review, and public education, such as Community Emergency Response Training (CERT).

Service Response

The CCCFPD has set service level goals throughout its jurisdiction based upon nationally recognized standards. The CCCFPD's goal is to deploy and initial full alarm assignment (five engine companies, one truck Company and a Battalion Chief) within a ten minute response time to 90 percent of all emergency incidents. In 2009, the CCCFPD responded to 2,347 Code 3 calls in the City of San Pablo. The CCCFPD responded to 30.7 percent of calls in less than 5 minutes and 95.9 percent of calls in less than 10 minutes. **Table 3.8-1** shows the percentage of responses times for all Code 3 calls in San Pablo.^{2,3}

TABLE 3.8-1 CCCFPD RESPONSE TIMES

AREA	YEAR	<5 MIN	<6 MIN	<7 MIN	<8 MIN	<9 MIN	<10 MIN
San Pablo	2009	30.7%	51.6%	70.4%	85.0%	92.9%	95.9%

Source: Contra Costa County Fire Protection District, 2010.

Currently, the CCCFPD has an Insurance Service Office (ISO) rating of 3, on a scale of 1 to 10 with 1 being the highest.⁴ The CCCFPD has a mutual aid agreement with the Richmond Fire Department to ensure quick and adequate response to any fire emergency. The closest Richmond Fire Stations are Station #68 located at 2904 Hilltop Drive, Richmond, and Station #62 located at 1065 7th Street, Richmond. Both stations are located just half a mile away from San Pablo.

Fire Flows and Funding

Water pressures typically range from 40 to 140 psi throughout the city. There are three pressure zones in San Pablo; Berryman A2A, Aqueduct G1AA, and Central GOA. Water pressure and fire flow requirements are addressed on a case-by-case basis as development projects are submitted.⁵

Most of the CCCFPD's funding is derived from local property tax revenues. Additional funding comes from fees, intergovernmental revenues, and dispatching services.

² Code 3 means emergency response in an emergency vehicle when it is driving with its lights flashing and the siren going.

³ Interview with CCCFPD Battalion Chief, Lon Goetsch, July 9, 2010.

⁴ Interview with CCCFPD Facilities Manager, Mr. Ron Guelden, August 21, 2008.

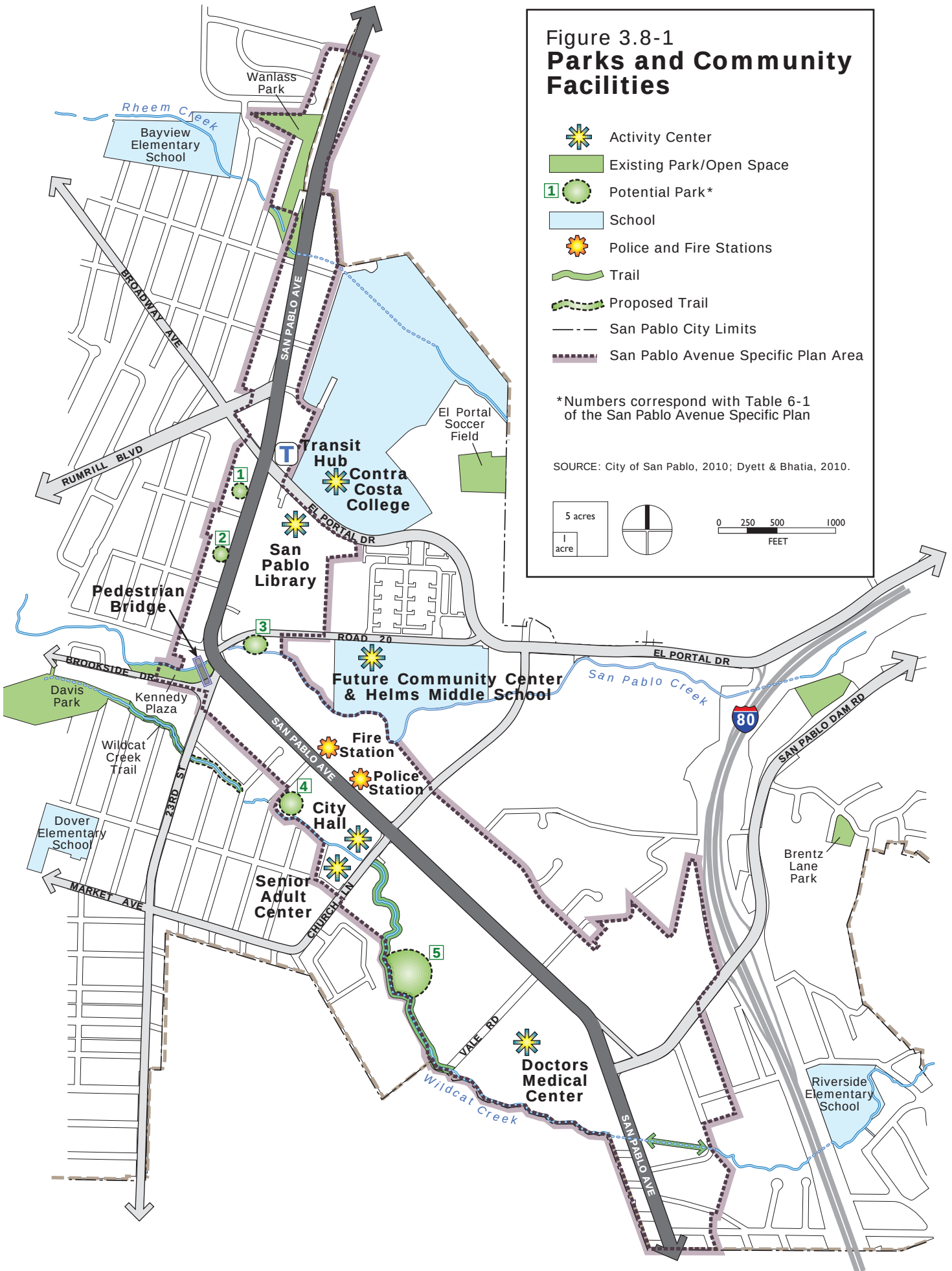
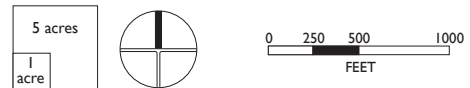
⁵ Interview with CCCFPD Battalion Chief, Lon Goetsch, July 9, 2010.

**Figure 3.8-1
Parks and Community
Facilities**

-  Activity Center
-  Existing Park/Open Space
-  Potential Park*
-  School
-  Police and Fire Stations
-  Trail
-  Proposed Trail
-  San Pablo City Limits
-  San Pablo Avenue Specific Plan Area

*Numbers correspond with Table 6-1
of the San Pablo Avenue Specific Plan

SOURCE: City of San Pablo, 2010; Dyett & Bhatia, 2010.



Police

Law enforcement services within San Pablo are provided by the San Pablo Police Department. In 2010, the Police Department had a total of 53 professional sworn officers and 22 non-sworn personnel.⁶ The San Pablo Police Department facilities include a headquarters building of approximately 14,600 square feet which includes an armory, a Board of Corrections certified temporary holding facility, evidence storage and an emergency operations center. The Department has five patrol teams, a fleet of 39 vehicles that includes specially equipped automobiles, vans, trucks, and trailers for emergency driving, and four police canines.

The Department is a full service law enforcement agency. The agency's administration is separated into three divisions: Patrol, Investigations, and Support Services and managed by the Chief of Police.

Service Response

The Department does not have mandated police-to-population service ratios, but does have informal police patrol coverage standards with minimum staffing of one supervisor and three officers. Although the Department's activity level is highest (per capita) in West Contra Costa County, the current staffing level is just 1.6 officers to 1,000 residents⁷, which is lower than the national average of 2.5 officers per 1,000 residents.⁸

According to the Department's spokesperson, one of the Department's most pressing needs is space, as the size of the Police building and its parking lot are insufficient to meet future growth. To maintain current service levels and provide adequate police protection, the Department's facility, equipment and budget would need to grow proportionately with additional personnel.

The Department does not have a response time mandate or maps. Although it does have response time mapping capabilities, due to San Pablo's geographic size, response times are similar throughout the city and vary primarily on call priority and officer availability. According to records, 90 percent of priority-one calls are handled within 11 minutes, priority-two calls within 16 minutes, and priority-three calls within 16 minutes. Calls held over 30 minutes must be approved by the watch commander. The Department participates in a County-wide mutual assistance program and has mutual assistance agreements with cities in the vicinity, including the Sheriff's Department and the El Cerrito, Richmond, and Pinole police departments.

Schools

Enrollment and Capacity

The Planning Area lies within the West Contra Costa Unified School District (WCCUSD), which is responsible for providing elementary, middle, and high school education in West Contra Costa County. There are no schools located within the Planning Area; however, there are several within a ten-minute

⁶ Information provided by Walter N Schuld, Chief of Police, of the San Pablo Police Department on September 9, 2010.

⁷ *Ibid.*

⁸ According to the 2003 Bureau of Justice Law Enforcement and Management Administrative Statistics (LEMAS) survey, municipal police departments employed an average of 2.5 full-time officers per 1,000 residents. Departments serving 25,000 to 99,999 residents had the lowest average ratio (1.8 officers per 1,000 residents), followed by cities with 100,000 to 249,999 residents (1.9), and cities with 10,000 to 24,999 residents (2.0). Cities with a population of 250,000 or more had 2.5 officers per 1,000 residents. <http://bjs.ojp.usdoj.gov/>

walk, including Helms Middle School, Bayview Elementary School, and Dover Elementary School. Students living within the Planning Area may attend these or other nearby schools in the school district.

Based on the 2010-2011 school year, WCCUSD schools located within the City of San Pablo and those with attendance areas in San Pablo have a K-12 enrollment of 6,326 students. This consists of 3,375 elementary school students, 951 middle school students, and 2,000 high school students. On average, the schools are about 16 percent under capacity. Only Riverside Elementary is overcapacity. **Table 3.8-2** summarizes enrollment and capacity counts for these schools.

TABLE 3.8-2 EXISTING PUBLIC SCHOOLS IN SAN PABLO

SCHOOL	2010-11 ENROLLMENT	TOTAL CAPACITY	PERCENT AVAILABLE CAPACITY
Elementary			
Bayview Elementary ¹	590	649	9%
Dover Elementary ^{1,3}	350	725	52%
Downer Elementary	692	800	14%
Lake Elementary	435	528	18%
Riverside Elementary	423	380	-11%
Ford Elementary ²	403	532	24%
Highland Elementary ²	482	637	24%
<i>Elementary School Subtotal</i>	<i>3,375</i>	<i>4,251</i>	<i>21%</i>
Middle			
Helms Middle School ¹	951	1,141	17%
<i>Middle School Subtotal</i>	<i>951</i>	<i>1,141</i>	<i>17%</i>
High School			
Middle College High	300	315	5%
Richmond High ²	1,700	1,853	8%
<i>High School Subtotal</i>	<i>2,000</i>	<i>2,168</i>	<i>8%</i>
Total	6,326	7,560	16%

¹ Within walking distance of the Planning Area.

² Schools are not physically within the City of San Pablo but have attendance areas that include the City.

³ Dover Elementary only serves grades K-5.

Source: West Contra Costa Unified School District, 2010.

St Paul's School, a parish school located on Church Lane, provides private elementary and middle school education. There are two schools that provide special education in San Pablo. The first, Middle College High School, provides non-traditional high school to "at-risk" San Pablo and regional residents. The school is located on Contra Costa College campus. Besides Middle College High School, there is also North Campus High School, which is a four-year continuation school. Many of the school's students are adults.

Contra Costa College

Contra Costa College (CCC) is a regional community college located in San Pablo. The College encompasses 23 buildings on 80 acres of land, and had a student enrollment of 8,994, as of fall 2009. Of that amount, 67 percent are part-time students and the rest are full-time students.⁹ Most students come from the cities of San Pablo, Richmond, El Cerrito, Hercules, Pinole, El Sobrante, and Rodeo. The CCC does not have dormitory facilities and all students must arrange their own housing.

Parks

The City's Parks and Recreation Division administers seven parks in the City of San Pablo, varying in size from the 0.1 acre 14th Street Park (a neighborhood park) to the 11.6 acre Davis Park (one of the city's community parks.) A total of 22.0 acres of parkland are located within the city. Besides public parks, the City has a joint-use agreement with the West Contra Costa School District and Contra Costa College, which allows residents to use their recreation facilities during non-school hours.

Of the seven parks in the City, only two—Wanlass Park and Kennedy Plaza—are located within the Planning Area. There are several other parks that are located within walking distance of the Planning Area. These facilities serve existing residents and workers and will continue to be an important public amenity for new populations as the Specific Plan builds out.

Existing Parks and Recreation Facilities

Neighborhood Parks

There are two neighborhood parks within half a mile of the Planning Area—Brentz Lane Park and 14th Street Park. Both parks are located in residential neighborhoods. Brentz Lane Park is a 0.8-acre park at the corner of Morrow Drive and Brentz Lane, with picnic tables, children's playground and an exercise area. 14th Street Park, at only 0.1 acres is located at 14th Street and Broadway. The small park has a landscaped space and a pedestrian rest area.

Community Parks

Davis Community Park (also known officially as John Hubert Davis Park) is located at the corner of Folsom Avenue and 17th Street near Brookside Drive. This 11.6 acre park has BBQ pits, a group picnic area that can be reserved, as well as soccer and baseball fields, tot and youth play areas, and trails. Currently the park is used by both San Pablo Baseball and San Pablo United Youth Soccer for practices and games. There are three buildings located at the park which are used by San Pablo seniors and most of our summer youth programs. Wildcat Creek also runs through Davis Park.

Kennedy Plaza is located at the junction of 23rd Street and Brookside Drive. This 1.8 acre linear park is the focal point for the Summer Concert Series and other community events. The park has a high fence that protects people from the creek area as well as a short decorative fence along Brookside Drive. There are grilling stations and picnic tables at one end of the park and a gazebo close to the fountain wall.

El Portal Soccer field is located at 2600 Moraga Street, adjacent to the Contra Costa Community College campus. The field used to be the school field of the El Portal elementary school. When the school was closed, the School District sold the property to the City of San Pablo. The City is using the field as the

⁹ Interview with Tim Clow, Dean of Research and Planning, Contra Costa College on December 3, 2010.

primary soccer field for San Pablo Youth Soccer. In the summer, the field hosts the City's 4th of July and the Movie in the Park events.

The Wanlass Community Park is the newest park in the City. Completed in 2009, the park includes an Environmental Education Center which employs "Green" technology including solar power, a restroom building, play areas, paved pathways, landscaping with native plants, drainage, improvements to mitigate runoff to adjacent residential properties, a masonry block wall separating the park from adjacent residences, park entry features, parking area, creek restoration, and a vehicular access bridge across the creek. The park is located along San Pablo Avenue, and bordered on two sides by Rivers Street and 20th Street.

Service Standard

The City's stated goal for parkland, as defined in the San Pablo Municipal Code, is to provide "three acres per one thousand residents." Currently, San Pablo's 22 acres of parkland serve a population of 32,200 residents, resulting in 0.7 acres of parkland per 1,000 residents. This service standard is not inclusive of recreational facilities made available to residents through joint-use agreements with schools, as well as access to the nearby regional parks, such as Alvarado Park and Point Pinole.

Recreation

The Recreation Department offers a variety of programs for youth, teens, and seniors. Sports classes and leagues, including soccer, are offered throughout the year at various community and neighborhood parks. Youth summer camps and day camps are also offered. Classes such as dance club, babysitting, swimming lessons, and fulsol, Latin and ballroom dancing classes and others are scheduled at Maple Hall and the Davis Park Senior Center. Applications are also accepted online.¹⁰

Other Community Facilities

Community Facilities

The City of San Pablo defines community facilities as buildings needed to support daily operations of the City, as well as other buildings designed for community meetings, indoor recreational and instructional programs, and social activities. Community facilities located within the Planning Area include:

- **The San Pablo Senior Adult Center**, located at 1943 Church Lane, offers recreational and educational activities, social services, and a daily congregate meal program serving 130 seniors per day. The facility has one meeting room, a pool room, and an event floor that are available for rent to local residents for meetings and special events.
- **The Maple Hall Community Center**, located at 13831 San Pablo Avenue inside the City Hall Complex has four meeting rooms, a commercial size kitchen, a stage area and fire place pit. The center can accommodate up to 250 persons and can be rented for private events, recreational activities, or social gatherings.
- **The San Pablo Blume House and Alvarado Adobe**, located at 1 Alvarado Square, serve as local museums. They house historical exhibits and photos chronicling the history of San Pablo and offer space for artistic and historical presentations. Both museums are managed by the San Pablo Historical Society.

¹⁰ City of San Pablo Recreation website, <http://www.ci.san-pablo.ca.us/main/recreation.htm>, Date accessed August 16, 2010.

- **The San Pablo Public Library** located at 2300 El Portal Drive boasts 35,000 books, DVD's, magazines and tapes and offers materials in English, Spanish and Vietnamese. The library is open six days a week and managed by Contra Costa County Library.

Another community facility, the Davis Park Senior Center, is located outside the Planning Area but within the City of San Pablo. The center offers recreational activities and a nutritional lunch twice per week to seniors 60 years and up or 50 and disabled. The facility has a large banquet hall, a stage, and a small utility kitchen.

Water Supply

The East Bay Municipal Utility District (EBMUD) provides potable water supply to the City of San Pablo. Formed in the early 1920s to provide water to customers in parts of Alameda and Contra Costa counties, the District is one of the largest urban water districts in Northern California with a service population of 1.38 million.

The EBMUD water supply system collects, transmits, treats, and distributes high-quality water from its primary water source, the Mukelumne River in the Sierra Nevada, to its customers in the San Francisco Bay Area. The water supply system consists of a network of reservoirs, aqueducts, water treatment plants, and distribution facilities. Raw water from the Pardee Reservoir is transported approximately 91 miles from its source to the East Bay treatment plants and reservoirs. EBMUD operates five reservoirs within East Bay: Briones, Chabot, Lafayette, Upper San Leandro, and San Pablo.¹¹ The San Pablo Reservoir is located in a valley north of Orinda, California and south of El Sobrante and Richmond, east of the Berkeley Hills.

The total capacity of the EBMUD water supply system is constrained by the inherent dependence on seasonal rainfall and collected snowpack in the Sierra Nevada watershed. On an average annual basis, approximately 90 percent of the water used by EBMUD comes from this source. The secondary source of water is the runoff from local watersheds at EBMUD's terminal reservoirs in the East Bay area.

Water Use

According to EBMUD's 2009 Annual Report, the total average water production was 181 million gallons per day (mgd). San Pablo's estimated share of the total, calculated using proportionate share of the total population, is only 4.2 mgd or about 2.3 percent of the total. Over the past four years, the water demand has been decreasing for the EBMUD service area despite a slight increase in population, due to water conservation efforts. (**Table 3.8-3**)

¹¹ EBMUD Urban Water Management Plan 2005, page 2-1

TABLE 3.8-3 HISTORIC AVERAGE DAILY WATER PRODUCTION

Year	EBMUD SERVICE AREA (MGD) ¹	SAN PABLO'S SHARE ² (MGD)	PERCENT CHANGE
2009	181	4.2	-12%
2008	205	4.8	-3%
2007	211	4.9	0%
2006	211	4.9	3%

¹ MGD = Million gallons per day

² San Pablo's share calculated by proportion of population.

Source: East Bay Municipal Utilities District, Water Annual Reports, 2006 to 2009.

Water Quality

EBMUD's water quality consistently surpasses the standards set by the California Department of Health Services and the U.S. Environmental Protection Agency. This is because it comes from the mostly undeveloped watershed of the Mokelumne River. This watershed is 75 percent forest land and open space, with the remaining areas being orchards, vineyards, and recreational areas (including winter sport facilities). Runoff from the snowmelt is collected at Pardee Reservoir in the Sierra foothills before being transported by large aqueducts to East Bay.

EBMUD further protects water quality at Pardee Reservoir through the purchase of conservation easements in areas with significant potential for residential development. As a result, the raw water is not exposed to common sources of contaminants such as pesticides, agricultural or urban runoff, municipal sewage discharges or industrial toxics.

On rare occasions, the water supply in Pardee Reservoir is affected by short term events that may stir up sediments. High turbidity, for instance, caused by unusually heavy late winter storms and/or landslides into Pardee Reservoir, can create poor water quality events that briefly interrupt the supply. In such cases, the Mokelumne Aqueducts that transport water from Pardee Reservoir to the EBMUD service area are shut down, or their flows are reduced until turbidity levels are reduced to allowable limits.

After arrival via aqueducts to the East Bay, EBMUD applies conventional treatment/disinfection, flocculation, sedimentation, and filtration to ensure water meets public health standards. A number of tests are applied to look for substances and impurities including bacteria, metals, inorganic contaminants, petroleum products, and by-products of water-treatment processes. Generally, only minimal treatment is necessary before the water is delivered to EBMUD customers.

Projected Demand

The demand for water by East Bay communities is expected to increase over the next 20 years. According to EBMUD's 2005 Urban Water Management Plan, EBMUD requires approximately 258 mgd of water to supply all its service areas in 2010. After taking into account conservation and other water recycling programs each city is expected to adopt on their own, EBMUD still requires 225 mgd of water to meet demand (see **Table 3.8-5**). By 2030, the planning demand is expected to increase by 3 percent to 232 mgd. Of this amount, San Pablo's proportionate share is expected to be 5.1 mgd.

TABLE 3.8-4 PROJECTED WATER DEMAND AND SUPPLY IN EBMUD SERVICE AREA¹

	2010	2020	2030
Population			
EBMUD Service Area Population	1,380,000	1,475,000	1,598,000
San Pablo Population	32,200	33,580	34,950
Specific Plan Area Population	4,000	5,090	6,170
San Pablo population as a percent of EBMUD Service Area	2.3%	2.3%	2.2%
Specific Plan Area population as a percent of EBMUD Service Area	0.3%	0.4 %	0.4 %
Demand			
Total EBMUD Water Demand (mgd)	258	277	281
Adjustment for Conservation (mgd)	(21)	(35)	(35)
Adjustment for Recycled Water (mgd)	(12)	(14)	(14)
EBMUD Planning Demand	225	228	232
San Pablo's Planning Demand ² (mgd)	5.3	5.3	5.4
Specific Plan Area's Planning Demand ² (mgd)	0.7	0.8	0.9

¹EBMUD service areas include both incorporated and unincorporated areas in Alameda and Contra Costa counties.

² San Pablo-specific water demand data were not available from EBMUD. Therefore, San Pablo existing and future water demand was estimated to be proportionate to the city's share of total service area population. E.g. In 2010, San Pablo's population is 2.3 percent of the service area total, so water demand is also estimated to be 2.3 percent of the total demand.

Source: East Bay Municipal Utilities District, *Urban Water Management Plan 2005*; Dyett & Bhatia, 2010.

EBMUD has no problem meeting water demand in a normal, non-drought year. However, in a one-year drought, EBMUD expects a demand-to-supply shortfall of five percent. The expected shortfall becomes greater the longer the drought lasts. The water supply is insufficient to meet customer needs even if aggressive water conservation and recycled programs are put in place in a multi-year drought. During the most recent drought from 2007 to 2009, for example, water levels in EBMUD reservoirs dropped to its lowest levels in a decade. The water agency had to ask for voluntary customer water use reductions in 2007 while EBMUD kept a watchful eye on precipitation and snowpack conditions. In May 2008, EBMUD declared a water shortage emergency and mandated water rationing to protect against a third dry year. The dry spell was only broken in 2010 when heavier than usual rainfall brought along by El Nino replenished the snowpack in the Sierra Nevada mountain ranges.

To improve water supply reliability in future droughts, EBMUD is adopting a multi-prong approach to reduce water demand, increase water storage capacity, and find alternative sources of water supply. Some ongoing programs include:

- **The Freeport Regional Water Project.** In 2002, EDMUD reached an agreement with the City and County of Sacramento to share water from the Sacramento River during drought years. Construction on the Freeport Regional Water Project began in June 2007, and in 2009 EBMUD completed the 19 miles of pipeline that would allow water to be moved from the Sacramento River to EBMUD's system through the Folsom South Canal. The project is expected to be completed by late 2010. Once

completed, the East Bay would be able to acquire up to 100 mgd of water from the Sacramento River during dry years.

- **Seawater Desalination Research.** EBMUD has been working with other Bay Area water agencies to explore ways to add desalinated water to the local water supply. Pilot testing is under way in eastern Contra Costa County.
- **Groundwater Banking Program.** In 2008, EBMUD began constructing a state-of-the-art groundwater injection well that will move some water deep underground into a clean aquifer beneath San Leandro. Once completed, water can be injected when it is available in wet years and banked. Up to one million gallons of water per day can be drawn out as needed from this locally-stored supply.

Water Conservation

Water conservation and recycling measures are critical elements of EBMUD's water management plan. The agency takes a rigorous approach to water conservation, and expects to conserve and recycle about 49 mgd of water per day; equivalent to a 17 percent reduction of the daily demand by 2030. EBMUD promotes water conservation through education and outreach as well as offering water conservation programs that help residential and business customers save money and increase efficiency. Its water conservation programs include free water audits, rebates for high-efficiency toilets and clothes washers, rebates for high-efficiency irrigation equipment upgrades, and grants for drought-tolerant landscaping in public areas. In addition to residential and business customers in San Pablo, EBMUD also works directly with local schools and civic groups to help them reduce water use and recycle.

While the City of San Pablo does not offer financial incentives like EBMUD does, it promotes water conservation through other means, including city regulations requiring new and remodeled homes to install high-efficiency toilets and the use of drought-resistant plants in city parks and gardens. The City also regularly publishes water conservation and recycling information in its newsletters to promote the use of water recycling systems and remind residents of rebate and grant programs available to them from EBMUD.

Wastewater

The West County Wastewater District (WCWD) provides wastewater treatment services to the City of San Pablo. WCWD has a service area of 16.9 square miles which includes the City of San Pablo, all of the northern subdivisions of Richmond, portions of the City of Pinole, communities of El Sobrante, East Richmond Heights, Tara Hills, Rollingwood and Bayview, and portions of the unincorporated County. The wastewater collection system consists of 242 miles of sewer gravity pipelines, 18 pumping stations, 11 miles of force mains, and a wastewater treatment plant located in North Richmond. Here, anaerobically digested sludge is dried in lagoons via evaporation and remaining biosolids are removed and buried in regional landfills.

The treatment plant has a hydraulic capacity of 12.5 mgd and has three flow equalization basins for managing wet weather flows. Between September 2009 and August 2010, the total influent flow for the whole service area (including San Pablo and other cities) was 286.7 million gallons and the annual average influent flow was about 9.4 mgd, as summarized in **Table 3.8-5**.¹² The WCWD does not keep

¹² Data provided by Ken Cook of WCWD on September 28, 2010.

records specific to San Pablo, however, based on the San Pablo's population relative to WCWD's entire service area population, the City's proportionate share of the annual average influent flow was 2.3 mgd.¹³

TABLE 3.8-5 WASTEWATER FLOWS IN WEST COUNTY WASTEWATER DISTRICT

MONTH/YEAR	INFLUENT FLOW	
	AVERAGE (MGD)	TOTAL (MILLION GALLONS)
September 2009	7.0	224.4
October 2009	8.0	260.0
November 2009	8.0	248.0
December 2009	9.0	273.0
January 2010	13.0	403.0
February 2010	11.9	333.3
March 2010	11.0	342.0
April 2010	10.6	318.4
May 2010	9.1	282.0
June 2010	8.5	254.3
July 2010	8.1	250.8
August 2010	8.1	251.0
AVERAGE	9.4	286.7

mgd= million gallons per day

Source: West County Wastewater District, 2010.

The sewer lines in San Pablo are generally 40 to 60 years old, and made of vitrified clay pipe and some ductile iron. Certain zones within the sanitary sewer system experience high infiltration rates (i.e. water flowing into pipe joints) due to sewer line conditions and groundwater levels.¹⁴

According to Paul Winnicki, WCWD's District Engineer, there are no current or anticipated problems with the system. The current infrastructure is sufficient to meet existing demands. However, because infrastructure is designed based on current zoning classifications (which allow lower density than what is anticipated in 2030); larger pipes will be required if new developments generate higher flows than anticipated. The WCWD is constantly updating its facilities and has been upsizing pipelines for peak storm events in San Pablo as recommended in its 2001 Capacity Analysis Study and 2006 flow monitoring efforts. All pipelines deficient for peak design storms will be upsized through WCWD's Capital Improvement Program that uses a five-year planning horizon. Examples of recent and upcoming projects in San Pablo include:

¹³ According to the 2002 WCWD Wastewater Facilities Master Plan Update, the WCWD is projected to serve a population of 120,100 in 2010; according to WCWD's website updated in 2009, the district serves a population of 126,100. (source: <http://www.wc wd.org/general.htm>). The latter estimate is used here to calculate San Pablo's share.

¹⁴ West County Wastewater District Capacity Analysis, May 2001.

- Replacement of 1,295 feet of 10-inch pipe with 18-inch pipeline on Church Street from Ridge Road to San Pablo Avenue (MH 6-1-9 to MH 6-1-1);
- Replacement of 258 feet of 12-inch pipe with 18-inch pipeline along San Pablo Avenue (MH6-4-7 to MH 6-4-3);
- Replacement of 440 feet of 10-inch pipe with 18-inch pipeline through Contra Costa College along Lancaster Drive (MH20-1-1 to MH 13-4-10); and
- Replacement of 311 feet of 15-inch pipe with 18-inch pipeline along Church Lane from San Pablo Avenue (MH 6-11-1 to MH 7-2-5).

WCWD has an industrial pre-treatment program and monitors all industrial discharges. Wastewater receives secondary treatment and is pumped to a dechlorination facility at Point Richmond where it is combined with the City of Richmond's Municipal Sewer District (RMSD) effluent. The combined effluent is discharged in a deep water outfall into San Francisco Bay at Point Richmond. In 2008, approximately 3.5 mgd of the WCWD effluent was recycled by EBMUD for reuse at the Chevron Refinery and 0.7 mgd was recycled for irrigation at the Richmond Country Club Golf Course.¹⁵

Storm Drainage Conveyance

The City of San Pablo Public Works Division is in charge of maintaining the storm water drainage system in the Planning Area.

In San Pablo, storm water runoff is discharged through a combination of natural and man-made drainage structures. Falling rain in the city is first directed to a system of street gutters, underground pipes, culverts, and ditches before it is channeled into storm drains located along San Pablo Avenue, Rumrill Boulevard, Broadway Avenue, and El Portal Drive, as well as San Pablo and Wildcat Creeks. Of these drainage features, the creeks are most prone to flooding because of their shallow beds and high water tables. The City cannot control creek flow or capacity because portions of the creeks are located on private property. To prevent flooding, the City encourages homeowners along the creeks to help keep them clear of obstructions and to purchase flood insurance as a precaution.

The City of San Pablo participates in the Contra Costa Clean Water Program, which implements the National Pollution Discharge Elimination System (NPDES) countywide. The NPDES's purpose is to efficiently utilize available assessment funding to reduce pollution of the storm water and effectively maintain public storm drain facilities through inspection and enforcement activities and industrial outreach.

Solid Waste

Solid waste disposal for the City of San Pablo is managed by the West Contra Costa Integrated Waste Management Authority (WCCIWMA). The WCCIWMA, which had a service population of 203,624 in September 2010, is the regional waste management authority and is mandated by State law to implement provisions of the Integrated Waste Management Act of 1989 for West Contra Costa County.

Solid waste collection and recycling services is provided by Richmond Sanitary Services, an affiliate of Republic Services, Inc. through an agreement with WCCIWMA. Currently, solid waste and recyclables

¹⁵ Telephone and email interview with Paul Winnicki of WCWD on July 14, 2008.

from San Pablo are taken to a transfer station in Richmond, where they are sorted before shipment. Approximately 90 percent of the non-recyclable wastes are brought to the Keller Canyon Landfill at Pittsburg while about 10 percent are brought to the Potrero Hills Landfill in Solano County. The Keller Canyon facility has a maximum capacity of 75 million cubic yards and has about 20 years of additional capacity.¹⁶ The Potrero Hills facility has a maximum capacity of 21 million cubic yards and has an additional eight to ten years of permitted capacity.¹⁷ Permit applications to expand the Potrero Hills facility are pending. If approved, the landfill's capacity would be quadrupled.¹⁸

While landfill capacity is not an issue, the service agreements between the WCCIWMA and Republic Services for solid waste disposal, recycling processing, and composting are due to expire on December 31, 2013. In August 2010, the Authority began strategic planning sessions to determine its plans after 2013.¹⁹

The WCCIWMA currently estimates that it has capacity to accommodate growth over the next 20 to 25 years. A review or study of capacity is required only when the agency estimates that capacity is sufficient for 15 years. For this reason, the agency does not foresee any problems related to meeting the solid waste disposal, diversion, or hazardous waste needs of the population projected by the San Pablo Avenue Specific Plan.

Recycling and Hazardous Wastes

Residential, commercial, industrial and office recycling is available through Richmond Sanitary Services. Working with the collection company, the City has several programs to encourage recycling and reuse in San Pablo. In addition to curbside recycling, the City provides options for recycling additional materials such as household hazardous waste, electronic waste, and green wastes.²⁰

Recyclable waste (blue cart) and green waste (green cart) are collected on alternate weeks while non-recyclable garbage (brown cart) is collected every week from San Pablo homes. There is no door-to-door hazardous waste collection service in San Pablo but residents and non-profits may drop off their household hazardous waste at no cost. A mobile collection service is available for disabled residents and senior citizens by appointment.

Solid Waste Diversion

To reduce waste disposal and promote recycling, the California Integrated Waste Management Act of 1989 (AB 939) promotes an integrated approach to managing waste. The California Public Resources Code Section 41780 (A)(2) requires that cities and counties divert 50 percent of all solid waste produced within their jurisdiction through source reduction, recycling, and composting. As shown in **Table 3.8-6**, WCCIWMA had a residential per capita disposal rate of 3.6 pounds per day (PPD) and an employment

¹⁶ The expected closure date for Keller Canyon Landfill is 31 December, 2030, according to CalRecycle's website.

¹⁷ The expected closure date for Potrero Hills Landfill is 1 January, 2011, according to CalRecycle's website. However, the Potrero Hills EIR (available on the Solano County website) indicates that it has additional capacity beyond this date. In any case, the future expansion of this facility is tied up in litigation because it would expand into a marsh. There is also legal action against Solano County Measure E, an initiative passed by Solano County voters in 1984 to limit the amount of garbage imported to local landfills. County officials say the law is unconstitutional according to the commerce clause of the US Constitution, interfering with interstate commerce.

¹⁸ Interview with Chris Lehon, Executive Director of West Contra Costa County Integrated Waste Management Authority, April 2010; and September 2010.

¹⁹ *Ibid.*

²⁰ Green wastes includes grass clippings, weeds, leaves, wood, and other plant material.

per capita disposal rate of 14.4 PPD in 2009, which met the maximum targets set for that year (5.4 and 22.1 mgd respectively).²¹.

**TABLE 3.8-6 WEST CONTRA COSTA INTEGRATED WASTE MANAGEMENT AUTHORITY
DIVERSION RATES**

Year	<u>Population Disposal (PPD)¹</u>		<u>Employment Disposal (PPD)</u>	
	TARGET	ANNUAL	TARGET	ANNUAL
2007	5.4	4.8	22.1	18.5
2008	5.4	4.4	22.1	16.9
2009	5.4	3.6	22.1	14.4

Note: In 2007, California Department of Resources Recycling and Recovery (CalRecycle) introduced a new system of measuring diversion rates based on a per capita disposal measurement system equivalent to the 50 percent diversion requirement. The previous system is no longer used. The new per capita disposal measurement system is one of several "factors" in determining a jurisdiction's compliance with the intent of AB 939, and allows CalRecycle and jurisdictions to set their primary focus on successful implementation of diversion programs.

¹ PPD = Pound per person per day.

Source: California Department of Resources Recycling and Recovery, 2010.

Electricity, Gas, and Telecommunications

Electricity

Pacific Gas & Electric provides electricity and natural gas to the Planning Area. The city is served by four distribution lines from substations outside San Pablo. The electrical lines in the city are typically overhead, except for a portion of San Pablo Avenue. The overhead line infrastructure is approximately 60 to 70 years old. There is an ongoing maintenance program in the city to replace damaged poles and infrastructure, and the city has a policy requiring all new large subdivisions to underground electric cables.

There is currently spare capacity for service in the City and PG&E does not foresee any issues meeting the gas and electricity needs for the development area. If increased capacity is needed, PG&E can increase demand from regional power plants and natural gas fields or construct new electrical substations in the region, as necessary.

Natural Gas

PG&E provides local natural gas service to the Planning Area. Three natural gas transmission lines feed into the San Pablo station at Rumrill Boulevard and Folsom. An eight-inch distribution main serves the City from this substation. Since most proposed Specific Plan development sites are located in urban infill areas, serving these areas is not expected to be a problem.

Telecommunications

Pacific Bell is the primary provider of residential and commercial telephone service in the City. Pacific Bell also provides or hosts a variety of telecommunication services such as Digital Subscriber Lines (DSL), Internet Service Providers (ISP), web hosting, virtual private networking, and wireless/cellular paging

²¹ Source: <http://www.calrecycle.ca.gov/LGCentral/Tools/MARS/DrmcMain.asp?VW=Disposal>

services. AT&T and Comcast are also internet Service Providers (ISP) in the City. These networks are privately owned and maintained.

Regulatory Setting

Definitions

Emergency Response Time

The National Fire Protection Association (NFPA) defines “response time” as “the travel time that begins when units are en route to the emergency incident and ends when units arrive at the scene.”

ISO Rating System

Insurance Service Office (ISO) is a private company that inspects and ranks fire departments across the country to help insurance companies determine premiums for homeowners in the areas they serve. The ISO collects and analyzes firefighting capability information on nearly 46,000 areas and rates departments on fire suppression ability, water availability and communications. ISO's methodology, known as the Fire Suppression Rating Schedule, assigns a class rating on a scale of 1 to 10, with Class 1 given to exemplary fire departments and Class 10 to departments that do not meet minimum criteria.

Community Center

Community centers consist of buildings, other than City Hall, designed for community meetings, indoor recreational and instructional programs, and social activities. Included in the definition of community centers are such specialized facilities as senior centers, youth centers, and gymnasiums.

Federal, State, and Local Regulations

Fire

Fire Code

The California Fire Code (Title 24, Part 9 of the California Code of Regulations) establishes regulations to safeguard against hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises. The provisions of the Fire Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure throughout the State of California. The Fire Code includes regulations regarding fire-resistance-rated construction, fire protection systems such as alarm and sprinkler systems, fire services features such as fire apparatus access roads, means of egress, fire safety during construction and demolition, and wildland-urban interface areas.

Contra Costa County Fire Protection District

The Contra Costa County Fire Protection District (CCCYPD) provides fire and life safety services in Contra Costa County. The District follows the regulations and standards established in the California Fire Code to provide acceptable levels of fire protection in its service area which includes the City of San Pablo.

Police

Law enforcement services are provided by the City of San Pablo Police Department along with additional law enforcement services provided by the California Highway Patrol.

Emergency Response and Disaster Preparedness

Multi Jurisdictional Local Hazards Mitigation Plan

In San Pablo, hazard mitigation planning is carried out collectively at the regional level owing to the proximity of different cities and their joint exposure to earthquakes and other regional hazards. ABAG is the lead agency on the multi-jurisdictional Local Hazard Mitigation Plan (MJ-LHMP) for the San Francisco Bay Area. The most recent MJ-LHMP was adopted in 2005. A new plan is currently being updated and is expected to be reviewed and adopted by 2011.

The City's Public Works Division is responsible for carrying out policies in the MJ-LHMP. The MJ-LHMP focuses on the assessment of identified risks and implementation of loss reduction measures to ensure critical City services and facilities survive a disaster.

City of San Pablo Emergency Operations Manual

The California Emergency Services Act (Government Code Section 8550-8668) requires each city to prepare and maintain an Emergency Plan for natural, manmade, or war-caused emergencies that result in conditions of disaster or in extreme peril to life. The San Pablo Emergency Operations Manual was adopted in 1999. The Manual outlines the City's response to different types of disaster situations including seismic hazards, extreme weather conditions, and flooding. It establishes the chain of command, operational areas and responsibilities for different City departments as well as individuals, and defines the City's response in four response and recovery phases: increased readiness, initial response operations, extended response operations, and recovery operations. The Manual is meant to work in conjunction with other disaster mitigation plans of the region, such as the Association of Bay Area Governments (ABAG) Local Hazard Mitigation Plan (see below) and the State Emergency Plan. According to the San Pablo Police Department, the Emergency Operations Manual is currently being updated and is expected to be adopted at the end of 2010.²²

Schools and Library

The West Contra Costa Unified School District is the provider of K-12 public schools. The District is overseen the Contra Costa County Department of Education

The Contra Costa Library System (CCLS) provides the library service for the City of San Pablo.

Parks

The 1975 Quimby Act (California Government Code section 66477) authorized cities and counties to pass ordinances requiring that developers set aside land, donate conservation easements, or pay fees for park improvements. The Act states that the dedication requirement of parkland can be a minimum of 3 acres per thousand residents or more, up to 5 acres per thousand residents if the existing ratio is greater than the minimum standard. Revenues generated through in lieu fees collected and the Quimby Act cannot be used for the operation and maintenance of park facilities. In 1982, the act was substantially amended. The amendments further defined acceptable uses of or restrictions on Quimby funds, provided acreage/population standards and formulas for determining the exaction, and indicated that the exactions must be closely tied (nexus) to a project's impacts as identified through studies required by the California Environmental Quality Act (CEQA).

²² Interview with Andrea Barte, Disaster Preparedness Coordinator of the San Pablo Police Department. January 2010.

The City's Municipal Code Title 12, Chapters 12.16 and 12.20 govern the type of uses and activities permitted or prohibited in City parks and recreation facilities, and empower the Public Works Director to decide on and direct all selections, trimming, pruning, care, plantings and removals of trees and other vegetation in the public realm.

Water

Federal Clean Water Act

The Clean Water Act is the principal federal law that addresses water quality. The primary objectives include the regulation of pollutant discharges to surface water, financial assistance for public wastewater treatment systems, technology development, and non-point source pollution prevention programs. The Clean Water Act also requires that states adopt water quality standards to protect public health and welfare and enhance the quality of water.

Safe Drinking Water Act

The Safe Drinking Water Act (SDWA), administered by the U.S. EPA in coordination with the states, is the main federal law that ensures the quality of drinking water. Under the SDWA, EPA sets standards for drinking water quality and oversees the states, localities, and water suppliers who implement those standards. The Department of Public Health administers the regulations contained in the Act in the State of California.

California Water Code

California Water Code (Porter-Cologne Act) establishes a program to protect water quality and beneficial uses of State water resources and includes groundwater and surface water. The State Water Resources Control Board and the San Francisco Bay Regional Water Quality Control Board are the principal State agencies responsible for control of water quality.

California Department of Public Health

A major component of the State Department of Public Health, Division of Drinking Water and Environmental Management, is the Drinking Water Program which regulates public water systems. Regulatory responsibilities include the enforcement of the federal and State Safe Drinking Water Acts, the regulatory oversight of public water systems, issuance of water treatment permits, and certification of drinking water treatment and distribution operators. State regulations for potable water are contained primarily within the Food and Agricultural Code, the Government Code, the Health and Safety Code, the Public Resources Code, and the Water Code. Regulations are from Title 17 and Title 22 of the California Code of Regulations.

The regulations governing recycled water are found in a combination of sources including the Health and Safety Code, Water Code, and Titles 22 and 17 of the California Code of Regulations. Issues related to treatment and distribution of recycled water are generally under the influence of the RWQCB, while issues related to use and quality of recycled water are the responsibility of the California Department of Public Health.

California Environmental Quality Act, SB 610, and SB 221

Section 15083.5 of the CEQA Guidelines requires the City to request certain information from the public water supply system(s) serving the planning area. This requested information includes: an indication of whether the projected water demand associated with the proposed general plan was included

in its last urban water management plan; and, an assessment for any major development projects “whether its total projected water supplies available during normal, single-dry, and multiple-dry water years as included in the 20-year projection contained in its urban water management plan will meet the projected water demand associated with the proposed project, in addition to the system’s existing and planned future uses.”

Senate Bill 610 became effective January 1, 2002, and requires cities in connection with CEQA review to consider water supply assessments to determine whether projected water supplies can meet the project’s anticipated water demand. SB 610 also requires additional factors to be considered in the preparation of urban water management plans and water supply assessments.

SB 610 and CEQA Guidelines Section 15083.5 identifies those projects generally as a residential development of more than 500 dwelling units; a commercial or industrial business employing more than 1,000 persons; or any other project that would have a water demand at least equal to a 500 dwelling unit project. SB 221 contains similar provisions as SB 610 but is intended for use with large residential subdivisions and is usually required at the time of tentative tract map approval.

San Francisco Bay Regional Water Quality Control Board

The San Francisco Bay Regional Water Quality Control Board (RWQCB) governs many of the regulations associated with utilities, specifically potable water, sanitary sewers, storm drains, and recycled water.

RWQCB has the authority to enforce water quality regulations found in the Clean Water Act based on the Porter-Cologne Water Quality Control Act.

East Bay Municipal Utility District

EBMUD is the regional entity formed to supply water to Alameda County and parts of Contra Costa County. The district provides drinking water to over 1.3 million customers and implements programs to conserve water and increase water supply. The district also manages several reservoirs in the two county region.

EBMUD, Urban Water Management Plan

EBMUD’s 2005 Urban Water Management Plan (UWMP) documents the district’s planning efforts to ensure adequate water supplies to meet existing and future demands for water. The UWMP presents forecasted supplies and demands up to the year 2030 and describes the District’s recycled water and conservation programs. The UWMP also describes what happens in a water shortage and discusses drought management programs.

The City of San Pablo Municipal Code Title 8, Chapter 8.38 contains standards on Approved Water Supply Systems.

EBMUD, Dam Safety Program

EBMUD has a comprehensive Dam Safety Program to prevent loss of life, personal injury and property damage from the failure of dams. The Dam Safety Program guides the City of San Pablo and other jurisdictions in ensuring the long-term safety of this dam.

Wastewater

The RWQCB administers regulations related to wastewater discharges under the Federal Water Pollution Control Act of 1972, as amended, more commonly known as the Clean Water Act. Wastewater discharges are guided by NPDES (National Pollutant Discharge Elimination System) permits granted by the RWQCB.

The City of San Pablo does not establish standards related to the sewer system, instead, it requires all existing developments comply with standards established by the West County Wastewater District (WCWD), and new developments receive certification from WCWD as to the adequacy of their sanitary sewer systems.

Storm Drains

The City's storm drain outfalls operate under NPDES permits granted by the RWQCB. The San Pablo Municipal Code contains regulations related to stormwater management in Title 8, Chapter 8.40. The Subdivision Ordinance contains the specific flood water and drainage requirements for development projects.

Flood Damage Prevention Ordinance

The City adopted a Flood Damage Prevention Ordinance in 1987 in compliance with requirements of the National Flood Insurance Program (NFIP) and FEMA for development in flood-plain areas. The stated purpose of the Ordinance is to promote public health, safety, and general welfare, and to minimize private losses due to flood conditions in specific areas.

City Municipal Code Title 15 outlines the controls which the City imposes on development on areas of special flood hazards as identified by FEMA maps, such as creek setback requirements and minimum floor elevations above the base flood elevation. The intent of the regulations is to avoid exposing developments to flood hazards and reduce the need for future flood control protective work. These codes are amended as needed to maintain compliance with State and federal regulations.

Solid Waste

Resource Conservation and Recovery Act (Amended 1986)

The Resource Conservation and Recovery Act is a federal act regulating the potential health and environmental problems associated with solid waste hazards and non-hazardous wastes. Specific regulations addressing solid waste issues are contained in Title 40, Code of Federal Regulations.

California Integrated Waste Management Board

The California Integrated Waste Management Board (CalRecycle) establishes the statewide regulations for solid waste collection and disposal, including State-mandated diversion goals. Regulations authored by CalRecycle (Title 14) were integrated with related regulations adopted by the State Water Resources Control Board pertaining to landfills (Title 23, Chapter 15) to form Title 27 of the California Code of Regulations.

The California Integrated Waste Management Act

The California Integrated Waste Management Act of 1989, or AB 939, mandated that all jurisdictions in the State divert at least 50 percent by 2000 through source reduction, composting, and recycling activities. The Act gives the highest priority to source reduction and defines it as the act of reducing the amount of solid waste generated in the first place. Recycling and composting are given the next highest priority. The Act specifies that all other waste that is not diverted be properly and safely disposed of in a landfill or through incineration. The California Integrated Waste Management Act also mandates that each jurisdiction adopt a Source Reduction and Recycling Element (SRRE) which specifies how the community will meet the 50 percent goals set forth in the Act. Each community is also required to take measures to reduce solid waste generation and to provide for the safe disposal of special and hazardous wastes.

The California Solid Waste Reuse and Recycling Access Act

Subsequent to the California Integrated Waste Management Act, additional legislation was passed to assist local jurisdictions in accomplishing the goals of AB939. The California Solid Waste Reuse and Recycling Access Act of 1991 directs the California Integrated Waste Management Board (CIWMB) to draft a model ordinance (which Contra Costa County has adopted) relating to adequate areas for collecting and loading recyclable materials in development projects. The model ordinance is used by the County as the basis for imposing recycling conditions on new development projects and on existing projects that add 30 percent or more to their existing floor area. Beginning in 1994, the model ordinance requires that any new development project for which an application is submitted include adequate, accessible and convenient areas for collecting and loading recyclable materials.

The Solid Waste Disposal Measurement System Act

The Solid Waste Disposal Measurement System Act of 2008, SB 1016, amended the California Integrated Waste Management Act procedures for measuring and reporting diversion requirements. Starting in 2009, jurisdictions are required to calculate the 50 percent diversion requirement in a per capita disposal rate equivalent. CalRecycle will determine the per capita disposal rate equivalent for each jurisdiction.

CalRecycle delegates local permitting, enforcement, and inspection responsibilities to Local Enforcement Agencies (LEA). The San Pablo Municipal Code contains regulations related to solid waste and recycling in Title 17, Chapter 30 and Title 15, Chapter 60.

Gas and Electricity

California Public Utilities Commission

The California Public Utilities Commission (CPUC) regulates Investor-Owned Utilities (IOUs) including those that offer electric, natural gas, steam, and petroleum service to consumers. The CPUC regulates both electric and natural gas rates and services provided by these utilities including in-state transportation over the utilities' transmission and distribution pipeline systems, storage, procurement, metering and billing. Natural gas regulations are found in General Orders 58, 94, 96, and 112, while electrical distribution regulations are found in General Orders 95, 128, 131, 165, and 166.

IMPACT ANALYSIS

Significance Criteria

Implementation of the proposed Project would have a potentially significant adverse impact if it would:

- Criterion 1:** Result in new development for which the provision of increased staffing, facilities and equipment necessary to maintain acceptable levels of fire and police service could cause adverse environmental effects.
- Criterion 2:** Interfere with the provision of existing or planned school services or allow new development for which the provision of appropriate increases in school staffing or facilities could cause adverse environmental effects.
- Criterion 3:** Exceed waste water treatment requirements of the applicable Regional Water Quality Control Board.
- Criterion 4:** Require or result in the construction of water facilities, or expansion of existing facilities, the construction of which could cause adverse environmental effects.
- Criterion 5:** Require or result in the construction of new storm water drainage facilities, or expansion of existing facilities, the construction of which could cause adverse environmental effects.
- Criterion 6:** Require or result in new or expanded solid waste disposal systems the construction of which could cause adverse environmental effects.
- Criterion 7:** Conflict with existing city standards for parks provision.

Methodology and Assumptions

This EIR addresses impacts to City infrastructure affected by the proposed Specific Plan at the program level. Subsequent CEQA review at the project level may be required to determine whether significant environmental effects would result from the construction of water distribution lines, wastewater collection system components, storm drainage conveyance pipes, and any onsite storage or pumping facilities on development sites. Project-level review will occur when proposed development plans are prepared.

Population and Housing

Existing population estimates are based on those reported by ABAG Projections. Existing housing unit estimates are based on yearly estimates by Department of Finance housing tables.

Buildout household estimates are based on a household size of 3.1 persons per unit. Secondary units are assumed to have a household size of 1.5 persons per unit for all years.

Fire Protection Services

The need for additional fire stations, staffing and equipment was evaluated on a citywide basis, based on CCCFPD's goal of responding to emergency calls within 10 minutes. GIS network analysis was used to

determine the approximate time it takes to reach all corners of the city from existing fire stations (including number #70 located in San Pablo and number #62 and #68 in Richmond) assuming fire engines were travelling on arterial roads. The analysis showed that the station in San Pablo and two nearby stations could meet CCCFPD's response time standard.

Police Services

The need for additional police services was evaluated on a citywide basis, based on the City Police Department maintaining the current service ratio of having 1.6 officers per 1,000 residents. Using the estimated population increase from the residential development in the city, the number of new officers needed at buildout was determined.

Schools

The impact on local schools due to changing General Plan Land Use designations was evaluated on a citywide basis, based on West Contra Costa County Unified School District's student generation rates. WCCCUSD uses the following table of student generation rates to plan needed capacity improvements:

TABLE 3.8-7 STUDENT GENERATION RATES

TYPE	SINGLE FAMILY	MULTIFAMILY
Elementary School	0.21	0.18
Middle School	0.06	0.08
High School	0.15	0.09

Source: West Contra Costa Unified School District, 2008.

Parks

The adequacy of parks and recreation facilities was evaluated based on the City's adopted standard for park requirements which is three acres of parkland per 1,000 residents.

Water

The projected water demand is estimated using information obtained from EBMUD's 2005 Urban Water Management Plan. The Planning Area's share of the total was calculated based on per capita planning demand within EBMUD's service area for 2030.

Wastewater

The projected wastewater flow was estimated using information obtained from WCWD. The Planning Area's share of the total was calculated based on proportion of its population to WCWD service area population.

Impact Summary

PROPOSED PROJECT IMPACT	MITIGATION MEASURE	SIGNIFICANCE AFTER MITIGATION

Implementation of the proposed San Pablo Avenue Specific Plan will require additional police and fire protection services that exceed current staffing and facilities.	None required	Less than significant
Implementation of the proposed San Pablo Avenue Specific Plan will increase enrollment, but this will not exceed the capacity of existing schools.	None required	Less than significant
Implementation of the proposed San Pablo Avenue Specific Plan will increase the ratio of parkland from the existing ratio but still fall short of the City's goal of 3 acres per thousand residents.	None required	Less than significant
Implementation of the proposed San Pablo Avenue Specific Plan will result in the increase in use of existing parks, such that substantial physical deterioration of the facility could occur or be accelerated.	None required	Less than significant
Implementation of the proposed San Pablo Avenue Specific Plan will increase the demand for public water which may exceed supply	None required	Less than significant
Implementation of the proposed San Pablo Avenue Specific Plan will generate additional waste water and require additional infrastructure to meet growth demands.	None required	Less than significant
Implementation of the proposed San Pablo Avenue Specific Plan may generate additional amounts of solid waste that may exceed future annual diversion targets.	None required	Less than significant

Impacts and Mitigation Measures

Impact

3.8-1 Implementation of the proposed San Pablo Avenue Specific Plan will require additional police and fire protection services that exceed current staffing and facilities. (*Less than Significant*)

Current police and fire protection is designed to meet the needs of the existing population and employment base in San Pablo. Implementation of the proposed Specific Plan would generate approximately 2,170 new residents in the Specific Plan area. This increased population would place a greater demand for police assistance and emergency fire response.

To ensure new development does not adversely affect existing police services, the San Pablo Police Department will need to hire additional police officers in order to maintain the current ratio of 1.6 sworn officers to 1,000 residents. To maintain the existing ratio, it would be necessary to hire 3 new officers. **Table 3.8-8** shows the additional police officers needed at buildout.

TABLE 3.8-8 ADDITIONAL POLICE OFFICERS NEEDED FOR BUILDOUT

	SAN PABLO'S POPULATION ¹	SPECIFIC PLAN AREA POPULATION ¹	OFFICERS (CITYWIDE)	RATIO
Existing Conditions	32,200	4,000	53	1.6
Buildout	34,950	6,170	56	1.6
Change	2,750	2,170	3	-

¹San Pablo's population includes Specific Plan area population.

Source: Dyett & Bhatia, 2010.

According to the Department's spokesperson, one of the Department's most pressing needs is space, as the size of the Police building and its parking lot are insufficient to meet future growth. To maintain current service levels and provide adequate police protection, the Department's facility, equipment and budget would need to grow proportionately with additional personnel. The proposed Specific Plan addresses this concern with policies that ensure building design and site planning adequately address public safety considerations. This is in addition to 2030 General Plan policies that ensure that police manpower and facilities will be able to meet future population needs.

Currently, 100 percent of San Pablo's residents are located within 1.5 mile of a CCCFD Fire Station. Since the City is not growing 'outwards' and all development sites are located in urban infill areas, buildout will not affect the time CCCFD needs to reach a fire.

Furthermore, all city projects would be subject to Fire and Building Code requirements and other applicable codes which are designed to minimize risks of fire hazards. All projects shall also comply with CCCFPD's Access and Water Supply Requirements.

Policies included in the 2030 General Plan and the proposed Specific Plan, shown below, will help reduce this impact to a less than significant level.

Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

SN-I-24 Assess the manpower, training, facility and equipment needs of the Police Department periodically to ensure they meet current and future community needs.

The City will ensure the staffing ratios and response times meet national standards, and hire additional police officers, support training programs, and retrofit police-related facilities and purchase equipment, as needed.

SN-I-26 Explore the feasibility of developing a small police station at Rumrill Boulevard and Market Avenue and/or expansion of the existing facility.

SN-I-27 Continue to share information and develop joint law enforcement efforts with adjacent jurisdictions and other public safety agencies.

SN-I-16 Continue to work with the County Fire Department to make San Pablo more resilient to fire hazards.

The City's Planning Division will work with the County Fire Department to plan for, maintain, and expand local fire service activities. The City's Building Division will consult with the Fire Department on new construction plan checking, building inspections, weed abatement and hazard mitigation activities, and public information resources. The City's Public Works and Planning Division will work with Fire Department to review hydrant locations, landscaping and other fire safety criteria. The City's Police Department will work with the Fire Department to distribute fire safety information and coordinate public safety education in schools.

- SN-I-18 Review the Fire District's fire hazard standards and annual report to determine if there should be a modification or additional types of services based on local population needs.

Proposed Specific Plan Policies that Reduce the Impact

- 5-G-2 *Maintain a safe and livable environment in the Planning Area by ensuring that building design and site planning adequately address public safety.*
- 5-I-8 Coordinate with the San Pablo Police Department on project site design to increase public safety.
- 5-I-9 Work with the Contra Costa County Fire Protection District to ensure that new development projects in the Planning Area have adequate emergency access.
- 5-I-10 Ensure that fire flow capacity is adequate for new development and that necessary improvements, such as fire access roadways and fire hydrants, are installed and in service prior to building construction.

Mitigation Measures

None required.

Impact

3.8-2 Implementation of the proposed San Pablo Avenue Specific Plan will increase enrollment, but this will not exceed the capacity of existing schools. (*Less than Significant*)

Implementation of the proposed Specific Plan would generate approximately 2,170 new residents in the Specific Plan area. Using student generation rates provided by the West Contra Costa Unified School District, these new households will add approximately 130 elementary school students, 60 middle school students, and 60 high school students. As shown in **Table 3.8-9**, by the year 2030, population growth is expected to bring the total number of students to 3,550 elementary school students, 1,026 middle school students, and 2,093 high school students in San Pablo. This increase will not exceed the capacity of the schools in San Pablo. Therefore development under the proposed Specific Plan will not require the building of new schools and its impact to existing schools is less than significant. This issue is evaluated no further in this EIR.

TABLE 3.8-9 BUILDOUT STUDENT POPULATION AND SCHOOL DEMAND

TYPE	CURRENT STUDENTS	ADDITIONAL STUDENTS AT SPECIFIC PLAN BUILDOUT ¹	ADDITIONAL STUDENTS AT GENERAL PLAN BUILDOUT ¹	TOTAL STUDENTS PROJECTED AT BUILDOUT (2030)	CURRENT CAPACITY	PERCENT REMAINING CAPACITY
Elementary School (K-6)	3,375	130	175	3,550	4,251	16%
Middle School (7-8)	951	60	75	1,026	1,141	10%
High School (9-12)	2,000	60	93	2,093	2,168	3%
Total	6,326	250	344	6,670	7,560	12%

¹Projected student population for the Specific Plan is included in the “Additional Students at General Plan Buildout.”

Source: West Contra Costa Unified School District, 2010; Dyett & Bhatia, 2010.

Mitigation Measures

None required.

Impact

3.8-3 Implementation of the proposed San Pablo Avenue Specific Plan would increase the ratio of parkland from the existing ratio but still fall short of the City’s goal of 3 acres per thousand residents. (*Less than Significant*)

The standard for parkland dedication as established in the Municipal Code (Title 16, Chapter 16.20) is 3.0 acres per thousand residents. Currently, the city has a total of 22.0 acres of parkland, not inclusive of school fields made available to city residents during non-school days under a joint-use agreement with the school district. Implementation of the 2030 General Plan would potentially add 24.4 acres of parkland to the city (**Table 3.8-10**). Of that amount, 4.2 acres are proposed in the Specific Plan area.

Assuming all proposed parks are built, the future parkland in San Pablo would be 46.5 acres. Of that amount, 9.8 acres are located in the Specific Plan area. The parkland per thousand residents is 1.3 citywide and 1.6 for just the Specific Plan area. Although both still fall short of the City’s goal of 3 acres per thousand residents, they represent an improvement over the existing ratio of 0.7 acres per thousand residents.

TABLE 3.8-10 SUMMARY OF PROPOSED PARKS IN THE PLANNING AREA

TYPE	SAN PABLO – CITYWIDE (ACRES)	SPECIFIC PLAN PLANNING AREA ¹ (ACRES)
Existing Parks	22.0	5.6
Proposed Parks	24.4	4.2
Total Parkland at Buildout	46.5	9.8
Park Ratio (Acres per 1,000 residents)	1.3	1.6
¹ Existing and future parkland in the Specific Plan Planning Area is included in the "San Pablo Citywide" column.		

Source: Dyett & Bhatia, 2010.

Besides proposing future parks on vacant and underutilized land, the Specific Plan includes a number of policies that would improve park accessibility and encourage provision of park land by developers. These policies are in addition to 2030 General Plan policies that seek to provide an expanded and diversified park system for the entire community. Implementation of these policies, shown below, would help reduce this impact to a less than significant level.

Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

Policies PCSU-G-8, SN-G-5, SN-I-22 and SN-I-23 listed under Impact 3.10-1 would help reduce this impact to a level that is less than significant.

Proposed Specific Plan Policies that Reduce the Impact

- 2-I-8 Require that redevelopment of the former Yard Birds site (south side of San Pablo Avenue just north of City Hall) provide a minimum of 0.35 acres of park or open space adjacent to the creek.

- 6-G-1 *Provide a diverse range of recreational opportunities within a ten-minute walk of all residents in the Planning Area.*

- 6-G-2 *Connect to local and regional bikeways and trail networks to the greatest extent possible.*

- 6-I-1 Create parks and recreation facilities in accordance with the Specific Plan Land Use Diagram (Figure 2-4) as development occurs and park land is dedicated.

- 6-I-2 Encourage provision of park land as part of new development rather than payment of impact or in-lieu fees.
 - If a greater amount of land is required by the Municipal Code than can be accommodated within the Planning Area, in-lieu fees may be used to enhance other City parks with greater recreational amenities. Parks created or improved with in-lieu fees should be located as close to the Planning Area as possible.

- 6-I-3 Size and distribute parks in order to maximize accessibility and match the needs identified for both the Planning Area and the city as a whole. In particular, strive to create multiple smaller parks rather than a single large park, placing them within walking distance of housing and along major bikeways and trails where possible, and providing street visibility and access on several sides.

- 6-I-6 Develop a program of community activities to activate park spaces and establish parks as community gathering spaces and activity centers.

- 8-I-8 Require new residential projects within the Specific Plan Planning Area, and other potential projects in the area which may also be categorized as sensitive receptors (such as nursing home facilities, retirement living facilities, school or daycare facilities), to be located an adequate distance from existing and potential sources of TACs and odors, in accordance with the BAAQMD's Air Quality and Land Use Handbook (2005) recommendations, or the latest resource the air district has available. Existing stationary TAC sources in the Planning Area are mapped in Figure 8-1 of the Specific Plan; however, project proponents are expected to check BAAQMD databases for the latest data on stationary TAC sources.

- 8-I-9 Require proponents of projects within 100 feet of existing hazardous materials case sites or TAC sources (as mapped on Figure 8-1 of the Specific Plan) to investigate use compatibility at the location in question (some kinds of uses might be at lower risk than others), as well as potential feasible design-related risk mitigation measures. Project proponents must provide evidence to the City of consultation with the BAAQMD and the RWQCB in making refinements to project designs to reduce applicable hazardous materials and/or toxic air contaminant risk.

Mitigation Measures

None required.

Impact

3.8-4 Implementation of the proposed San Pablo Avenue Specific Plan will result in the increase in use of existing parks, such that substantial physical deterioration of the facility could occur or be accelerated. (*Less than Significant*)

The San Pablo Avenue Specific Plan calls for the intensification of residential as well as commercial uses along the San Pablo Avenue corridor. This will result in an increase in local population which will place a greater demand on parks closest to the Specific Plan area, such as Kennedy Plaza and Wanlass Park; accelerating the physical deterioration of park facilities.

To mitigate the impacts from urban density increase, the proposed Specific Plan includes policies that maximize accessibility to parks in the Planning Area. These policies, in conjunction with San Pablo 2030 General Plan policies that promote facility maintenance and community policing, would help reduce the impact to a less than significant level.

Besides addressing issues related to facility maintenance, the General Plan proposes seven new parks totaling 24.4 acres and preserves an additional 10.8 acres of open space. This would provide residents

with more choices. Bicycle and other circulation improvements will make parks and open space located close to the city boundary more accessible to people living in the Specific Plan area corridor.

Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

PSCU-I-2 Adopt a Parks and Recreation Master Plan.

The Master Plan should include the following components:

- An assessment of existing and future parks and recreational needs including neighborhood parks and facilities;
- Sustainable construction and park maintenance strategies;
- Development of an action plan to prioritize the City's needs, identify preferred sites for new facilities, identify staffing needs, and present a plan for acquisition and improvement of future facilities.

PSCU-I-3 Develop new park and recreation facilities and continue to upgrade existing ones with universal accessibility, durability, and low maintenance in mind.

PSCU-I-9 Involve citizens, especially youths, in maintaining park areas through participating in park watches, citizen-based graffiti watch, and clean up and repair.

HEA-I-2 Improve signage directing residents and visitors to public parks and recreational facilities from all parts of the community. Integrate parks signage with bikeway and pedestrian-oriented signage system throughout San Pablo.

HEA-I-5 Link park facility improvement priorities to a ranking system keyed to public health and recreational goals.

PSCU-I-1, PSCU-I-4, PSCU-I-5, PSCU-I-6, PSCU-I-8, and HEA-I-6 mentioned under **Impact 3.8-3** would also help reduce this impact to a level that is less than significant.

Proposed Specific Plan Policies that Reduce the Impact

6-I-4 Ensure that parks and public spaces in the Planning Area offer a diverse range of amenities and activities, such as: picnic areas; places to walk dogs; children's play areas; sports fields; urban plazas with landscaping, paving, benches, and trees; a community center with City recreation programs and classes; and staging areas along trail networks where people can access bike and pedestrian trails.

6-G-1, 6-G-2, and 6-I-3 mentioned under **Impact 3.8-3** would also help reduce this impact to a level that is less than significant.

Mitigation Measures

None required.

Impact

3.8-5 Implementation of the proposed San Pablo Avenue Specific Plan will increase the demand for public water which may exceed supply. (*Less than Significant*)

According to data from EBMUD, the total average water production for EBMUD's service area was 181 million gallons per day (mgd) in 2009. The Planning Area's share of the total was estimated to be 0.5 mgd.

At buildout, the Planning Area's demand would rise to 0.9 mgd, while the citywide demand would increase to 5.1 mgd. **Table 3.8-11** compares existing and future water demands.

TABLE 3.8-11 ESTIMATED WATER DEMAND

	SPECIFIC PLAN AREA POPULATION	ESTIMATED SPECIFIC PLAN AREA WATER DEMAND (MGD)	PERCENT INCREASE FROM EXISTING DEMAND
Existing Conditions	4,000	0.5	-
Buildout	6,170	0.9	71%

1 mgd = million gallons per day

Source: Dyett & Bhatia, 2010; East Bay Municipal Utility District, Water Annual Report, 2009; East Bay Municipal Utility District, Urban Water Management Plan, 2005.

Since EBMUD uses ABAG's "Projections 2005" to plan for future water demand and infrastructure needs²³, and since the 2030 General Plan buildout population is only marginally larger than ABAG's projection²⁴—the water agency does not expect difficulty meeting projected growth under the General Plan (which includes population proposed in the Specific Plan) in a non-drought year. However, because EBMUD's water supply is dependent on precipitation and snowpack conditions in the western Sierra ridges, the agency's ability to meet customer demand will be chiefly dependent upon future weather conditions. According to EBMUD, the water agency expects no problem in meeting water demand in a normal, non-drought year; but expects a demand-to-supply shortfall of five percent in a drought year and larger shortfalls for multi-drought years.

To reduce water demand, the proposed Specific Plan includes policies that promote water conservation, such as the installation of water meters in new residential and commercial development and the use of drought-resistant plant palettes in the design of new streetscapes. These policies are in addition to those established in the General Plan designed to reduce water use, as shown below.

Taken together, these policies would reduce the impact from increasing water demand to a level that is less than significant.

²³ EBMUD, 2005.

²⁴ ABAG releases projections for Bay Area cities every two years. Its Projections 2005 (released in 2005) projected a population of 33,300 for San Pablo in 2030. This data was used as the basis for EBMUD's Urban Water Management Plan projections. Since then, ABAG has revised its projections in its latest paper (Projections 2009) to 36,700 for 2030. Citywide population under the proposed Project is anticipated to be around 35,000; however, recent economic conditions suggest that while the General Plan and proposed Specific Plan could accommodate this growth by 2030, actual buildout of the Specific Plan make take longer.

Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

PSCU-G-6 *Support the efficient use and conservation of water.*

PSCU-I-23 Coordinate with East Bay Municipal Utilities District (EBMUD) to provide an adequate and clean water supply.

The City will work with EBMUD to update and support compliance with the District's Water Supply Management Program.

PSCU-I-24 Establish water saving and conservation standards for new development. Standards may include, but are not limited to, the following:

- Require new residential developments to install low-flush toilets and water saving shower heads;
- Require new commercial, retail, and industrial developments to install low-flush toilets and auto shut-off faucets in public bathrooms; and
- Require the installation of water meters on all new multifamily residential units, mobile homes, and common interest developments, whether owner-occupied or rented, as well as on existing multifamily units at the time of sale, or at the time of condominium conversion as a part of the subdivision mapping process.

The City will work with property owners to increase awareness of both the environmental and the economic advantages of sub-metering. Properly done, sub-metering of multifamily buildings can cut apartment resident demand by 15 percent.

PSCU-I-25 Reduce water use in municipal buildings and City operations.

The City will develop a schedule and budget for the retrofit of existing municipal buildings with water conservation features, such as auto shut-off faucets and water saving irrigation systems.

PSCU-I-26 Adopt a Water Conservation Ordinance to conserve water and reduce water waste in San Pablo.

The Water Conservation Ordinance will establish restrictions on water uses such as lawn and landscape watering and the filling of fountains and swimming pools, as well as penalties for violations. It also will establish consumption reduction measures to be adopted when State or countywide water rationing is in effect.

Landscape water conservation standards will apply to new development of more than 10,000 square feet. This ordinance also will:

- Require commercial and public right-of-way projects to submit planting plans, irrigation plans, irrigation schedules and water use estimates for City approval prior to issuance of building permits; and

- Require industrial projects to submit plans for water recycling and explain how water use will meet requirements of the National Pollutant Discharge Elimination System program during the plan review process. They are also required to submit irrigation plans for proposed landscaping.

PSCU-I-27 Promote water conservation through public education, including but not limited to the following:

- Encouraging educators to include water conservation in their curriculums;
- Promoting the use of drought resistant plants and turf in yards and gardens;
- Highlighting the availability of EBMUD water conservation programs to residents, including the free Residential Water Survey Program, Residential Landscape Rebate Program, Low-flush Toilet Replacement Program, High Efficiency Residential Clothes Washer Rebate Program and other programs; and
- Providing tips to households and businesses on water conservation.

The City will use its newsletter and website to promote water conservation, and may solicit assistance from EBMUD, environmental groups, and/or concerned citizens to provide education materials or staff time to assist in public outreach efforts.

PSCU-I-28 Consult with EBMUD about starting a recycled water program for San Pablo to irrigate parks, recreational facilities, and landscaping.

PSCU-I-29 Provide educational materials to support the development of safe and effective on-site gray water systems for local homes and businesses, consistent with State codes.

PSCU-I-30 Provide educational materials to support the development of inexpensive and effective rainwater harvesting systems for local homes and businesses.

The following policies and programs are from the Housing Element:

Program H-4.1.6: Promote water conservation in San Pablo homes by:

- Requiring all new and remodeled housing units to install high efficiency toilets;
- Offering water efficiency surveys by trained staff that will make recommendations tailored to household needs;
- Promoting the use of drought-resistant plants in gardens, sub-surface lawn irrigation systems; and
- Promoting the use of gray-water (water recycling) systems and rainwater catchment systems, consistent with the Building Code.

Proposed Specific Plan Policies that Reduce the Impact

5-G-1 *Continue the successful provision, maintenance and operation of infrastructure and public utilities to maintain the quality of life and sustainability of the San Pablo Avenue corridor.*

- 5-I-1 Maintain successful cooperation with independent agencies to continue adequate utility service throughout the San Pablo Avenue Specific Plan Planning Area.
- 5-I-2 Promote efficient use and conservation of water in the design of new residential and commercial development. This includes the installation of water meters and low-flow showerheads, faucets and toilets.
- 5-I-3 Promote efficient use of and conservation of water in the design of new streetscape and landscaped areas. This includes the installation of drought-resistant plant palettes.
- DG-25 Encourage sustainable landscape design with the use of hardy, native, low-water consumption, drought-tolerant planting, as well as stormwater management systems. Utilize bioswales and rain gardens in street medians or landscape buffers. Employ moisture-sensitive irrigation systems.
- DG-26 Refer to “Bay-Friendly Landscaping Guidelines” published by Stopwaste.org for a list of landscape materials that are appropriate for the climate and Contra Costa’s Clean Water Program for stormwater management best practices.
- DG-43 Install water saving appliances and systems such as gray water systems, moisture-sensitive irrigation rainwater cisterns, low-flow toilets and faucets.

Implementation of the policies listed above would reduce this impact to a level that is less than significant. No additional mitigation is needed.

Mitigation Measures

None required.

Impact

3.8-6 Implementation of the proposed San Pablo Avenue Specific Plan will generate additional waste water and require additional infrastructure to meet growth demands. (*Less than Significant*)

The West County Wastewater District treatment plant located in Richmond treated approximately 286.7 million gallons of influent between September 2009 and August 2010 for its service area, at an average daily flow of 9.4 mgd. Of this amount, approximately 0.3 mgd came from the Planning Area. Implementation of the Specific Plan would cause a 50 percent increase in wastewater from population and job growth as shown in **Table 3.8-12**.

TABLE 3.8-12 ESTIMATED WASTEWATER FLOW

	SPECIFIC PLAN AREA POPULATION	ESTIMATED SPECIFIC PLAN AREA AVERAGE INFLUENT FLOW (MGD)	PERCENT INCREASE FROM EXISTING FLOW
Existing Conditions	4,000	0.3	-
Buildout	6,170	0.5	54%

1 mgd = million gallons per day

Source: WCWD, 2010; Dyett & Bhatia, 2010.

Current projections indicate that the wastewater treatment plant has sufficient capacity to meet projected treatment needs. The WCWD treatment plant has a design capacity of 12.5 mgd for dry weather flows and 21 mgd for wet weather flows. Since the average influent flow between September 2009 and August 2010 was 9.4 mgd (which includes both dry and wet months), this means the treatment plant has approximately 25 percent excess capacity to its dry weather flow limit and 55 percent excess capacity to its wet weather flow limit. By 2030, San Pablo's population is expected to grow by only 10 percent while the rest of WCWD's service area is unlikely to grow by more than 20 percent. Added together, they are unlikely to exceed the treatment plant's available capacity.

Although treatment plant capacity is not an issue, WCWD will likely require new infrastructure, such as new pipelines, force mains, and pump-stations to meet future demands. The sewer lines in San Pablo are generally 40 to 60 years old, made of vitrified clay pipe and some ductile iron. They were designed based on current zoning classifications which allow lower density than what is anticipated in 2030. Larger pipes and other upgrades to the conveyance system will be required to serve higher density development.

To ensure that new development does not adversely affect the wastewater conveyance system, the 2030 General Plan includes a policy that requires new development to contribute to the cost of new wastewater facilities in proportion to the demand generated by project occupants and users. Additionally, the City aims to continue cooperative efforts with the WCWD to address planning capacity and identify deficiencies in the waste water collection system. These policies and other policies included below would reduce potential impacts to a less than significant level.

Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

- PSCU-I-31 Require, as a condition of project approval, stormwater drainage and sewer improvements in proportion to a project's impacts, including upgrades, replacements, or repairs to older stormwater collection systems, as necessary.
- PSCU-I-32 Maintain master storm drain system maps that identify locations where easements should be reserved for eventual installation of pipes and structures to ensure appropriate storm drainage management.
- PSCU-I-33 Coordinate with the West County Wastewater District to address planning capacity and identify deficiencies in the waste water collection system.
- PSCU-I-34 Update zoning standards to minimize storm water runoff rates and volumes, control water pollution, and maximize recharge of local groundwater aquifers. New development

will be required to include features that reduce impermeable surface area and increase infiltration. Such features may include, but are not limited to:

- Canopy trees or shrubs to absorb rainwater;
- Grading that lengthens flow paths and increases runoff travel time to reduce the peak hour flow rate;
- Removing curbs and gutters from parking areas where appropriate to allow stormwater sheet flow into vegetated areas;
- Permeable paving and parking area design;
- Stormwater detention and retention basins to facilitate infiltration; and
- Integrated or subsurface water retention facilities to capture rainwater for use in landscape irrigation and other non-potable uses.

Proposed Specific Plan Policies that Reduce the Impact

- 5-G-1 *Continue the successful provision, maintenance and operation of infrastructure and public utilities to maintain the quality of life and sustainability of the San Pablo Avenue corridor.*
- 5-I-1 Maintain successful cooperation with independent agencies to continue adequate utility service throughout the San Pablo Avenue Specific Plan Planning Area.
- 5-I-6 Expand the wastewater collection system such that it is adequate to serve the projected development along the San Pablo Avenue corridor. Coordinate with the West County Wastewater District to update the collection system and Wastewater Master Plan to ensure that adequate conveyance capacity is available.
- 8-I-1 Require development in the San Pablo Avenue Specific Plan Planning Area to include low impact development features to reduce stormwater pollutant loads and increase on-site infiltration, consistent with General Plan policy PSCU-I-34. Features should be drawn from the Bay Area Stormwater Management Agency's "Start at the Source Design Guidance Manual for Stormwater Quality Protection." Ensure the update of zoning stormwater management standards pursuant to General Plan policy PSCU-I-34 includes provisions for stronger stormwater management on sites within 300 feet of creeks in the Planning Area, with an emphasis on maintaining or restoring the natural character of the water feature.
- DG-22 Limit hardscape to a maximum of 50% of required private common open space. Encourage the use of pervious materials to assist in stormwater management.

Implementation of the policies listed above would reduce this impact to a level that is less than significant. No additional mitigation is needed.

Mitigation Measures

None required.

Impact

3.8-7 Implementation of the proposed San Pablo Avenue Specific Plan may generate additional amounts of solid waste that may exceed future annual diversion targets. (*Less than Significant*)

According to Chris Lehon from the WCCIWMA²⁵, the WCCIWMA disposed of about 143,000 tons of waste in 2009. Approximately 90 percent of the non-recyclable wastes were brought to the Keller Canyon Landfill at Pittsburg while about 10 percent were brought to the Potrero Hills Landfill in Solano County. The Keller Canyon facility has a maximum capacity of 75 million cubic yards and has about 20 years of additional capacity.²⁶ The Potrero Hills facility has a maximum capacity of 21 million cubic yards and has an additional eight to ten years of permitted capacity. The WCCIWMA does not foresee any issues related to solid waste collection or landfill capacity for San Pablo.

The Integrated Waste Management Act of 1989 requires that all jurisdictions meet a 50 percent waste reduction requirement. In 2009, WCCIWMA had a disposal rate of 3.6 pounds per person per day (ppd). In 2008, WCCIWMA had a disposal rate of 4.4 ppd. Both years met the target of 5.4 ppd set by CalRecycle.²⁷ At buildout of the General Plan, the amount of solid waste generated will likely increase due to population growth. However, as long as the waste generated per person does not increase, the city should have no trouble meeting the pound per person target set by CalRecycle each year.

To reduce residential and commercial waste streams within the city, the proposed Specific Plan includes a policy requiring all new developments to participate in city recycling and waste diversion programs. This policy, along with 2030 General Plan policies that reduce waste generation through reduction, reuse, recycling, and public education as shown below, would help reduce the impact to a less than significant level.

Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

PSCU-I-39	Require recycling collection services in all residential and non-residential buildings.
PSCU-I-40	Promote the importance of waste reduction and recycling, as well as the safe disposal of hazardous materials, to San Pablo residents and businesses owners.
PSCU-I-41	Establish design standards for new multifamily development in the Zoning Ordinance to make provisions for recycling part of the building design.
PSCU-I-42	Reduce construction waste in San Pablo by adopting a Waste Reduction and Construction Debris Recycling Ordinance that requires developers to: • Reuse building materials, or use materials with recycled content, to the maximum extent possible;

²⁵ Email interview with Chris Lehon, Executive Director of WCCIWMA, September 2010. The 143,000 tons counts only garbage tonnage collected by the franchised collection hauler and excludes garbage brought in by self-haul customers.

²⁶ The expected closure date for Keller Canyon Landfill is 31 December, 2030, according to CalRecycle.

²⁷ Department of Resources Recycling and Recovery website on Diversion/Disposal Rate Report, <http://www.calrecycle.ca.gov/lgcentral/Tools/MARS/JurDrDtl.asp?Flag=1&Yr=2008&Ju=568>

- Submit a ‘Construction and Demolition Materials Management Plan’ indicating the estimated volume or weight of project construction and demolition materials, by materials type, to be generated; the maximum volume or weight of materials the project will divert; the vendor or diversion facility; and the volume or weight of residual materials that would be transported for disposal in a landfill;
- Schedule time for deconstruction and recycling activities to take place during project demolition and construction phases; and
- Divert at least 50 percent of recyclable debris (such as paper based boards, ceiling tiles, wood, or aluminum) generated from projects from landfill disposal to reuse or recycling options.

PSCU-I-43 Reduce waste production in all City operations by using post-consumer recycled paper and other recycled materials.

PSCU-I-44 Actively promote reuse by supporting swap meets, flea markets, and providing information on donation pick-up or drop off locations, as well as other waste reduction programs, on the City website.

Proposed Specific Plan Policies that Reduce the Impact

5-I-7 Require all new development to participate in all recycling and hazardous waste reduction and solid waste diversion programs in effect at the time of issuance of building permits.

DG-48 Divert waste from landfills by promoting reduction, reuse, recycling, and composting of materials during construction and through building materials selection.

DG-49 All development is subject to Alameda County’s StopWaste.Org waste diversion, recycling, and composting standards, as adopted by City Council.

Mitigation Measures

None required.

3.9 *Noise*

This section evaluates noise impacts associated with the implementation of the proposed Specific Plan. It discusses both short-term construction as well as long-term operational impacts of the Plan. This section also provides background information identifying noise sources in San Pablo and describes the regulatory setting.

ENVIRONMENTAL SETTING

Technical Background

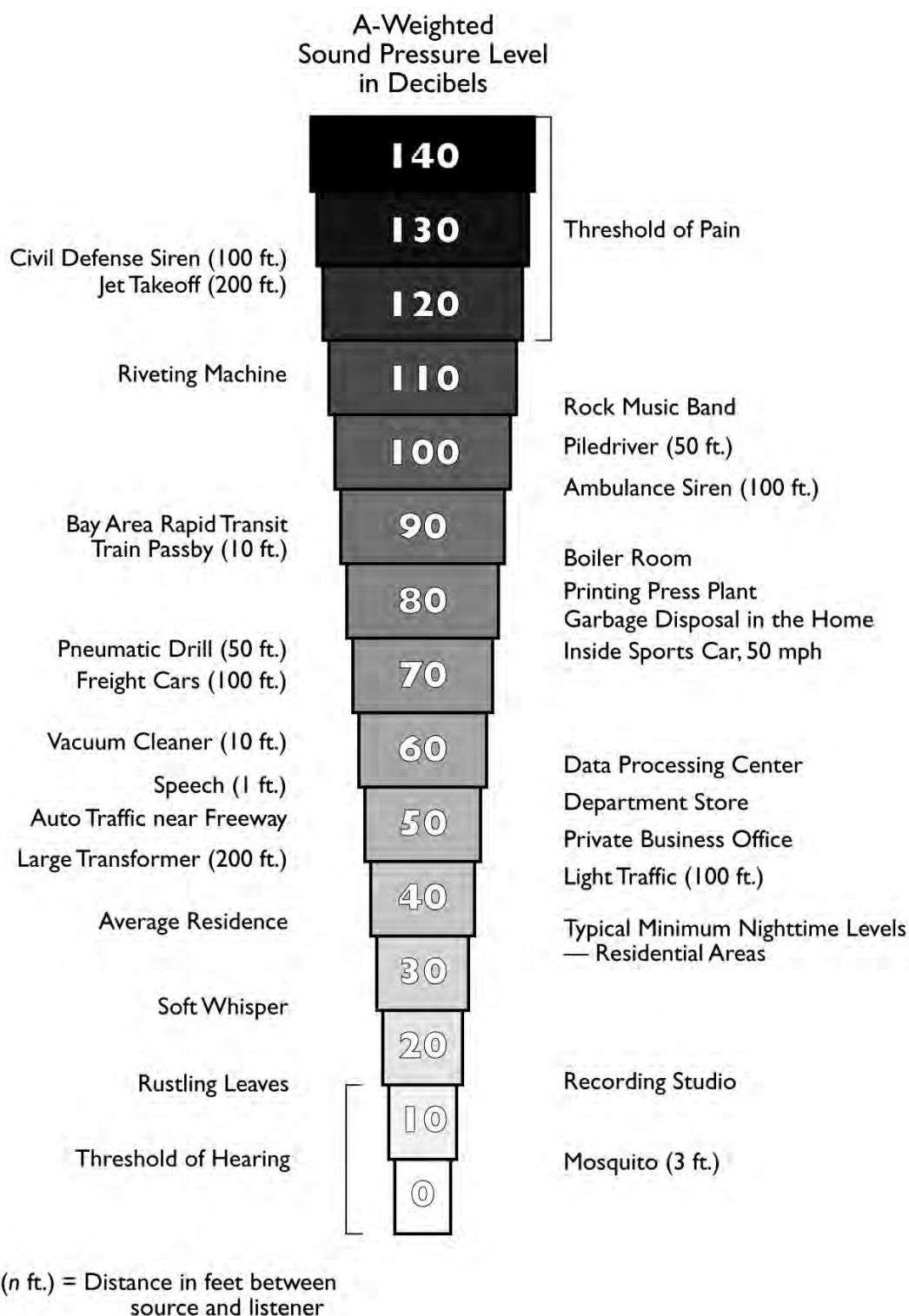
Noise Descriptors

Sound waves, traveling outward from a source, exert a sound pressure level (commonly called “sound level”), measured in decibels (dB). In general, people can perceive a two- to three-dB difference in noise level; a difference of 10 dB is perceived as a doubling of loudness. “Noise” is often defined as unwanted sound. Environmental noise is usually measured in A-weighted decibels, a metric corrected for the variation in frequency response of the human ear. The A-weighted scale is used to describe all noise levels discussed in this section.

Environmental noise levels typically fluctuate over time; different types of noise descriptors are used to account for this variability. Some descriptors characterize cumulative noise over a given period, while others describe single noise events. Cumulative noise descriptors include the energy-equivalent noise level (Leq), Day-Night Average Noise Level (DNL), and Community Noise Equivalent Level (CNEL). The Leq is the actual time-averaged, equivalent steady-state sound level, which, in a stated period, contains the same acoustic energy as the time-varying sound level during the same period. Some representative noise sources and their corresponding A-weighted noise levels are shown in **Figure 3.9-1**.

DNL and CNEL values result from the averaging of Leq values (based on A-weighted decibels) over a 24-hour period, with weighting factors applied to different periods of the day to account for their greater relative annoyance. For DNL, noise that occurs during the nighttime period (10:00 p.m. to 7:00 a.m.) is penalized by 10 dBA. The CNEL descriptor is similar to DNL, except that it also includes a penalty of approximately 5 dBA for noise that occurs during the evening period (7:00 p.m. to 10:00 p.m.). The cumulative noise descriptors, DNL and CNEL, are well correlated with the likelihood of public annoyance from transportation noise sources.

Figure 3.9-1: Typical Sound Levels



Sound Propagation and Attenuation

Sound level naturally decreases as one moves farther away from the source. This basic attenuation rate is referred to as the geometric spreading loss. The basic rate of geometric spreading loss depends on whether a given noise source can be characterized as a point source or a line source. For a point source, such as an idling truck or jackhammer, the noise level decreases by about 6 dBA for each doubling of distance away from the source.

In many cases, noise attenuation from a point source increases by 1.5 dBA from 6.0 dBA to 7.5 dBA for each doubling of distance due to ground absorption and reflective wave canceling. These factors are collectively referred to as excess ground attenuation. The basic geometric spreading loss rate (6.0 dBA per doubling of distance) is used where the ground surface between a noise source and a receiver is reflective, such as parking lots or a smooth body of water. The excess ground attenuation rate (7.5 dBA per doubling of distance) is used where the ground surface is absorptive, such as soft dirt, grass, or scattered bushes and trees.

For a line source, such as a heavily traveled roadway, the noise level decreases by a nominal value of 3.0 dBA for each doubling of distance between the source and the receiver. If the ground surface between source and receiver is absorptive rather than reflective, the nominal rate increases by 1.5 dBA to 4.5 dBA for each doubling of distance. Atmospheric effects, such as wind and temperature gradients, can also influence noise attenuation rates from both line and point sources of noise. However, unlike ground attenuation, atmospheric effects are constantly changing and difficult to predict.

Trees and vegetation, buildings, and barriers reduce the noise level that would otherwise occur at a given receptor distance. However, for a vegetative strip to have a noticeable effect on noise levels, it must be dense and wide. For example, a stand of trees must be at least 100 feet wide and dense enough to completely obstruct a visual path to the roadway to attenuate traffic noise by 5 dBA.¹ A row of structures can shield more distant receivers depending upon the size and spacing of the intervening structures and site geometry. Generally, for an at-grade highway in an average residential area where the first row of houses cover at least 40 percent of the total area, the reduction provided by the first row of houses is approximately 3 dBA, there is 1.5 dBA of additional reduction for each additional row of homes.² Similar to vegetative strips discussed above, noise barriers, which include natural topography and sound walls, reduce noise by blocking the line of sight between the source and receiver. Generally, a noise barrier that breaks the line of sight between source and receiver will provide at least a 5 dBA reduction in noise.

Effects of Noise

The effects of noise on humans may include annoyance, interference with various activities, hearing loss, and stress-related health problems. These effects of noise are discussed below.

- **Annoyance** is the most difficult of all noise responses to describe. Annoyance is a very individual characteristic and can vary widely from person to person. What one person considers tolerable can be quite unbearable to another of equal hearing capability (for instance, some people like the sound of trains, while others do not).

¹ California Department of Transportation, October 1998.

² *Ibid.*

- **Speech interference** is one of the primary concerns associated with environmental noise. Normal conversational speech is in the range of 60 to 65 dBA and any noise in this range or louder may interfere with speech. Depending upon the distance between the talker and the listener, background noise levels may require a raised voice in order to communicate. Transportation sources can easily interfere with conversation within a few hundred feet of the source.
- **Sleep interference** is a major noise concern related to traffic-generated noise. Sleep disturbance studies have identified interior noise levels attributed to traffic noise as a key factor of sleep disturbance. However, it should be noted that sleep disturbance does not necessarily mean awakening from sleep, but can refer to altering the pattern and stages of sleep. Train noise (especially horn soundings) is a major source of complaints.
- **Potential hearing loss** is commonly associated with occupational exposures in heavy industry or very noisy work environments. Noise levels in neighborhoods, even near very noisy airports, are not sufficiently loud to cause hearing loss.
- **Physiological responses** are those measurable noise effects on the human metabolism. They are ascertained as changes in pulse rate, blood pressure, etc. While such effects can be induced and observed, the extent to which these physiological responses cause harm or are a sign of harm is not known.

Vibration

Vibration is energy radiated through the ground. The rumbling sound caused by the vibration of room surfaces is called groundborne noise. Sources of groundborne vibration include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, such as factory machinery, or transient, such as the passby of a train or an explosion.

The effects of groundborne vibration include perceptible floor movement, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. In contrast to noise, vibration is not a common environmental problem. In extreme cases, vibration can cause damage to buildings. Building damage is usually not a factor for normal transportation projects, with the exception of blasting and pile driving during construction. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Annoyance from vibration often occurs when the vibration exceeds the threshold of human perception by only a small margin. A vibration level that causes annoyance will be well below the damage threshold for normal buildings.

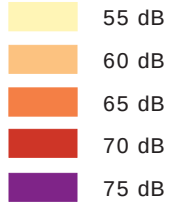
Physical Setting

The Noise Environment

As in most urban areas, vehicular traffic along major arterials is the principal noise source in the planning area. Other human-caused sources of noise include train traffic, construction and landscaping equipment. Natural sources of noise include wind and birds. The existing noise contours are shown in **Figure 3.9-2**.

Figure 3.9-2
Existing Noise Exposure

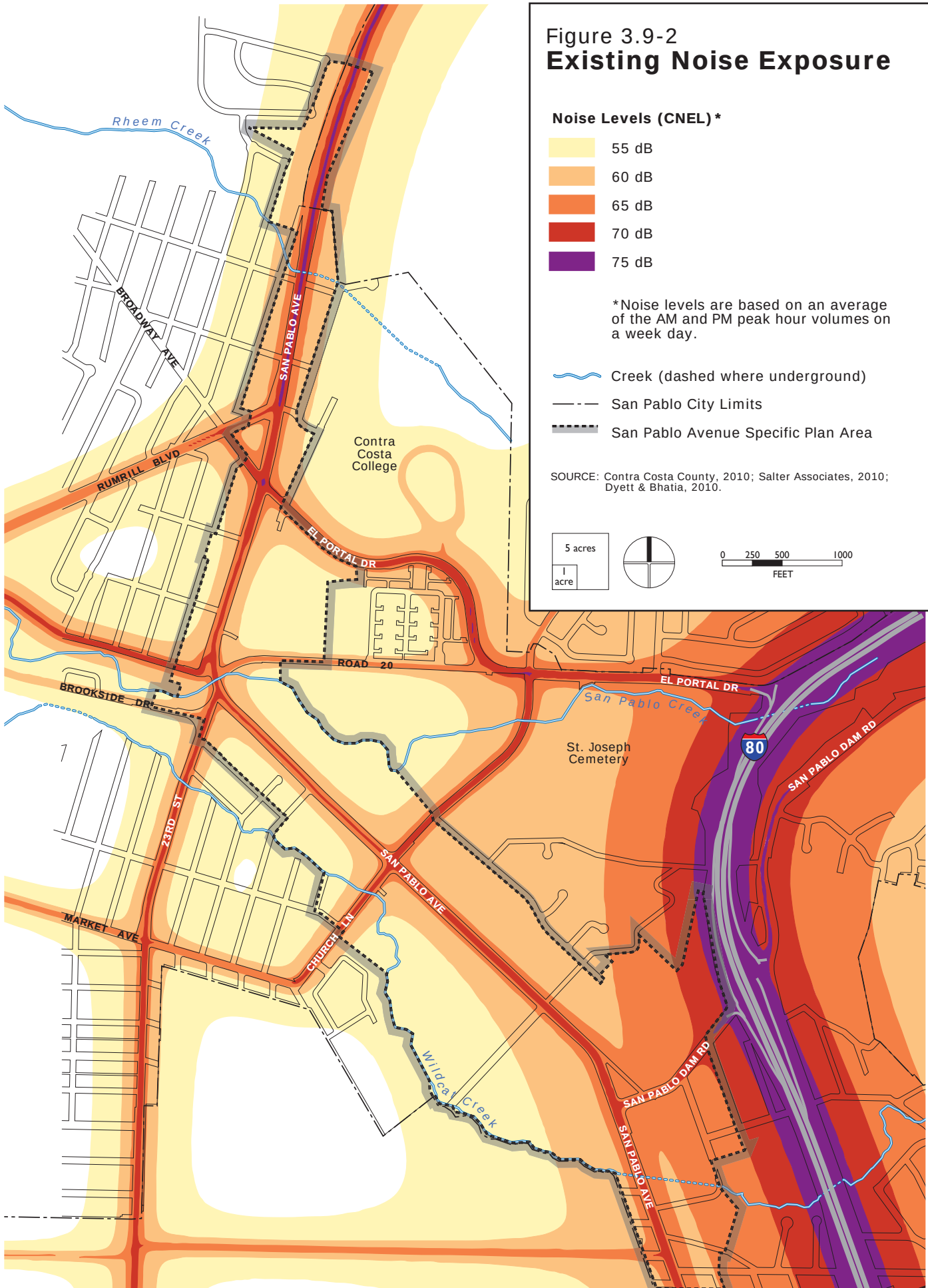
Noise Levels (CNEL) *



*Noise levels are based on an average of the AM and PM peak hour volumes on a week day.

-  Creek (dashed where underground)
-  San Pablo City Limits
-  San Pablo Avenue Specific Plan Area

SOURCE: Contra Costa County, 2010; Salter Associates, 2010; Dyett & Bhatia, 2010.



Vehicle Noise

Most noise within the Specific Plan area results from automobile and truck traffic. Vehicle traffic background noise levels vary throughout the day based on the average density of noise sources in a given area. Traffic noise at a particular location depends upon the traffic volume on nearby roadways, the average vehicle speed, distance between the receptor and the roadway, intervening barriers between source and receiver, and the ratio of trucks (particularly heavy trucks) and buses to automobiles.

The dominant and consistent source of noise in the Planning Area is on-road vehicular traffic from San Pablo Avenue. Additionally, noise levels are also elevated at intersections with 23rd Street, San Pablo Dam Road, Road 20, El Portal Drive, and the Church Lane. Traffic noise can be a significant environmental concern where buffers (e.g., buildings, landscaping, etc.) are inadequate or where the distance from centerline to sensitive uses is relatively small. Noise levels along arterial roadways currently range from 60 to 80 dB CNEL at a distance of 100 feet from the roadway centerlines.

Interstate 80 is another major source of noise in San Pablo. Although the freeway does not directly pass through the San Pablo Avenue corridor, it is located very close to the south-eastern boundary of the Planning Area. Existing outdoor noise levels within a quarter mile of the freeway stands at or above 65 dB CNEL

Railroad Operations

Freight trains are the main source of environmental noise along the Burlington Northern Santa Fe (BNSF) route in San Pablo. Although the railroad tracks are at least half-a-mile away from the Planning Area, the trains generate high noise levels in some locations because they are required to sound their whistles when crossing roadways at-grade. According to the Federal Railroad Administration, train horns can generate noise ranging from 60 dBA to 80 dBA even at a distance of half-a-mile.³

Construction Noise Sources

Construction is another significant, although typically short-term, source of noise. Construction noise is most significant when it takes place near sensitive land uses, and occurs at night or in early morning hours. Local governments typically regulate noise associated with construction equipment and activities through enforcement of noise ordinance standards, implementation of general plan policies, and imposition of conditions of approval for building or grading permits. **Table 3.9-1** shows typical noise levels associated with various types of construction equipment.

³ Federal Railroad Administration, Final Train Horn Rule, 2005. Available at <http://www.fra.dot.gov/rpd/freight/1318.shtml> and <http://www.hanson-inc.com/images/Vision/pdfs/Is-Train-Horn-Noise-a-Problem7-09.pdf>

TABLE 3.9-1 TYPICAL NOISE LEVELS FROM CONSTRUCTION EQUIPMENT

CONSTRUCTION EQUIPMENT	NOISE LEVELS (DBA AT 50 FEET FROM SOURCE)
Air Compressor	81
Backhoe	80
Ballast Equalizer	82
Ballast Tamper	83
Compactor	82
Concrete Mixer	85
Concrete Pump	82
Concrete Vibrator	76
Crane, Derrick	88
Crane, Mobile	83
Dozer	85
Generator	81
Grader	85
Impact Wrench	85
Jack Hammer	88
Loader	85
Paver	89
Pile-Driver (Impact)	101
Pile-Driver (Sonic)	96
Pneumatic Tool	85
Pump	76
Rail Saw	90
Rock Drill	98
Roller	74
Saw	76
Scarifier	83
Scraper	89
Shovel	82
Spike Driver	77
Tie Cutter	84
Tie Handler	80
Tie Inserter	85
Truck	88

Source: U.S. Department of Transportation, Federal Transit Administration, Transit Noise and Vibration Impact Assessment, 2006.

Sensitive Receptors

Some land uses are considered more sensitive to ambient noise levels than others due to the amount of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities typically involved. People in residences, motels and hotels, schools, libraries, churches, hospitals, nursing homes, auditoriums, natural areas, parks, and outdoor recreation areas are generally more sensitive to noise than are people at commercial and industrial establishments. Consequently, the noise standards for sensitive land uses are more stringent than for those at less sensitive uses. Residential uses are located all

over the Planning Area in the form of multi-family residential or mixed uses. There are also a number of churches located along San Pablo Avenue north of Road 20, as well as medical uses such as Doctors Medical Center south of the Planning Area.

Regulatory Setting

Federal, State, and local agencies regulate different aspects of environmental noise. Generally, the federal government sets noise standards for transportation-related noise sources closely linked to interstate commerce. These include aircraft, locomotives, and trucks. The State government sets noise standards for other transportation noise sources less closely linked with interstate commerce, such as automobiles, light trucks, and motorcycles. Noise sources associated with industrial, commercial, and construction activities are generally subject to local control through noise ordinances and general plan policies. While local general plans identify general principles intended to guide and influence noise from development and systems operation, it is typically noise ordinances that set forth the specific standards and procedures for addressing particular noise sources and activities.

Federal Regulations

Federal regulations for railroad noise are contained in 40 CFR, Part 201 and 49 CFR, Part 210. Noise limits are implemented through regulatory controls on locomotive manufacturers. For locomotives manufactured during or after 1980, noise limits are as follows:

- Stationary locomotives (at idle throttle setting) are not to exceed 70 dBA at 15 meters (approximately 50 feet) from the track pathway centerline;
- Stationary locomotives (at all other throttle settings) are not to exceed 87 dBA at 15 meters; and
- Moving locomotives are not to exceed 90 dBA at 15 meters.

Sounding locomotive horns or whistles in advance of highway-rail grade crossings has been used as a safety precaution by railroads since the late 1880s. The manner in which horns have been sounded (two longs, one short and one long) was standardized in 1938. In response to a growing national trend towards restrictions on the use of locomotive horns under local ordinances and a related increase in collisions, Congress passed the Swift Rail Development Act, which directed the Federal Railroad Administration to develop rules addressing this issue. On December 18, 2003, the Federal Railroad Administration published an Interim Final Rule that requires the use of locomotive horns or whistles when approaching road/rail grade crossing, except in approved quiet zones, where supplementary safety measures have been installed or adopted by the state or locality. The rule establishes that a horn sound level must be a minimum of 96 dBA and no louder than 110 dBA measured 100 feet in front of the locomotive and 15 feet above the rail. The rule became effective on December 18, 2004.⁴

The federal truck passby noise standard is 80 dBA at 15 meters from the vehicle pathway centerline (trucks more than 4.5 tons, gross vehicle weight rating, under 40 CFR, Part 205, Subpart B). This standard is implemented through regulatory controls on truck manufacturers. Under regulations established by the Federal Highway Administration, noise abatement must be considered for federal or federally-funded projects involving the construction of a new highway or significant modification of an existing freeway. Abatement is considered when the project would result in a substantial noise increase or

⁴ Federal Railroad Administration, 2003.

when the predicted noise levels approach or exceed the Noise Abatement Criteria (23 CFR Part 772). Under these criteria, a substantial increase is defined as a 12 dBA increase in the Leq during the traffic peak hour. The Noise Abatement Criteria differ among various activity categories and between exterior spaces and interior spaces. For sensitive uses, such as residences, schools, churches, parks, and playgrounds, the Noise Abatement Criteria for interior and exterior spaces during the traffic peak hour is 57 and 67 Leq, respectively.

State Regulations

The State of California establishes noise limits for vehicles licensed to operate on public roads. For heavy trucks, the passby standard is consistent with the federal limit of 80 dBA. The State passby standard for light trucks and passenger cars (less than 4.5 tons, gross vehicle rating) is also 80 dBA at 15 meters from the centerline (California Vehicle Code, Section 23130 and 23130.5; 27150, et seq.; 27204 and 27206). These controls are implemented through controls on vehicle manufacturers and by legal sanction of vehicle operators by State and local law enforcement officials. Caltrans uses Federal Highway Administration (FHWA) Noise Abatement Criteria to evaluate noise impacts.

State General Plan Guidelines suggest that for residential uses, outdoor noise levels of less than 60 DNL or less are considered "normally acceptable"; outdoor noise levels between 60 and 70 DNL are "conditionally acceptable"; and outdoor noise levels exceeding 70 DNL are "normally unacceptable." Under State guidelines, new schools, libraries, churches, hospitals, and nursing homes that are proposed in areas subject to 60 to 70 DNL should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. For many land uses, the State recommendations show overlapping DNL ranges for two or more compatibility categories. These overlapping DNL ranges indicate that local conditions (existing noise levels and community attitudes toward dominant noise sources) should be considered in evaluating land use compatibility at specific locations.

The State has also established noise insulation standards for multi-family residential units, hotels, and motels that would be subject to relatively high levels of transportation-related noise. These requirements are collectively known as the California Noise Insulation Standards and are found in California Code of Regulations, Title 24. These standards set forth an interior standard of 45 DNL in any habitable room.

Local Regulations

To identify, appraise, and remedy noise problems in the local community, each county and city in California is required to adopt a Noise Element as part of its General Plan. Each Noise Element is required to analyze and quantify, to the extent practicable, current and projected noise levels associated with local noise sources. Beyond statutory requirements, local jurisdictions are free to adopt their own goals and policies in their Noise Elements. However, most jurisdictions chose to adopt noise/land use compatibility policies derived from State recommendations. This analysis assumes the adoption of the San Pablo 2030 General Plan, including the Noise Element and its associated standards.

In addition to regulating noise through implementation of noise element policies, local jurisdictions regulate noise through enforcement of local ordinances. These standards generally relate to noisy activities (e.g., use of loudspeakers and construction) and stationary noise sources and facilities (e.g., air conditioning units and industrial activities); they also may address airport and traffic noise and land use compatibility. Generally, federal and State laws preempt local agencies from establishing noise standards

for transportation-related noise sources, such as aircraft, ships, trains, and motor vehicles. The San Pablo Municipal Code regulates construction activity within the city, as follows:

San Pablo Municipal Code, Chapter 9.12 Noise Control

9.12.010 - Specific prohibitions

No person shall do, cause or suffer or permit to be done on any premises owned, occupied or controlled by such person, any of the following acts:

- A. Repair any auto body or fender unless within a completely enclosed building and the noises from such repairs are reasonably confined to such building;
- B. Operate or use in connection with building operations between the hours of ten p.m. and seven a.m. any pile driver, steam shovel, pneumatic hammer, derrick, steam or electric hoist, power-driven saw or any other tool or apparatus the use of which is attended by loud or unusual noise, except by written permission of the building inspector, and then only in case of emergency;
- C. Keep or maintain any animal, crowing rooster or fowl which by any sound or cry annoys or disturbs persons owning, using or occupying property in the neighborhood;
- D. Test run trucks or other similar, heavy equipment, except for a reasonable warm-up period, between the hours of ten p.m. and seven a.m., unless such testing or running in is done within a building or specially designated structure, and the noise from such testing or running in is reasonably confined to such building or structure.

IMPACT ANALYSIS

Significance Criteria

Implementation of the proposed Project would have a potentially significant adverse impact if it would:

Criterion 1: Expose persons to or generate substantial temporary *construction* noise levels and groundborne vibration in excess of standards above existing levels without the project.

Criterion 2: Expose persons to or generate outdoor noise levels in excess of standards found in the San Pablo 2030 General Plan Noise Element.

Methodology and Assumptions

Methodology

As part of the proposed General Plan update process conducted in tandem with the San Pablo Avenue Specific Plan, noise exposure contours for the City of San Pablo were modeled by Charles Salter Associates by applying the Federal Highway Administration's noise modeling procedure. These noise contours are conservative, meaning that the contours are modeled with minimal noise attenuation by natural barriers, buildings, etc. Because noise is a highly localized impact, specific and detailed analyses are more appropriate at the project level. Individual projects that may be proposed in the future under the Specific Plan may be required to determine whether they could generate noise impacts specific to their

site, time and project description. These project-specific noise assessments would determine the magnitude of noise and vibration impacts and potential mitigation measures (if needed) for each project.

Assumptions

The contours for the future noise environment assume full buildout of the Specific Plan in 2030 as well as other development proposed under the San Pablo 2030 General Plan, in addition to some amount of regional growth and development that would contribute to overall traffic levels. Policies in the General Plan that would reduce impacts of the Specific Plan have been identified assuming the General Plan will be adopted prior to or concurrent with adoption of this Specific Plan.

Impact Summary

Implementation of the proposed San Pablo Avenue Specific Plan would lead to increased densities and intensities along the San Pablo Avenue corridor, which will result in more residents and jobs. These residents and jobs also mean more noise, primarily a result of increased traffic volumes on the major arterial roadways. Additionally, construction activity related to development would result in temporary and intermittent construction noise impacts and expose sensitive receptors to groundborne noise and vibration.

Impacts and Mitigation Measures

Impact

3.9-1 New development under the proposed San Pablo Avenue Specific Plan could potentially expose existing noise-sensitive uses to construction-related increases in ambient noise and groundborne vibration. (*Less than Significant*)

Construction activities would occur intermittently at different sites in the planning area throughout the period of implementation of the Specific Plan. Although construction-related noise is considered a short-term noise impact, it could substantially increase ambient noise levels at noise-sensitive locations and result in potentially significant, albeit temporary, impacts to sensitive receptors. Noise from construction activities primarily comes from the operation of equipment and construction activities such as excavation, grading, earth movement, stockpiling, and batch-dropping operations. Construction activities such as foundation laying, building construction, and finishing operations would also generate noise. Besides generating noise, construction activity may create temporary groundborne vibrations. Activities such as pile-driving, blasting, drilling, and excavation have the highest potential for creating groundborne vibration impacts.

The potential construction-related noise and vibration impacts depend on the proximity of construction activities to sensitive receptors, the presence of intervening barriers, the number, and the types and duration of construction equipment used. To reduce construction-related noise impacts, development under the Specific Plan would be required to comply with limitations on construction activity in the City's Municipal Code which specifically prohibits construction operations between 10 p.m. and 7 a.m. unless there is an emergency. Construction managers and work crew are also required to use 'best available control technology such as insulation and soundproof materials to minimize noise and vibration from construction equipment. The implementation of these measures would help reduce this impact to a less than significant level.

Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

SN-G-9 *Protect public health and welfare by eliminating noise problems and maintaining an acceptable indoor and outdoor acoustic environment.*

SN-I-38 Require new, fixed noise sources (e.g. mechanical equipment) to use best available control technology to minimize noise and vibration.

Noise from mechanical equipment can often be reduced by applying soundproofing materials, mufflers, or other controls provided by the manufacturer.

SN-I-40 Work with Caltrans, AC transit and railroad operators to mitigate transportation-related noise impacts on residential areas and sensitive uses. Additionally, continue to limit hours for construction and demolition work to reduce construction-related noises.

Compliance with existing City regulations and proposed General Plan policies would ensure that construction noise impacts would be less than significant.

Proposed Specific Plan Policies that Reduce the Impact

None.

Mitigation Measures

None required.

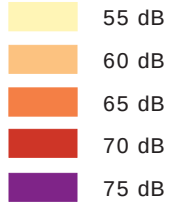
Cumulative Impact

3.9-2 Implementation of the proposed San Pablo Avenue Specific Plan, combined with regional growth and development, could expose persons to or generate outdoor noise levels in excess of standards in the San Pablo 2030 General Plan Noise Element. (*Less than Significant*)

Implementation of the proposed Specific Plan would lead to increased population, resulting in both higher traffic volumes through the Planning Area as well as the potential exposure of more people to traffic noise. **Table 3.9-2** compares future noise exposure in the Planning Area against 2030 General Plan noise standards (General Plan Table 9.6-1). The table shows any land that would be subjected to noise levels above a “normally acceptable” range, defined in the General Plan according to land use type. The proposed standards are based on State guidelines established by the Governor’s Office of Planning and Research. Implementation of the proposed Specific Plan would allow for potential noise exposure above the “normally acceptable” range for a total of 17 percent of the Planning Area (37.4 acres).

Figure 3.9-3
Future Noise Exposure

Noise Levels (CNEL) *



*Noise levels are based on an average of the AM and PM peak hour volumes on a week day.

-  Creek (dashed where underground)
-  San Pablo City Limits
-  San Pablo Avenue Specific Plan Area

SOURCE: Contra Costa County, 2010; Salter Associates, 2010; Dyett & Bhatia, 2010.

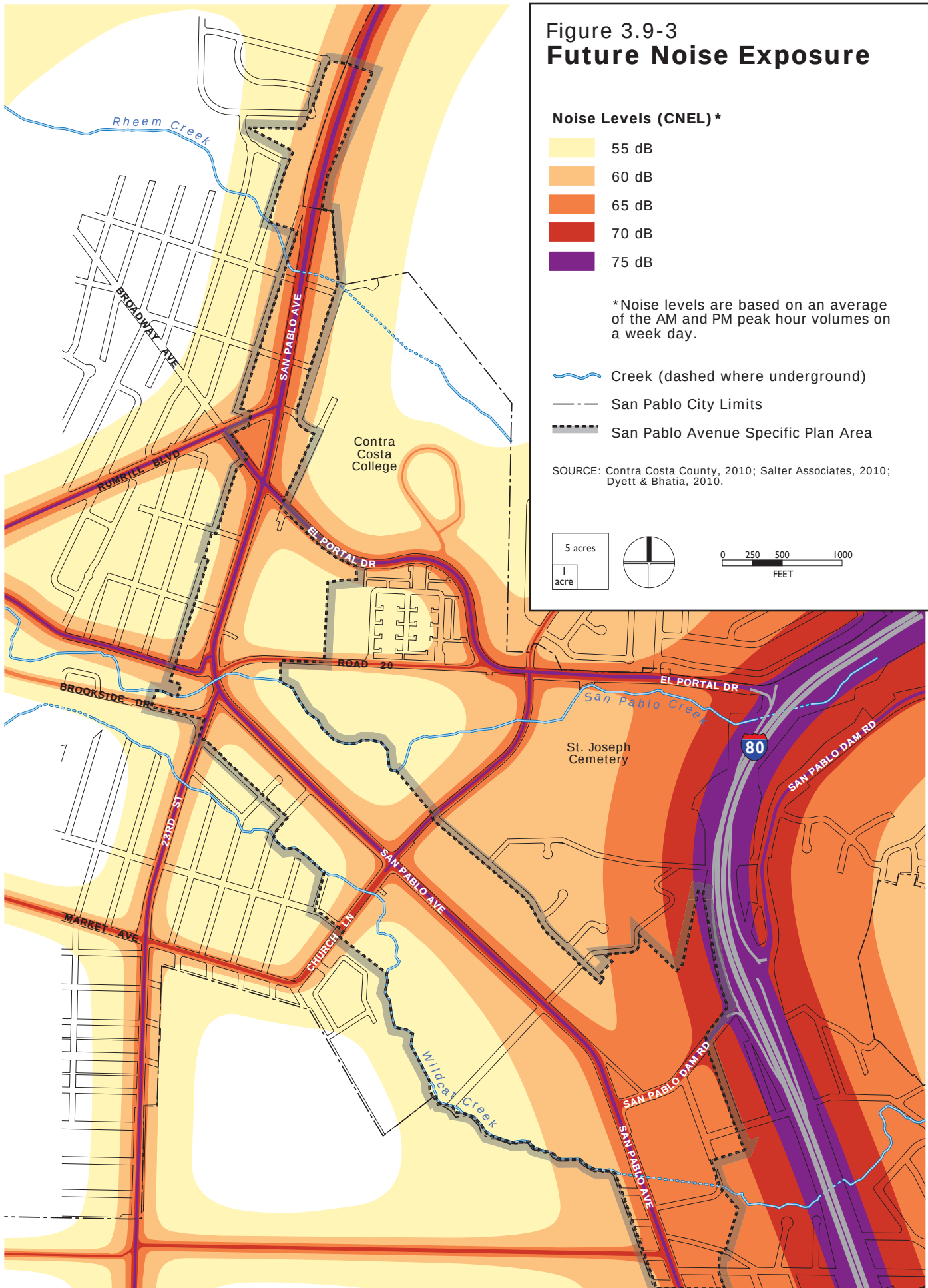
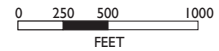


TABLE 3.9-2 SPECIFIC PLAN NOISE EXPOSURE ABOVE GENERAL PLAN STANDARDS

PROPOSED SPECIFIC PLAN LAND USE	GENERAL PLAN STANDARD (DB)	ACRES OVER STANDARD	TOTAL ACRES BY LAND USE	PERCENT OVER STANDARD BY LAND USE
Low Density Residential	60	3.4	4.2	80%
Medium Density Residential	65	6.1	27.6	22%
High Density Residential	65	4.9	37.6	13%
Residential Mixed Use	65	3.2	13.2	24%
Commercial Mixed Use	65	9.7	18.1	54%
Mixed Use Center North	65	1.8	2.7	67%
Mixed Use Center South	65	1.7	19.1	9%
Neighborhood Commercial	70	0.1	13.8	<1%
Regional Commercial	70	6.5	26.7	24%
Entertainment District	70	0.0	22.1	-
Public/Institutional	70	-	24.1	-
Parks	70	-	5.6	-
Open Space	70	-	-	-
Total		37.4	214.8	17%

Notes: Acreages exclude road rights-of-way. Totals may not add up due to rounding.

Source: Charles Salter Associates, 2009; Dyett & Bhatia, 2010.

Of this exposure, however, fully 96 percent falls in the “conditionally acceptable” range of the General Plan standards. Areas subject to “conditionally acceptable” noise can reasonably be mitigated by State building code standards and specialized policies in the proposed General Plan. On sites affected by noise levels in an “unacceptable” range (1.4 acres of Entertainment District land immediately adjacent to the freeway), noise mitigation would be required as a condition of project approval under the proposed General Plan. Realistically, this land is so close to the freeway it is currently landscape buffer and parking lot. In the future, it will continue to be subject to setback standards dictated by Caltrans, as well as setback standards contained in the proposed Specific Plan.

For additional perspective, if one were to compare existing land uses (described in more detail in Section 3.2) against the adopted General Plan Noise standards, we would find that about 12 percent of the Planning Area’s existing land uses (26 acres) are already exposed to noise above General Plan standards. Of this existing exposure, 1.3 acres of non-residential land near the freeway already appear exposed to noise in the “unacceptable” range (as a reminder, the noise contour modeling does not account for existing soundwalls and other structures that result in noise attenuation). This means the vast majority of noise exposure increase in the future falls within a “conditionally acceptable” range that can be mitigated through current building standards and Plan policies. Implementation of General Plan policies, proposed Specific Plan policies, and State building code standards would ensure that these noise impacts are less than significant.

Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

SN-G-9 *Protect public health and welfare by eliminating noise problems and maintaining an acceptable indoor and outdoor acoustic environment.*

SN-I-36 Use the Community Noise Level Exposure Standards, shown in General Plan Table 9.6-1, as review criteria for new land uses. Require all new development that would be exposed to noise greater than the “normally acceptable” noise level range to reduce interior noise through design, sound insulation, or other measures.

SN-I-37 Require proposed industrial, commercial, and other uses with potential noise and vibration producing activities to submit a noise study report identifying noise and vibration mitigation measures that would reduce the adjacent noise level to acceptable ranges based on the Community Noise Environment Standards.

SN-I-39 Establish standards for noise reduction for new housing exposed to DNL noise levels above 65 dB, including but not limited to, the following:

- All facades must be constructed with substantial weight and insulation;
- Sound-rated windows with enhanced noise reduction for habitable rooms;
- Sound-rated doors with enhanced noise reduction for all exterior entries at habitable rooms;
- Minimum setbacks and exterior barriers;
- Acoustic baffling of vents is required for chimneys, attic and gable ends; and
- Installation of a mechanical ventilation system affording comfort and fresh air under closed window conditions is required.

Alternative acoustical designs that achieve the prescribed noise level reduction may be approved, provided a certified Acoustical Engineer submits information demonstrating that the required reductions can be achieved and maintained.

SN-I-40 Work with Caltrans, AC transit and railroad operators to mitigate transportation-related noise impacts on residential areas and sensitive uses.

Continue to limit hours for construction and demolition work to reduce construction-related noises.

SN-I-41 Require that all new residential building designs for sites where the DNL will exceed 65dBA achieve noise level reductions through acoustical design and construction of the building elements:

- Residential building designs must be based upon a minimum interior design noise level reduction of 35dB in all habitable areas (i.e., garages, storage areas, etc. are exempted). The 35dB criteria must provide a minimum constructed noise level reduction of 30dB; and

- Residential building designs must also be based upon a minimum design noise level reduction of 40dB in all bedrooms. The 40dB criteria must provide a minimum constructed noise level reduction of 35dB.

SN-I-42 Require that all residential building designs for sites where the DNL will exceed 65dBA include supporting information for City review and approval demonstrating that an acoustical design providing the necessary noise level reduction has been prepared by a Board Certified Acoustical Engineer for each dwelling unit prior to construction. Elements of this acoustical review process shall include:

- A letter by a Board Certified Engineer approving the acoustical design of each dwelling unit (or group of units, if identical), submitted to the City with building permit applications. This letter must be received and approved prior to the issuance of a building permit;
- Following construction, a letter by the Board Certified Engineer showing noise level reduction test results for a minimum of two habitable areas within each dwelling unit (or group of units, if identical), submitted to the City for review and approval prior to the issuance of an occupancy permit.

Acoustical analysis pursuant to General Plan noise standards shall be the financial responsibility of the project applicant. All acoustical engineering and measurement must be conducted under the direction of an Acoustical Engineer who is currently Board Certified by the Institute of Noise Control Engineering, USA. General review and approval of groups of buildings or prototype designs may be sufficient to meet these requirements.

Proposed Specific Plan Policies that Reduce the Impact

8-G-3 *Maintain a healthy noise environment in the San Pablo Avenue Specific Plan Planning Area while accommodating the increased intensities and mix of uses intended to characterize the San Pablo Avenue corridor in the future.*

8-I-5 Use Figure 8-3 and General Plan policies and noise standards contained in The Safety and Noise Element to ascertain need for acoustical analysis for noise-sensitive land uses, including residential uses and mixed-use projects containing residential uses. Ensure that adequate noise attenuation methods are incorporated in new development prior to the issuance of building permits.

8-I-6 For parcels where redevelopment in the San Pablo Avenue corridor will occur adjacent to existing low density residential development, place careful consideration for noise compatibility in project design, including location and orientation of driveways and parking areas, location of loading areas, location and shielding of noise-producing HVAC equipment, landscape planting buffers, and other design considerations.

Mitigation Measures

None required.

3.10 Hazardous Materials and Wildfire Hazards

This section presents the environmental setting and impact assessment for hazardous materials and wildfire hazards in the San Pablo Avenue Specific Plan area. Hazardous materials and other hazards with the potential to affect human health and the environment are described. Applicable regulations are summarized, and their potential impacts and mitigation measures are discussed. As San Pablo is not located within an airport land use planning area, near a private airstrip, or within two miles of an airport, those safety considerations are not evaluated in this section.

ENVIRONMENTAL SETTING

Physical Setting

Past and present land uses in the Specific Plan area comprise a variety of uses including commercial, office, medical, public, and residential uses. Activities associated with these land uses may pose potential environmental, health, and safety risks. These risks include accidents involving vehicles transporting hazardous materials or hazardous wastes, accidental spills or leaks, and improper use, handling, storage, transport, and disposal of hazardous materials.

Overview of Contaminated Sites

Sites where historic or on-going activities have resulted in known or suspected hazardous materials, as identified by the San Francisco Bay Regional Water Quality Control Board (RWQCB) and California Department of Toxic Substances (DTSC), are shown on **Figure 3.10-1**. Sites listed by the RWQCB include leaking underground storage tanks (LUST) sites, aboveground tank sites, land disposal sites (none in San Pablo), and military cleanup sites (also none in San Pablo). The DTSC database includes sites from their various programs including Federal Superfund (also referred to as National Priority List), State Response (State Superfund and Military facilities), Voluntary Cleanup Sites, and School Cleanup sites.

Within the Planning Area, there are three sites with open hazardous materials cases, all of which involve LUSTs from existing or former gasoline stations. These sites are shown in **Table 3.10-1**. It is important to note that listed properties do not necessarily represent a potential risk to the project area unless otherwise specified.

TABLE 3.10-1 REPORTED HAZARDOUS SUBSTANCE SITES

NO	SITE NAME	CLEAN UP STATUS	LOCATION	TYPE
1	ARCO #2030	Open - verification monitoring	2550 Mission Bell Drive	Leaking Underground Tank (LUST) Cleanup Sites
2	DWB Partners Property	Open - assessment & interim remedial action	14205 San Pablo Avenue	LUST Cleanup Sites
3	World Oil #24	Open - remediation	13013 San Pablo Avenue	LUST Cleanup Sites

Source: EnviroStor Database, 2010; Geotracker website, 2010.

Arco #2030 (2550 Mission Bell Drive)

A preliminary site assessment was conducted in 1988 to evaluate a potential release of petroleum hydrocarbons associated with fuel underground storage tanks (USTs) and a waste oil UST. Soil and groundwater samples showed that a significant mass of fuel hydrocarbons existed in the subsurface. Later in 1988, three gasoline USTs and a waste oil tank were replaced. During this work, contaminated soils that were exposed were excavated and hauled to a permitted waste disposal facility. However, these excavation activities did not remove all contaminated soil. Soil contamination was not observed during the removal of the waste oil UST at the site. Additional investigation activities and facility upgrades were conducted in 1992, 1996, 1997, and 2002. In January 2003, approximately 73 tons of contaminated soil were removed and transported to a licensed disposal facility. On November 2, 2007, three 12,000-gallon single-walled steel gasoline USTs and one 250-gallon UST were removed from the site. All four USTs appeared to be in good condition. The USTs were transported to Vasco Road Landfill in Livermore, CA for disposal.

DWB Partners Property (14205 San Pablo Avenue)

This property is located on the northwest corner of San Pablo Avenue and Road 20 in a mixed commercial and residential area. A check cashing business and coin-operated laundry are present on the site. A leak of diesel and gasoline from USTs at this site was discovered in 2004. Subsequent to the discovery, the site has been the subject of soil and groundwater investigations. An enforcement action from the Regional Water Quality Control Board was issued in January 2010 requiring additional investigation work to further delineate contamination at the site. A final technical report detailing the additional work was submitted to the RWQCB in August 2010.

World Oil #24 (13013 San Pablo Avenue)

This site is an active Arco retail gasoline service station. Investigation results indicate that soil and groundwater beneath the site have been impacted by fuel leaks from past station operations. The highest concentrations of dissolved petroleum hydrocarbons are present north and northwest of the UST pit. The dissolved hydrocarbon plume extends slightly off site to the west to northwest, following the predominant groundwater flow.

A release of gasoline at this site was first documented in 1998 and the shallow groundwater has been found to have relatively high concentrations of total petroleum hydrocarbons. Seven groundwater monitoring wells are sampled semi-annually and five wells are sampled annually to monitor offsite migration. In March 2010, a work plan was submitted to the Water Board that recommends changes to

the remediation system in order to complete the site cleanup. According to reports to the State Water Resources Control Board, the groundwater plume (contaminated groundwater area) associated with this site is neither stabilized nor decreasing despite remediation efforts to-date. (This does not necessarily mean that the groundwater contamination is increasing, but rather that data from monitoring wells suggest the migration pattern continues to change.)

Surrounding Areas

Surrounding the Specific Plan Area within the City of San Pablo, 11 other sites have been identified by RWQCB, DTSC and Envirostor as having existing or prior use of hazardous materials. These sites are primarily registered, historic or current LUST cleanup sites. There are also DTSC cleanup sites, former brownfields, and other industrial facilities that handle small amounts of hazardous wastes. These offsite facilities are mapped in the San Pablo General Plan Environmental Impact Report. Although they are not located in the Specific Plan area, releases and leaks in surrounding areas may lead to contamination of groundwater that can migrate beyond the property boundary of the original release site.

Wildfire Hazards

Wildfire hazard potential is largely dependent on the extent and type of vegetation, known as surface fuels, that exist within a region. Wildfire hazards are typically highest in wooded areas as trees are a greater source of fuel than low-lying brush or grass. Residential neighborhood areas have minimal surface fuels and therefore have a lower fire hazard. Wildfire hazard data for the Specific Plan area is provided by the California Department of Forestry and Fire Protection's Fire and Resource Assessment Program (FRAP). According to FRAP's Statewide Fire Threat Map,¹ which combines expected fire frequency with potential fire behavior to create four threat classes ranging from little or no fire threat to very high fire threat, the majority of the Planning Area is considered to have either little or no threat of wildfire.² Less than one percent of the Planning Area has a high or very high threat of fire. Wildfire hazard is mapped on **Figure 3.10-1**.

Regulatory Setting

Hazardous materials and hazardous wastes are extensively regulated by federal, State, regional and local regulations, with the major objective of protecting public health and the environment. In general, these regulations provide definitions of hazardous substances; identify responsible parties; establish reporting requirements; set guidelines for handling, storage, transport, remediation, and disposal of hazardous materials and wastes; and require health and safety provisions for both workers and the public, such as emergency response and worker training programs. Sites which are subject to these regulations are identified on periodically-updated published lists at the federal, state, and local levels; the regulated sites include LUST locations. The major regulations relevant to the proposed Project are summarized in the subsections that follow.

¹ <http://frap.cdf.ca.gov/data/frapgisdata/output/fthrt.txt>

² Association of Bay Area Governments (ABAG), 2010.

Figure 3.10 -1
Hazardous Materials and Wild Fire Hazards

-  Leaking Underground Storage Tanks
-  Little or No Fire Threat
-  Moderate Fire Threat
-  Very High Fire Threat

 Creek (dashed where underground)

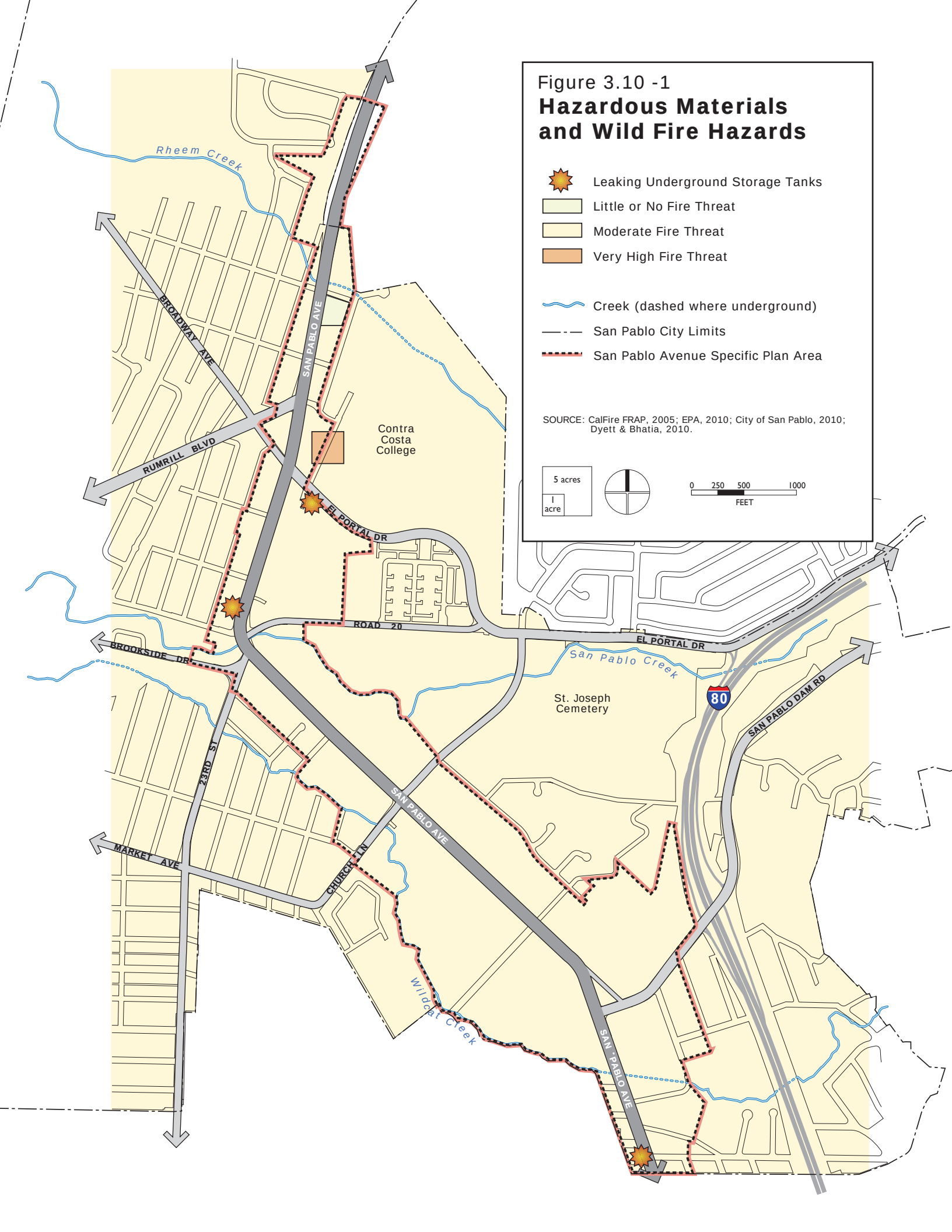
 San Pablo City Limits

 San Pablo Avenue Specific Plan Area

SOURCE: CalFire FRAP, 2005; EPA, 2010; City of San Pablo, 2010; Dyett & Bhatia, 2010.



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 FEET



Definitions

Hazardous Materials

Hazardous materials are substances with certain physical or chemical properties that could pose a substantial present or future hazard to human health or the environment when improperly handled, disposed, or otherwise managed. Title 22 of the California Code of Regulations, Division 4.5, Chapter 11, Article 3 groups hazardous materials into the following four categories based on their properties: toxic (causes human health effects), ignitable (has the ability to burn), corrosive (causes severe burns or damage to materials), and reactive (causes explosions or generates toxic gasses). Hazardous materials are commonly used in commercial, agricultural and industrial applications as well as in residential areas to a limited extent.

Hazardous Waste

A hazardous waste is any waste that may (1) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness, or (2) pose a substantial present or potential hazard to human health or the environment, due to factors including, but not limited to, carcinogenicity, acute toxicity, chronic toxicity, bio-accumulative properties, or persistence in the environment, when improperly treated, stored, transported, or disposed of, or otherwise managed (California Health and Safety Code, Section 25141). Hazardous materials and wastes can result in public health hazards if improperly handled, released into the soil or groundwater, or released into the air through vapors, fumes, or dust.

Asbestos-Containing Materials

Asbestos is a naturally occurring fibrous material once commonly used as a fireproofing and insulating agent in building construction before such uses were banned by the EPA in the 1970s. Asbestos can also be atmospherically deposited from vehicle brake shoes. Naturally occurring asbestos can be found in serpentinite or other metamorphosed ultramafic rocks such as dunite, peridotite, and pyroxenite. According to large scale mapping of ultramafic rocks in California, there may be ultramafic rocks present at near surface locations just east of Highway 80 either in or close to the City of San Pablo.³

Lead and Lead-Based Paint

The presence of lead in soils above natural background levels can be a common occurrence in areas that were created by fill and in former industrial areas. Lead concentrations can also be elevated in fill materials because the fill can originate from building and industrial rubble containing or affected by sources of lead such as piping, coatings, and other construction materials. The California Code of Regulations, Title 22, considers waste soil to be hazardous if its total lead concentration exceeds 1,000 parts per million (ppm) and a soluble concentration exceeds 5 ppm. Tetraethyl lead (TEL) may be present from aerially deposited lead (ADL) from historic traffic. TEL was a gasoline additive, and although it is no longer used, it is persistent in surface and shallow soils.

Polychlorinated Biphenyls (PCBs)

Polychlorinated Biphenyls (PCBs) are synthetic organic oils that were historically used in many types of electrical equipment, including transformers and capacitors, primarily as electrical insulators. Production

³ California Division of Mines and Geology (CDMG), 2000.

and use of PCBs was discontinued in 1977 following the discovery that exposure to PCBs may cause various health effects including skin conditions and reduced immune system response.

Polycyclic Aromatic Hydrocarbons (PAHs)

Polycyclic Aromatic Hydrocarbons (PAHs) are a group of organic chemicals found in a wide variety of materials, including crude oil, asphalt, and creosote. Most refined petroleum products also contain PAHs, either retained from the original crude or produced during the refining process. PAHs are also produced as combustion products and therefore occur in many burned or charred materials. Chemically, PAHs have high to very high molecular weights and low solubility in water, and tend to adhere to soil particles. These factors result in generally high mobility of PAHs in the environment. Elevated concentrations of PAHs may occur in soils throughout San Pablo due to the presence of historic fill and the variety of previous uses in the area. The U.S. EPA has classified seven PAH compounds as probable human carcinogens.⁴

Federal Regulations

The U.S. EPA is the lead agency responsible for enforcing federal regulations that affect public health or the environment. The primary federal laws and regulations include the Resource Conservation and Recovery Act of 1976 (RCRA) and the Hazardous and Solid Waste Amendments enacted in 1984; the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA); and the Superfund Act and Reauthorization Act of 1986 (SARA). Federal statutes pertaining to hazardous materials and wastes are contained in the Code of Federal Regulations (CFR), Title 40.

State and Regional Regulations

The U.S. EPA has delegated much of its regulatory authority to the individual states. The DTSC of the California EPA, formerly a division of the Department of Health Services, enforces hazardous materials and waste regulations in California, in conjunction with the U.S. EPA. The DTSC is responsible for regulating the management of hazardous substances including the remediation of sites contaminated by hazardous substances. California hazardous materials laws incorporate federal standards, but are often more strict than federal laws. The primary State laws include the California Hazardous Waste Control Law (HWCL; the state equivalent of RCRA); and the Carpenter-Presley-Tanner Hazardous Substance Account Act (HSAA; the State equivalent of CERCLA). State hazardous materials and waste laws are contained in the California Code of Regulations, Titles 22 and 26.

The RWQCB is authorized by the State Water Resources Control Board (SWRCB) to enforce provisions of the Porter-Cologne Water Quality Control Act of 1969. This act gives the RWQCB authority to require groundwater investigations when the quality of groundwater or surface waters of the State are threatened and to remediate the site, if necessary. The Bay Area Air Quality Management District (BAAQMD) may impose specific requirements on remediation activities to protect ambient air quality from dust or other airborne contaminants.

State laws also regulate USTs and Aboveground Storage Tanks (ASTs) containing hazardous substances. These laws are primarily found in the Health and Safety Code, and, combined with CCR Title 23, comprise the requirements of the State UST program. The laws contain requirements for UST permitting, construction, installation, leak detection monitoring, repairs and corrective actions and

⁴ U.S. Environmental Protection Agency (EPA), 2010.

closures. In accordance with State laws, the Contra Costa Department of Environmental Health implements UST and AST regulations in Contra Costa County.

Hazardous Materials Transport

The U.S. Department of Transportation regulates hazardous materials transportation. State agencies with primary responsibility for enforcing federal and State regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol and the California Department of Transportation. Together, these agencies determine container types used and license hazardous waste haulers for hazardous waste transportation on public roads.

Hazardous Materials Worker Safety Requirements

The Federal Occupational Safety and Health Administration (Fed/OSHA) and the California Occupational Safety and Health Administration (Cal/OSHA) are the agencies responsible for assuring worker safety in the handling and use of chemicals in the workplace. The federal regulations pertaining to worker safety are contained in the Code of Federal Regulations, Title 29 (29 CFR) as authorized in the Occupational Safety and Health Act of 1970. They provide standards for safe workplaces and work practices, including standards relating to hazardous materials handling. In California, Cal/OSHA assumes primary responsibility for developing and enforcing workplace safety regulations; Cal/OSHA standards are generally more stringent than federal regulations.

The State regulations concerning the use of hazardous materials in the workplace are included in Title 8 of the California Code of Regulations, which contain requirements for safety training, availability of safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation. Cal/OSHA also enforces hazard communication program regulations, which contain worker safety training and hazard information requirements, such as procedures for identifying and labeling hazardous substances, communicating hazard information relating to hazardous substances and their handling, and preparation of health and safety plans to protect workers and employees at hazardous waste sites.

Waste Disposal Regulations

The disposal of contaminated soil is regulated by the RWQCB and is regulated based on the concentrations of the chemical constituents that are present. Soils having concentrations of contaminants higher than certain acceptable levels must be handled and disposed as hazardous waste when excavated. The California Code of Regulations, Title 22, Section 66261.20-24 contains technical descriptions of characteristics that would cause a soil to be classified as a hazardous waste.

City of San Pablo Ordinances

The following is a summary of relevant City of San Pablo ordinances related to hazardous materials as found in Title 8 (Health & Safety), Chapter 8.24, Flammable Liquids.

8.24.030 - Location of structures with regard to sources which would cause ignition of places of human occupancy. No rack, platform or other structure which is used in cleaning tanks or containers of flammable liquids, fumes or vapors shall be located less than seventy-five feet from any source which could cause ignition of any place of human occupancy.

8.24.040 - Parking of trucks and trailers with regard to sources which would cause ignition of places of human occupancy. No mobile tank truck or trailer shall be parked less than seventy-five feet from any source which could cause ignition of place of human occupancy.

8.24.050 - Dispelling hazardous gases prohibited. Toxic vapors, fumes, or other contaminants shall not be dispelled so as to cause a hazard in residential areas.

8.24.060 - Fire extinguishers on premises required. There shall be present on the premises and maintained in working condition such suitable fire equipment, including extinguishers required for flammable liquid fires, as required by the fire chief for the San Pablo fire protection district.

8.28.020 - Abatement—Notification. Whenever the public works department of the city finds and determines that any tree or shrub or other vegetation is dead and constitutes a fire hazard or other hazard by reason of possible breaking or falling, then the owner shall be notified by posting a notice on said property for a period of thirty days to abate and remove said dead trees or shrubbery or other similar growth from his property within thirty days.

Wildfire Regulations

California Wildland Hazard/Building Code

On September 20, 2005, the California Building Standards Commission approved the Office of the State Fire Marshal's emergency regulations amending the California Code of Regulations (CCR), Title 24, Part 2, known as the 2007 California Building Code (CBC).

New buildings located in any Fire Hazard Severity Zone shall comply with one of the following:

- A. *State Responsibility Areas.* New buildings located in any Fire Hazard Severity Zone within State Responsibility Areas, for which an application for a building permit is submitted on or after January 1, 2008, shall comply with all sections of this chapter.
- B. *Local Agency Very-High Fire Hazard Severity Zone.* New buildings located in any Local Agency Very High Fire Hazard Severity Zone for which an application for a building permit is submitted on or after July 1, 2008, shall comply with all sections of this chapter.
- C. *Wildland-Urban Interface Fire Area.* New buildings located in any Wildland-Urban Interface Fire Area designated by the enforcing agency for which an application for a building permit is submitted on or after January 1, 2008, shall comply with all sections of this chapter.

The City of San Pablo is not designated as a fire hazard severity zone or a wildland-urban interface fire area.⁵

Contra Costa County Fire Protection District

The County Fire Department is responsible for conducting inspection for code compliance and fire-safe practices, permitting of certain hazardous materials, and for investigation of fire and hazardous materials incidents.

⁵ California Department of Forestry and Fire Protection, 2010.

IMPACT ANALYSIS

Significance Criteria

Implementation of the proposed Project would have a potentially significant adverse impact if it would:

- Criterion 1:** Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- Criterion 2:** Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions resulting in the release of hazardous materials into the environment.
- Criterion 3:** Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- Criterion 4:** Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.
- Criterion 5:** Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- Criterion 6:** Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Methodology and Assumptions

Hazardous Materials

An electronic file search was conducted to identify any historic or current hazardous sites within the Planning Area. Environmental databases searched include EnviroStor and Cal-Sites maintained by DTSC, and the GeoTracker database maintained by the State Water Resources Control Board.

Wildfire

The Fire Threat Map for the Planning Area was downloaded from the California Department of Forestry and Fire Protection's Fire and Resource Assessment Program (FRAP) website to conduct analysis on potential wildfire risks in San Pablo.

Impact Summary

PROPOSED PROJECT IMPACT	MITIGATION MEASURE	SIGNIFICANCE AFTER MITIGATION
Implementation of the proposed San Pablo Avenue Specific Plan could result in exposure to residents or workers of hazardous materials or wastes from areas where releases of hazardous materials such as from underground fuel storage tanks have occurred.	None required	Less than significant
Implementation of the proposed San Pablo Avenue Specific Plan could result in the disturbance of structures containing hazardous building materials, such as lead-based paint, asbestos, and PCBs which could expose and adversely affect workers, the public, or the environment if not handled appropriately.	None required	Less than significant
Implementation of the proposed San Pablo Avenue Specific Plan could result in new office, medical, and commercial uses that would involve the transportation, use, and storage of hazardous chemicals, which could present public health and/or safety risks to facility workers, patients and visitors, and the surrounding area.	None required	Less than significant

Since less than one percent of the Specific Plan Planning Area has a high or very high threat of wildfire according to wildfire hazard data provided by the Department of Forestry and Fire Protection, and since most land use changes in the proposed General Plan are in existing urban infill sites, implementation of the proposed General Plan is not expected to increase the threat of wildfire hazards. This impact is evaluated no further in this EIR.

Impacts and Mitigation Measures

Impact

3.10-1 Implementation of the proposed San Pablo Avenue Specific Plan could result in exposure to residents or workers of hazardous materials or wastes from areas where releases of hazardous materials such as from underground fuel storage tanks have occurred. (*Less than Significant*)

As described in the Environmental Setting section, there are three known sites within the Specific Plan area with active leaking underground storage tanks. They include the ARCO #2030 site, which is currently under verification and being monitored, and the DWB Partners Property and the World Oil #24 sites, which are awaiting remediation. The conditions at these sites could expose individuals living or working nearby to hazardous fumes and contaminated groundwater. In addition, if these sites are not remediated before redevelopment, construction workers and future residents may be exposed to contaminated soil and other chemical constituents. The exposure to hazardous materials poses a potentially significant threat to human health and the environment.

Various federal, State, and regional regulations govern the proper storage, handling, and transport of hazardous materials. Developers wishing to develop on these sites would have to apply for permits and

perform cleanup and remediation actions required by overseeing agencies such as the Regional Water Quality Control Board and the Department of Toxic Substances Control. Furthermore, the proposed San Pablo General Plan and proposed Specific Plan include several policies that would reduce the potential impact of hazardous materials to residents and workers. The implementation of these policies would reduce the potential impacts from hazardous sites to a less than significant level.

Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

PSCU-G-8 *Enhance waste reduction and recycling in San Pablo.*

PSCU-I-39 Require recycling collection services in all residential and non-residential buildings.

PSCU-I-40 Promote the importance of waste reduction and recycling, as well as the safe disposal of hazardous materials, to San Pablo residents and businesses owners.

Avenues of communication of waste reduction and conservation messages may include articles in local newsletters, advertisements in local newspapers, and the City website.

SN-G-4 *Reduce the risk to the health of San Pablo residents from exposure to hazardous materials.*

SN-G-5 *Promote the reduction, recycling, and safe disposal of household and business hazardous wastes through public education and awareness.*

SN-I-20 Require applicants for development in a potentially contaminated location to perform inspection and cleanup if the site is found to be contaminated with hazardous substances.

The City will require the project applicant to have the site inspected by a registered Environmental Assessor. Reports detailing the results must be submitted for City review. The level of remediation and cleanup will be in compliance with federal and State standards.

SN-I-21 Continue to support West Contra Costa Integrated Waste Management District's Household Hazardous Waste Drop-off Program, and encourage citizens and crime watch organizations to report unlawful dumping of hazardous materials.

SN-I-22 Ensure that the production, use, storage, disposal, and transport of hazardous materials conform to standards specified in the County Hazardous Waste Management Plan.

SN-I-23 Coordinate with Contra Costa County Health Services, the Contra Costa County Fire District, and other appropriate regulatory agencies in hazardous material emergency response and the review of all proposals that uses hazardous materials, or those properties that may have toxic contamination, such as petroleum hydrocarbons, CAM 17, metals, asbestos, and lead.

Proposed Specific Plan Policies that Reduce the Impact

8-G-4 *Ensure that infill and redevelopment in the San Pablo Avenue Specific Plan corridor minimize exposure to hazardous materials and toxic air contaminants.*

- 8-I-7 Require remediation and cleanup of any contaminated sites in the Specific Plan Planning Area to levels required for the proposed new land use, where hazardous materials have impacted soil, surface water, or groundwater. Remediation and cleanup will be in compliance with federal and State standards. Documentation of the site investigation and cleanup will be provided to City staff during development project review.
- 8-I-8 Require new residential projects within the Specific Plan Planning Area, and other potential projects in the area which may also be categorized as sensitive receptors (such as nursing home facilities, retirement living facilities, school or daycare facilities), to be located an adequate distance from existing and potential sources of TACs and odors, in accordance with the BAAQMD's Air Quality and Land Use Handbook (2005) recommendations, or the latest resource the air district has available. Existing stationary TAC sources in the Planning Area are mapped in Figure 8-1; however, project proponents are expected to check BAAQMD databases for the latest data on stationary TAC sources.
- 8-I-9 Require proponents of projects within 100 feet of existing hazardous materials case sites or TAC sources (as mapped on Figure 8-1) to investigate use compatibility at the location in question (some kinds of uses might be at lower risk than others), as well as potential feasible design-related risk mitigation measures. Project proponents must provide evidence to the City of consultation with the BAAQMD and the RWQCB in making refinements to project designs to reduce applicable hazardous materials and/or toxic air contaminant risk.

Mitigation Measures

None required.

Impact

3.10-2 Implementation of the proposed San Pablo Avenue Specific Plan could result in the disturbance of structures containing hazardous building materials, such as lead-based paint, asbestos, and PCBs which could expose and adversely affect workers, the public, or the environment if not handled appropriately. (*Less than Significant*)

Demolition of any existing structures, especially older structures where these hazardous building materials were commonly used in construction, could expose construction workers, the public, or the environment to these materials. The level of potential impact is dependent upon the age, construction, and building materials in each building and the protocols employed for demolition. However, there are established measures that certified contractors commonly use to contain, store, and dispose of these hazardous materials in a manner which limits exposure. The first step towards appropriate handling and demolition is conducting thorough surveys to identify the presence of these materials. ACMs are regulated both as a hazardous air pollutant under the Clean Air Act and as a potential worker safety hazard under the authority of Cal-OSHA. Cal-OSHA also regulates worker exposure to lead-based paint. Potential exposure to these hazardous building materials can be reduced through appropriate use of personal protective equipment, isolation and containment of work areas, and placement of waste in approved transport containers.

Both the federal OSHA and Cal-OSHA regulate worker exposure during construction activities that disturb lead-based paint. The Interim Final Rule found in 29 CFR 1926.62 covers construction work in which employees may be exposed to lead during such activities as demolition, removal, surface preparation for repainting, renovation, cleanup, and routine maintenance. The OSHA-specified compliance includes respiratory protection, protective clothing, housekeeping, special high-efficiency filtered vacuums, hygiene facilities, medical surveillance, and training. No minimum level of lead is specified to activate the provisions of this regulation.

Adherence to existing regulations is also contained in policy SN-I-4 of the proposed San Pablo General Plan which would help reduce the potential for hazardous building materials to impact the environment or the public. The policy requires that any disturbances to buildings with hazardous building materials to adhere to all applicable regulations. Therefore, proposed redevelopment of older existing facilities would be required to adhere to appropriate identification and abatement procedures by certified contractors who employ practices that limit the exposure of hazardous building materials, where present. Therefore, the regulations mentioned above and the following General Plan policies render this a less than significant impact.

Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

Proposed San Pablo General Plan policies mentioned under Impact 3.10-1 would also help reduce this impact to a level that is less than significant. No additional mitigation is needed.

The following programs are from the Housing Element:

Program H-1.2.2: Continue a modified Residential Paint Rebate Program to encourage residents to paint and maintain their homes. Modify the program by including a lead paint remediation educational component, to encourage households to complete safe and effective remediation for homes with lead paint hazards. Additionally, implement a tracking system to record the number of applications and approvals under this program each year, and the number and location of participant households with identified lead paint hazards.

Program H-4.1.5: Facilitate environmentally sensitive construction practices by:

- Restricting the use of chloroflourocarbons (CFCs), hydrochloroflourocarbons (HCFCs), and halons in mechanical equipment and building materials;
- Promoting the use of products that are durable and allow efficient end-of-life disposal (recyclable);
- Requiring large project applicants to submit a construction waste management plan for City approval;
- Promoting the use of locally or regionally available materials; and
- Promoting the use of cost-effective design and construction strategies that reduce resource and environmental impacts.

Proposed Specific Plan Policies that Reduce the Impact

DG-42 Utilize materials which have low embodied energy, are rapidly renewable, locally available, and do not give off harmful vapors.

Mitigation Measures

None required.

Impact

3.10-3 Implementation of the proposed San Pablo Avenue Specific Plan could result in new office, medical, and commercial uses that would involve the transportation, use, and storage of hazardous chemicals, which could present public health and/or safety risks to facility workers, patients and visitors, and the surrounding area. (*Less than Significant*)

Future office, medical and commercial land uses proposed by the Specific Plan would likely involve the use, storage, transportation, and disposal of hazardous materials such as paints, solvents, cleaning agents, and other chemicals. Improper handling and accidents involving these substances could expose workers, residents, and the environment to hazardous materials.

The use, transportation, storage, and disposal of hazardous materials are subject to federal, State, and regional regulations. Hazardous materials would be required to be transported under DOT regulations. The proposed Specific Plan area would be subject to hazardous materials programs and ordinance administered by Contra Costa County and the County Fire Protection District. Businesses associated with aboveground and underground storage tanks and the generation of hazardous waste must be permitted and inspected annually by the Contra Costa Health Services Hazardous Materials Program.

In addition to mandatory compliance with the abovementioned regulations, the proposed General Plan and San Pablo Avenue Specific Plan contains policies that promote the safe-handling, proper disposal, and awareness of the dangers of hazardous materials. These policies would help reduce this impact to a less than significant level.

Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

Policies PSCU-G-8, SN-G-5, SN-I-22 and SN-I-23 listed under Impact 3.10-1 would help reduce this impact to a level that is less than significant.

Proposed Specific Plan Policies that Reduce the Impact

Policies 8-I-8 and 8-I-9 listed under Impact 3.10-1 would also help reduce this impact to a level that is less than significant.

Mitigation Measures

None required.

3.11 Cultural Resources

This section identifies cultural resources in the Planning Area, their environmental and regulatory settings, and analyzes potential impacts from the implementation of the San Pablo Avenue Specific Plan. Cultural resources evaluated include historic resources, contemporary Native American resources, archaeological resources, and paleontological resources.

ENVIRONMENTAL SETTING

Physical Setting

Bay Area Prehistoric Resources

Prehistoric cultural resources are composed of Native American structures or sites of historical or archaeological interest. These may include districts, buildings, objects, landscape elements, sites, or features that reflect human occupations of the region, such as villages and burial grounds.

The moderate climate, combined with the abundant natural resources found throughout the nine-county region, has supported human habitation for several thousand years. The prehistoric occupation of Central California can be interpreted using the Paleo-Archaic-Emergent chronological sequence.¹ The sequence consists of three broad periods: The Paleo-Indian period (10,000 – 6,000 B.C.); the Archaic period consisting of the Lower Archaic (6,000 – 3,000 B.C.), Middle Archaic (3,000 – 1,000 B.C., and Upper Archaic (1,000 B.C. – A.D. 500); and the Emergent period (A.D. 500 – 1800). The entry and spread of people into California dates to the Paleo-Indian period and human occupation in what is now Contra Costa County dates to the Middle Archaic period.² The cultural patterns relevant to the project area include the Windmill Pattern and Berkeley Pattern during the Archaic period and the Augustine Pattern during the Emergent period.

The Windmill Pattern was characterized by small communities of hunters and gatherers who moved seasonally. Material attributes typical of the Windmill Pattern include large leaf-shaped and stemmed projectile points, westerly oriented extended burials with grave offerings or burial goods such as red ocher, and a distinctive variety of shell beads and charmstones.³ Subsistence was based on hunting large animals including deer and elk, along with smaller game animals such as water fowl. Fishing also occurred along with the gathering of nuts and fruits.

¹ D.A. Fredrickson, 1974.

² M.J. Moratto, 1984.

³ M. Ember and P.N. Peregrine, 2001.

The Berkeley Pattern was characterized by larger communities with more permanent settlement patterns. Material attributes typical of the Berkeley Pattern include projectile points with distinctive diagonal flaking across their faces, flexed position burials with burial ornaments such as shell beads, and an extensive bone tool industry. During this Pattern, a heavy reliance was developed on acorns which were used throughout the year as a staple food.⁴ Food was also obtained through a combination of hunting, fishing, and gathering. Tools were more diverse than the Windmill Pattern, and included specialized fish spears and hunting gear along with bone and ground-stone tools.

The Augustine Pattern was characterized by large sedentary communities. Material attributes typical of the Augustine Pattern include large spear points, often with serrated edges, and small arrow points, bone harpoons, ceramics and coiled basketry, and flexed position burials, and evidence of the practice of cremation.⁵ Hunting and gathering was practiced broadly and important technological innovations include the bow and arrow and shaped mortars and pestles. This late prehistoric pattern predated the Miwok who occupied central California at the time of Spanish contact.⁶

According to research, “by about 10,000 years ago, California’s Paleo-Coastal peoples were traveling in seaworthy boats, using fishhooks and other fishing tackle, hunting marine mammals and sea birds, weaving cordage and basketry from sea grass, and making shell beads for ornamental use and exchange with interior peoples.”⁷ Rising sea levels, the formation of the San Francisco Bay, and the resulting filling of inland valleys have covered early sites, which were most likely located along the then existing bay shore and waterways. Existing evidence indicates the presence of many village sites from at least 5,000 B.C. in the region. The arrival of Native Americans into the Bay Area is associated with documented cultural resources from circa 5,500 B.C.⁸

Contra Costa County

By approximately 1,500 B.C., peoples with three different language groups inhabited portions of Contra Costa: the Costanoan (Ohlone), the Bay Miwok, and the Northern Valley Yokuts (considered to be the final Native American group to arrive in the Bay Area). These three cultures all occupied the Bay Area when the Spanish arrived in the 18th century. Evidence of their political, social, spiritual and economic activities is known through both archaeological investigations and ethnographic evidence.

The Costanoan speakers inhabited the western hills, plains, and the Bay shore from the Carquinez Straits south to Salinas. Many of the village sites were associated with a permanent source of fresh water and were frequently located at the mouth of streams along the Bay shore. Numerous villages were also established inland along permanent streams and on terraces at the base of hills. Special use and seasonal use sites were established throughout their territories, often in association with rock outcrops or abundant food sources.

⁴ M. Ember and P.N. Peregrine, 2001.

⁵ *Ibid.*

⁶ S.J. Fiedel, 1992.

⁷ T. Jones and K. Klar, 2007.

⁸ U.S. Dept. of Interior, 1990.

San Pablo Archaeological and Native American Resources

San Pablo is located within the historic territory of the Huchuin Indians, speakers of the Costanoan/Ohlone language. The Huchuin band of the Ohlone homeland (the word Huchuin simply means “people”) was high in the western hills of West Contra Costa County. Based on an evaluation of the environmental setting and features associated with known sites, Native American cultural resources in this part of the region have been found near sources of water including perennial and intermittent streams and springs, on midslope terraces and elevated knolls above the flood plain, and near ecotones and other productive environments. The Specific Plan area is adjacent to one principle stream—Wildcat Creek, and is cut across by another principal stream— San Pablo Creek. Given the presence of these water bodies and ecotones, coupled with known habitation sites, there is a high likelihood that unrecorded Native American cultural sites exist in the Specific Plan area.

According to Sonoma State University Northwest Information Center’s (NWIC) inventory review, the City of San Pablo contains seven recorded Native American cultural resources. All of these resources represent habitation sites and three of the seven have recorded burials. Specifically, one Native American archaeological site has an eligibility status code of 2D2, meaning it is a contributor to a district determined eligible for the National Register by consensus. Unlike historic sites, the location of archaeological sites is restricted by the federal Archaeological Resources Protection Act (ARPA) in order to prevent looting, vandalism, and destruction of archaeological resources. As a result, they are not indicated on a map.

Historic Resources

The arrival of the Spanish and the development of the mission system in the latter half of the 18th century permanently disrupted the indigenous societies flourishing in the area. Native American settlements were abandoned and replaced with agricultural land, housing, and military support for the missions. The “Missionization” of the local Indian tribes and the establishment of ranchos and towns drastically altered the indigenous people’s traditional lifeways, displaced many tribes, and introduced diseases that greatly reduced their population. After the Mexican revolt against Spain in 1822, California lands came under Mexican rule and large tracts of land, including the former missions, were granted to individual owners. It was during the Mexican era that most of the historic ranch lands and associated living quarters and operational structures originate.

Mexico ceded control of California to the United States at the end of the Mexican-American War (1846-1848), and the discovery of gold in the late 1840s brought thousands of prospectors and settlers into California. This Gold Rush period began to transform the culture, demographics, and landscape to a more “American” California. The Bay Area became the gateway to the gold of the Sierra Nevadas, with rapid growth occurring in several of the region’s fledgling cities.

Contra Costa County has a diverse range of historic districts, structures, archaeological sites, and landmarks representing the diverse population that occupied California during the historic period. Numerous buildings in San Pablo survive from the Mexican and American periods and provide a link to the historic-era development of the city. According to the NWIC records search based on address, there are 58 historic buildings and structures listed by the Office of Historic Preservation’s Historic Property Directory (HPD) in San Pablo. Of those 58 listings, only five are located in the San Pablo Avenue Specific Plan Planning Area. Of those five, only one (Old Rectory) appear eligible for future registration on the National Register. In addition, the Alvarado Adobe is listed as a State Historic Landmark

(Number #512). The status of these resources is listed in more detail in **Table 3.11-1** and illustrated in **Figure 3.11-1**.

TABLE 3.11-1 BUILDINGS WITH POTENTIAL HISTORIC SIGNIFICANCE

NO.	ADDRESS	YEAR BUILT	HISTORICAL NAME	CODE
1	Alvarado Square	1905	Blume House	7R
2	Alvarado Square	1890	Texiera Home	7R
3	1901 Church Lane	1875	Old Rectory	2S2
4	13831 San Pablo Ave	1826	Alvarado Adobe	7N
5	14006 San Pablo Ave	1875	Mello Residence	7R

Note: Resource Codes from the Office of Historic Preservation denote the following:

2S2: Individual property determined to be eligible for National Register by consensus through Section 106 process. Listed in the California Register.

3S: Appears eligible for National Register as an individual property through survey evaluation.

6Y: Determined to be ineligible for National Register by consensus through Section 106 process, but not evaluated for California Register or Local Listing.

7N: Needs to be re-evaluated.

7R: Identified in reconnaissance level study. Not evaluated for National Register, California Register, and needs evaluation.

Sources: Office of Historic Preservation, Northwest Information Center, Sonoma State University, 2008.

Regulatory Setting

Definitions

Archaeological Resources

Archaeological resources are places where human activity has measurably altered the earth or left deposits of physical remains. Archaeological resources may be either prehistoric (before the introduction of writing in a particular area) or historic (after the introduction of writing). The majority of such places in this region are associated with either Native American or Euroamerican occupation of the area. The most frequently encountered prehistoric and early historic Native American archaeological sites are village settlements with residential areas and sometimes cemeteries; temporary camps where food and raw materials were collected; smaller, briefly occupied sites where tools were manufactured or repaired; and special-use areas like caves, rock shelters, and sites of rock art. Historic archaeological sites may include foundations or features such as privies, corrals, and trash dumps.

Historic Resources

Historic resources are standing structures of historic or aesthetic significance. Architectural sites dating from the Spanish Period (1529-1822) through the early years of the Depression (1929-1930) are generally considered for protection if they are determined to be historically or architecturally significant. These may include missions, historic ranch lands, and structures from the Gold Rush and the region's early industrial era. Post-Depression sites may also be considered for protection if they could gain historic significance in the future. Historic resources are often associated with archaeological deposits of the same age.

Contemporary Native American Resources

Contemporary Native American resources, also called ethnographic resources, can include archaeological resources, rock art, and the prominent topographical areas, features, habitats, plants, animals, and minerals that contemporary Native Americans value and consider essential for the preservation of their traditional values.

Paleontological Resources

Paleontological resources are the mineralized (fossilized) remains of prehistoric plant and animal life exclusive of human remains or artifacts. Fossil remains such as bones, teeth, shells, and leaves are found in geologic deposits (rock formations) where they were originally buried.

Federal Regulations

National Historic Preservation Act

The National Historic Preservation Act (NHPA) is the most prominent federal law dealing with historic preservation. The NHPA established guidelines to “preserve important historic, cultural, and natural aspects of our national heritage, and to maintain, wherever possible, an environment that supports diversity and a variety of individual choice.” The NHPA includes regulations specifically for federal land-holding agencies, but also includes regulations (Section 106) which pertain to all projects that are funded, permitted, or approved by any federal agency and which have the potential to affect cultural resources. All projects that are subject to the National Environmental Policy Act (NEPA) are also subject to compliance with Section 106 of the NHPA. Furthermore, all projects that are carried out by Caltrans are also subject to Section 106. At the federal level, the Office of Historic Preservation (OHP) carries out reviews under Section 106 of the NHPA.

The Section 106 review process normally involves a four-step procedure described in detail in the Section 106 Regulations (36 CFR Part 800):

- Identify and evaluate historic properties in consultation with the State Historic Preservation Officer (SHPO) and interested parties;
- Assess the effects of the undertaking on properties that are eligible for inclusion in the NRHP;
- Consult with the SHPO, other agencies, and interested parties to develop an agreement that addresses the treatment of historic properties and notify the Advisory Council on Historic Preservation; and
- Proceed with the project according to the conditions of the agreement.

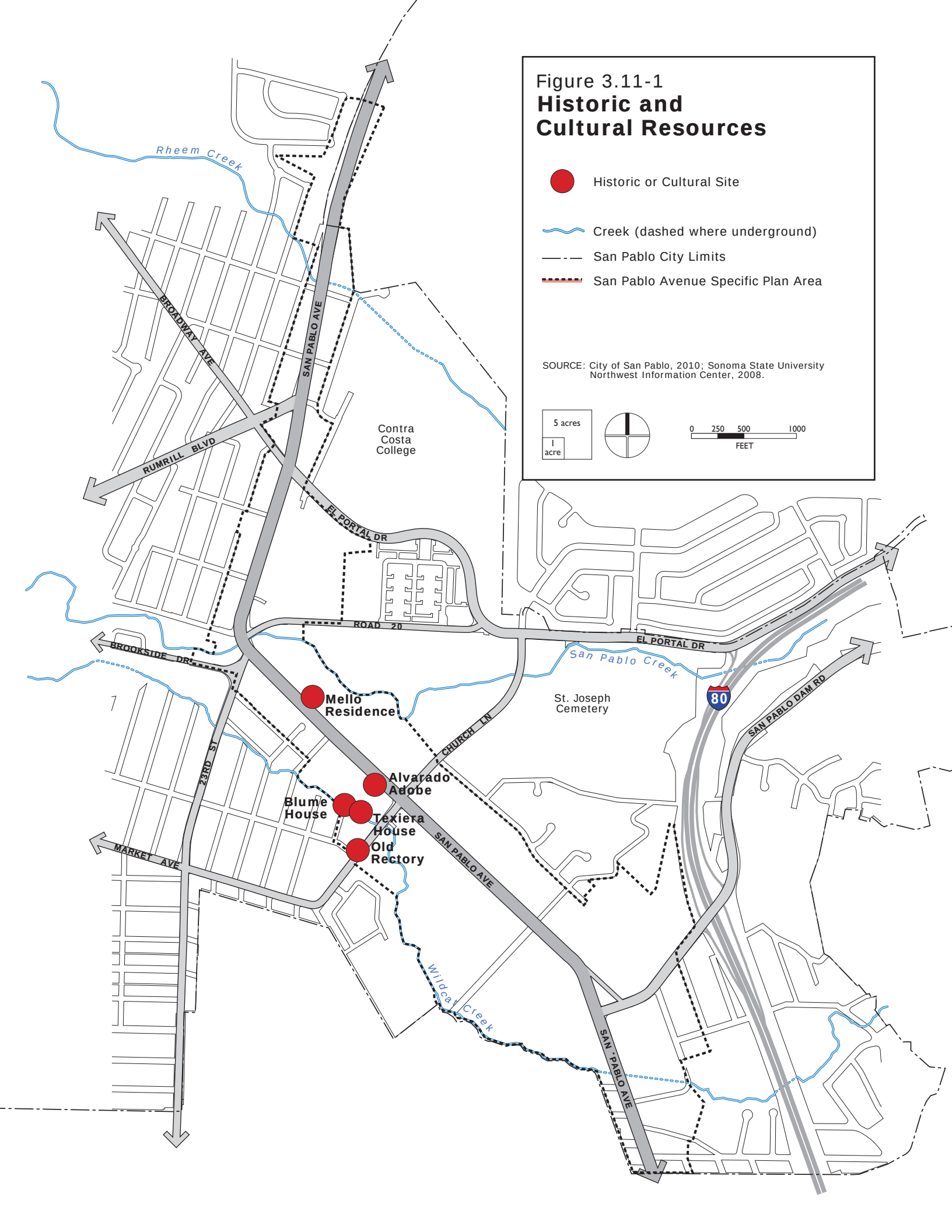
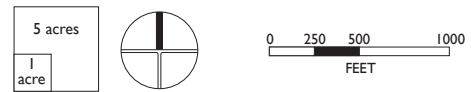
National Register of Historic Places

Additionally, the NHPA authorizes the Secretary of the Interior to establish a National Register of Historic Places (National Register), an inventory of districts, sites, buildings, structures, and objects significant on a national, State, or local level in American history, architecture, archeology, engineering, and culture. The National Register is maintained by the National Park Service, the Advisory Council on Historic Preservation, State Historic Preservation Office, and grants-in-aid programs.

Figure 3.11-1
Historic and Cultural Resources

-  Historic or Cultural Site
-  Creek (dashed where underground)
-  San Pablo City Limits
-  San Pablo Avenue Specific Plan Area

SOURCE: City of San Pablo, 2010; Sonoma State University Northwest Information Center, 2008.



National Environmental Policy Act (NEPA)

Specific projects that are subject to NEPA must also comply with NEPA requirements for the consideration of cultural resources. Compliance with NEPA requirements concerning cultural resources may be addressed through compliance with Section 106 of the NHPA. Reports, agreements, and correspondence documenting compliance with Section 106 of the NHPA are provided to the lead NEPA agency for a specific proposed action that is subject to NEPA.

State Regulations

Office of Historic Preservation

The mission of the OHP and the State Historical Resources Commission (SHRC) is to preserve and enhance California's irreplaceable historic heritage as a matter of public interest so that its vital legacy of cultural, educational, recreational, aesthetic, economic, social, and environmental benefits will be maintained and enriched for present and future generations.⁹ California Public Resources Code 5024 requires consultation with the State Historic Preservation Officer (SHPO) when a project may impact historical resources located on State-owned land.

California Register of Historic Resources

The SHPO also maintains the California Register of Historic Resources (California Register). Historic properties listed, or formally designated for eligibility to be listed, on the National Register are automatically listed on the California Register (PRC Section 5024.1). State Landmarks and Points of Interest are also automatically listed. The California Register can also include properties designated under local preservation ordinances or identified through local historic resource surveys.

For a historic resource to be eligible for listing on the California Register, it must be significant at the local, State, or national level under one or more of the following four criteria:

- It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States;
- It is associated with the lives of persons important to local, California, or national history;
- It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or
- It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation (California Public Resources Code).

California Environmental Quality Act

21083.2: Archaeological Resources

CEQA directs the lead agency on any project undertaken, assisted, or permitted by the State to include in its environmental impact report for the project a determination of the project's effect on unique archeological resources; defines unique archeological resource; enables a lead agency to require an applicant to make reasonable effort to preserve or mitigate impacts to any affected unique archeological

⁹ Office of Historic Preservation webpage: http://ohp.parks.ca.gov/?page_id=1054

resource; sets requirements for the applicant to provide payment to cover costs of mitigation; and restricts excavation as a mitigation measure.

21084.1: Historic Resources

CEQA establishes that adverse effects on an historical resource qualifies as a significant effect on the environment; and defines historical resource.

CEQA Guidelines

Section 15064.5 of CEQA guidelines define three ways that a property can qualify as a significant historical resource for the purposes of CEQA review:

- A. If the resource is listed in or determined eligible for listing in the California Register of Historical Resources;
- B. If the resource is included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code, or is identified as significant in a historical resource survey meeting the requirements of section 5024.1(g) of the Public Resources Code unless a preponderance of evidence demonstrates that it is not historically or culturally significant; or
- C. If the lead agency determines the resource to be significant as supported by substantial evidence (California Code of Regulations, Title 14, Division 6, Chapter 3, section 15064.5).

In addition to determining the significance and eligibility of any identified historical resource under CEQA and the California Register, historic properties must be evaluated under the criteria for the National Register should federal funding or permitting become involved in any undertaking subject to this document.

CEQA Guidelines on Mitigation of Cultural Resources Impacts

CEQA Guidelines Section 15126.4 states that “public agencies should, whenever feasible, seek to avoid damaging effects on any historical resources of an archeological nature.” The Guidelines further state that preservation-in-place is the preferred approach to mitigate impacts on archaeological resources. However, according to Section 15126.4, if data recovery through excavation is “the only feasible mitigation,” then a “data recovery plan, which makes provision for adequately recovering the scientifically consequential information from and about the historical resources, shall be prepared and adopted prior to any excavation being undertaken.” Data recovery is not required for a resource of an archaeological nature if “the lead agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the archaeological or historical resource.” The section further states that its provisions apply to those archaeological resources that also qualify as historic resources.

Native American Heritage Act

Also relevant to the evaluation and mitigation of impacts to cultural resources is the Native American Heritage Act (NAHA) of 1976 which established the Native American Heritage Commission (NAHC) and protects Native American religious values on state property (see California Public Resources Code 5097.9).

Public Notice to California Native American Indian Tribes

Government Code, Section 65092 includes California Native American tribes that are on the contact list maintained by the Native American Heritage Commission in the definition of “person” to whom notice of public hearings shall be sent by local governments.

Tribal Consultation Guidelines

Passed in 2004, Senate Bill (SB) 18 (Burton, D-San Francisco) now Government Code Section 65351 and 65352 establishes a procedure to help tribes and jurisdictions define tribal cultural resources and sacred areas more clearly and incorporate protection of these places earlier into the General Plan and Specific Plan processes. The SB 18 process mirrors the federal 106 Review process used by archaeologists as part of the environmental review conducted under NEPA (36 CFR Part 800.16). While not a component of CEQA review per se, the Lead agency is required to request consultation with responsible and trustee agencies, such as NAHC and neighboring tribes, during the initial study and EIR process (PRC 21080.3, 21080.4).

Disposition of Human Remains (Health and Safety Code, Section 7050.5)

When an initial study identifies the existence, or the probable likelihood, of Native American human remains within the project, a lead agency shall work with the appropriate Native American groups or individuals as identified by the NAHC as provided in Public Resources Code 5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American burials. Furthermore, Section 7050.5 of the California Health and Safety Code requires that construction or excavation be stopped in the vicinity of discovered human remains until the county coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the NAHC.

Native American Graves Protection and Repatriation Act

California Health and Safety Code Sections 8010-8011 establishes a State repatriation policy intent that is consistent with and facilitates implementation of the federal Native American Graves Protection and Repatriation Act. The Act strives to ensure that all California Indian human remains and cultural items are treated with dignity and respect. It encourages voluntary disclosure and return of remains and cultural items by publicly funded agencies and museums in California. It also states the intent for the State to provide mechanisms for aiding California Indian tribes, including non-federally recognized tribes, in filing repatriation claims and getting responses to those claims.

IMPACT ANALYSIS

Significance Criteria

Implementation of the proposed Project would have a potentially significant adverse impact if it would:

- Criterion 1:** Cause a substantial adverse change in the significance of a historic resource, defined as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historic resource would be materially impaired. (CEQA Guidelines Section 15064.5)

- Criterion 2:** Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to CEQA Guidelines Section 15064.5.
- Criterion 3:** Disturb any human remains, including those interred outside of formal cemeteries.
- Criterion 4:** Destroy, directly or indirectly, a unique paleontological resource or site or unique geologic feature.

Methodology and Assumptions

A complete records search was conducted by the Northwest Information Center (NWIC) at Sonoma State University, which reviewed the State of California Office of Historic Preservation records, base maps, historic maps, and literature on Contra Costa County on file. Because this EIR is a program EIR, it is not possible to conduct any site specific analysis. Instead, this analysis identifies the type and magnitude of impacts that may result from the proposed Specific Plan as a whole, and recognize that important cultural resources may be encountered during ground-disturbing construction work on future development projects.

Impact Summary

The primary impact that could occur would be disturbance of cultural or archaeological resources during development of property, subsequent to adoption of the Specific Plan. Specific projects are required to conduct supplemental environmental analysis prior to construction to comply with CEQA requirements.

According to the Northwest Information Center at Sonoma State University, there is a high possibility of encountering archaeological resources in the Specific Plan area. However, existing national and State laws, as well as policies in the San Pablo 2030 General Plan, reduce these potential impacts on historic and archaeological resources to less than significant levels. No known significant paleontological resources exist in the Planning Area.

Impacts and Mitigation Measures

Impact

3.11-1 Implementation of the proposed San Pablo Avenue Specific Plan would cause a substantial adverse change in the significance of an archaeological or historic resource, or disturb any human remains, including those interred outside of formal cemeteries. (*Less than Significant*)

A complete records search revealed that seven Native American archaeological sites are currently located within the City of San Pablo. Specific geographic information is not provided for archaeological sites, as mentioned earlier, to protect these resources from looting and vandalism. However, given that Native American cultural resources in the region have typically been found near sources of water, there is a high likelihood that further unrecorded Native American cultural sites exist in San Pablo.

A complete records search also shows that the Specific Plan area contains five historic buildings. Only one of them appears eligible for future registration in the National Register (Old Rectory). There is one

historic resource (Alvarado Adobe) that is listed as a State Historic Landmark. None are situated on an “opportunity site” — a site where the City expects development to occur within the next 20 years.

Various State regulations provide guidance on the steps that must be taken if significant archaeological resources are uncovered during ground-disturbing activities associated with construction. Pursuant to CEQA Guidelines 15064.5 (f), if potentially significant cultural resources are discovered, work shall halt in that area until a qualified archaeologist can assess the significance of the find, and, if necessary, develop appropriate treatment measures in consultation with Contra Costa County and other appropriate agencies and interested parties. If the archaeologist determines that the find does not meet the CEQA standards of significance, construction shall proceed. On the other hand, if the archaeologist determines that further information is needed to evaluate significance, the Planning Division staff shall be notified and a data recovery plan shall be prepared.

All future development in the Planning Area will be in accordance with State laws pertaining to the discovery of human remains. Accordingly, if human remains of Native American origin are discovered during project construction, the developer and/or the Planning Division would be required to comply with State laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (Pub. Res. Code Sec. 5097). If any human remains are discovered or recognized in any location on a project site, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

- A. The Contra Costa County Coroner/Sheriff has been informed and has determined that no investigation of the cause of death is required; and
- B. If the remains are of Native American origin:
 - 1. The descendants of the deceased Native Americans have made a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98; or
 - 2. The Native American Heritage Commission was unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the commission.

Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

Overall, current federal and State laws as well as the following policies in the San Pablo 2030 General Plan would reduce these impacts on archaeological resources to less than significant levels.

- OSC-I-13 Establish and maintain a register of historic and potentially historic resources in San Pablo.

A historic preservation register is the primary planning tool used to identify, record, and evaluate historic properties within a community, neighborhood, project area, or region. The City may use the list of historical buildings in the General Plan Map Atlas as a starting point to create a register of sites/buildings San Pablo may wish to designate as

landmarks and/or important historical resources. The register can form an important component of the local preservation program, and can ultimately contribute to community knowledge of local history.

OSC-I-14 Preserve and build upon the historic and multicultural identity of Alvarado District as a defining element of the city.

OSC-1-15 Help to ensure that new development analyzes and avoids potential impacts to historic, archaeological, and paleontological resources by:

- Requiring a records review for development proposed in areas that are considered archaeologically or paleontologically sensitive;
- Requiring pre-construction surveys and monitoring during any ground disturbance for all development in areas of historic or archaeological sensitivity;
- Implementing appropriate measures as a condition of project approval—measures such as avoidance, preservation in place, excavation, documentation, and/or data recovery—in order to avoid any identified cultural resource impacts.

In the event that historical, archaeological, or paleontological resources are accidentally discovered during construction, grading activity in the immediate area shall cease and materials and their surroundings shall not be altered or collected. A qualified archaeologist or paleontologist must make an immediate evaluation and avoidance measures or appropriate mitigation should be completed, according to CEQA Guidelines. The State Office of Historic Preservation has issued recommendations for the preparation of Archaeological Resource Management Reports that may be used as guidelines.

OCS-1-16 Work with local Native American tribes to protect recorded and unrecorded cultural and sacred sites, and to educate developers and the community-at-large about the connections between Native American history and the environmental features that characterize the local landscape.

Native American cultural resources in the Planning Area have been found near sources of water including perennial and intermittent streams and springs, on midslope terraces and elevated knolls above the floodplain, and near ecotones and other productive environments. There is a high likelihood that additional unrecorded Native American cultural sites also exist in the Planning Area.

The following policies and programs are from the Housing Element:

Policy H-1.3: Continue to preserve historically significant housing and promote the Early California Architecture style to preserve San Pablo's architectural heritage.

Program H-1.3.1: Create an inventory of potential historical buildings, evaluate their historical and architectural significance, and designate those with significance as local landmarks.

Program H-1.3.2: Preserve archaeologically significant sites by continuing to investigate and review all potentially significant Native American Sites before any development activity takes place.

Proposed Specific Plan Policies that Reduce the Impact

None.

Mitigation Measures

None required.

Impact

3.11-2 Implementation of the proposed San Pablo Avenue Specific Plan could destroy, directly or indirectly, a unique paleontological resource or site or unique geologic feature. (*Less than Significant*)

Adverse impacts to paleontological resources could occur when earthwork activities such as mass excavation cut into geological formations where fossils are buried. These impacts are in the form of physical destruction of fossil remains. While no known significant paleontological resources occur within the Planning Area, fossils are considered to be nonrenewable resources and due to the infrequency of fossil preservation, such impacts would be considered significant. Relatively few undeveloped parcels remain in the Planning Area and mass excavation cuts into fossil-bearing bedrock formations are not expected.

Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

San Pablo General Plan policy OSC-I-15 cited under Impact 3.11-1 makes provisions for the accidental discovery of paleontological resources, and helps reduce this impact to a level that is less than significant.

Proposed Specific Plan Policies that Reduce the Impact

None.

Mitigation Measures

None required.

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3.12 Visual Resources

This section presents the environmental setting and impact analysis for visual resources. It evaluates the extent to which implementation of the proposed Specific Plan will affect the visual quality of the Planning Area.

ENVIRONMENTAL SETTING

Physical Setting

The Planning Area is characterized mostly by a mix of neighborhood retail, medium-density residential and strip mall developments on a flat plain. There are no distinctive natural features except for three small creeks which traverse the Planning Area, though water is not always visible in them. The scale and character of land uses along San Pablo Avenue differ depending on location. Generally, three distinct types can be discerned and are described below. The photos on the following page show the existing visual resources of the Planning Area.

Lower San Pablo Avenue

San Pablo Avenue located between Church Lane and the southern city limit is characterized by low density regional-oriented uses. The area's character is that of a main thoroughfare with large buildings set back on each side of the street. The area's major retail and entertainment attractions include San Pablo Casino, San Pablo Towne Center, and Diaz Plaza. The San Pablo Doctor's Medical Center is located just off the street. The Casino, with its distinctive design, is a landmark in this area.

Middle San Pablo Avenue

San Pablo Avenue located between Church Lane and Road 20 is characterized by high density multifamily developments on both sides of the street, interspersed by public land uses such as City Hall and the city's police and fire stations. The aesthetic and visual quality on this stretch of the corridor is ordinary. There are no landmarks or attractions in this area. However, all five of the buildings with historical significance are located here or just slightly off the street. These include Blume House, Texiera Home, and Alvarado Adobe near City Hall.

Upper San Pablo Avenue

San Pablo Avenue between Road 20 and the northern city limit is characterized by single-story, small business, neighborhood retail. There are several fast food restaurants in this area as well as numerous pay-day lending shops. Shops located west of San Pablo Avenue have a distinct neighborhood retail character while those east of San Pablo Avenue are generally newer and larger in size. Development in recent years

has concentrated on parcels east of San Pablo Avenue while the smaller-scale development on the west side has not seen renewal for some time. As a consequence, many stores are either dilapidated or operating marginally. Many vacant parcels can also be found on the west side of San Pablo Avenue. There are two notable community landmarks or features on this stretch of the corridor. The first is an arch or gateway near Road 20 and San Pablo Avenue, and the second is a community park (Wanlass Park) located near the northern Planning Boundary.

Scenic Resources

Because most of the Planning Area is located on a low-lying plain, views in general are quite limited. Wildcat Canyon and Sobrante Ridge form a rolling green hillside on the eastern edge of town, but this is visible only on east-west trending streets that cross San Pablo Avenue. (see figures on page 3.12-4) A continuous tree line is just visible on the horizon, looking north along upper San Pablo Avenue towards Hilltop Village, but the view is not significant since Hilltop Village is only about 30 feet higher than the rest of San Pablo.

There are no formally designated scenic roadways in the Planning Area or the rest of the city.

Regulatory Setting

Contra Costa County has regulations that attempt to preserve the County's scenic resources. The Contra Costa County General Plan (2005-2020) includes a scenic route plan, which is an update to the 1974 Contra Costa Scenic Routes Element. The plan's main purpose is to enable the County to request that the State designate state routes to the State Scenic Highway Program, while at the same time providing a local scenic route implementation program. The plan also identifies a countywide scenic route system and ensures that new projects approved along scenic routes are reviewed to maintain their scenic potential. While no scenic routes are depicted in San Pablo, San Pablo Avenue and I-80 through San Pablo are depicted as "connecting routes", suggesting they either connect other scenic areas together or they have "scenic potential".¹

¹ Contra Costa County General Plan (2005-2020), page 5-24.

Figure 3.12-1: San Pablo Visual Resources



From left: View of the San Pablo Casino; Doctors Medical Center; and San Pablo Towne Center. All three can be found in the lower section of San Pablo Avenue.



From left: Typical view of a medium to high density housing along the middle section of San Pablo Avenue; the San Pablo Police Station; and Wildcat Creek.



From left: View of upper San Pablo Avenue towards the gateway/arch; view of a retail along upper San Pablo Avenue (note the irregular setbacks and marginal condition of the uses); and view of Mission Plaza at the junction of San Pablo Avenue and Broadway Avenue.

IMPACT ANALYSIS

Significance Criteria

Implementation of the proposed San Pablo Avenue Specific Plan would have a potentially significant adverse impact if it would:

- Criterion 1:** Block panoramic views or views of significant landscape features or landforms (mountains, oceans, rivers, or significant man-made structures) as seen from public viewing areas.
- Criterion 2:** Substantially damage scenic resources (such as trees, rock outcroppings, and historic buildings) that would alter the appearance of or from State- or county-designated or eligible scenic highways. Such projects would be judged against a higher standard for visual impacts due to this designation.
- Criterion 3:** Create significant contrasts with the scale, form, line, color and/or overall visual character of the existing landscape in areas with sensitive visual resources or high visual quality.
- Criterion 4:** Add a visual element of urban character to an existing rural or open space area or add a modern element to a historic area.
- Criterion 5:** Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Methodology and Assumptions

This programmatic visual assessment was conducted through windshield surveys of the planning area and photographs taken of views from representative locations along the San Pablo Avenue corridor. The analysis was conducted qualitatively by assessing potential growth implications of the Specific Plan on the visual character of the corridor.

Impact Summary

Adoption of the proposed land use designations in the proposed Specific Plan could result in higher density development that partially or fully obstruct views currently available to the public. However, implementation of Plan policies would reduce this to a less than significant level, because new development would comply with design guidelines that are intended to maintain and improve the scenic quality of San Pablo Avenue.

There are no State- or county-designated or eligible scenic highways in San Pablo, therefore development under the proposed Specific Plan will cause no impact on these kinds of scenic resources. This issue is evaluated no further in this EIR.

The development of vacant and opportunity sites along San Pablo Avenue is the most notable physical change that will result in a different visual experience when travelling on San Pablo Avenue. This change is generally positive in nature as implementation of plan policies will help plant more trees, improve

streetscape, install connected bikeways and pedestrian walkways, remove blight and reduce vacancy with infill development to improve the city's urban character.

The proposed land use changes along the San Pablo Avenue corridor will not “add a visual element of urban character to an existing rural or open space area” since San Pablo is an urban city to begin with. There are no open space areas along the corridor. There are five historical buildings along the corridor but none of them are situated on opportunity sites. Proposed General Plan policies will ensure these historic resources are protected, consistent with State and federal regulations.

Additional development and a projected increase in population will likely create new sources of light or glare, but they will not adversely affect the nighttime views of the area or the night sky since the San Pablo Avenue corridor is an urban area to begin with. As a result, the impact is less than significant.

Impacts and Mitigation Measures

Impact

3.12-1 Implementation of the proposed San Pablo Avenue Specific Plan could adversely affect visual resources in the short-term during period of construction by blocking or disrupting views. (*Less than Significant*)

Short-term visual impacts including blockage or disruption of views by construction equipment and scaffolding, the removal of landscaping, temporary route changes, temporary signage, and excavation could occur as a result of construction activity in the course of development. These activities, however, will be short-term and confined to specific locations. Construction will not occur all at once in all Specific Plan opportunity sites. Finally, extensive landscaping and other design features will be installed, which enhance visual character in the long-term. For these reasons, any temporary impacts to visual resources from construction activity would be less than significant.

Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

LU-I-7 Require design review of all new construction and visible exterior alterations of large non-residential buildings.

Any new non-residential construction or remodeling of an existing building where exterior work alters more than 50 percent of a visible building façade, including exterior improvements, such as new windows, doors or signage, will be subject to a design review.

LU-I-11 Enhance the City's unique identity and image by adopting a consistent palette of landscaping, street trees, lighting, and signage within the public right-of-way for neighborhood and street improvements.

Large canopy street trees, such as oaks or the London Plane tree, can create a distinct character for San Pablo. They also provide important environmental benefits.

Proposed Specific Plan Policies that Reduce the Impact

4-I-27 Establish landscaped pedestrian walkways alongside or through commercial development.

- 4-I-57 Where residential buildings front onto San Pablo Avenue, provide landscaped setbacks with low attractive hedges, flowering shrubs, and trees planted in the same configuration as the street trees to create a pedestrian colonnade along the sidewalk.

Mitigation Measures

None required.

Impact

3.12-2 Implementation of the proposed San Pablo Avenue Specific Plan could block views of significant landscape features as seen from public areas. (*Less than Significant*)

Higher density development proposed by the Specific Plan has the potential to obstruct views currently available to the public. However, the impact would be less than significant as the San Pablo Avenue corridor is located in a low-lying plain with little or no view of scenic resources. Although new and higher buildings along San Pablo Avenue may create minor obstructions of some views, these views are minor components of the experience of traveling along San Pablo Avenue. The allowed densities, or FARs, for proposed land use designations indicate that most new development would not be taller than three or four stories in height. Height limits for proposed land uses would be addressed in an amendment to the San Pablo Zoning Ordinance.

The General Plan land uses continue to preserve hillside land within San Pablo for open space, and in doing so preserve the potential for views of those hillside open spaces.

Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

- LU-I-45 Protect the semi-rural character of the hillside area through the integration and balance of usable open space areas and residential uses.
- OSC-I-2 Continue to identify, preserve, and enhance scenic vistas to and from hillside areas and other visual resources.
- New development should be designed to minimize obstructions of scenic vistas and preserve or enhance important attributes of view corridors.*
- OSC-I-7 Preserve and protect undeveloped hillside areas for their potential habitat value and as a visual and open space resource.

Proposed Specific Plan Policies that Reduce the Impact

- 2-I-5 Ensure that ample community gathering spaces, open spaces, and recreational facilities are part of any mixed-use development or master planned area.
- 4-G-2 *Ensure that streets and open spaces form the framework for development, with the public realm designed to be accessible from the surroundings, and designed to enhance pedestrian movement.*
- 4-G-12 *Improve the visual character and quality of the San Pablo Avenue corridor and highlight gateways onto the corridor.*

- 4-I-5 Provide direct and visible connections between San Pablo Avenue and the central community gathering space.
- 4-I-15 Incorporate small landscaped plazas that are visible and accessible from San Pablo Avenue to heighten the comfort and safety of the block, and accommodate outdoor seating.
- 4-I-60 Locate wayfinding elements such as kiosks and directional signage at key public destinations, including the library, City Hall, and entrances to the College, to help orient visitors.
- DG-24 Design publicly accessible open space that is physically and visually accessible from the street. Orient open space to the street; frame or mark the entrances to open space with architectural or landscape elements; and/or provide signage.

Circle-S Site

- 3-I-26 Establish a street grid that covers the entire site and allows visual access into the development from San Pablo Avenue. The grid should organize all development within the site, provide a direct connection to Church Lane to the north, and provide a potential connection through to Vale Road to the south and potentially to the Casino.
- 3-I-27 Establish a central pedestrian-oriented street that provides a direct link from San Pablo Avenue to improved open space along Wildcat Creek.

Mitigation Measures

None required.

Impact

3.12-3 Implementation of the proposed San Pablo Avenue Specific Plan could create significant contrasts with the scale, form, line, color and/or overall visual character of the existing landscape in areas with sensitive visual resources or high visual quality, or add a modern element to a historic area. (*Less than Significant*)

Implementation of the Specific Plan could create changes in land use and physical design that contrasts with the existing scale, form, and overall visual character of the existing San Pablo Avenue corridor. However, two arguments suggest this impact is less than significant: 1) the corridor itself contains no sensitive visual resources or high visual quality, and 2) the proposed changes in land use and physical design are intended to increase the visual quality of corridor, create a more unified visual experience, and fill in vacant and undesirable visual areas with attractive and economically vibrant new development.

Any remaining impacts would be reduced to a less than significant level by proposed Specific Plan and proposed General Plan policies that seek to improve street view and urban design, minimize incompatibilities in scale and form, and protect historic and sensitive areas.

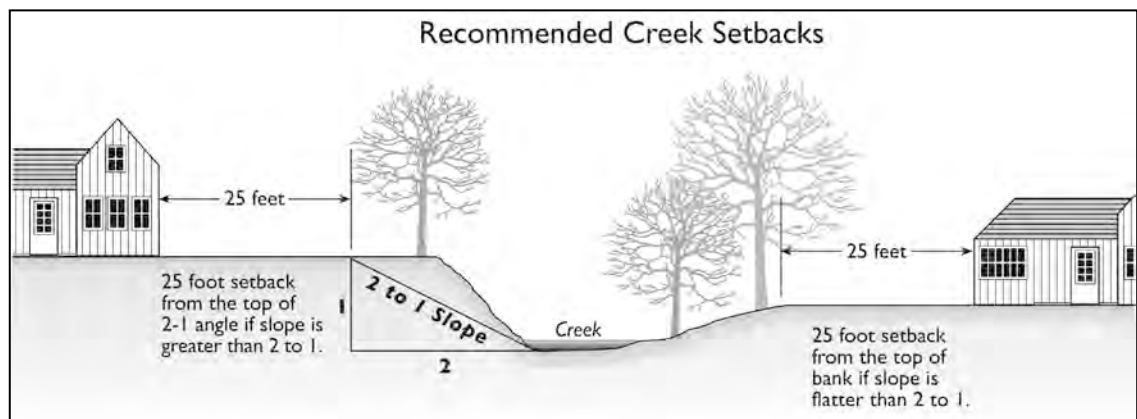
Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

- LU-I-5 Promote the phasing out of old uses in areas designated for new land use in an orderly fashion, consistent with adopted general plan designations. Promote the continuing viability of old uses during the transition period.
- LU-I-9 Encourage new residential, commercial and related forms of development in a manner which fosters both day and appropriate night time activity; visual presence on the street level; appropriate lighting; and minimally obstructed view areas.
- LU-I-12 Enhance and celebrate key entrances to the city with signs, landscaping, street trees, lighting, banners, gateway and/or entry features.
- LU-I-13 Ensure that new development in or adjacent to established neighborhoods is compatible in scale and character with the surrounding area by:
- Promoting a transition in scale and architectural character between new buildings and established neighborhoods; and
 - Requiring pedestrian circulation and vehicular routes to be well integrated.
- LU-I-21 Ensure that noise, traffic, and other potential conflicts that may arise in a mix of commercial and residential uses are mitigated through good site planning, building design, and/or appropriate operational measures.
- LU-I-27 Establish design guidelines to assure high quality design and site planning for large commercial and industrial developments. The guidelines should address:
- Architectural finishes, coordinated color palette, massing, and hierarchy in scale;
 - Pedestrian-scaled amenities, signage, and lighting;
 - Site improvements, including parking lot landscaping, perimeter landscaping, foundation landscaping, walkways, and passageways;
 - Ground floor transparency requirements along shopping streets and limitations on blank walls in these areas;
 - Anti-theft glass on windows, instead of bars or roll-down metal screens, that are architecturally compatible with building design;
 - Screening of truck loading, parking, mechanical equipment, transformers, ventilation systems, storage containers, and refuse collection areas from the street;
 - Building entries; and
 - Design standards for perimeter walls and fencing.

Where a building exceeds a certain height, the City will evaluate shading created and its relationship and effects on surrounding buildings.

- LU-I-38 Develop a distinct design theme with defined design standards and guidelines for each of the special planning areas to foster an identifiable image for each area.
- OSC-I-14 Preserve and build upon the historic and multicultural identity of Alvarado District as a defining element of the city.
- OSC-I-13 Establish and maintain a register of historic and potentially historic resources in San Pablo.
- OSC-I-10 Maintain, protect, and enhance San Pablo's creeks, including Rheem, San Pablo, and Wildcat creeks, as local environmental and aesthetic resources, with approaches including, but not limited to:
- Establishing a Creek Improvement Program to widen, day-light, and improve San Pablo and Wildcat creeks for the enjoyment of residents;
 - Strengthening stormwater management requirements for properties adjacent to the creek areas by applying techniques that maintain or restore nature character;
 - Identifying and working with property owners to take advantage of unique opportunities where human active use (e.g. through trail development) would enhance creek appreciation without disrupting ecological function;
 - Working with developers to "daylight" portions of creeks that have historically been channelized underground under existing paved areas (e.g. parking lots); and
 - Requiring minimum setbacks from the top of the creek bank for development proposed adjacent to creeks, in keeping with City regulations and Best Management Practices.

Figure 3.12-2: Recommended Creek Setbacks



Proposed Specific Plan Policies that Reduce the Impact

- 4-G-9 *Develop a memorable streetscape identity for the San Pablo Avenue corridor as a “boulevard” with consistent streetscape elements throughout its extent in San Pablo, with distinguishing elements at major activity centers and focus areas.*
- 4-G-11 *Design the streetscape at the pedestrian scale with wide sidewalks, bike lanes, and amenities for pedestrians and cyclists such as bike racks, comfortable street furnishings, sufficient and attractive lighting, and street trees for shading and aesthetics.*
- 4-G-12 *Improve the visual character and quality of the San Pablo Avenue corridor and highlight gateways onto the corridor.*
- 4-I-8 Maintain buildings of generally three to four stories, with lower heights in certain portions of the site, and reaching five or six stories in selected locations, stepped away from the project’s edges.
- 4-I-22 Maintain consistent streetscape and street tree schemes on pedestrian paths and vehicular roads throughout the site.
- DG-5 Ensure smooth transitions in building height. Tall buildings should step down adjacent to existing low-density residential development.
- DG-14 Ensure unified and harmonious building façades by integrating all architectural elements, including signs, balconies, building entrances, and lighting. Windows should have regular patterns and be coherent in shape and proportion.

Mitigation Measures

None required.

Impact

3.12-4 Implementation of the proposed San Pablo Avenue Specific Plan could create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. (*Less than Significant*)

The construction of new buildings in the Planning Area may create additional sources of nighttime light pollution. However, their impacts are likely to be insignificant since new development will almost exclusively occur as redevelopment of existing built sites or infill development of unused parcels between existing built sites. When facilities such as parking lots are replaced with buildings, this may reduce nighttime sources of light in as much as a new building will not require high voltage lamps to illuminate large swaths of pavement. Similarly, infill development of underutilized or vacant parcels would result in new light sources that are congruous with nearby light sources (e.g., lighting from shop windows, or upper story residential windows). Furthermore, proposed Specific Plan and 2030 General Plan policies help to ensure that lighting for new development is held to high design standards for light pollution reduction. These policies would reduce potentially significant long-term light and glare impacts to less than significant levels.

Public Review Draft General Plan Policies (November 2010) Assumed to be Adopted Prior to Adoption of the Proposed Specific Plan

PSCU-I-7 Provide security lighting to illuminate communal areas and pathways in all parks to ensure safety, and where feasible, select lighting fixtures that will not produce glare or illuminate the night sky.

Whenever possible, the City will select lighting fixtures that are shielded, are solar-powered, and/or can turn on automatically in low light conditions.

Proposed Specific Plan Policies that Reduce the Impact

2-I-16 Encourage structured or underground, or tuck-under parking in new development, to maximize occupied uses and open space at the ground level. Discourage new or expanded surface parking lots.

4-I-59 Maximize lighting for safety, especially along connections between transit facilities, in public plazas, pedestrian-oriented destinations, parking areas, and other major public destinations.

DG-37 Ensure that all exterior lighting is shielded from surrounding use and directed downward except where safety and security purposes require otherwise.

Mitigation Measures

None required.

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4 Analysis of Alternatives

This chapter documents the alternatives development and screening process and analyzes several alternatives identified during preparation of the proposed San Pablo Avenue Specific Plan. Key features of each alternative are presented, and potential impacts are discussed and compared to the impacts of the proposed Project.

4.1 PURPOSE AND SCOPE OF ALTERNATIVES ANALYSIS

The CEQA Guidelines require EIRs to describe a reasonable range of potentially feasible alternatives to a proposed project or program. That is, the EIR needs to analyze only those alternatives that will help decision-makers make reasoned choices. The range of alternatives shall include those that “would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project” (CEQA Guidelines, Section 15126.6(a)). “Feasible” means that the alternatives “are capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors” (CEQA Guidelines, Section 15364). In addition, the EIR must evaluate the No Project Alternative, which allows decision makers to compare the impacts of approving the proposed Project with the impacts of not approving the proposed Project.

If the alternatives themselves would have significant environmental impacts, the EIR must identify them. The alternatives may result in new impacts that do not result from the proposed Project. The EIR, however, need not analyze these alternatives at the same level of detail that it analyzes the proposed Project itself. The CEQA Guidelines require only that the EIR provide enough information to allow meaningful evaluation, analysis, and comparison. Quantified information on the alternatives is presented where available; however, in some cases only partial quantification can be provided because of data or analytical limitations.

Finally, the CEQA Guidelines require each EIR to identify the environmentally superior alternative among the alternatives analyzed. If the No Project alternative is the environmentally superior alternative, the EIR must select another alternative from among the alternatives analyzed.

4.2 ALTERNATIVES SCREENING

Guiding Principles Factored into Development of Alternatives

The following Guiding Principles emerged from community and decision-maker input throughout the planning process. Taken together, these ideas establish an overall vision for the corridor that is reflected in the land use pattern, policies, and implementation measures of the alternative plans considered during the Plan development process. These themes ultimately form the main project objectives of the proposed Specific Plan, as described in Chapter 2: Project Description.

- **Walkability and a High-Intensity Mix of Uses.** Development along this major transportation corridor must have a synergistic mix of uses. The Plan locates higher density residential neighborhoods adjacent to neighborhood-serving retail, employment centers, and amenities such as the Contra Costa College. Retail, restaurants and entertainment uses are grouped to create walkable destinations. The Plan encourages service uses like supermarkets, pharmacies, laundries, and community centers. In several areas along the corridor, vertical mixes of uses is encouraged or required in an effort to create self-supporting districts.
- **Destinations and Amenities for All Ages.** Activities that serve as citywide and regional draws will be critical to the future of the corridor. Shopping, dining, theaters, event venues and other attractions will bring the community together, encourage visitors, and establish needed activity nodes along the corridor. The success of the San Pablo Lytton Casino, the ample acreage of opportunity sites near the Casino, and the dearth of existing entertainment uses all suggest that an entertainment district near the Casino would enliven the corridor. This district, established as an “overlay” in the Plan, would help to create jobs, destinations for families, and a recognizable and marketable image for the city.
- **A Variety of Housing Options.** A variety of housing options are needed to attract new residents to the San Pablo Avenue corridor, provide options for the ageing San Pablo population, and house the anticipated growth in enrollment at Contra Costa College and workers at establishments such as the Doctors Medical Center. The Specific Plan allows for a variety of housing options for all potential residents, including families, students, and professionals. Planned residential uses vary in density and in proximity to commercial uses. The Plan includes policies to ensure that density does not compromise livability.
- **Community Facilities and Open Space.** Community-oriented facilities are an essential component of new development along the corridor. The Plan provides a new community plaza along San Pablo Avenue as part of redevelopment of the former Circle S site. Additionally, one major public open space along the improved Wildcat Creek and a number of smaller and more programmed open spaces (e.g. pocket parks, trails, exercise stations, and playgrounds) are integrated into the corridor. Candidate uses for additional community facilities include a cultural center, a community theater, sports fields and courts, a community swimming pool, trade schools, senior centers, bilingual service centers, and preschools. While it may not be physically feasible to include all of these amenities, key opportunity areas will have designations that accommodate these types of uses. In a high-density infill setting, well-designed public open spaces are also essential—not just to residents, but to pedestrians between destinations.

- **Improved Accessibility.** The corridor is well-served by bus lines, but increasing ridership will be achieved only through improvements to complementary modes of travel, such as walking and biking. The Plan necessitates that future development and street improvements be more conscious of the pedestrian and bicycle experience and employ universal design throughout. The Plan includes policies to ensure that parking is hidden from view from the public right-of-way, and façades improved in a style that projects a consistent image along the corridor. Within the right-of-way, the pedestrian realm is designed to create more comfortable and inviting paths that diminish perceived walking distances, and continuous, convenient, and safe bicycle routes are established

Alternatives Considered v. Carried Forward

The Alternatives Workshop, held on November 19, 2009, was the second in a series of three scheduled public workshops for the Specific Plan process. About 40 community members, several City officials, General Plan Advisory Committee members (also serving as the Specific Plan advisory committee), City staff, and consultants attended. The workshop was essential in helping the City and planning team to understand the community's preferences for buildings heights; residential densities; types of commercial development; and amount and intensity of mixed-use development at various focus areas within the Planning Area. The feedback gathered at the workshop was also essential to understanding the community's visions for the character of the Avenue along the length of the Planning Area as well as within the focus areas, and the community's priorities for streetscape improvements and street design.

The alternatives described in this EIR include the two substantial proposals considered by the City of San Pablo during the sketch design stage of the planning process. Although several other initial alternatives for the built city were identified during sketch design, they were eliminated from full analysis because they would not satisfy enough of the City's goals and would not reduce impacts of the proposed Specific Plan.

4.3 ALTERNATIVES ANALYZED IN THIS EIR

This EIR evaluates the No Project alternative as required by CEQA, as well as two other alternatives developed through the screening process. The alternatives described below represent ways to accomplish increased transit ridership, physical and economic revitalization, and community objectives along the San Pablo Avenue corridor. The anticipated horizon year of the alternatives, like the proposed Specific Plan, is 2030. The alternatives have much in common; however, they take different approaches in terms of density, the proportion of mixed-use development, and the character of commercial development. Common characteristics include:

- Both alternative plans call for an entertainment district, designated by the new Entertainment District land use, along both sides of San Pablo Avenue near the intersection with San Pablo Dam Road. Anchored by the San Pablo Lytton Casino, this new district establishes a regional destination for entertainment uses such as movie theatres, performing arts facilities, restaurants, nightclubs and bars. The size and extent of the Entertainment District varies between the two alternatives.
- The College Center Shops commercial development and the Abella Paseo multifamily residential development at San Pablo Avenue and Road 20 are integral parts of both alternative plans. These projects will intensify activity along San Pablo Avenue and will help establish a retail center for the college community.

- Both alternative plans propose that the city's creeks, and trails alongside them, be restored to their natural state to preserve them as a natural resource. Both plans also call for increased park and open space to meet the recreation needs of current and future residents.
- Both alternative plans share similar opportunity sites, which are sites identified by the lead agency as suitable for development or eventual redevelopment. These sites include vacant sites as well as underutilized sites, totaling 143 acres.

Variations on densities, land use designations, and mix of use (for mixed-use categories) were considered before those in the alternative plans were finally selected. It is important to note that even if the same land use appears on both alternative plans, the buildout density may be different in each case due to different design intentions and project objectives.

Alternative A

In Alternative A, areas designated as mixed-use are greatest in intensity. The highest-intensity mixed-use designation, Mixed Use Center, is contained within the Circle-S site and the Mission Plaza block—a total of 17.2 acres. Heights on these sites may reach over four stories, with housing that is typically between 25 and 60 dwelling units per acre. About 400 new units would be accommodated in the Circle-S site alone. Similarly, the Residential Mixed Use designation is limited to the western half-block of the West San Pablo Avenue focus area, but typical densities are high—about 24 units per acre. Outside of these high-intensity areas, non-residential uses predominate. Non-residential designations occupy almost the entire street frontage within the West San Pablo Avenue focus area and key opportunity sites at the intersection of San Pablo Avenue and Church Lane. Heights in commercial areas in the southern end of the corridor would be two to four stories. The Entertainment District in Alternative A is unique in that it extends from the casino all the way to the Circle-S site. It bridges destinations along the whole southern portion of the corridor to create one continuous active zone.

One component unique to Alternative A is its lack of a Regional Commercial designation. Areas that are designated regional commercial in the proposed Specific Plan and Alternative B are designated as Neighborhood Commercial in this plan. An additional difference is the number of sites dedicated to pure residential land use. Alternative A would accommodate a greater number of households because it designates more sites to residential development, and higher-intensity for areas of mixed-use with residential. New park locations suggested in Alternative A are somewhat different to those in the proposed Specific Plan. The buildout projections under Alternative A are shown in **Table 4.3-1**.

Alternative B

In Alternative B, residential and commercial uses are more mixed than in Alternative A. The Mixed-Use Center designation occupies 24 acres in this alternative, including some opportunity sites outside of the Mission Plaza and Circle-S sites highlighted in Alternative A. The Residential Mixed-Use designation covers the entire West San Pablo Avenue focus area as well as other nearby opportunity sites. These areas, however, are lower in intensity than in Alternative A; the Mixed Use Center allows a maximum of five stories and only up to 50 units per acre. The Entertainment District in Alternative B is both larger and more nodal than in Alternative A, with the use surrounding the entire intersection of San Pablo Avenue and San Pablo Dam Road, including the small block where Nation's Hamburger currently sits and parts of both the Towne Center and Big Lots sites. Wrapping around the east side of the Entertainment District is a Regional Commercial designation, which is carried over into the proposed Specific Plan. This

land use includes uses that have a regional draw, like retail outlet centers, and will benefit from the focus area's "gateway" location alongside I-80.

New park locations in Alternative B are generally similar to those in the proposed Specific Plan. Unlike the proposed Specific Plan, Alternatives A and B designate Entertainment District as a stand-alone land use designation rather than an overlay. Alternative B accommodates fewer households and more jobs than the proposed Specific Plan. The buildout projections under Alternative B are shown in **Table 4.3-1**.

No Project Alternative

The purpose of evaluating the No Project Alternative is to allow decision makers to compare the potential impacts of approving the proposed Project with the potential impacts of not approving the proposed Project. The No Project analysis discusses both the existing conditions at the time the NOP is published as well as what would be reasonably expected to occur in the foreseeable future if the proposed Project were not approved. The No Project alternative is depicted in **Figure 4.3-3**.

The No Project scenario represents the continuation of the City of San Pablo 1996 General Plan land use designations within the Specific Plan Planning Area. It assumes that the 1996 General Plan and Zoning Ordinance would continue to guide development in the Planning Area through 2030. There are many differences between the proposed Specific Plan and the No Project Alternative. As compared to the proposed Specific Plan, the No Project Alternative:

- Has different land use classifications, notably a substantial amount of commercial land with no accommodation for mixed uses;
- Assumes lower density development of both residential and non-residential land;
- Assumes full development of vacant sites only (the proposed Specific Plan opportunity sites include vacant and underutilized sites);
- Offers no mechanism for developing new parks or open space areas in the Planning Area.

The buildout projections under the No Project Alternative are shown in **Table 4.3-1**.

Figure 4.3-1
Land Use Alternative A

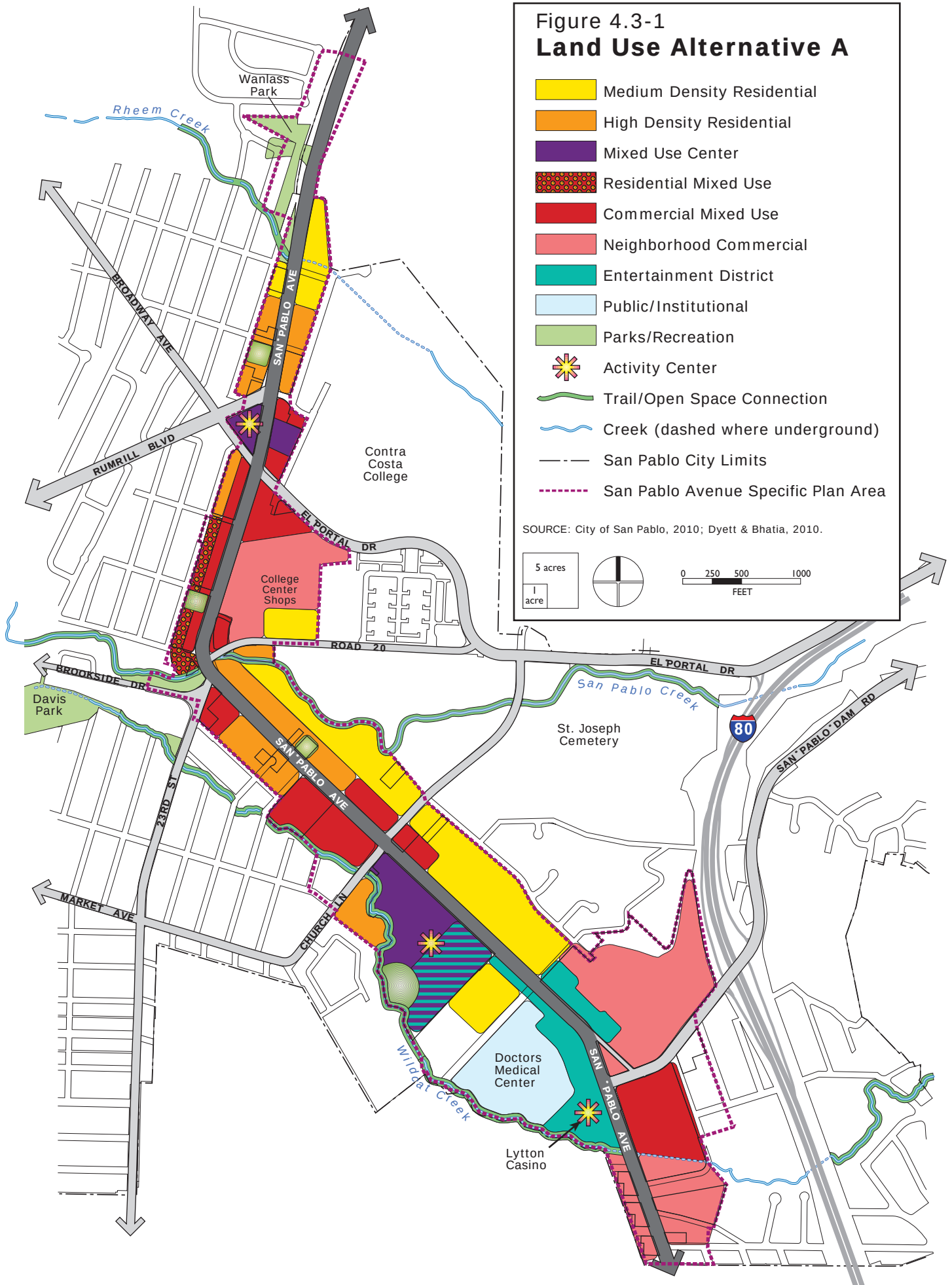


**Figure 4.3-2
Land Use Alternative B**

- Medium Density Residential
- High Density Residential
- Mixed Use Center
- Residential Mixed Use
- Commercial Mixed Use
- Neighborhood Commercial
- Entertainment District
- Public/Institutional
- Parks/Recreation
- Activity Center
- Trail/Open Space Connection
- Creek (dashed where underground)
- San Pablo City Limits
- San Pablo Avenue Specific Plan Area

SOURCE: City of San Pablo, 2010; Dyett & Bhatia, 2010.

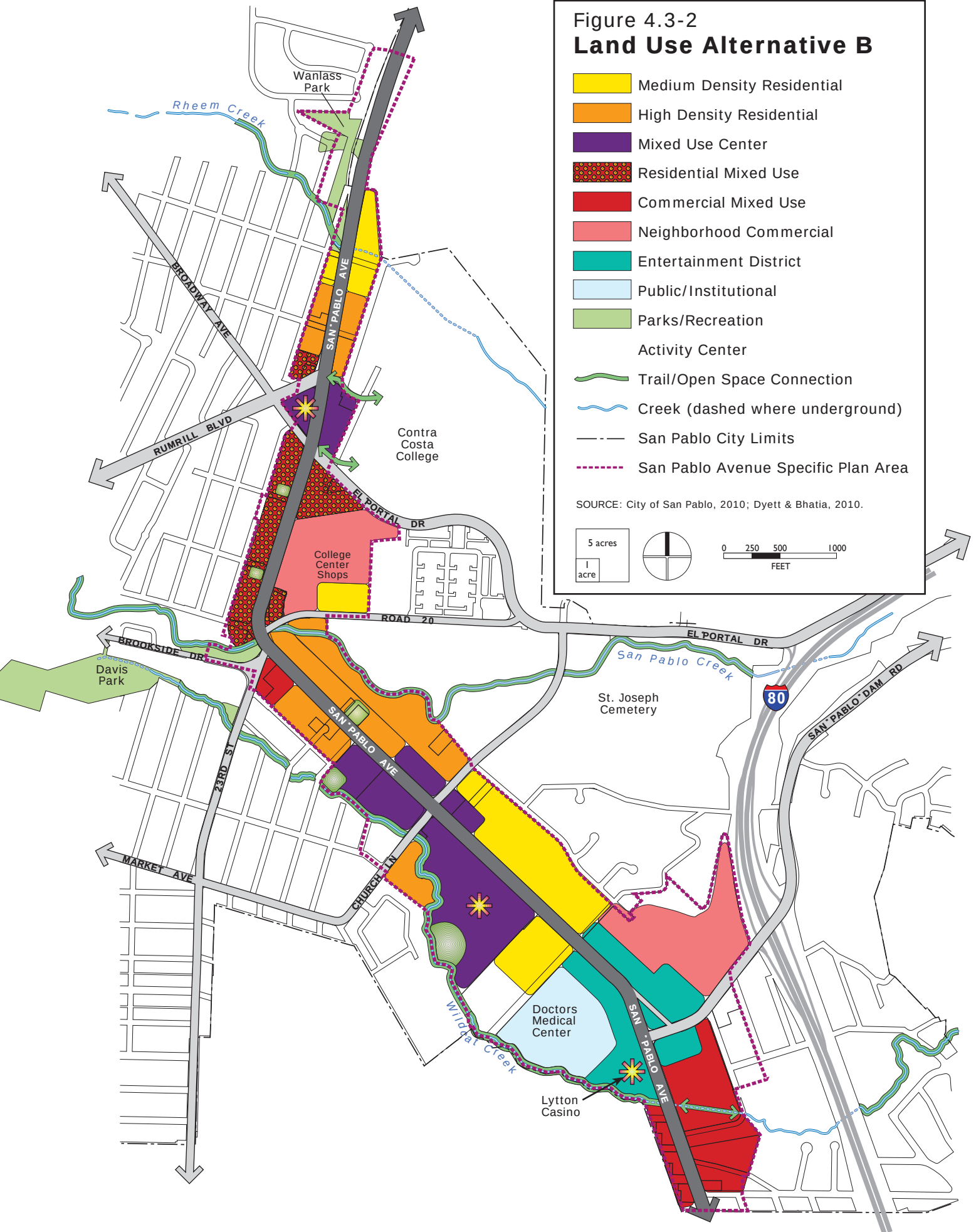
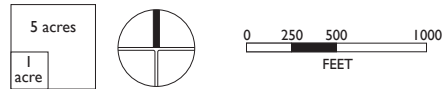
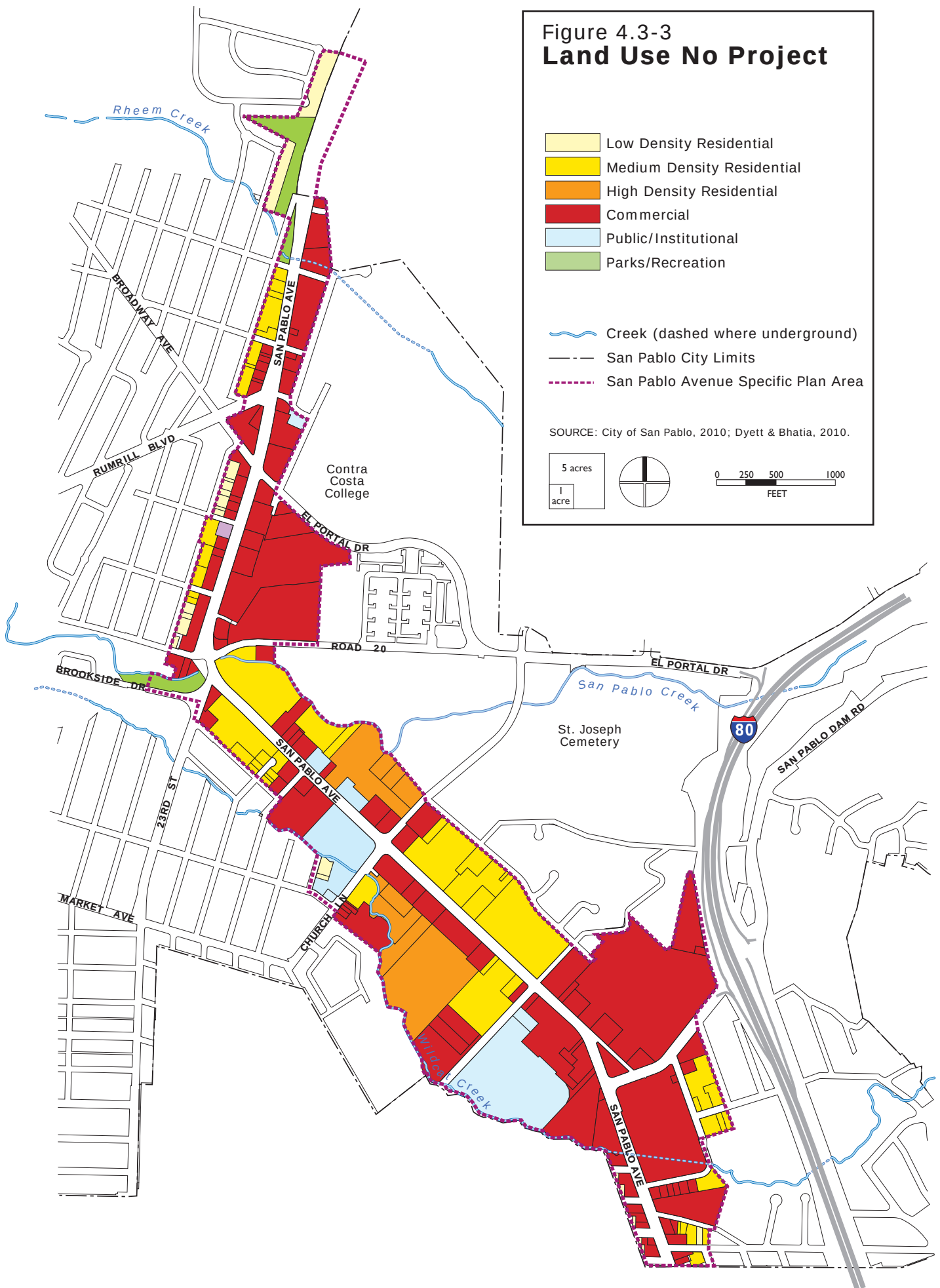


**Figure 4.3-3
Land Use No Project**



SOURCE: City of San Pablo, 2010; Dyett & Bhatia, 2010.

TABLE 4.3-1 BUILDOUT COMPARED TO EXISTING (2010) CONDITIONS

	HOUSEHOLDS			JOBS			HOUSING			POPULATION		
	EXISTING	BUILDOUT	ADDITIONAL	EXISTING	BUILDOUT	ADDITIONAL	EXISTING	BUILDOUT	ADDITIONAL	EXISTING	BUILDOUT	ADDITIONAL
Specific Plan	1,290	1,990	700	4,090	6,080	1,990	1,360	2,100	740	4,000	6,170	2,170
Alternative A	1,290	2,150	860	4,090	6,650	2,560	1,360	2,260	900	4,000	6,650	2,650
Alternative B	1,290	1,810	520	4,090	6,800	2,710	1,360	1,910	550	4,000	5,620	1,620
No Project	1,290	1,860	570	4,090	4,400	310	1,360	1,970	610	4,000	5,780	1,780

Note: Numbers rounded to nearest tenth and are only approximate projections. Totals may not add up due to rounding.

Source: Dyett & Bhatia, 2010.

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4.4 COMPARATIVE IMPACT ANALYSIS OF ALTERNATIVES

This section compares the environmental impacts of each alternative to the proposed Project, by resource issue area. Alternatives are compared subject to the same significance criteria as the proposed Project. It is assumed that Alternatives A and B would generally include the same policies as those defined for the proposed Specific Plan, excluding site specific policies that would not apply because of differences in planned land use. In contrast, the No Project Alternative does not include the same policies as those defined for the proposed Specific Plan.

Land Use

Table 4.4-1 shows land use by acreage at full buildout of each alternative. The alternatives differ in land use types, the amount of land dedicated to residential and non-residential uses, as well as in the density and intensity of development. The alternatives share the same planning area boundaries.

Although the total amount of land dedicated to residential use is similar between Alternative A and the proposed Specific Plan, the emphasis is different in each case. Specifically, Alternative A devotes more land to Medium Density Residential while the Specific Plan devotes more land to High Density Residential. In terms of the amount of mixed use land, Alternative A proposes only 38 acres compared to about 72 acres under the proposed Specific Plan. This difference is largely thanks to the Specific Plan having 21 acres more Entertainment District land than Alternative A. Conversely, Alternative A boasts 52 acres of Commercial land, a category not found in the Specific Plan. In terms of the amount of land devoted to public, institutional, parks and open space, Alternative A devotes slightly more land to parks but less to public/institutional uses compared to the Specific Plan.

Alternative B devotes less land to residential use compared to the Specific Plan and has a stronger emphasis on Medium Density Residential. Unlike the Specific Plan, it does not have any Neighborhood Commercial land, but compensates for it with 52 acres of Commercial land. In terms of mixed use land, this alternative proposes more than Alternative A but less than the Specific Plan. The overall amount of land devoted to public, institutional, parks and open space is generally similar to Alternative A.

The No Project Alternative devotes more land to residential uses than the proposed Specific Plan, but significantly less of that is allocated to High Density Residential. It does not have any type of mixed use, and all non-residential land is devoted to commercial. Additionally, this alternative would also produce the least amount of parks, recreational, and open space compared to the other alternatives.

TABLE 4.4-1 COMPARISON OF LAND USE BUILDOUT BY ALTERNATIVE

LAND USE ¹	SPECIFIC PLAN	ALTERNATIVE A	ALTERNATIVE B	NO PROJECT
Low Density Residential	4.2	4.0	4.0	5.9
Medium Density Residential	23.8	38.8	38.8	41.0
High Density Residential	37.0	21.8	15.8	25.0
<i>Residential Land Subtotal</i>	<i>65.1</i>	<i>64.6</i>	<i>58.6</i>	<i>71.8</i>
Commercial	-	51.8	51.8	117.5
Neighborhood Commercial	17.6	29.6	-	-
Regional Commercial	26.7	-	26.3	-
<i>Commercial Land Subtotal</i>	<i>44.3</i>	<i>81.4</i>	<i>78.2</i>	<i>117.5</i>
Mixed Use Center North	2.7	1.6	2.7	-
Mixed Use Center South	16.1	15.6	21.3	-
Commercial Mixed Use	17.7	14.5	4.8	-
Residential Mixed Use	12.8	5.5	9.3	-
Entertainment District ²	22.1	1.2	10.1	-
<i>Mixed Use Land Subtotal</i>	<i>71.6</i>	<i>38.3</i>	<i>48.3</i>	<i>-</i>
Public/Institutional	24.1	19.9	19.9	19.9
Parks, Recreation and Open Space	9.8	10.5	9.8	5.6
<i>Others Subtotal</i>	<i>33.8</i>	<i>30.4</i>	<i>29.7</i>	<i>25.5</i>
Total³	214.8	214.8	214.8	214.8

¹ Some land uses exist in certain alternatives only.

² The Entertainment District land use exists as an overlay in the proposed Specific Plan, but as a stand-alone land use in Alternative A and Alternative B.

³ Total does not include roads and other right-of-ways.

Source: City of San Pablo, 2010; Dyett & Bhatia, 2010.

Transportation

As with the analysis in Section 3.2, this transportation alternatives analysis assumes that regional growth and development influences on traffic and trips are consistent across alternatives. Furthermore, like Section 3.2, the modeling used to estimate trips for alternatives was conducted citywide, and incorporates traffic generation associated with a limited amount of growth and development elsewhere in the city, but outside the Planning Area. This is because modeling for the Planning Area alone, just one corridor, would not adequately reflect the regional nature of trip generation. Differences between alternatives are nonetheless restricted to differences in development within the Planning Area, and therefore the citywide modeling is suitable to show the potential difference in impacts between Specific Plan area alternatives.

Trip Generation Comparison

Of the three alternatives, Alternative B is projected to generate the highest number of daily vehicle trips upon implementation. The daily trips would increase by almost 34,800 over existing conditions, compared to an increase of 23,900 under the No Project Alternative and 33,900 under Alternative A. Propelled by its higher employment generation, Alternative B is also the only alternative that generates

more (about 500) daily trips than the proposed Plan despite a lower total number of households. With the fewest households and the lowest total employment, the No Project Alternative would generate 10,300 fewer trips than the proposed Plan. Alternative A would generate slightly fewer daily trips than the proposed Plan even though this alternative has more projected households and higher projected total employment. The primary reason for this slight variation is the higher retail employment share in the proposed Specific Plan. Retail land use generates more trips per employment unit than other types of non-residential land use.

In terms of total vehicle-miles-traveled (VMT), all the alternatives would experience higher VMT than existing conditions because there will be some amount of regional population growth and development over the next 20 years resulting in more automobile use. Implementation of the No Project Alternative would see an increase in VMT of 200,000; Alternative A and Alternative B would see an increase in VMT of about 280,000 and 290,000, respectively. The VMT generated under the proposed Specific Plan is projected to be similar to Alternative A, which is higher than the No Project Alternative and lower than Alternative B.

LOS Comparison

Table 3.2-10 in Chapter 3 presents the comparison of the intersection level of service for existing conditions, the proposed Specific Plan, and the No Project Alternative. Implementation of the No Project Alternative would result in significant LOS impacts at two intersections based on CCTA MTSO standards: I-80 Westbound off-ramp/El Portal Drive during both peak hours and I-80 Eastbound ramp/El Portal Drive during the PM peak hour. Both of these locations would also experience substandard level of service with the implementation of the proposed Specific Plan during the same peak periods. However, the No Project Alternative would not cause substandard service at the San Pablo Dam Road intersections of San Pablo Avenue and Amador Street/I-80 Eastbound ramps as projected under the proposed Specific Plan scenario. As discussed, the Caltrans San Pablo Dam Road Interchange Improvement project would modify the El Portal Drive interchange of Interstate 80 by relocating the westbound on-ramp to the north to form a tight diamond interchange and providing additional turn and through lanes on both El Portal Drive and eastbound off-ramp. It is projected that the impacts to the El Portal Drive/I-80 ramp intersections would be fully mitigated upon implementation of the Interchange Improvement project.

Based on trip generation data for all alternatives, and the fact that alternatives A and B share the same policy foundation as the proposed Specific Plan, it is projected that vehicle intersection LOS impacts under Alternative A would be similar to those of the proposed Plan. Implementation of Alternative A would likely result in significant impacts at the same intersections as the proposed Plan. While the number of total daily trips is slightly lower than the proposed Plan under Alternative A, the higher number of households and total employment may generate commute trips in particular, which tend to concentrate during peak periods.

Alternative B entails higher total employment than the proposed Specific Plan. More instrumentally, it also projects a higher number of retail jobs than the proposed Specific Plan. It is projected that the number of daily trips generated by Alternative B would be higher by about 500 trips. Consequently, the impact of this alternative on the transportation network LOS is likely to be greater than the proposed Specific Plan and the number of impacted intersections resulting from Alternative B may extend beyond those identified for the proposed Specific Plan.

Of all alternatives, the No Project Alternative is least likely to cause significant vehicle intersection LOS impacts in the future, primarily as a result of the lower numbers of households and jobs projected for the Planning Area. However, also missing from the No Project Alternative are the pedestrian and bicycle improvements programmed in the proposed Specific Plan. These benefits are partially revealed through the multimodal LOS analyses (described in Section 3.2), where the No Project condition assumes traffic volume growth along San Pablo Avenue, but not the pedestrian and bicycle improvements. While vehicle intersection LOS may be better under the No Project Alternative than under the proposed Specific Plan, pedestrian, bicycle, and transit LOS under the No Project Alternative would likely be worse than under the proposed Specific Plan, due to the lack of programming and investment in Complete Streets projects.

All things considered, the proposed Plan and Alternative A are almost identical in potential transportation impacts, and perform better than Alternative B.

TABLE 4.4-2 TRIPS SUMMARY BY ALTERNATIVE, DATA REPORTED CITYWIDE¹

YEAR	TOTAL HOUSEHOLD (IN UNITS)	TOTAL EMPLOYMENT	EMPLOYMENT BY SECTOR				DAILY VEHICLE TRIPS	MILLION VMT GENERATED	MILLION VMT ON STREETS (EXCLUDING FREEWAYS)	AVERAGE TRIP LENGTH (MILES)
			RETAIL	SERVICE	MANUFACT.	OTHER				
Existing Conditions	9,795	8,830	2,168	4,565	256	1,649	92,723	0.67	0.17	7.23
Future with Proposed Plan	12,557	12,832	3,887	5,916	443	2,325	126,983	0.95	0.28	7.49
Future with Alternative A	12,703	13,174	3,778	5,775	371	2,991	126,636	0.95	0.29	7.50
Future with Alternative B	12,371	13,316	4,079	5,859	371	2,757	127,484	0.96	0.29	7.50
Future with No Project	12,288	10,791	2,757	5,397	367	2,095	116,646	0.87	0.28	7.44

¹ The transportation analysis was done citywide because of the regional, cumulative characteristics of traffic patterns. Therefore, the trip generation and vehicle miles data reported in this EIR incorporate traffic generation in the Planning Area, outside the Planning Area within the City of San Pablo, as well as outside the city, in as much as trips generated by development in the city may have one terminus outside the city.

Source: Dowling Associates, 2010.

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Air Quality

Air quality impacts are evaluated on a citywide basis because of the regional, cumulative characteristics of air quality and air pollution patterns. Two of three criteria used in evaluating impacts to air quality are related to goals, policies, and objectives that aim to minimize impacts to air quality, including policies that reflect the Bay Area 2010 Clean Air Plan control measures and policies that minimize impacts of toxic air contaminants on sensitive receptors. Because policies for Alternatives A and B would be the same as policies in the proposed Specific Plan, impacts are expected to be similar, and less than significant in terms of policy related impacts. However, the No Project Alternative would not include these goals, policies, and objectives, resulting in a potentially significant impact related to achieving regional air quality goals and protecting public health.

The final criterion used in evaluating impacts to air quality is in the comparison of the rate of increase in VMT to the rate of increase in population. As noted in Impact 3.3-1, the proposed Specific Plan would result in a significant and unavoidable impact due to the VMT growth exceeding population growth for 2030. As shown in **Table 4.4-3**, both Alternatives A and B, as well as the No Project, all result in a significant impact by this standard. The No Project Alternative results in the smallest difference between the rate of population and VMT growth, Alternative A is slightly better than the proposed Specific Plan, and Alternative B results in the greatest difference in population and VMT growth. While this comparison is useful in evaluating alternatives, all future scenarios result in a faster rate of increase for VMT when compared to population, indicating a significant impact for this criterion in all scenarios.

TABLE 4.4-3 COMPARISON OF VMT AND POPULATION BY ALTERNATIVE, CITYWIDE¹

YEAR	SAN PABLO POPULATION	POPULATION % CHANGE FROM BASELINE	VMT	VMT % CHANGE FROM BASELINE	DIFFERENCE IN RATE OF GROWTH (POPULATION – VMT)
2000 Baseline ¹	30,215	n/a	670,000	n/a	n/a
Proposed Plan	34,950	15.7%	950,000	41.8%	-26.1%
Alternative A	35,460	17.4%	950,000	41.8%	-24.4%
Alternative B	34,430	14.0%	960,000	43.3%	-29.3%
No Project	34,160	13.1%	870,000	29.9%	-16.8%

¹ Comparison of VMT and population is for the City of San Pablo.

² Baseline VMT data is based on data from the year 2000, therefore this analysis also considers population growth from 2000 (ABAG projections 2009), rather than from 2010.

Source: Dyett & Bhatia, 2010, Environmental Science Associates, 2010.

Energy and Greenhouse Gases

Energy and greenhouse gas impacts are evaluated on a citywide basis primarily because the transportation data on which part of the analysis is based encompasses the whole city, and partly because the policy approach for reducing energy use and greenhouse gas emissions would apply citywide in any case.

Energy

The following three tables summarize the comparison of energy use across alternatives. The findings suggest that all alternatives, like the proposed Project, have lower overall per service population energy use than existing conditions (69.4 MMbtu per service population). This is largely because of the anticipated improvements in fuel efficiency assumed under Pavley rules/new federal CAFE standards.

Overall, the No Project Alternative is the environmentally superior alternative in terms of energy use because it has the lowest population and jobs. The differences between alternatives are marginally in favor of Alternative A in second place as the environmentally superior alternative in this issue area, after the No Project Alternative.

TABLE 4.4-4 COMPARISON OF ENERGY USE BY ALTERNATIVE, CITYWIDE¹

ALTERNATIVE	MMBTU	PER SERVICE POPULATION
Proposed Plan	2,648,686	60.9
Alternative A	2,678,932	60.4
Alternative B	2,688,083	61.8
No Project	2,385,208	58.6

¹Energy use in this table includes that which occurs in the Planning Area as well as energy use outside the Planning Area but within the City of San Pablo. For each alternative, it is citywide energy use assuming implementation of the alternative within the Planning Area.

Source: Dyett & Bhatia, 2010.

Greenhouse Gases

A comparison of the GHG emissions across alternatives shows that the future under the No Project Alternative results in the lowest per service population emissions rate citywide, while the future with the proposed Project results in the second lowest per service population emissions rate citywide. However, all alternatives offer a citywide per service population emissions rate that meets the threshold set by the BAAQMD.

TABLE 4.4-5 COMPARISON OF GREENHOUSE GAS EMISSIONS BY ALTERNATIVE, CITYWIDE¹

	PROPOSED PLAN	ALTERNATIVE A	ALTERNATIVE B	NO PROJECT
Future Population	34,950	35,460	34,430	34,160
Future Jobs	8,520	8,900	9,050	6,520
Residential Emissions	39,815	40,396	39,223	38,915
Non-Residential Emissions	108,800	113,652	115,568	83,260
Transportation Emissions	111,900	111,900	113,078	102,477
Total	260,515	265,948	267,868	224,652
Per Service Population	5.99	6.00	6.16	5.52

¹ Emissions in this table includes that which occurs in the Planning Area as well as emissions outside the Planning Area but within the City of San Pablo. For each alternative, it is citywide emissions assuming implementation of the alternative within the Planning Area.

Source: Dyett & Bhatia, 2010.

Hydrology and Flooding

Urban development can bring about an increase in impervious surfaces that could lead to increased run-off rates and flooding in downstream areas. The proposed Specific Plan and alternatives focus new development in currently built-up areas to limit impacts to hydrology and flooding.

Alternative A will result in a higher level of development than the proposed Specific Plan—potentially resulting in more construction activity overall. Construction activity may cause temporary impacts to the region’s hydrology due to earth movement. Nevertheless, the overall impact is not significant, as the majority of new developments are planned at infill sites along the main transportation corridors outside flood prone areas. No natural areas in San Pablo will be converted to urban use.

Alternative B will result in a similar level of development to the proposed Specific Plan—resulting in a similar level of construction activity. Construction activities may cause temporary impacts to the region’s hydrology due to earth movement. Nevertheless, the overall impact is not significant, as the majority of new developments are planned outside flood prone areas. Like the proposed Specific Plan, no natural areas will be converted to urban use.

The No Project Alternative will result in the least amount of development—resulting in the least amount of impervious surfaces and lowest level of construction activity associated with development. However, flood prevention policies and mitigation measures in the proposed Specific Plan will not apply under this alternative. Furthermore, the No Project Alternative makes no allowances for the provision of parks or open space within the Specific Plan Planning Area, thereby increasing the potential for runoff from impervious surfaces entering the stormwater drainage system. Consequently, though overall development intensity is lower, the anticipated impact related to hydrology and flooding will be similar to, and potentially worse than, the proposed Specific Plan and other alternatives.

Biological Resources

The proposed Specific Plan and all alternatives would generate minimal impacts to biological resources in San Pablo since none of them would convert existing open space or natural areas into built land. In fact, they protect San Pablo’s habitat by focusing development in currently built up areas and including policies that would help protect the city’s vegetated upland, natural creeks, and riparian corridors.

Alternative A, like the proposed Specific Plan, limits urban development to infill sites along the main transportation corridors and busy intersections. No vegetated and natural areas will be converted into urban use. While there may be temporary impacts to biological resources when the City carries out one of the policies to “daylight” San Pablo’s creeks, the impacts as a result of construction work are temporary and will ultimately be beneficial. Overall, this alternative would have minimal impacts to biological resources.

Alternative B proposes development at locations similar to those under the proposed Specific Plan and Alternative A—infill sites along the main transportation corridors and intersections. Like the proposed Specific Plan, no vegetated and natural areas will be converted to urban use. Overall, implementation of Alternative B would also have minimal impacts on biological resources.

Like the proposed Specific Plan, development under the No Project Alternative would also cause no loss of wildlife and plant habitats within the Specific Plan Area. As such, the impacts to biological resources are similarly minimal. To the extent that the proposed Project offers stronger policies related to the protection of biological and hydrological resources, the proposed Project and alternatives A and B would all three perform better than the No Project Alternative.

Geology, Soils, and Seismicity

San Pablo is located in one of the most seismically active regions in the United States. Consequently, when a large earthquake occurs close by, it is likely to affect everyone in the Planning Area, particularly those working or living in older structures. Current State and federal regulations require specific engineering and design criteria to minimize impacts related to seismic and geologic hazards. These regulations include building limits on parcels located next to the Alquist-Priolo Earthquake Fault Zone and apply equally to development under the proposed Specific Plan and each of the alternatives.

As previously noted, Alternative A proposes development that is more intensive in terms of households and jobs and allows greater heights along San Pablo Avenue than the proposed Specific Plan; consequently, it has the potential to expose a larger number of people and structures to geologic and seismic hazards than the proposed Specific Plan.

Alternative B calls for development along San Pablo Avenue with intensities similar to that in the proposed Specific Plan, but proposes fewer housing units and more jobs than the proposed Specific Plan. For this reason, its exposure to potential geologic, soils, and seismic hazards is expected to be similar to or slightly lower than the proposed Plan.

The No Project Alternative offers a future development program smaller in scope and lower in intensity than anticipated under the proposed Plan or other alternatives. Therefore, compared to the proposed Plan, this alternative would result in the least potential new exposure to geologic and seismic hazards. However, because the No Project Alternative proposes less redevelopment, it also offers fewer opportunities to replace older, more vulnerable structures with newer ones built to stricter code specifications.

Public Services, Facilities, and Utilities

The comparison of impacts on public services, facilities, and utilities is based on the degree of increased demand on public schools, parks, water supply, wastewater treatment, solid waste, and public safety and emergency services. The proposed Specific Plan, the two “build” alternatives, as well as the No Project Alternative are evaluated based on their relative impact on these areas. Data specific to the Specific Plan planning area are used when they are available and makes sense. When such data are not available, citywide data are used. Often, it is more logical and proper to make a citywide comparison, as in the case of calculating park ratio, water supply or wastewater supply. The assumption inherent in this EIR is that the proposed Specific Plan will be adopted shortly after, or concurrently with the 2030 General Plan. Both plans propose the same land uses and are consistent with each other. The only differences between them are (1) geographic scope– the proposed General Plan boundary includes all of the Specific Plan planning area and other areas, and (2) the Specific Plan includes more detail about the Specific Plan Planning Area and additional policies geared toward the Specific Plan Planning Area.

In terms of overall impact, the No Project Alternative would at first blush appear to be the environmentally superior alternative since it has the least new population and places the least demand on public services and utilities. However, policies in the proposed General Plan and both alternatives A and B would ensure that new development contributes its fair share towards public service improvements needed to accommodate increased demand. Therefore, the differences among alternatives would not be substantive with respect to their impacts on public services, facilities, and utilities.

Schools

All of the alternatives, including the No Project Alternative, will increase the student population in 2030. None of them will require the development of new schools. The West Contra Costa Unified School District would continue to operate their schools below capacity, as shown in **Table 4.4-7**.

The number of new students is projected based on “student generation factors” by residential type provided by the School District. All existing schools with attendance areas in the city are included in the analysis. Current enrollment and capacity is based upon the 2009-2010 enrollment figures.

Alternative A will result in 860 new households in the Specific Plan area. These new households will add approximately 315 new students to the school system. Under this alternative, all elementary, middle and high schools will continue to operate below capacity. No new schools are needed.

Alternative B will result in 520 new households in the Specific Plan Planning Area. These households will add approximately 191 new students to the school system. All elementary, middle and high schools will continue to operate below capacity. No new schools are needed.

The No Project Alternative will generate the least number of new students among the alternatives. This alternative would add 212 new students and would have the least potential impact on existing school facilities. No new schools are needed.

TABLE 4.4-7 DEMAND FOR PUBLIC SCHOOLS AT BUILDOUT BY ALTERNATIVE

ALTERNATIVE	ADDITIONAL STUDENTS AT SPECIFIC PLAN BUILDOUT ¹	CURRENT CAPACITY (CITYWIDE)	TOTAL STUDENTS PROJECTED AT BUILDOUT (2030 CITYWIDE)	STUDENTS BELOW EXISTING CAPACITY
Specific Plan	250	7,560	6,670	890
Alternative A	315	7,560	6,729	831
Alternative B	191	7,560	6,608	952
No Project	212	7,560	6,576	984

¹Assumes 0.21 elementary school, 0.06 middle school, and 0.15 high school students per single-family household, and 0.18 elementary school, 0.08 middle school, and 0.09 high school students per multifamily household.

Source: Dyett & Bhatia, 2010.

Parks

There are currently 5.6 acres of parkland in the Specific Plan area and 22.0 acres of parkland in the whole of San Pablo. With a citywide population of 32,200 in 2010, San Pablo has a park ratio of 0.7 acres per thousand residents. This is lower than the city’s goal of providing 3.0 acres per thousand residents.

TABLE 4.4-9 TOTAL PARKLAND AT BUILDOUT BY ALTERNATIVE

ALTERNATIVE	SPECIFIC PLAN AREA		CITYWIDE	
	ADDITIONAL RESIDENTS	ADDITIONAL PARKLAND (ACRES)	TOTAL PARKLAND (ACRES)	OVERALL PARK RATIO (ACRES PER THOUSAND RESIDENTS)
Specific Plan	2,170	4.2	46.5	1.3
Alternative A	2,650	5.0	42.4	1.2
Alternative B	1,620	4.3	41.7	1.2
No Project	1,780	-	22.0	0.6

Source; Dyett & Bhatia, 2010.

Alternative A will result in the largest population among all four options (**Table 4.4-9**). This alternative proposes 5.0 acres of new parkland in the Specific Plan area, bringing the citywide park ratio to 1.2 acres per thousand residents, which is slightly lower than that obtained under the proposed Specific Plan.

Alternative B will result in a lower population than the proposed Specific Plan. This alternative proposes 4.3 acres of new parkland in the Specific Plan area, bringing the citywide park ratio to 1.2 acres per thousand residents.

The No Project Alternative will not create any new parks in the Specific Plan area. At buildout, this alternative would produce a park ratio of 0.6 acres per thousand residents, the lowest among the alternatives.

Water Supply

Water supply to the City of San Pablo is provided by East Bay Municipal Utility District (EBMUD). According to EBMUD's 2005 Urban Water Management Plan, EBMUD will be able to meet the needs of its service area under normal non-drought conditions. However, because its water supply is dependent upon seasonal rainfall and collected snowpack in the Sierra Nevada watershed, EBMUD may have to implement water use reductions during droughts. Since San Pablo's population is only 2.3 percent of EBMUD's entire service area population, the differences in water demand in San Pablo due to the alternatives is inconsequential when compared to fluctuations in supply due to climate conditions. Nevertheless, the proposed General Plan includes a series of water conservation policies aimed at reducing water use in San Pablo.

Alternative A, with the highest projected population among all the alternatives, would result in the highest water demand. Alternative B, with the lowest projected population among all the alternatives, would require the least supply of water.

The No Project Alternative would result in a population size that's higher than Alternative B but lower than the other alternatives. However, unlike the proposed Specific Plan and alternatives A and B, the No Project Alternative will not have the benefit of new policies promoting water conservation. Therefore, the overall result may mixed. While this alternative will reduce water demand by virtue of its generally lower population, it may not conserve as much water compared to the other alternatives.

Wastewater Treatment

As discussed in Chapter 3.8, population increase due to implementation of the proposed Specific Plan is not expected to cause any capacity issues at the treatment plant. However, higher intensity new development may necessitate the replacement of existing clay pipes, which are on average, 40 to 60 years old. Pipe replacements and upgrades are part of West County Wastewater District's Capital Improvement Plan, and the pipes are scheduled to be replaced in phases, regardless of which alternative is implemented by the City.

Alternative A will result in more households and jobs than anticipated under the proposed Specific Plan. Accordingly, it is expected to generate more waste than the Specific Plan.

Alternative B will result in fewer households but more jobs than anticipated under the proposed Specific Plan. It is expected to generate a wastewater flow that is slightly less than the proposed Specific Plan.

The No Project Alternative will result in less housing and fewer jobs than the proposed Specific Plan and place the smallest demand on wastewater treatment facilities.

Solid Waste

All of the alternatives, including the No Project Alternative, will generate solid waste in San Pablo. Assuming the annual per capita disposal rates under West Contra Costa Integrated Waste Management Authority for residential and commercial development remain the same in 2030 as they were in 2009, the additional solid waste generated under each alternative can be calculated. **Table 4.3-8** compares the additional pounds of solid waste generated per day.

Alternative A will result in more housing and more jobs than the proposed Specific Plan. Accordingly, this alternative places more demand on solid waste services than the proposed Specific Plan. The total amount of additional solid waste generated per day is 46,400 pounds, or about 27 percent more than the proposed Specific Plan.

Alternative B will result in less housing and more jobs than the proposed Specific Plan, thus placing less demand on facilities from residential development but more from non-residential development. The total amount of additional solid waste generated per day is 44,850 pounds, or about 22 percent more than the proposed Specific Plan.

The No Project Alternative will result in less housing and less jobs than the proposed Specific Plan; therefore, it would produce less additional solid waste. The total amount of additional solid waste generated per day is 10,870 pounds, or about 70 percent less than the proposed Specific Plan.

TABLE 4.4-8 SOLID WASTE GENERATION AT BUILDOUT BY ALTERNATIVE

ALTERNATIVE	ADDITIONAL RESIDENTS AT SPECIFIC PLAN BUILDOUT	ADDITIONAL WASTE FROM RESIDENTIAL DEVELOPMENT (POUNDS PER DAY)	ADDITIONAL JOBS AT SPECIFIC PLAN BUILDOUT	ADDITIONAL WASTE FROM JOB DEVELOPMENT (POUNDS PER DAY)	TOTAL WASTE (POUNDS PER DAY)
Specific Plan	2,170	7,810	1,990	28,660	36,470
Alternative A	2,650	9,540	2,560	36,860	46,400
Alternative B	1,620	5,830	2,710	39,020	44,850
No Project	1,780	6,410	310	4,460	10,870

Source: Dyett & Bhatia, 2010.

Public Safety and Emergency Services

The demand for police and emergency services would increase in direct proportion to population growth. **Table 4.4-6** shows the anticipated demand for police officers and facilities at buildout for each alternative. The need for new officers would be based upon maintaining the current ratio of 1.6 officers per 1,000 residents, while the need for new space is based upon the assumption that 200 square feet is required for each additional police officer. In the case of fire protection service, since no alternative would build outside of San Pablo's city limits, their land use differences have little to no effect on CCCFPD's response times. Consequently, no new fire stations are needed.

TABLE 4.4-6 DEMAND FOR POLICE FACILITIES AT BUILDOUT BY ALTERNATIVE

ALTERNATIVE	SPECIFIC PLAN AREA POPULATION	ADDITIONAL POLICE OFFICERS NEEDED (CITYWIDE)	ADDITIONAL POLICE FACILITY SPACE NEEDED (SQUARE FEET)
Specific Plan	6,170	3	600
Alternative A	6,650	5	1,000
Alternative B	5,620	4	800
No Project	5,780	3	600

Source: Dyett & Bhatia, 2010.

Alternative A will result in more residents than the proposed Specific Plan and place a greater demand on police services. A total of 5 additional officers and 1,000 square feet of space will be required. All new growth in this alternative would be within the 1.5 mile response radii of an existing fire station. Growth management policies under the 2030 General Plan will ensure that growth demands would remain less than significant.

Alternative B will result in less population growth than the proposed Specific Plan. This alternative would require four new police officers and 800 square feet of space to maintain the City's current ratio of 1.6 police officers per 1,000 residents. All new growth in this alternative would be within the 1.5 mile response radii of an existing fire station. Growth management policies under the 2030 General Plan would ensure that growth demands would remain less than significant.

The No Project Alternative will result in a smaller population compared with the proposed Specific Plan. Accordingly, the demand on public safety resources is less compared to the proposed Specific Plan. Similar to the other alternatives, all new growth would be within the 1.5 mile response radii of an existing fire station.

Noise

The analysis of noise impacts under different alternatives is evaluated on a citywide basis since ambient noise is rarely localized. Now as in the future, San Pablo's streets and highways will be the primary generators of noise. Railway noise on tracks west of San Pablo's city limits and emergency helicopter usage by Doctors Medical Center would not differ among the alternatives. Noise levels will be highest at intersections with high traffic volumes, and alternatives with lower levels of development would be least exposed to high noise levels. **Table 4.4-2** compares the population and vehicle trips for all the alternatives.

Under Alternative A, the projected number of trips and vehicle miles travelled is 950,000, which is the same as those generated by the San Pablo 2030 General Plan. Furthermore, because this alternative proposes mixed use development along San Pablo Avenue with residential living areas above ground level like those in the proposed Specific Plan, the noise exposure to residents would not be noticeably different.

Under Alternative B, the projected number of trips and vehicle miles travelled is 960,000. As in Alternative A's case, the differences are statistically insignificant and probably would not be discernable to the naked ear.

The No Project Alternative would not have as much development as the other alternatives. Consequently, the number of vehicle trips and vehicle miles travelled would be lower. This suggests a lower level of exposure to excessive noise. However, since the No Project Alternative does not benefit from the enhanced proposed Specific Plan and 2030 General Plan policies concerning noise mitigation, the relative impact of noise generated at buildout may be similar to the other alternatives.

Hazardous Materials

Generally, impacts associated with hazardous materials are determined by the amount and type of job growth. For example, office or retail jobs are more likely to create hazardous materials than residential homes. Additionally, the demolition of older buildings for redevelopment can expose people and the environment to hazardous materials, such as asbestos and lead-based paint. Due to these reasons, the No Project Alternative is the environmentally superior alternative in terms of impacts associated with hazardous materials, since it would create the least amount of jobs and involves no redevelopment of existing sites.

Alternative A would introduce more jobs and more households than the proposed Specific Plan. As such, it is expected to create more impacts associated with hazardous materials than the proposed Specific Plan.

Alternative B would introduce more jobs but fewer households than the proposed Specific Plan. Most of the additional jobs consist of "mixed-use" type jobs which are office, retail, or service in nature. As such, it is expected to create more impacts associated with hazardous materials than the proposed Specific Plan, but fewer than Alternative A.

The No Project Alternative would create the least households and jobs. It is the environmentally superior alternative in this category.

Cultural Resources

The evaluation of impacts to cultural resources by alternative is based on the degree and location of new development proposed within each alternative. Cultural resources include buildings of historical importance, registered historic sites and archaeological resources. In the Planning Area, only five buildings are listed by the Office of Historic Preservation's Historic Property Directory (HPD) as having historic importance. Only one of them (Old Rectory) appears eligible for future registration on the National Register. Another building, Alvarado Adobe, is listed as a State Historic Landmark.

As in the case of the proposed Specific Plan, most development in Alternative A would occur on vacant and underutilized sites along San Pablo Avenue. Sites bearing a historic building would be protected from development by 2030 General Plan policies. Although the sites will be protected from development, views to and from sites located along San Pablo Avenue may be blocked by new development. The impact is expected to be similar in degree to that under the proposed Specific Plan.

Alternative B would develop on the same opportunity sites as those in Alternative A. Like Alternative A, while sites with historic buildings would be protected from development, adjacent sites would be blocked as a result of higher density development along San Pablo Avenue. As a result, the impact is expected to be similar to that of Alternative A.

The No Project Alternative proposes development that is smaller in intensity than any of the prior alternatives and is expected to cause the least impact to cultural resources.

Visual Quality

Differences in visual impacts between the proposed Specific Plan and Alternatives A and B are minor and relate primarily to the intensity of development along San Pablo Avenue. Differences between the proposed Specific Plan and the No Project Alternative are substantial as the streetscape character will be different for each case.

Alternative A focuses on nodal-type developments at important infill sites along San Pablo Avenue. Consequently, buildings at key locations would be taller, while those between them would be lower compared to those in the proposed Specific Plan. This also means that fewer of the background views to the horizon will be blocked along San Pablo Avenue. In terms of streetscape, Alternative A would be visually similar to the proposed Specific Plan since the major uses and streetscape improvements proposed along San Pablo Avenue would be similar.

Alternative B promotes development of uniform density along San Pablo Avenue. This means that most buildings would have a similar height of about two or three stories. Accordingly, there would be less visual porosity than either Alternative A or the proposed Specific Plan which proposes a variety of building heights. However, a major initiative of this alternative is to create a "green boulevard" along San Pablo Avenue. Streetscape improvements would help to ameliorate the loss of views to a level that is less than significant.

The No Project Alternative would result in the least amount of development among all four alternatives. It follows that this alternative would produce fewer view obstructions, fewer sources of light and glare, and less construction activity. On the other hand, this alternative would not have the benefit of streetscape improvements proposed by the other alternatives.

4.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA Guidelines require the identification of an environmentally superior alternative among the alternatives analyzed in an EIR. The Guidelines also require that if the No Project Alternative is identified as the environmentally superior alternative, then another environmentally superior alternative must be identified.

Based on a comparison of the alternatives' overall environmental impacts and their compatibility with Specific Plan goals and objectives, Alternative B appears to be the environmentally superior alternative for this EIR. Although the No Project Alternative would create lower numbers of housing and jobs and consequently would result in fewer vehicles and place a lower demand on utility services, it would not enjoy the benefits of proposed Specific Plan environmental protection policies, nor would the safety and health benefits associated with redevelopment under the latest building code be realized as fully under the No Project Alternative. Also importantly, the No Project Alternative does not meet the proposed Specific Plan goals related to promoting walkability, creating destinations and amenities for all ages, improving access to community facilities, and providing residents with more parks and open space.

Alternative B would result in lower population and more jobs than the proposed Specific Plan. Its impacts are expected to be similar to those in the proposed Plan for most of the environmental impact categories analyzed in this EIR—land use, hydrology and flooding, biology, geology and seismicity, cultural resources, air quality, and visual resources. However, the lower population generated under Alternative B means it would likely result in fewer impacts in relation to population-related externalities such as police and fire services, schools, and demand for water supply and wastewater services. Because it would generate more jobs than the proposed Specific Plan, it would likely result in greater job-related impacts such as generating more: solid waste, vehicle miles travelled, energy use, greenhouse gas emissions, noise, and hazardous materials.

However, there are tradeoffs associated with Alternative B. It would be less successful in meeting the City's identified long term objectives, such as expanding housing opportunities. The urban form created under the proposed Specific Plan is also potentially more pleasing, with higher density developments at important junctions and lower density developments elsewhere. These are the reasons why Alternative B was not selected for the project even though it is environmentally superior to the proposed Specific Plan.

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5 CEQA Required Conclusions

This chapter presents a summary of the impacts of the proposed San Pablo Avenue Specific Plan in several subject areas specifically required by CEQA, including significant irreversible environmental changes, significant unavoidable impacts, growth-inducing impacts, cumulative impacts, and impacts found not to be significant. These findings are based on the analysis provided in Chapter 3: Settings, Impacts, and Mitigation Measures.

5.1 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

CEQA Guidelines require the EIR to consider whether “uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely” (CEQA Guidelines Section 15126.2(c)). “Nonrenewable resource” refers to the physical features of the natural environment, such as land, waterways, etc. Irretrievable commitments of non-renewable resources associated with the proposed San Pablo Avenue Specific Plan include:

Water Consumption

To the extent that the proposed Specific Plan would accommodate new population and jobs, it would increase the demand for water. It would place a somewhat greater burden on the East Bay Municipal Utilities District (EBMUD), which provides water to San Pablo and derives its supply from seasonal rainfall and snowpack in the Sierra Nevada watershed. Even if the overall change in demand is very marginal from EBMUD’s perspective, the increase would represent an irreversible environmental change.

Energy Sources

Residential and non-residential developments use electricity, natural gas, and petroleum products for lighting, heating, and other indoor and outdoor power demands, while cars use both oil and gas. New development under the proposed Specific Plan would result in increased energy use for the operation of new buildings and transportation. This new development would therefore result in an overall increased use of both renewable and nonrenewable energy resources. To the extent that new development uses more nonrenewable energy sources, this would represent an irreversible environmental change.

Construction-Related Impacts

Irreversible environmental change could also occur as a result of constructing development projects made possible by the proposed Specific Plan. New construction would result in the consumption of building

materials, such as lumber, sand and gravel, as well as the use of energy to process, transport and build with these materials.

5.2 SIGNIFICANT UNAVOIDABLE IMPACTS

Significant unavoidable impacts are those that cannot be mitigated to a level that is less than significant. According to CEQA Guidelines 15126(b), an EIR must discuss any significant environmental impacts that cannot be avoided under full implementation of the proposed program. Chapter 3 identified the following significant unavoidable impacts when comparing the proposed Specific Plan to existing conditions:

Transportation

Implementation of the proposed San Pablo Avenue Specific Plan, in conjunction with anticipated regional growth and development, could cause conflicts with existing MTSSOs for Routes of Regional Significance presented in the West County Action Plan. In particular, intersections on Routes of Regional Significance may operate below the acceptable MTSSO standard during one or both peak hours. According to the I-80/San Pablo Dam Road Interchange Project IS/EA, the San Pablo Avenue/San Pablo Dam Road intersection would operate at LOS F in the future with no project, as well as with Caltrans' proposed reconfiguration of the interchanges. This means that while the Caltrans interchange reconfigurations may improve traffic flow overall, those improvements do not substantively change performance of this intersection under future local and regional growth conditions. The cumulative impact at this intersection of regional growth, Caltrans efforts, and the proposed Specific Plan is therefore considered potentially significant.

The San Pablo 2030 General Plan (assumed to be adopted) offers a policy to convert the southbound through lane on San Pablo Avenue to a left-or-through lane to provide a total of one left-turn-only lane, one left-or-through lane and one through-or-right lane as well as modifying the traffic signal timing to allow "split phases" for the northbound and southbound movements. The current modeling suggests that implementation of this policy would allow the intersection to operate at LOS B with a v/c of 0.68 in the AM peak hour and LOS E with a v/c of 0.95 in the PM peak hour.

Despite the potential benefits of the lane designations and signal timing improvements, there is still too much uncertainty around the impacts of the Caltrans ramps improvements on traffic flow into this intersection. Without more data on changes in actual traffic flow between I-80 and the intersection of San Pablo Avenue and San Pablo Dam Road, the signal timing and/or lane designation changes necessary to improve future performance, and their effectiveness, remain uncertain. Therefore, even with implementation of this proposed policy, this analysis still finds a significant and unavoidable cumulative impact on traffic LOS at this intersection. However, the project's contribution to this significant cumulative effect is found to be less than considerable with the proposed mitigation, reducing CCTA-based modeled LOS within an acceptable range for the planning period (to 2030).

Air Quality

Implementation of the proposed San Pablo Avenue Specific Plan could result in an increase in VMT at a rate that would exceed the rate of population increase within the city. The proposed Specific Plan assumes the adoption of the San Pablo 2030 General Plan, which includes many of the measures

identified by the BAAQMD as applicable to reduce air quality impacts of general plans. Unfortunately, transportation modeling is still unable to account for the positive influence of these policy and land use design choices. Based strictly on the transportation modeling conducted for the proposed Project in accordance with BAAQMD CEQA Guidelines, vehicle travel is forecast to increase at a faster rate than population, and therefore this impact would be considered significant and unavoidable.

The proposed Specific Plan is being offered despite this significant impact because the land use plan is consistent with MTC's and ABAG's transit oriented development goals in which urban development is directed toward existing urban infill sites near transit corridors in order to avoid the loss of open space. The proposed Specific Plan overall seeks to achieve this goal through policies that give high priority to density, connectivity, and jobs-housing balance. Furthermore, the significant impact related to population and VMT growth would not be considerably different under any other likely growth scenario for San Pablo, particularly given the limitations of current applicable traffic models. Moreover, as noted in Chapter 3.3, emissions of several criteria pollutants are expected to decrease by 2030 even with population growth and increased VMT because of fuel efficiency standards. This suggests that the proposed Specific Plan will actually have only a minimal contribution to the overall regional cumulative impact of criteria air pollutant emissions.

5.3 GROWTH-INDUCING IMPACTS

The EIR must examine the potential growth-inducing impacts of the proposed Specific Plan. More specifically, CEQA Guidelines require that the EIR “discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly” (CEQA Guidelines Section 15126.2(d)). This analysis must also consider the removal of obstacles to population growth, such as improvements in the regional transportation system.

Projected Growth

The Planning Area will accommodate a population of approximately 6,170 people at buildout in 2030, an increase of about 54 percent over the 2010 estimated population of 4,000.¹ This represents an annual growth rate of 2.2 percent over 20 years.

The Planning Area is fully urban and well-served by existing roadways, utility infrastructure, and service systems. The East Bay Municipal Utility District and West County Wastewater District provide water service and sanitary sewer service to the Planning Area, respectively. The amount of water consumed and wastewater generated by the expected additional population is minimal and would not require or result in the construction of new treatment facilities or the expansion of existing facilities. Solid waste generated by the future residents is disposed of through the West Contra Costa County Integrated Waste Management Authority at the Keller Canyon Landfill and the Potrero Hills Landfill. Both landfills have sufficient permitted capacity so development under the proposed Specific Plan would not require expansion of these landfills. Public services (i.e., police, fire protection, schools, and parks and recreation) in the Planning Area are currently provided by the City of San Pablo Police Department, the Contra Costa County Fire Protection District, the West Contra Costa County Unified School District, and the City of San Pablo Parks and Recreation Division, respectively. New development in the Specific Plan area will be

¹ According to City of San Pablo records and ABAG estimates in 2010.

required to comply with all applicable codes for fire safety and emergency access. Additional school-age children by the way of new households in the proposed Specific Plan Planning Area would not exceed existing school capacity and require the construction of new schools. Increased demand for public services and facilities, such as police, transportation improvements or park facilities, will be financed by developer contributions in proportion to the demand generated by project occupants and users. Therefore, the proposed project would not tax the existing community services facilities, create an unfair burden on existing users, or require the construction of new public facilities that would cause significant environmental effects.

In Contra Costa County, all cities are participating in CCTA's growth management program are required to adopt growth management elements in their general plans. These growth management elements must include goals and policies for managing growth and requirements for achieving these goals in order to be approved by CCTA. This countywide planning and regulatory framework mitigates any growth-inducing effect that may be attributable to the proposed Specific Plan, as the Specific Plan is fully consistent with the General Plan containing the Growth Management Element. As a consequence, the growth-inducing effects of the proposed Specific Plan on other jurisdictions are likely to be minimal.

Indirect growth-inducing impacts such as those associated with job increases that might affect housing and retail demand in other jurisdictions over an extended time period are difficult to assess with precision, since future economic trends may be influenced by unforeseeable events, such as natural disasters and business and development cycles. Moreover, long-term changes in economic and population growth are often regional in scope; they are not influenced solely by changes or policies in San Pablo.

Increase in Regional Housing Demand

As the employment base in the San Francisco Bay Area continues to expand, more people may be drawn to live in the City of San Pablo even though they may work in other cities. As a result, housing demand may increase in San Pablo and other adjacent areas. The City's Housing Element includes programs to address regional housing needs in the near term, and subsequent revisions will extend, modify, or add to housing programs as needed to continue to respond to the city's "fair share" of regional housing needs, as required by law.

5.4 CUMULATIVE IMPACTS

CEQA requires that the EIR examine cumulative impacts. As discussed in CEQA Guidelines Section 15130(a)(1), a cumulative impact "consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts." Furthermore, the analysis of cumulative impacts need not provide the level of detail required of the analysis of impacts from the project itself, but shall "reflect the severity of the impacts and their likelihood of occurrence" (CEQA Guidelines Section 15130(b)). In order to assess cumulative impacts, the EIR must analyze either a list of past, present, and probable future projects or a summary of projections contained in an adopted plan or related planning document. In conducting the analysis for this EIR, ABAG population and employment projections for the City of San Pablo and the adjacent unincorporated areas were reviewed.

Cumulative Analysis Provided in Chapter 3

It is important to note that several analyses presented in Chapter 3 represent cumulative analyses of issues over the Specific Plan time horizon to 2030 because they combine the anticipated effects of the proposed Specific Plan with anticipated effects of regional growth and development. Issue areas for which Chapter 3 analyses are specifically cumulative include transportation, air quality, energy and greenhouse gases, and noise, because the project-specific effects cannot reasonably be differentiated from the broader effects of regional growth and development. The cumulative conclusions are summarized there, and where applicable, significant unavoidable impacts are listed in Section 5.2.

Other Cumulative Impacts

For some issue areas evaluated as direct impacts in Chapter 3, concurrent implementation of the proposed Specific Plan, along with regional growth and development, may result in cumulative impacts such as:

- **Cumulative Changes to Land Use Character.** Land use changes that would alter the scale, density, and character of urban areas and neighborhoods could change the visual character of many areas in the region, especially where development would occur on visually prominent hillsides or in existing rural or open space lands. However, due to the built-out nature of San Pablo and its surrounding cities, the proposed Specific Plan's contribution to this potentially significant cumulative impact is not cumulatively considerable.
- **Cumulative Effects on Water Quality.** The proposed Project, in combination with regional growth and development, could increase impervious surfaces resulting in a greater chance of flood and potential impacts to water quality. However, due to the built-out nature of the Planning Area, and assuming the adoption of 2030 General Plan policies designed to improve stormwater management and reduce stormwater pollution, the proposed Project's contribution to this potentially significant cumulative impact is not cumulatively considerable.
- **Cumulative Effects on Birds and Animals.** Increased noise, light, and habitat disturbance resulting from urban development both within the Planning Area as well as in adjacent communities could adversely affect biological resources such as migratory birds and other wildlife species. However, the potential for degradation beyond the existing condition is slight, given the urban and developed nature of the Planning Area and vicinity. With applicable 2030 General Plan policies in place as described in the direct impact analysis in Chapter 3, and Specific Plan policies to support the protection and enhancement of the riparian creek corridors within the Planning Area, the overall cumulative impact is expected to be less than significant, and the project's contribution not cumulatively considerable.
- **Cumulative Increases in Hazardous Materials.** The increase in local population and employment could result in the increased use of hazardous household, commercial, and industrial materials, as well as a cumulative increase in exposure to risk associated with accidental release of hazardous materials into the environment. However, City, State, and federal regulations, such as those that control the production, use, and transportation of hazardous materials would apply to development countywide; therefore, the project's contribution to this potential cumulative impact is not cumulatively considerable.

- **Cumulative Effects on Historical Resources.** Because the accommodation of future growth also constitutes a likelihood that future development will encounter challenges associated with known and unknown historic resources, there is the possibility of cumulative impacts to historical resources in the future in the context of regional growth and development. The City of San Pablo cannot be sure that all cumulative impacts on such historical resources can be mitigated to less than significant levels. Consequently, the proposed Specific Plan has the potential to contribute to cumulative impacts to these historic resources. However, assuming adoption and implementation of the San Pablo General Plan and the specialized policies contained therein as applicable to the entire city, the proposed Specific Plan's contribution to this significant cumulative impact is not cumulatively considerable.

These types of impacts are not limited to the planning area but are characteristic of any area that is experiencing population and employment growth.

5.5 IMPACTS FOUND NOT TO BE SIGNIFICANT

CEQA requires that an EIR provide a brief statement indicating why various possible significant impacts were determined to be not significant. Chapter 3 of this EIR discusses all potential impacts, regardless of their magnitude. A similar level of analysis is provided for impacts found to be less than significant as impacts found to be significant. Significance of an impact is assessed in relation to the significance criteria provided in each section in Chapter 3. A summary of all impacts is provided in the Executive Summary of this EIR.

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8 Glossary

100-Year Flood. The magnitude of a flood expected to occur on the average every 100 years, based on historical data. The 100-year flood has a 1/100, or 1 percent, chance of occurring in any given year.

500-Year Flood. The magnitude of a flood expected to occur on the average every 500 years, based on historical data. The 500-year flood has a 1/500, or 0.2 percent, chance of occurring in any given year.

Acres, Gross. A measure of total land area of any lot including streets, parks and other land dedications.

Acres, Net. The gross area of a site excluding all public and private streets; streets which provide primary and direct access to a public street; land which has been determined to be hazardous or unbuildable; land within any existing or planned drainage easement; and land required to be dedicated for school and park or other facility dedicated for public use.

Affordable Housing. Housing capable of being purchased or rented by a household with very low, low, or moderate income, based on a household's ability to make monthly payments necessary to obtain housing. Housing is considered affordable when a household pays less than 30% of its gross monthly income (GMI) for housing, including utilities.

Agency. The governmental entity, department, office, or administrative unit responsible for carrying out regulations.

Agriculture. Use of land for the production of food and fiber, including the growing of crops and/or the grazing of animals on natural prime or improved pasture land.

Air Pollution. Concentrations of substances found in the atmosphere that exceed naturally occurring quantities and are undesirable or harmful in some way.

Ambient. Surrounding on all sides; used to describe measurements of existing conditions with respect to traffic, noise, air and other environments.

Anaerobic. An organism or tissue) living in the absence of air or free oxygen; or pertaining to or caused by the absence of oxygen.

Aquifer. An underground, water-bearing layer of earth, porous rock, sand, or gravel, through which water can seep or be held in natural storage. Aquifers generally hold sufficient water to be used as a water supply.

Archaeological. Relating to the material remains of past human life, culture, or activities.

Army Corps of Engineers. A federal agency responsible for the design and implementation of publicly supported engineering projects. Any construction activity that involves filling a watercourse, pond, lake (natural or man-made), or wetlands (including seasonal wetlands and vernal pools), may require an ACOE permit.

Arterial. A major street carrying volumes of relatively high speed traffic from local and collector streets to and from freeways and other major streets. These streets have controlled intersections and generally provide limited direct access to abutting properties.

Attainment Area. An area considered to have air quality as good as or better than federal or State air quality standards as defined in the federal Clean Air Act or the California Clean Air Act. An area may be an attainment area for one pollutant and a non-attainment area for others.

Base Flood. A 100-year flood event; having a 1 percent likelihood of occurring in any given year.

Best Available Control Technology (BACT). The most stringent emission limit or control technique that has been achieved in practice that is applicable to a particular emission source.

Best Management Practices (BMP). The combination of conservation measures, structure, or management practices that reduces or avoids adverse impacts of development on adjoining site's land, water, or waterways, and waterbodies.

Bicycle Class I Facility (Bicycle Path). A paved route not on a street or roadway and expressly reserved for bicycles traversing an otherwise unpaved area. Bicycle paths may parallel roads but typically are separated from them by landscaping.

Bicycle Class II Facility (Bicycle Lane). A corridor expressly reserved for bicycles, existing on a street or roadway in addition to any lanes for use by motorized vehicles.

Bicycle Class III Facility (Bicycle Route). A facility shared with motorists and identified only by signs, a bicycle route has no pavement markings or lane stripes.

Bikeways. A term that encompasses bicycle lanes, bicycle paths and bicycle routes.

Buffer Zone. An area of land separating two distinct land uses which acts to soften or mitigate the effects of one land use on the other.

Building. Any structure having a roof supported by columns or walls for the housing or enclosure of persons, animals, or property of any kind.

Buildout. That level of urban development characterized by full occupancy of all developable sites in accordance with the project; the maximum probable level of development envisioned by the project under specified assumptions about densities and intensities. Buildout does not assume that each parcel is developed to include all floor area or housing units possible under zoning regulations.

Business Services. A subcategory of commercial land use which permits establishments primarily engaged in rendering services to other business establishments on a fee or contract basis, such as advertising and mailing; building maintenance; personnel and employment services; management and consulting services; protective services; equipment rental and leasing; photo finishing; copying and printing; travel; office supply; and similar services.

Capital Improvement Program (CIP). A program, administered by the City which schedules permanent improvements, usually for a minimum of five years into the future, to fit the projected fiscal capability of the City. The program generally is reviewed annually, for conformance to and consistency with the General Plan.

Carbon Dioxide (CO₂). A colorless, odorless, non-poison gas that is a normal part of the atmosphere.

Carbon Monoxide (CO). A colorless, odorless, highly poisonous gas produced by automobiles and other machines with internal combustion engines that imperfectly burn fossil fuels such as oil and gas.

Circulation Element. One of seven State-mandated elements of a local general plan, it contains adopted goals, policies, and implementation programs for the planning and management of existing and proposed thoroughfares and transportation routes correlated with the Land Use Element of the General Plan.

City. In this document, City with a capital “C” refers to the City of San Pablo; when used with a lower case “c” it refers to the geographic area of the city, not the governmental organization.

Clustered Development. Development in which a number of dwelling units are placed in closer proximity than typically permitted, or are attached, with the purpose of minimizing grading and retaining open space areas.

Cogeneration. Cogeneration (also combined heat and power, CHP) is the use of a heat engine or a power station to simultaneously generate both electricity and useful heat. It is one of the most common forms of energy recycling.

Collector Street. A street serving traffic movements between arterial and local streets, generally providing direct access to abutting properties.

Commercial. A land use classification which permits facilities for the buying and selling of commodities and services.

Community Noise Equivalent Level (CNEL). The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five decibels to sound levels in the evening from 7 p.m. to 10 p.m. and after addition of 10 decibels to sound levels in the night from 10 p.m. to 7 a.m.

Community Park. A park or facility developed primarily to meet the requirements of a large portion of the City.

Compatible. Capable of existing together without conflict or ill effects.

Conservation. The management of natural resources to prevent waste, destruction or neglect.

Consistent. Free from variation or contradiction. Programs in the Specific Plan are to be consistent, not contradictory or preferential with the City's General Plan.

Contra Costa Transportation Authority (CCTA). A public agency formed by Contra Costa voters in 1988 to manage the county's transportation sales tax program and to do countywide transportation planning.

Cul-de-sac. A short street or alley with only a single means of ingress and egress at one end and with a large turnaround at its other end.

Cultural Facilities. Premises operated to accommodate cultural pursuits such as visual or performing arts, lectures, or exhibitions.

Cumulative Impact. As used in CEQA, the total impact resulting from the accumulated impacts of individual projects or programs over time.

Curb Cut. The opening along the curb line at which point vehicles or other wheeled forms of transportation may enter or leave the roadway. Curb cuts are essential at street corners for wheelchair users.

dBA. The "A-weighted" scale for measuring sound in decibels; weights or reduces the effects of low and high frequencies in order to stimulate human hearing. Every increase of 10 dBA doubles the perceived loudness though the noise is actually ten times more intense.

Decibel (dB). A unit of measurement used to express the relative intensity of sound as heard by the human ear describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).

Day-Night Average Sound Level (Ldn). The A-weighted average sound level in decibels during a 24-hour period with a 10 dB weighing applied to nighttime sound levels (10 p.m. to 7 a.m.). This exposure method is similar to the CNEL, but deletes the evening time period (7 p.m. to 10 p.m.) as a separate factor.

Dedication. The commitment by an owner or developer of private land for public use, and the acceptance of land for such use by the governmental agency having jurisdiction over the public function for which it will be used. Dedications for roads, parks, school sites, or other public uses often are required by the city as conditions of approval on a development.

Dedication, In lieu of. Cash payments which may be required of an owner or developer as a substitute for a dedication of land, usually calculated in dollars per lot, and referred to as in lieu fees or in lieu contributions.

Density. The number of residential dwelling units per acre of land.

Density Bonus. The allocation of development rights that allow a parcel to accommodate additional square footage or additional residential units beyond the maximum for which the parcel is zoned, usually in exchange for the provision or preservation of an amenity at the same site or at another location. Under California State Law, residential projects of three or more units that provide affordable housing may be entitled to a 35 percent increase of the underlying zone district.

Design Review. The comprehensive evaluation of a development and its impact on neighboring properties and the community as a whole, from the standpoint of site and landscape design, architecture, materials, colors, lighting, and signs, in accordance with a set of adopted criteria and standards.

Detention Basin/Pond. Facilities classified according to the broad function they serve, such as storage, diversion or detention. Detention facilities are constructed to retard flood runoff and minimize the effect of floods.

Developer. An individual who, or business which, prepares raw land for the construction of buildings or builds or causes to be built physical building space for use primarily by others, and in which the preparation of the land or the creation of the building space is in itself a business and is not incidental to another business or activity.

Development. The physical extension and/or construction of urban land uses. Development activities include but are not limited to. subdivision of land; construction or alteration of structures, roads, utilities, and other facilities; installation of septic systems; grading; deposit of refuse, debris, or fill materials; and clearing of natural vegetation cover (with the exception of agricultural activities). Routine repair and maintenance activities are not considered as “development.”

Development Fee. See “Impact Fee.”

Development Rights. The right to develop land by a landowner who maintains fee-simple ownership over the land or by a party other than the owner who has obtained the rights to develop. Such rights usually are expressed in terms of density allowed under existing zoning. For example, one development right may equal one unit of housing or may equal a specific number of square feet of gross floor area in one or more specified zone districts.

De-watering. The removal of water from a solid material; removal of water from soil or from a body of water (by natural or mechanical means).

Downwind. In the direction in which the wind is blowing.

Dwelling Unit. One or more rooms with a single kitchen, designed for occupancy by one family for living and sleeping purposes.

Easement. A right given by the owner of land to another party for specific limited use of that land. An easement may be acquired by a government through dedication when the purchase of an entire interest in the property may be too expensive or unnecessary. Easements are usually needed for utilities or shared parking.

Easement, Scenic. A tool that allows a public agency to use land for scenic enhancement, such as roadside landscaping or vista preservation.

Emission Standard. The maximum amount of pollutant legally permitted to be discharged from a single source, either mobile or stationary.

Endangered Species. A species of animal or plant whose prospects for survival and reproduction are in immediate jeopardy from one or more causes.

Environment. The physical conditions in an area, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance, which will be affected by a proposed project. The area involved shall be the area in which significant effects would occur either directly or indirectly as a result of the project. The "environment" includes both natural and man-made conditions.

Environmental Impact Report (EIR). A document used to evaluate the potential environmental impacts of a project, evaluate reasonable alternatives to the project, and identify mitigation measures necessary to minimize the impacts. The California Environmental Quality Act (CEQA) requires that the agency with primary responsibility over the approval of a project (the lead agency) evaluate the project's potential impacts in an Environmental Impact Report (EIR).

Equivalent Noise Level (Leq). Also known as the energy equivalent level, defined as the average sound level on the basis of sound energy (or sound pressure squared). The Leq is a "dosage" type measure and is the basis for the descriptions used in current standards, such as the 24-hour CNEL used by the State of California. It is a single-number representation of the fluctuating sound level in decibels over a specified period of time.

Erosion. The process by which material is removed from the earth's surface (including weathering, dissolution, abrasion, and transportation), most commonly by wind or water.

Exaction. A contribution or payment required as an authorized precondition for receiving a development permit; usually refers to mandatory dedication (or fee in lieu of dedication) requirements found in many subdivision regulations.

Expansive Soils. Soils which swell when they absorb water and shrink as they dry.

Fault. A fracture in the earth's crust forming a boundary between rock masses that have shifted. An "active" fault is one that has had surface displacement within Holocene time (about the last 11,000

years). A “potentially active” fault is one that shows evidence of surface displacement during Quaternary time (the last 2 million years).

Federal Candidate Species, Category 1 (Candidate 1). Species for which the U.S. Fish and Wildlife Service has sufficient biological information to support a proposal to list as Endangered or Threatened.

Federal Candidate Species, Category 2 (Candidate 2). Species for which existing information indicates that these species may warrant listing, but for which substantial biological information to support a proposed rule is lacking.

Federal Emergency Management Agency (FEMA). A federal agency that provides disaster relief when cities, counties, or the State cannot respond.

Federal Flood Insurance. Affordable flood insurance offered by the federal government to property owners whose communities participate in the National Flood Insurance Program.

Finding(s). The result(s) of an investigation and the basis upon which decisions are made. Findings are used by government agencies and bodies to justify action taken by the entity.

Fire-resistant. Able to withstand specified temperatures for a certain period of time, such as a one-hour fire wall; not fireproof.

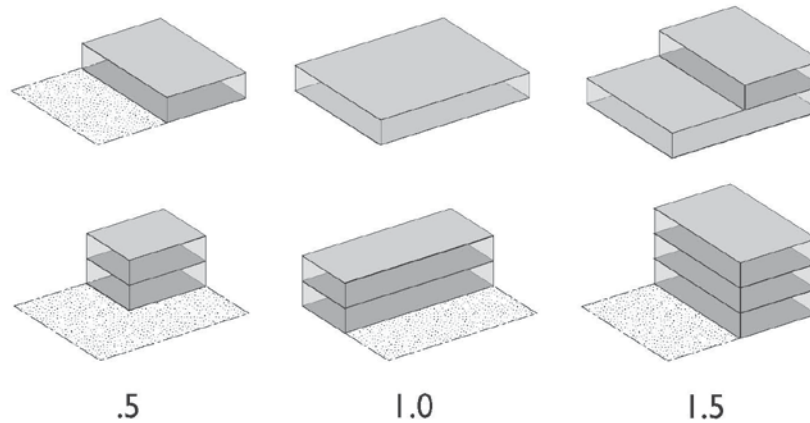
Flood Insurance Rate Map (FIRM). For each community, the official map on which the Federal Insurance Administration has delineated areas of special flood hazard and the premium risk zones applicable to that community.

Flood Plain. The relatively level land area on either side of the banks of a stream regularly subject to flooding. That part of the flood plain subject to a one percent chance of flooding in any given year, is designated as an area of special flood hazard by the Federal Insurance Administration.

Flood Zone. The relatively level land area on either side of the banks of a stream that is subject to flooding under a 100-year or a 500-year flood.

Floor Area, Gross. The total horizontal area in square feet of all floors within the exterior walls of a building, but not including the area of unroofed inner courts or shaft enclosures.

Floor Area Ratio (FAR). The net floor area of a building or buildings on a lot divided by the lot area or site area. Examples showing the concept of FAR:



Flora and Fauna. Flora and fauna refer to plant and wildlife, respectively. The indigenous plant and wildlife of a geographical region is often referred to as that region's flora and fauna.

Geologic Review. The analysis of geologic hazards, including all potential seismic hazards, surface ruptures, liquefaction, landsliding, mudsliding, and the potential for erosion and sedimentation.

Geological. Pertaining to rock or solid matter.

Grasslands. Land reserved for pasturing or mowing, in which grasses are the predominant vegetation.

Graywater. Graywater is defined as the wastewater produced from baths and showers, clothes washers, and lavatories. Graywater may be recycled for irrigation, cooling, or other secondary uses after minimal treatment.

Green Building. A Green Building generally refers to one that is environmentally friendly in terms of energy consumption, or the waste they produce during its entire life-cycle. A Green Building will have little or no significant impact on the environment. Green buildings are scored by rating systems, such as the Leadership in Energy and Environmental Design (LEED) rating system developed by the U.S. Green Building Council, Green Globes from GBI and other locally developed rating systems. They also must conform to California Green Building Standards.

Greenhouse gases. Greenhouse gases are gases in the atmosphere that absorb and emit radiation within the thermal infrared range. This process is the fundamental cause of the greenhouse effect. Carbon dioxide, methane, and ozone are examples of greenhouse gases.

Groundwater. Water under the earth's surface, often confined to aquifers capable of supplying wells and springs.

Groundwater Recharge. The natural process of infiltration and percolation of rainwater from land areas or streams through permeable soils into water-holding rocks which provide underground storage (“aquifers”).

Growth Management Program. The use of planning policies, zoning, subdivision regulations and other local government controls to influence the pattern of growth and development to meet projected needs. A growth management program is a required component of the General Plan following the adoption of Measure J by Contra Costa County voters in 2004.

Guidelines. General statements of policy direction for which specific details may be later established.

Habitat. The physical location or type of environment in which an organism or biological population lives or occurs.

Handicapped. A person determined to have a mobility impairment or mental disorder expected to be of long or indefinite duration. Many such impairments or disorders are of such a nature that a person’s ability to live independently can be improved by appropriate housing conditions.

Hazardous Material. Any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. The term includes, but is not limited to, hazardous substances and hazardous wastes.

Hazardous Waste. Waste which requires special handling to avoid illness or injury to persons or damage to property. Includes, but is not limited to, inorganic mineral acids of sulfur, fluorine, chlorine, nitrogen, chromium, phosphorous, selenium and arsenic and their common salts; lead, nickel, and mercury and their inorganic salts or metallo-organic derivatives; coal, tar acids such as phenol and cresols and their salts; and all radioactive materials.

Historic Resource. A historic building or site that is noteworthy for its significance in local, state, national, its architecture or design, or its works of art, memorabilia, or artifacts.

Impact. The effect of any man-made actions or indirect repercussions of man-made actions on existing physical, social, or economic conditions.

Impact Fee. A fee, also called a development fee, levied on the developer of a project by a city, county, or other public agency as compensation for otherwise-unmitigated impacts the project will produce. California Government Code Section 54990 specifies that development fees shall not exceed the estimated reasonable cost of providing the service for which the fee is charged. To lawfully impose a development fee, the public agency must verify its method of calculation and document proper restrictions on use of the fund.

Impervious Surface. Surface through which water cannot penetrate, such as roof, road, sidewalk, and paved parking lot. The amount of impervious surface increases with development and establishes the need for drainage facilities to carry the increased runoff.

Implementation. Actions, procedures, programs, or techniques that carry out policies.

Improvement. The addition of one or more structures or utilities on a vacant parcel of land.

Industrial. The manufacture, production, and processing of consumer goods. Industrial is often divided into “heavy industrial” uses, such as construction yards, quarrying, and factories; and “light industrial” uses, such as research and development and less intensive warehousing and manufacturing.

Infill Development. Development of vacant land (usually individual lots or left-over properties) within areas which are already largely developed.

Infiltration. The introduction of underground water, such as groundwater, into wastewater collection systems. Infiltration results in increased wastewater flow levels.

Intersection Capacity. The maximum number of vehicles that has a reasonable expectation of passing through an intersection in one direction during a given time period under prevailing roadway and traffic conditions.

Infrastructure. Public services and facilities, such as sewage-disposal systems, water-supply systems, other utility systems, and roads.

Jobs-Housing Balance. Total jobs divided by total housing units. A more appropriate measure is the jobs/employed resident ratio, which divides the number of jobs in an area by the number of employed residents (i.e. people who live in the area, but may work anywhere). A ratio of 1.0 typically indicates a balance. A ratio greater than 1.0 indicates a net in-commute; less than 1.0 indicates a net out-commute.

Landmark. A building, site, object, structure, or significant tree, having historical, architectural, social, or cultural significance and marked for preservation by the local, State, or federal government; A visually prominent or outstanding structure or natural feature that functions as a point of orientation or identification.

Landscaping. Planting, including trees, shrubs, and ground covers, suitably designed, selected, installed, and maintained permanently to enhance a site or roadway.

Landslide. A general term for a falling mass of soil or rocks.

Land Use. The occupation or utilization of land or water area for any human activity or any purpose defined in the Specific Plan and the 2030 General Plan.

Ldn. Day-Night Average Sound Level. The A-weighted average sound level for a given area (measured in decibels) during a 24-hour period with a 10 dB weighing applied to night-time sound levels. The Ldn is approximately numerically equal to the CNEL for most environmental settings.

Lease. A contractual agreement by which an owner of real property (the lessor) gives the right of possession to another (a lessee) for a specified period of time (term) and for a specified consideration (rent).

LEED. The Leadership in Energy and Environmental Design (LEED) Green Building Rating System™ is the nationally accepted benchmark for the design, construction, and operation of high performance green buildings.

Leq. The energy equivalent level, defined as the average sound level on the basis of sound energy (or sound pressure squared). The Leq is a “dosage” type measure and is the basis for the descriptions used in current standards, such as the 24-hour CNEL used by the State of California. It is a single-number representation of the fluctuating sound level in decibels over a specified period of time.

Level of Service (LOS). A qualitative measure describing operational conditions within a traffic stream, as perceived by motorists. The conditions are generally described in terms of factors such as speed, delay, freedom to maneuver, comfort, convenience, and safety. Six levels of service are defined with letter designations from A to F, with A representing the optimal condition and F representing the worst.

Liquefaction. A sudden large decrease in the shearing resistance of a cohesion less soil, caused by a collapse of the structure by shock or strain, and associated with a sudden but temporary increase of the pore fluid pressure.

Local Street. A street which primarily serves as access to abutting properties characterized by traffic with low speeds, low volumes and relatively short trip lengths.

Low Impact Development. An innovative stormwater management approach with a basic principle that is modeled after nature: manage rainfall at the source using uniformly distributed decentralized micro-scale controls. The goal is to mimic a site's predevelopment hydrology by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to its source.

Maximum Contaminant Level. Are standards that are set by the Environmental Protection Agency for drinking water quality in Title 40 of the Code of Federal Regulations. The limit is usually expressed as a concentration in milligrams or micrograms per liter of water.

Median Strip. The dividing area, either paved or landscaped, between opposing lanes of traffic on a roadway.

Mitigation. A specific action taken to reduce environmental impacts. Mitigation measures are required as a component of an environmental impact report (EIR) if significant measures are identified.

Mitigation Measures. Action taken to avoid, minimize, or eliminate environmental impacts. Mitigation includes. avoiding the impact altogether by not taking a certain action or parts of an action; minimizing impacts by limiting the degree or magnitude of the action and its implementation; rectifying the impact by repairing, rehabilitating, or restoring the affected environment; reducing or eliminating the impact

over time by preservation and maintenance during the life of the action; and compensating for the impact by repairing or providing substitute resources or environments.

Mobile Sources. A source of air pollution that is related to transportation vehicles, such as automobiles or buses.

National Ambient Air Quality Standards. The prescribed level of pollutants in the outside air that cannot be exceeded legally during a specified time in a specified geographical area.

National Flood Insurance Program. A federal program which authorizes the sale of federally subsidized flood insurance in communities where such flood insurance is not available privately.

National Historic Preservation Act. A 1966 federal law that established a National Register of Historic Places and the Advisory Council on Historic Preservation, and which authorized grants-in-aid for preserving historic properties.

National Register of Historic Places. The official list of sites, districts, buildings, structures, and objects significant in the nation's history or whose artistic or architectural value is unique, established by the National Historic Preservation Act.

Neighborhood Park. A park or playground developed primarily to serve the recreation needs of a small portion of the City. The park improvements are usually oriented toward the recreation needs of children.

Nitrogen Dioxide (NO₂). A reddish brown gas that is a byproduct of the combustion process and is a key to the ozone production process.

Nitrogen Oxide(s). Chemical compounds containing nitrogen and oxygen; reacts with volatile organic compounds, in the presence of heat and sunlight to form ozone. It is also a major precursor to acid rain.

Noise. Any sound which is undesirable because it interferes with speech and hearing, or is intense enough to damage hearing, or is otherwise annoying. Noise is simply "unwanted sound."

Noise Attenuation. Reduction of the level of a noise source using a substance, material, or surface.

Noise Contour. Lines drawn about a noise source indicating equal levels of noise exposure. CNEL and Ldn are the metrics utilized herein to describe annoyance due to noise and to establish land use planning criteria for noise.

Non-attainment. The condition of not achieving a desired or required level of performance. This term is frequently used in reference to air quality.

Non-point Source. A pollutant source introduced from dispersed points and lacking a single, identifiable origin. Examples include automobile emissions or urban run-off.

Open Space. Any parcel or area of land or water which is essentially unimproved and devoted to an open space use for the purposes of (1) the preservation of natural resources, (2) the managed production of resources, (3) outdoor recreation, or (4) public health and safety.

Overlay. A land use designation on the Land Use Map, or a zoning designation on a zoning map, which modifies the basic underlying designation in some specific manner.

Ozone. A tri-atomic form of oxygen (O₃) created naturally in the upper atmosphere by a photochemical reaction with solar ultraviolet radiation. In the lower atmosphere, ozone is a recognized air pollutant that is not emitted directly into the environment, but is formed by complex chemical reactions between oxides of nitrogen and reactive organic compounds in the presence of sunlight, and becomes a major agent in the formation of smog.

PM₁₀, PM_{2.5}. The current standard for measuring the amount of solid or liquid matter suspended in the atmosphere (“particulate matter including dust”). Refers to the amount of particulate matter under 10 micrometers and 2.5 micrometers in diameter, respectively. Particulate matters can penetrate to the deeper portions of the lung, affecting sensitive population groups such as children and people with respiratory diseases

Paratransit. Refers to transportation services which operate vehicles, such as buses, jitneys, taxis, and vans, for senior citizens and/or mobility-impaired persons.

Parks. Open space lands whose primary purpose is recreation. (See “Community Park” and “Neighborhood Park.”)

Peak Hour/Peak Period. For any given roadway, a daily period during which traffic volume is highest, usually occurring in the morning and evening commute periods. Where “F” Levels of Service are encountered, the “peak hour” may stretch into a “peak period” of several hours duration.

Performance Standards. Zoning regulations that permit uses based on a particular set of standards of operation rather than on particular type of use. Performance standards provide specific criteria limiting noise, air pollution, emissions, odors, vibration, dust, dirt, heat, fire hazards, wastes, traffic impacts, and visual impact of a use.

Planning Area. The land area addressed by the Specific Plan.

Point Source. A source of pollutants which may be traced to a discrete point of emission.

Policy. A specific statement of principle or of guiding or implementing actions which implies clear commitment.

Pollutant. Any introduced gas, liquid, or solid that makes a resource unfit for its normal or usual purpose.

Pollution. The presence of matter or energy whose nature, location, or quantity produces undesired environmental effects.

Preserve. An area in which beneficial uses in their present condition are protected; for example, a nature preserve or an agricultural preserve.

Rare or Endangered Species. A species of animal or plant listed in. Sections 670.2 or 670.5, Title 14, California Administrative Code; or Title 50, Code of Federal Regulations, Section 17.11 or Section 17.2, pursuant to the Federal Endangered Species Act designating species as rare, threatened, or endangered.

Reactive Organic Gases (ROG). Classes of hydrocarbons (olefins, substituted aromatics, and aldehydes) likely to react with ozone and nitrogen dioxide in the atmosphere to form photochemical smog.

Reclamation. The reuse of resources, usually those present in solid wastes or sewage.

Recreation, Active. A type of recreation or activity which requires the use of organized play areas including, but not limited to, softball, baseball, football, and soccer fields, tennis and basketball courts and various forms of children's play equipment.

Recreation, Passive. Type of recreation or activity which does not require the use of organized play areas.

Recycle. The process of extraction and reuse of materials from waste products.

Regional. Pertaining to activities or economies at a scale greater than that of a single jurisdiction, and affecting a broad homogeneous area.

Residential. Land designated in the Specific Plan and 2030 General Plan for buildings consisting of dwelling units. May be vacant or unimproved. (See "Dwelling Unit.")

Richter Scale. A measure of the size or energy release of an earthquake at its source. The scale is logarithmic; the wave amplitude of each number on the scale is 10 times greater than that of the previous whole number.

Right-of-way. The strip of land over which certain transportation and public use facilities are built, such as roadways, railroads, and utility lines.

Riparian Lands. Lands which are comprised of the vegetative and wildlife areas adjacent to perennial and intermittent streams. Riparian areas are delineated by the existence of plant species normally found near fresh water.

Riparian Vegetation. Vegetation associated with any water-course which requires or tolerates moisture in excess of that available in adjacent uplands.

Riprap. Also known as rip rap, rubble, shot rock or rock armor — is rock or other material used to armor shorelines, streambeds, bridge abutments, pilings and other shoreline structures against scour, water or ice erosion.

Routes of Regional Significance. Routes of Regional Significance are major roadways that carry a significant amount of through traffic connecting two or more regions of a County. The routes are designated by CCTA based on recommendations from WCCTAC. In San Pablo, the following routes are designated as routes of regional significance: Interstate-80, San Pablo Avenue, 23rd Street, El Portal Drive, and San Pablo Dam Road.

Runoff. That portion of rain or snow which does not percolate into the ground and is discharged into streams instead.

Sedimentation. Process by which material suspended in water is deposited in a body of water.

Seismic. Caused by or subject to earthquakes or earth vibrations.

Sensitive Receptors. Members of the population who are most sensitive to air quality include children, the elderly, the acutely ill, and the chronically ill. The term "sensitive receptors" can also refer to the land use categories where these people live or spend a significant amount of time. Such areas include residences, schools, playgrounds, child-care centers, hospitals, retirement homes, and convalescent homes.

Septic System. A sewage-treatment system that includes a settling tank through which liquid sewage flows and in which solid sewage settles and is decomposed by bacteria in the absence of oxygen. Septic systems are often used for individual-home waste disposal where an urban sewer system is not available.

Settlement. The drop in elevation of a ground surface caused by settling or compacting. Differential settlement is uneven settlement.

Significant Effect. A beneficial or detrimental impact on the environment. May include, but is not limited to, significant changes in an area's air, water, and land resources.

Single-family Dwelling, Attached. A building containing two dwelling units with each unit having its own foundation on grade.

Single-family Dwelling, Detached. A building containing one dwelling unit on one lot.

Site. A parcel of land used or intended for one use or a group of uses and having frontage on a public or an approved private street. A lot.

Slope. Land gradient described as the vertical rise divided by the horizontal run, and expressed in percent.

Soil. The unconsolidated material on the immediate surface of the earth created by natural forces that serves as the natural medium for growing land plants.

Solid Waste. Any unwanted or discarded material that is not a liquid or gas. Includes organic wastes, paper products, metals, glass, plastics, cloth, brick, rock, soil, leather, rubber, yard wastes, and wood.

Specific Plan. A plan that provides detailed design and implementation tools for a specific portion of the area covered by a general plan. A specific plan may include all regulations, conditions, programs, and/or proposed legislation which may be necessary or convenient for the systematic implementation of any general plan element(s).

Sphere of Influence (SOI). The ultimate service area of an incorporated city, such as San Pablo, as established by Contra Costa County LAFCO.

Storm Runoff. Surplus surface water generated by rainfall that does not seep into the earth but flows overland to flowing or stagnant bodies of water. Also referred to as “urban runoff.”

Structure. Anything constructed or erected which requires a location on the ground, including a building or a swimming pool, but not including a fence or a wall used as a fence, if the height does not exceed six feet, or access drives or walks.

Subdivision. The division of a tract of land into defined lots, either improved or unimproved, which can be separately conveyed by sale or lease, and which can be altered or developed. Subdivision includes a condominium project as defined in Section 1350 of the California Civil Code.

Subsidence. The gradual sinking of land as a result of natural or artificial causes. (See “Settlement.”)

Sulfur Dioxide (SO₂). A heavy, pungent, colorless air pollutant formed primarily by the combustion of fossil fuels. It is a respiratory irritant, especially for asthmatics and is the major precursor to the formation of acid rain.

Threatened Species. A species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Total Dissolved Solids (TDS). Total dissolved solids comprise inorganic salts and small amounts of organic matter that are dissolved in water. The principal constituents are usually calcium, magnesium, sodium and potassium and the anions carbonate, bicarbonate, chloride, sulphate and, particularly in groundwater, nitrate (from agricultural use).

Toxic Air Contaminant. An air pollutant that may increase a person's risk of developing cancer and/or other serious health effects. Toxic air contaminants include more than 700 chemical compounds that have been determined to have potential adverse health impacts.

Transportation Demand Management (TDM). A strategy for reducing demand on the road system by reducing the number of vehicles using the roadways and/or increasing the number of persons per vehicle. TDM attempts to: (1) reduce the number of persons per vehicle; (2) reduce the number of persons who drive alone on the roadway during the commute period; and (3) increase the use of carpools, vanpools, buses and trains, and walking and biking.

Transit Oriented Development. A development or planning concept typified by the location of residential and commercial districts around a transit station or corridor with high quality service, good walkability, parking management and other design features that facilitate transit use and maximize overall accessibility.

Trip. A one-way journey that proceeds from an origin to a destination via a single mode of transportation; the smallest unit of movement considered in transportation studies. Each trip has one “production end” (origin, often from home, but not always), and one “attraction end” (destination). (See “Traffic Demand Forecasting Model.”)

Trip Generation. The dynamics that account for people making trips in automobiles or by means of public transportation. Trip generation is the basis for estimating the level of use of a transportation system and the impact of additional development or transportation facilities on an existing, local transportation system. Trip generations of households are correlated with destinations that attract household members for specific purposes.

Undevelopable. Specific areas where topographic, geologic, and/or sub-surface soil conditions indicate a significant danger to future occupants and a liability to the City, and are thus designated as undevelopable by the City.

Uniform Building Code. A national, standard building code which sets forth minimum standards for construction.

Uniform Housing Code. State housing regulations governing the condition of habitable structures with regard to health and safety standards and which provide for the conservation and rehabilitation of housing in accordance with the Uniform Building Code (UBC).

Urban Heat Island Effect. A phenomenon where a metropolitan or city area is significantly warmer than surrounding rural areas because of its greater mass and surface area which makes it more able to retain heat.

Urban Limit Line (ULL). A planning boundary, defined by voters, beyond which no urban land uses can be designated during the term of the General Plan. The primary purpose of an ULL is to limit the extent of urbanization.

Urban Services. Utilities (such as water, gas, electricity, and sewer) and public services (such as police, fire, schools, parks, and recreation) provided to an urban area.

Use. The purpose for which a lot or structure is or may be leased, occupied, maintained, arranged, designed, intended, constructed, erected, moved, altered, and/or enlarged as per the City’s Zoning Ordinance and General Plan land use designation.

Use Permit. The discretionary and conditional review of an activity or function or operation on a site or in a building or facility.

Utility Corridors. Right-of-way or easements for utility lines on either publicly or privately owned property. (See “Right-of-way” or “Easement.”)

Vacant. Lands or buildings which are not actively used for any purpose.

Vehicle Miles Traveled (VMT). A measure of both the volume and extent of motor vehicle operation; the total number of vehicle miles traveled within a specified geographical area (whether the entire country or a smaller area) over a given period of time.

View Corridor. The line of sight (identified as to height, width, and distance) of an observer looking toward an object that is significant to the community (e.g., ridgeline, river, historic building, etc.); the route that directs the viewer’s attention.

Viewshed. The area within view from a defined observation point.

Volume-to-Capacity Ratio. A measure of the operating capacity of a roadway or intersection, in terms of the number of vehicles that theoretically could pass through when the roadway or intersection is operating at its designed capacity. Abbreviated as v/c. At a v/c ratio of 1.0, the roadway or intersection is operating at capacity. If the ratio is less than 1.0, the traffic facility has additional capacity. Although ratios slightly greater than 1.0 are possible, it is more likely that the peak hour will elongate into a “peak period.” (See “Peak Hour” and “Level of Service.”)

Watercourse. Natural or once natural flowing (perennially or intermittently) water including rivers, streams, and creeks. Includes natural waterways that have been canalized, but does not include manmade channels, ditches, and underground drainage and sewer systems.

Watershed. The total area above a given point on a watercourse that contributes water to its flow; the entire region drained by a waterway or watercourse which drains into a lake, reservoir, bay or ocean.

West Contra Costa County Transportation Advisory Committee. The West Contra Costa County Transportation Advisory Committee (WCCTAC) is one of four sub-regional transportation planning committees that advises the CCTA on Measure J expenditures and transportation concerns specifically related to the cities of San Pablo, Richmond, El Cerrito, Hercules, and Pinole as well as transit agencies serving these cities.

Wetlands. Transitional areas between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is covered by shallow water.

Wildlife Corridors. A natural corridor, such as an undeveloped ravine, that is frequently used by wildlife to travel from one area to another.

Williamson Act. Known formally as the California Land Conservation Act of 1965, it was designed as an incentive to retain prime agricultural land and open space in agricultural use, thereby slowing its conversion to urban and suburban development. The program entails a ten-year contract between an owner of land and (usually) a county whereby the land is taxed on the basis of its agricultural use rather

than the market value. The land becomes subject to certain enforceable restrictions, and certain conditions need to be met prior to approval of an agreement.

Zone, Traffic. In a traffic model, land areas are divided into zones, with each zone treated as producing and attracting trips. The production of trips by a zone is based on the number of trips to or from work or shopping, or other trips produced per dwelling unit.

Zoning. The division of a city by legislative regulations into areas, or zones, which specify allowable uses for real property and size restrictions for buildings within these areas.

Zoning District. A designated section of the City for which prescribed land use requirements and building and development standards are uniform.

Zoning Ordinance. Chapter 17 of the San Pablo Municipal Code, which is a City ordinance, that divides incorporated city land into districts and establishes regulations governing the use, placement, spacing, and size of buildings, open spaces, and other facilities.

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9 Acronyms and Abbreviations

af/y: acre feet/year

AASHTO: American Association of State Highway and Transportation Officials

ABAG: Association of Bay Area Governments

ADT: Average daily traffic

ADWF: Average Dry Weather Flow

AIA: Air Impact Assessment

AIRS: Aerometric Information Retrieval System

ARPA: Archaeological Resources Protection Act

BAAQMD: Bay Area Air Quality Management District

BACT: Best Available Control Technology

BCDC: San Francisco Bay Conservation and Development Commission

BMP: Best Management Practice

CALTrans: California Department of Transportation

CalRecycle: California Department of Resources Recycling and Recovery

CARB: California Air Resources Board

CalEPA: California Environmental Protection Agency

CBC: California Building Code

CCC: Contra Costa College

CC&Rs: Covenants, Conditions, and Restrictions

CCCSPD: Contra Costa County Fire Protection District

CCHS: Contra Costa Health Service

CCTA: Contra Costa Transportation Authority

CCR: California Code of Regulations

CDFFP: California Department of Forestry and Fire Prevention
CDFG: California Department of Fish and Game
CEC: California Energy Commission
CEQA: California Environmental Quality Act
CERCLA: Comprehensive Environmental Responsibility, Compensation, and Liability Act
CESA: California Environmental Species Act
CFCs: Chloroflourocarbons
CFR: Code of Federal Regulations
CGS: California Geologic Survey
CHRIS: California Historical Resources Information System
CIP: Capital Improvement Program
CNDDDB: California Natural Diversity Data Base, Department of Fish and Game
CNEL: Community Noise Equivalent Level
CNPS: California Native Plant Society
CO: Carbon Monoxide
CRA: Community Redevelopment Act
CSC: California Species of Special Concern
CWA: Clean Water Act
CWMB: California Waste Management Board
CWMI: Chemical Waste Management Inc
CZMA: Coastal Zone Management Act
dB: Decibel
dBA: Decibel A-Weighted
DEIR: Draft Environmental Impact Report
DHS: California Department of Health Services
DMC: Doctors Medical Center
DNL: Day-Night Average Noise Level
DOF: Department of Finance
DSOD: Division of Safety of Dams
DTSC: Department of Toxic Substances Control, State of California

DU: Dwelling Unit

EIR: Environmental Impact Report

EMF: Electric and Magnetic Field

FAR: Floor Area Ratio

FEIR: Final Environmental Impact Report (CEQA)

FEMA: Federal Emergency Management Act

FESA: Federal Endangered Species Act

FIRM: Flood Insurance Rate Map

FMMP: Farmland Mapping and Monitoring Program

gpd: Gallons per day

GHG: Greenhouse Gasses

GIS: Geographic Information Systems

GMP: Growth Management Program

GPAC: General Plan Advisory Committee

HC: Hydrocarbons

HCM: Highway Capacity Manual

HCP: Habitat Conservation Plan

HHW: Household Hazardous Waste

HHWE: Household Hazardous Waste Element

HMMP: Hazardous Material Management Plan

HSSA: Alfred E Alquist Hospital Facilities Seismic Safety Act

ISO: National Insurance Service Office

ISR: Indirect Source Review (Air Quality)

kV: Kilovolt

kW: Kilowatt

kWh: Kilowatt-hour

LAFCO: Local Agency Formation Commission

Ldn: Day-Night Average Sound Level

LEED: Leadership in Energy and Environmental Design

Leq: Equivalent Noise Level

LID: Low Impact Development

LOS: Level of Service

LUST: Leaking Underground Storage Tanks (Case List)

MACT: Maximum Achievable Control Technology

MBTA: Migratory Bird Treaty Act

MCL: Maximum Contaminant Level

mgd: Million gallons per day

MJ-LHMP: Multi Jurisdictional Local Hazard Mitigation Plan

MOU: Memorandum of Understanding

MRP: Municipal Regional Stormwater Permit

MTSO: Multi-modal Transportation Service Objectives

MWMA: California Medical Waste Management Act

NAAQS: National Ambient Air Quality Standards

NCCP: Natural Communities Conservation Plan

NEPA: National Environmental Policy Act

NFIP: National Flood Insurance Program

NHPA: National Historic Preservation Act

NOP: Notice of Preparation (CEQA)

NO₂: Nitrogen Dioxide

NO_x: Nitrogen Oxides

NPDES: National Pollutant Discharge Elimination System

NPPA: Native Plant Protection Act

NRHP: National Register of Historic Places

NWP: Nationwide Permit

NWIC: Sonoma State University Northwest Information Center

O₃: Ozone

OHP: Office of Historic Preservation

OSHA: Occupational Safety and Health Administration

Pb: Lead

PGA: Peak Ground Acceleration (Earth Movements)

PG&E: Pacific Gas & Electric Company

PM-10: Suspended particulate matter 10 microns or less in diameter

PM-2.5: Suspended particulate matter 2.5 microns or less in diameter

ppb: Parts per billion

ppm: Parts per million (10^6) by volume or weight

PWD: San Pablo Public Works Department

RACM: Reasonably Available Control Measures

RCRA: Federal Resource Conservation and Recovery Act

ROG: Reactive Organic Gases

RTIP: Regional Transportation Improvement Plan

RTPC: Regional Transportation Planning Committee. The RTPC for San Pablo is West Contra Costa Transportation Advisory Committee (WCCTAC)

RWQCB: Regional Water Quality Control Board

SAFETEA: Safe, Accountable, Efficient Transportation Equity Act

SARA: Superfund Amendments and Reauthorization Act

SHPO: State Historic Preservation Officer

SHRC: State Historic Resources Commission

SIP: State Implementation Plan

SLIC: Spills, Leaks, Investigations, and Cleanups

SMARA: California Surface Mining and Reclamation Act

SOI: Sphere of Influence

SOV: Single Occupant Vehicles

SO₂: Sulfur Dioxide

Sq. Ft.: Square Feet

SR: State Route

SRRE: Source Reduction and Recycling Element

SWPPP: Stormwater Pollution Prevention Plan

SWRCB: State Water Resources Control Board

TACs: Toxic Air Contaminants

TAZ: Traffic Analysis Zone

TCE: Trichloroethylene

TDM: Transportation Demand Management

TDR: Transfer of Development Rights

TMDL: Total Maximum Daily Load

UBC: Uniform Building Code

ULL: Urban Limit Line

USDA: United States Department of Agriculture

U.S. EPA: United States Environmental Protection Agency

USFWS: United States Fish and Wildlife Service

USGS: United States Geologic Survey

UST: Underground Storage Tank

V/C: Volume to Capacity Ratio

VMT: Vehicle Miles Traveled

VOC: Volatile Organic Compounds

VPD: Vehicles per day

WCCIWMA: West Contra Costa Integrated Waste Management Authority, also known as Recyclemore

WCCTAC: West Contra Costa Transportation Advisory Committee

WCCUSD: West Contra Costa Unified School District

WCWD: West County Wastewater District

WWTP: Wastewater Treatment Plant

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Appendix A
Notice of Preparation,
Re-circulated NOP, and
NOP Response Letters

**NOTICE OF PREPARATION (NOP) FOR ENVIRONMENTAL IMPACT
REPORT (EIR), SAN PABLO AVENUE SPECIFIC PLAN,
CITY OF SAN PABLO**

Date: May 19, 2010

To: Responsible Agencies, Interested Parties and Organizations

**Subject: Notice of Preparation (NOP) of an Environmental Impact Report
(EIR) for the San Pablo Avenue Specific Plan**

The City of San Pablo is preparing a Specific Plan, and has determined that an Environmental Impact Report (EIR) will be necessary pursuant to the California Environmental Quality Act (CEQA). The City requests your input on how the Specific Plan may affect the environment. More specifically, input is being solicited regarding the scope and content of environmental analysis that is relevant to your respective agency's statutory/regulatory responsibilities in order to ascertain potential impacts of the proposed project.

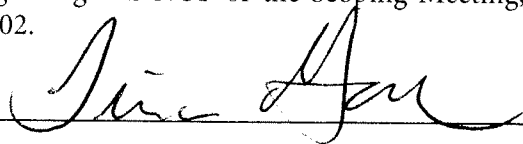
Although specific proposals and revisions for the San Pablo Avenue Specific Plan have not yet been determined, we are soliciting your comments. This will allow your input to be taken into consideration during formulation of the environmental impacts of the Specific Plan to be addressed in the EIR. A description of the proposed project, location map, and potential issue areas to be addressed are contained in the attached materials.

If your agency is a responsible agency as defined by Section 15381 of the State CEQA Guidelines, your agency will need to use the environmental documents prepared by the City of San Pablo when considering your permit or other approval for the action.

CEQA Guidelines Section 15082(b) mandates each Responsible Agency to respond to an NOP within thirty (30) days. Please send your written response, with the name of your agency contact person by June 21, 2010, to the following address:

Tina Gallegos, Planner
Planning Division
City of San Pablo
13831 San Pablo Avenue, Bldg. 3
San Pablo, CA 94806
TinaG@ci.san-pablo.ca.us

A Scoping Meeting will be conducted on Tuesday, June 1, 2010, 5:00pm San Pablo City Hall Council Chambers, 13831 San Pablo Avenue, San Pablo. If you have questions regarding this NOP or the Scoping Meeting, you can call Tina Gallegos at (510) 215-3002.

 5/19/2010

**NOTICE OF PREPARATION (NOP)
ENVIRONMENTAL IMPACT REPORT (EIR)
SAN PABLO AVENUE SPECIFIC PLAN**

1. PROJECT TITLE:

San Pablo Avenue Specific Plan

2. LEAD AGENCY NAME AND ADDRESS:

Planning Division
City of San Pablo
13831 San Pablo Avenue, Building 3
San Pablo, CA 94806

3. CONTACT PERSON AND PHONE NUMBER:

Tina Gallegos, AICP
Associate City Planner
City of San Pablo
(512) 215-3002

4. PROJECT LOCATION AND BOUNDARIES:

Location

The Specific Plan area (Planning Area) runs along San Pablo Avenue, which runs through the middle of the city; I-80 abuts the Planning Area to the east. The City itself is situated within the western portion of Contra Costa County, inland from the east side of San Pablo Bay. The City is located off Interstate 80, minutes away from the Bay Area cultural centers of Berkeley, Oakland and San Francisco. The City is nestled between the cities of Pinole and Richmond and the neighboring cities of El Cerrito and Hercules. The unincorporated community of El Sobrante is located to the north and south of the eastern

extension of San Pablo. The city has an area of nearly 2.8 square miles.

Boundaries

Figure 1 (see last page) shows the San Pablo Avenue Specific Plan area in the context of the city as a whole. The area within the Specific Plan planning boundary is 261 acres, or 0.41 square miles. It occupies about 15% of the total area of the city. Within the City of San Pablo, San Pablo Avenue extends for 2.0 linear miles. At its north end, the San Pablo Avenue Specific Plan Planning Area includes an additional 0.25 linear miles of San Pablo Avenue which is not included in the City limits. Because this 5-acre stretch of San Pablo Avenue is adjacent to City land, it is included in the Planning Area. This brings the total length of the corridor to 2.25 linear miles.

5. PROJECT SPONSOR'S NAME AND ADDRESS:

Planning Division
City of San Pablo
13831 San Pablo Avenue, Bldg. 3
San Pablo, CA 94806

6. DESCRIPTION OF PROJECT:

The City of San Pablo has initiated a specific plan that encompasses San Pablo Avenue. This is an opportunity for community members to explore long-term goals and development possibilities for this central part of the City. The Specific Plan was initiated by the City to establish goals, policies and standards for Transit Oriented Development (TOD) along the San Pablo Avenue corridor that results in increased transit ridership and helps accommodate housing growth in an infill transit-accessible setting. It also aims to create a vibrant commercial and entertainment hub along the corridor, and establish synergies with Contra Costa College and Doctors Medical Center, located adjacent to the Planning Area.

As the Specific Plan is being carried out in tandem with the City's General Plan Update, the efforts of the Specific Plan will be consistent with and will help inform the goals and policies of the General Plan. The San Pablo Avenue Specific Plan will also be coordinated with other relevant specific plans in the area. This includes the City of San Pablo's 23rd Street Specific Plan and the specific planning efforts of neighboring jurisdictions. In July 2009, the cities of El Cerrito and Richmond jointly completed a draft specific plan for San Pablo

Avenue, and the City of Pinole is currently conducting its own specific plan for the revitalization of its segment of San Pablo Avenue.

The Draft Specific Plan will contain summary background information, goals, and policies addressing the following topics (which may be combined or be stand-alone elements):

- Land Use;
- Transportation and Access;
- Environmental Resources;
- Community Facilities and Open Space; and
- Utilities and Public Services
- Economic Development.

A public participation process has been underway that provides opportunities for community input. A series of public hearings will allow for additional public input before City decision-makers certify the EIR and adopt the Plan.

More information on the project, and background technical and public participation reports can be reviewed at the project website <http://www.ci.san-pablo.ca.us/main/SPAvenueSpecificPlan.htm>

7. SURROUNDING LAND USES:

Surrounding the planning area are urban land uses in the cities of San Pablo, El Cerrito, and Richmond.

8. OTHER PUBLIC AGENCIES WHOSE APPROVAL IS REQUIRED:

No other public agency is required to approve the San Pablo Avenue Specific Plan. However, development under the Plan may require approval of State, federal and responsible trustee agencies that may rely on this EIR for information relative to their area of expertise and jurisdiction.

POTENTIAL ENVIRONMENTAL IMPACTS TO BE CONSIDERED:

Preliminary topics for the EIR include:

- Land Use;
- Population and Housing;
- Aesthetics;
- Parks and Recreation;
- Biological Resources;
- Cultural Resources;
- Transportation;
- Air Quality;
- Energy and Climate Change;
- Noise;
- Geology and Seismicity;
- Water Supply and Quality, and Hydrology;
- Wastewater and Solid Waste;
- Energy Use;
- Hazardous Materials.

The EIR will analyze the potential impacts of adopting the Specific Plan. It will discuss how Specific Plan policies will affect the environment, identify any significant impacts, and recommend measures to mitigate those impacts. Subsequent environmental review may be needed for development projects and infrastructure improvements in order to evaluate site-specific issues.

The EIR will also consider the environmental impacts of alternatives, and identify an environmentally superior alternative. The No Project alternative will evaluate the impacts resulting from continued implementation of existing plans, policies, and regulations which govern the area. The EIR will also evaluate potential cumulative effects of the Specific Plan.

**RECIRCULATED NOTICE OF PREPARATION (NOP)
ENVIRONMENTAL IMPACT REPORT (EIR)
SAN PABLO AVENUE SPECIFIC PLAN**

Date: November 19, 2010

To: Responsible Agencies, Interested Parties and Organizations

Subject: **Recirculated Notice of Preparation (NOP) of an Environmental Impact Report (EIR) for the San Pablo Avenue Specific Plan**

To ensure sufficient notification of responsible and trustee agencies, this is a recirculation of a Notice of Preparation first circulated on May 19, 2010.

The City of San Pablo is preparing a Specific Plan for the San Pablo Avenue Corridor and has determined that a Program Environmental Impact Report (EIR) will be necessary. In compliance with the California Environmental Quality Act (CEQA), the City of San Pablo will be the lead agency and will prepare the EIR for the proposed Project. Attached are the project description, location map, and identification of the potential environmental topics to be explored. The City of San Pablo requests your input regarding the scope and content of environmental analysis that is relevant to your respective agency's statutory/regulatory responsibilities in order to ascertain potential environmental impacts of the proposed Project.

Due to time limits mandated by State law, your response must be sent at the earliest possible date, but no later than December 22, 2010. Please send your written response, with the name, address, phone number, and email address of your agency contact person, to the following address:

Tina Gallegos, Planner
Planning Division
City of San Pablo
13831 San Pablo Avenue, Bldg. 3
San Pablo, CA 94806
TinaG@ci.san-pablo.ca.us

A scoping meeting was held during the first circulation of this NOP. Another is not scheduled at this time; however, agencies are invited to request one if desired. If you have questions regarding this NOP, you can call Tina Gallegos at (510) 215-3002.



Tina Gallegos, Associate City Planner
City of San Pablo



Date

**RECIRCULATED NOTICE OF PREPARATION (NOP)
ENVIRONMENTAL IMPACT REPORT (EIR)
SAN PABLO AVENUE SPECIFIC PLAN**

1. PROJECT TITLE:

San Pablo Avenue Specific Plan

2. LEAD AGENCY NAME AND ADDRESS:

Planning Division
City of San Pablo
13831 San Pablo Avenue, Building 3
San Pablo, CA 94806

3. CONTACT PERSON AND PHONE NUMBER:

Tina Gallegos, AICP
Associate City Planner
City of San Pablo
(512) 215-3002

4. PROJECT LOCATION AND BOUNDARIES:

Location

The Specific Plan area (Planning Area) runs along San Pablo Avenue, which runs through the middle of the city; I-80 abuts the Planning Area to the east. The city itself is situated within the western portion of Contra Costa County, inland from the east side of San Pablo Bay. The city is located off Interstate 80, minutes away from the Bay Area cultural centers of Berkeley, Oakland and San Francisco. The city is nestled between the cities of Pinole and Richmond and the neighboring cities of El Cerrito and Hercules. The unincorporated community of El Sobrante is located to the north and south of the eastern extension of San Pablo. The city has an area of nearly 2.8 square miles.

Boundaries

Figure 1 (see last page) shows the San Pablo Avenue Specific Plan area in the context of the city as a whole. The area within the Specific Plan planning boundary is 261 acres, or 0.41 square miles. It occupies about 15 percent of the

total area of the city. Within the City of San Pablo, San Pablo Avenue extends for 2.0 linear miles. At its north end, the San Pablo Avenue Specific Plan Planning Area includes an additional 0.25 linear miles of San Pablo Avenue which is not included in the City limits. Because this 5-acre stretch of San Pablo Avenue is adjacent to City land, it is included in the Planning Area. This brings the total length of the corridor to 2.25 linear miles.

5. PROJECT SPONSOR'S NAME AND ADDRESS:

Planning Division
City of San Pablo
13831 San Pablo Avenue, Bldg. 3
San Pablo, CA 94806

6. DESCRIPTION OF PROJECT:

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As the Specific Plan is being carried out in tandem with the City's General Plan Update, the Specific Plan will be fully consistent with and will help inform and implement the goals and policies of the General Plan. The San Pablo Avenue Specific Plan will also be coordinated with other relevant specific plans in the area. This includes the City of San Pablo's 23rd Street Specific Plan and the specific planning efforts of neighboring jurisdictions. In July 2009, the cities of El Cerrito and Richmond jointly completed a draft specific plan for another portion of San Pablo Avenue, and the City of Pinole is currently conducting its own specific plan for the revitalization of its segment of San Pablo Avenue.

The Draft Specific Plan will contain summary background information, goals, and policies addressing the following topics:

- Land Use;

- Access, Circulation, and Parking;
- Urban Design and Building Standards;
- Utilities and Public Services;
- Community Facilities and Open Space; and
- Environmental Health and Safety.

A public participation process has been underway that provides opportunities for community input. A series of public hearings will allow for additional public input before City decision-makers certify the EIR and adopt the Specific Plan.

More information on the project, and background technical and public participation reports can be reviewed at the project website <http://www.ci.san-pablo.ca.us/main/SPAvenueSpecificPlan.htm>

7. SURROUNDING LAND USES:

Surrounding the planning area are urban land uses in the cities of San Pablo, El Cerrito, and Richmond.

8. OTHER PUBLIC AGENCIES WHOSE APPROVAL IS REQUIRED:

No other public agency is required to approve the San Pablo Avenue Specific Plan. However, development under the Plan may require approval of State, federal and responsible trustee agencies that may rely on this EIR for information relative to their area of expertise and jurisdiction.

9. PREVIOUS NOTICE AND SCOPING MEETING:

A scoping meeting on the Specific Plan environmental analysis was held on Tuesday, June 1, 2010, at 5:00pm at San Pablo City Hall Council Chambers, 13831 San Pablo Avenue, San Pablo. Responsible and trustee agencies were notified by mail of the meeting via the first circulation of this NOP, and some were in attendance on that day.

To ensure all responsible and trustee agencies are provide adequate opportunity for input in this environmental review process, this notice has been recirculated. Those unable to attend the scoping meeting in June or who may not have received the notice are invited to request a scoping meeting during this NOP period, if desired.

10. ENVIRONMENTAL IMPACTS TO BE CONSIDERED:

Anticipated topics for the EIR include:

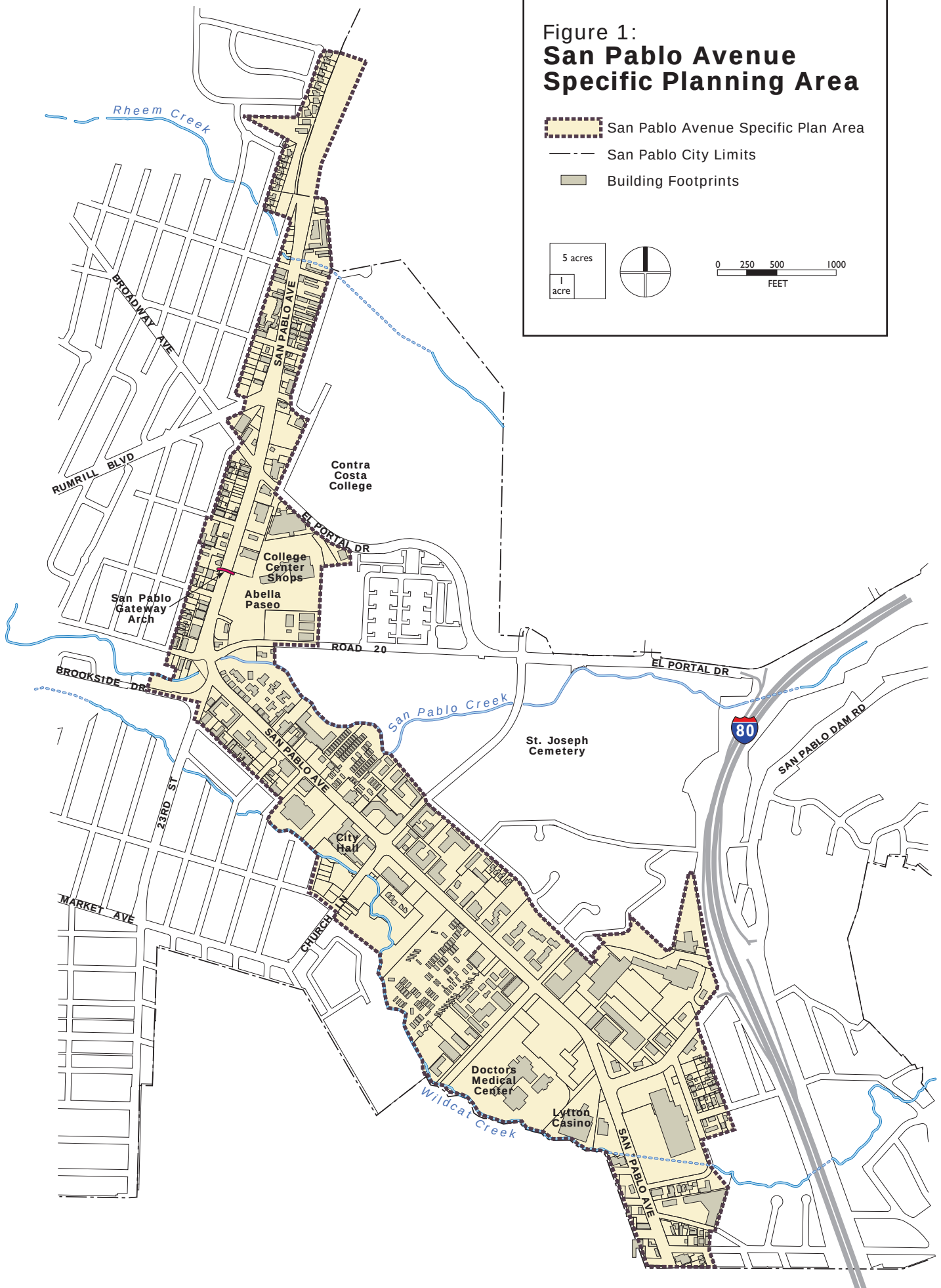
- Land Use, Population, and Housing;
- Aesthetics;
- Parks and Recreation;
- Biological Resources;
- Cultural Resources;
- Transportation;
- Air Quality;
- Energy and Climate Change;
- Noise;
- Geology, Soils, and Seismicity;
- Water Supply and Quality, and Hydrology;
- Public Facilities and Utilities (incl. Wastewater and Solid Waste); and
- Hazardous Materials.

The EIR will analyze the potential impacts of adopting the Specific Plan. It will discuss how Specific Plan policies will affect the environment, identify any significant impacts, and recommend measures to mitigate those impacts as necessary. Subsequent environmental review may be needed for development projects and infrastructure improvements in order to evaluate site-specific issues.

The EIR will also consider the environmental impacts of alternatives, and identify an environmentally superior alternative. The No Project alternative will evaluate the impacts resulting from continued implementation of existing plans, policies, and regulations which govern the area. The EIR will also evaluate potential cumulative effects of the Specific Plan.

Figure 1:
**San Pablo Avenue
 Specific Planning Area**

-  San Pablo Avenue Specific Plan Area
-  San Pablo City Limits
-  Building Footprints



Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
 For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH #

Project Title: San Pablo Avenue Specific Plan

Lead Agency: City of San Pablo

Contact Person: Tina Gallegos

Mailing Address: Planning Division, 13831 San Pablo Avenue, Bldg. 3

Phone: 510-215-3002

City: San Pablo

Zip: 94806

County: Contra Costa County

Project Location: County: Contra Costa County City/Nearest Community: San Pablo

Cross Streets: San Pablo Avenue corridor within city limits Zip Code: 94806

Longitude/Latitude (degrees, minutes and seconds): ° ' " N / ° ' " W Total Acres: 261

Assessor's Parcel No.: NA

Section: NA

Twp.: NA

Range: NA

Base: NA

Within 2 Miles: State Hwy #: I-80

Waterways: San Pablo Creek, Wildcat Creek, Rheem Creek

Airports: NA

Railways: Schools: West Contra Costa Unified

Document Type:CEQA: ☒ NOP☐ Draft EIRNEPA: ☐ NOIOther: ☐ Joint Document☐ Early Cons☐ Supplement/Subsequent EIR☐ EA☐ Final Document☐ Neg Dec

(Prior SCH No.)

☐ Draft EIS☐ Other:☐ Mit Neg Dec

Other:

☐ FONSI**Local Action Type:**☐ General Plan Update☒ Specific Plan☐ Rezone☐ Annexation☐ General Plan Amendment☐ Master Plan☐ Prezone☐ Redevelopment☐ General Plan Element☐ Planned Unit Development☐ Use Permit☐ Coastal Permit☐ Community Plan☐ Site Plan☐ Land Division (Subdivision, etc.)☐ Other:**Development Type:**☐ Residential: Units NA

Acres NA

☐ Office: Sq.ft. NA

Acres NA

Employees NA

☐ Transportation: Type NA☐ Commercial: Sq.ft. NA

Acres NA

Employees NA

☐ Mining: Mineral NA☐ Industrial: Sq.ft. NA

Acres NA

Employees NA

☐ Power: Type NA

MWNA

☐ Educational: NA☐ Waste Treatment: Type NA

MGD NA

☐ Recreational: NA☐ Hazardous Waste: Type NA☐ Water Facilities: Type NA

MGD NA

☐ Other: NA**Project Issues Discussed in Document:**☒ Aesthetic/Visual☐ Fiscal☒ Recreation/Parks☒ Vegetation☐ Agricultural Land☒ Flood Plain/Flooding☒ Schools/Universities☒ Water Quality☒ Air Quality☒ Forest Land/Fire Hazard☒ Septic Systems☒ Water Supply/Groundwater☒ Archeological/Historical☒ Geologic/Seismic☒ Sewer Capacity☒ Wetland/Riparian☒ Biological Resources☐ Minerals☒ Soil Erosion/Compaction/Grading☒ Growth Inducement☐ Coastal Zone☒ Noise☒ Solid Waste☒ Land Use☒ Drainage/Absorption☒ Population/Housing Balance☒ Toxic/Hazardous☒ Cumulative Effects☐ Economic/Jobs☒ Public Services/Facilities☒ Traffic/Circulation☐ Other:**Present Land Use/Zoning/General Plan Designation:**

NA

Project Description: (please use a separate page if necessary)

The City of San Pablo has initiated a specific plan that encompasses the extent of the San Pablo Avenue corridor within city limits. This is an opportunity for community members to develop long-term goals and development possibilities for this central part of the city. The Specific Plan was initiated by the City to establish goals, policies and standards for transit-oriented development along the San Pablo Avenue corridor that results in increased transit ridership and helps accommodate housing growth in an infill transit-accessible setting. It also aims to create a vibrant commercial and entertainment hub along the corridor, and establish synergies with Contra Costa College and Doctors Medical Center, located adjacent to the Planning Area. This NOC accompanies the NOP for the EIR on this project, for easy of SCH record-keeping.

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with an "X".
If you have already sent your document to the agency please denote that with an "S".

☐ Air Resources Board	☐ Office of Emergency Services
☐ Boating & Waterways, Department of	☐ Office of Historic Preservation
☐ California Highway Patrol	☐ Office of Public School Construction
☐ Caltrans District # _____	☐ Parks & Recreation, Department of
☐ Caltrans Division of Aeronautics	☐ Pesticide Regulation, Department of
☐ Caltrans Planning	☐ Public Utilities Commission
☐ Central Valley Flood Protection Board	☐ Regional WQCB # _____
☐ Coachella Valley Mtns. Conservancy	☐ Resources Agency
☐ Coastal Commission	☐ S.F. Bay Conservation & Development Comm.
☐ Colorado River Board	☐ San Gabriel & Lower L.A. Rivers & Mtns. Conservancy
☐ Conservation, Department of	☐ San Joaquin River Conservancy
☐ Corrections, Department of	☐ Santa Monica Mtns. Conservancy
☐ Delta Protection Commission	☐ State Lands Commission
☐ Education, Department of	☐ SWRCB: Clean Water Grants
☐ Energy Commission	☐ SWRCB: Water Quality
☐ Fish & Game Region # _____	☐ SWRCB: Water Rights
☐ Food & Agriculture, Department of	☐ Tahoe Regional Planning Agency
☐ Forestry and Fire Protection, Department of	☐ Toxic Substances Control, Department of
☐ General Services, Department of	☐ Water Resources, Department of
☐ Health Services, Department of	
☐ Housing & Community Development	☒ Other: <u>See attached lists</u>
☐ Integrated Waste Management Board	☐ Other: _____
☐ Native American Heritage Commission	

Local Public Review Period (to be filled in by lead agency)

Starting Date November 22, 2010 Ending Date December 22, 2010

Lead Agency (Complete if applicable):

Consulting Firm: <u>Dyett & Bhatia</u>	Applicant: <u>City of San Pablo Planning Division</u>
Address: <u>755 Sansome Street Suite 400</u>	Address: <u>13831 San Pablo Avenue</u>
City/State/Zip: <u>San Francisco, CA 94111</u>	City/State/Zip: <u>San Pablo, CA 94806</u>
Contact: <u>Rajeev Bhatia</u>	Phone: <u>510-215-3002</u>
Phone: <u>415-956-4300</u>	

Signature of Lead Agency Representative: _____

Date: 11/18/10

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

NOP Distribution List

CNS

County: Contra Costa

SCH#

2008082069

Resources Agency
☐ Resources Agency
Nadell Gayou

☐ Dept. of Boating & Waterways
David Johnson

☐ California Coastal Commission
Elizabeth A. Fuchs

☐ Colorado River Board
Gerald R. Zimmerman

☐ Dept. of Conservation
Sharon Howell

☐ California Energy Commission
Dale Edwards

☐ Cal Fire
Allen Robertson

☐ Office of Historic Preservation
Wayne Donaldson

☐ Dept. of Parks & Recreation
Environmental Stewardship Section

☐ Central Valley Flood Protection Board
Mark Herald

☐ S.F. Bay Conservation & Dev't. Comm.
Steve McAdam

☐ Dept. of Water Resources
Resources Agency
Nadell Gayou

☐ Conservancy
Fish and Game
☐ Depart. of Fish & Game
Scott Flint
Environmental Services Division

☐ Fish & Game Region 1
Donald Koch

☐ Fish & Game Region 1E
Laurie Harnsberger

☐ Fish & Game Region 2
Jeff Drongesen

☐ Fish & Game Region 3
Robert Floerke

☐ Fish & Game Region 4
Julie Vance

☐ Fish & Game Region 5
Don Chadwick
Habitat Conservation Program

☐ Fish & Game Region 6
Gabrina Gatchel
Habitat Conservation Program

☐ Fish & Game Region 6 I/M
Gabrina Gatchel
Inyo/Mono, Habitat Conservation Program

☐ Dept. of Fish & Game M
George Isaac
Marine Region
Other Departments
☐ Food & Agriculture
Steve Shafter
Dept. of Food and Agriculture

☐ Depart. of General Services
Public School Construction

☐ Dept. of General Services
Anna Garbeff
Environmental Services Section

☐ Dept. of Public Health
Veronica Malloy
Dept. of Health/Drinking Water
Independent Commissions/Boards
☐ Delta Protection Commission
Debby Eddy

☐ Office of Emergency Services
Dennis Castillo

☐ Governor's Office of Planning & Research
State Clearinghouse

☐ Native American Heritage Comm.
Debbie Treadway

☐ Public Utilities Commission
Ken Lewis

☐ Santa Monica Bay Restoration
Gangyu Wang

☐ State Lands Commission
Marina Brand

☐ Tahoe Regional Planning Agency (TRPA)
Cherry Jacques
Business, Trans & Housing
☐ Caltrans - Division of Aeronautics
Sandy Hesnard

☐ Caltrans - Planning
Terri Pencovic

☐ California Highway Patrol
Shirley Kelly
Office of Special Projects

☐ Housing & Community Development
CEQA Coordinator
Housing Policy Division
Dept. of Transportation
☐ Caltrans, District 1
Rex Jackman

☐ Caltrans, District 2
Marcelino Gonzalez

☐ Caltrans, District 3
Bruce de Terra

☐ Caltrans, District 4
Lisa Carboni

☐ Caltrans, District 5
David Murray

☐ Caltrans, District 6
Michael Navarro

☐ Caltrans, District 7
Elmer Alvarez

☐ Caltrans, District 8
Dan Kopulsky

☐ Caltrans, District 9
Gayle Rosander

☐ Caltrans, District 10
Tom Dumas

☐ Caltrans, District 11
Jacob Armstrong

☐ Caltrans, District 12
Ryan P. Chamberlain
Cal EPA
☐ Air Resources Board

☐ Airport Projects
Jim Lerner

☐ Transportation Projects
Ravi Ramalingam

☐ Industrial Projects
Mike Tollstrup

☒ California Integrated Waste Management Board
Sue O'Leary

☐ State Water Resources Control Board
Regional Programs Unit
Division of Financial Assistance

☐ State Water Resources Control Board
Student Intern, 401 Water Quality Certification Unit
Division of Water Quality

☐ State Water Resources Control Board
Steven Herrera
Division of Water Rights

☒ Dept. of Toxic Substances Control
CEQA Tracking Center

☐ Department of Pesticide Regulation
CEQA Coordinator
Regional Water Quality Control Board (RWQCB)
☐ RWQCB 1
Cathleen Hudson
North Coast Region (1)

☒ RWQCB 2
Environmental Document Coordinator
San Francisco Bay Region (2)

☐ RWQCB 3
Central Coast Region (3)

☐ RWQCB 4
Teresa Rodgers
Los Angeles Region (4)

☐ RWQCB 5S
Central Valley Region (5)

☐ RWQCB 5F
Central Valley Region (5)
Fresno Branch Office

☐ RWQCB 5R
Central Valley Region (5)
Redding Branch Office

☐ RWQCB 6
Lahontan Region (6)

☐ RWQCB 6V
Lahontan Region (6)
Victorville Branch Office

☐ RWQCB 7
Colorado River Basin Region (7)

☐ RWQCB 8
Santa Ana Region (8)

☐ RWQCB 9
San Diego Region (9)

☐ Other

AC Transit
Research & Planning Dept
1600 Franklin Street
Oakland, CA 94612-2806

Bay Area Air Quality Management
Dist.
939 Ellis Street
San Francisco, CA 94109

State of California
Office of Planning and Research
1400 Tenth Street
Sacramento, CA 95814

Contra Costa County Assessor
2530 Arnold Drive, Suite 100
Martinez, CA 94553

Contra Costa County Fire Protection
Dist.
2010 Geary Blvd.
Pleasant Hill, CA 94523-4694

Contra Costa County Library
1750 Oak Park Boulevard
Pleasant Hill, CA 94523

West County Sanitary District
2910 Hilltop Drive
Richmond, CA 94806

Contra Costa County Environmental
Health
2120 Diamond Blvd. #200
Concord, CA 94520-5743

Contra Costa Water District
1331 Concord Avenue
Concord, CA 94520

CCC Housing Authority
1805 Arnold Drive
Martinez, CA 94553

Marni Kinne-Lutes
SBC-Public Works Coordinator
2600 Camino Ramon; 2N450J
San Ramon, CA 94583

The Ohlone Indian Tribe
Attn: Andrew Galvan
P.O. Box 3152
Mission San Jose, CA 94539

Pacific Gas & Electric Company
1100 South 27th Street
Richmond, CA 94801

Northwest Information Center
Attention: Leigh Jordan
1303 Maurice Avenue
Rohnert Park, CA 94928

Indian Canyon Mutsun Band of Costanoan
Attn: Ann Marie Sayers, Chairperson
P.O. Box 28
Hollister, CA 95024

Contra Costa County
Community Development Dept.
4th Floor, North Wing
651 Pine Street
Martinez, CA 94553

San Francisco Regional Water Quality
Control Board
Matt Gaul
1515 Clay Street; Suite 1400
Oakland, CA 94612

Amah/Mutsun Tribal Band
Attn: Irene Zwierlein, Chairperson
789 Canada Road
Woodside, CA 94062

West Contra Costa Unified School Dist.
Nina Hurley, Facilities Planner
1300 Potrero Avenue
Richmond, CA 94804

California Dept. of Fish & Game
Sandy Brenson
P.O. Box 47
Yountville, CA 94599

Lytton Rancheria Band of Pomo Indians
Attn: Margie Mejia, Chairperson
1300 N. Dutton, Suite A
Santa Rosa, CA 95401

City of Richmond
Planning Department
1401 Marina Way South
Richmond, CA 94804

U.S. Army Engineer District
1455 Market Street, Floor 17
San Francisco, CA 94103-1368

County Clerk of Contra Costa
822 Main Street
Martinez, CA 94830

Department of Transportation District 4
Environmental Planning & Engineering
111 Grand Avenue
P.O. Box 23660
Oakland, CA 94623-0660

Contra Costa County Flood Control
Dist.
255 Glacier Drive
Martinez, CA 94553

East Bay Municipal Utility District
Water Service Planning
Attention Mr. Rehnstrom, Sr. Engineer
375 11th Street, MS 701
Oakland, CA 94607-4246

Association of Bay Area Governments
P.O. Box 2050
Oakland, CA 94604-2050



Arnold Schwarzenegger
Governor

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit



Cathleen Cox
Acting Director

Notice of Preparation

November 23, 2010

To: Reviewing Agencies

Re: San Pablo Avenue Specific Plan
SCH# 2010112062

Attached for your review and comment is the Notice of Preparation (NOP) for the San Pablo Avenue Specific Plan draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Tina Gallegos
City of San Pablo
Planning Division
13831 San Pablo Avenue, Bldg. 3
San Pablo, CA 94806

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Attachments
cc: Lead Agency

**Document Details Report
State Clearinghouse Data Base**

SCH# 2010112062
Project Title San Pablo Avenue Specific Plan
Lead Agency San Pablo, City of

Type NOP Notice of Preparation
Description NOTE: Reference SCH# 2008082069

The City of San Pablo has initiated a specific plan that encompasses the extent of the San Pablo Avenue corridor within city limits. This is an opportunity for community members to develop long-term goals and development possibilities for this central part of the city. The Specific plan was initiated by the City to establish goals, policies and standards for transit-oriented development along the San Pablo Avenue corridor that results in increased transit ridership and helps accommodate housing growth in an infill transit-accessible setting. It also aims to create a vibrant commercial and entertainment hub along the corridor, and establish synergies with Contra Costa College and Doctors Medical Center, located adjacent to the Planning Area.

Lead Agency Contact

Name	Tina Gallegos	
Agency	City of San Pablo	
Phone	(510) 215-3002	Fax
email	TinaG@ci.san-pablo.ca.us	
Address	Planning Division 13831 San Pablo Avenue, Bldg. 3	
City	San Pablo	State CA Zip 94806

Project Location

County Contra Costa
City San Pablo
Region
Cross Streets San Pablo Ave corridor within city limits
Lat / Long
Parcel No.
Township

Range **Section** **Base**

Proximity to:

Highways I-80
Airports
Railways
Waterways San Pablo Creek, Wildcat Creek, Rheem Creek
Schools West Contra Costa USD,...
Land Use

Project Issues Aesthetic/Visual; Air Quality; Archaeologic-Historic; Biological Resources; Drainage/Absorption; Flood Plain/Flooding; Forest Land/Fire Hazard; Geologic/Seismic; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Septic System; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Landuse; Cumulative Effects; Growth Inducing

Reviewing Agencies Resources Agency; Department of Parks and Recreation; Department of Water Resources; Department of Fish and Game, Region 3; Native American Heritage Commission; California Highway Patrol; Department of Housing and Community Development; Caltrans, District 4; Air Resources Board, Transportation Projects; Regional Water Quality Control Board, Region 2

Date Received 11/23/2010 **Start of Review** 11/23/2010 **End of Review** 12/22/2010

Resources Agency

☒ Resources Agency
Nadell Gayou

☐ Dept. of Boating & Waterways
Mike Sotelo

☐ California Coastal Commission
Elizabeth A. Fuchs

☐ Colorado River Board
Gerald R. Zimmermann

☐ Dept. of Conservation
Rebecca Salazar

☐ California Energy Commission
Eric Knight

☐ Cal Fire
Allen Robertson

☐ Central Valley Flood Protection Board
James Herola

☐ Office of Historic Preservation
Wayne Donaldson

☒ Dept of Parks & Recreation
Environmental Stewardship Section

☐ California Department of Resources, Recycling & Recovery
Sue O'Leary

☐ S.F. Bay Conservation & Dev't. Comm.
Steve McAdam

☒ Dept. of Water Resources
Resources Agency
Nadell Gayou

☐ Conservancy

Fish and Game

☐ Department of Fish & Game
Scott Flint
Environmental Services Division

☐ Fish & Game Region 1
Donald Koch

☐ Fish & Game Region 1E
Laurie Hamsberger

☐ Fish & Game Region 2
Jeff Drongesen

☒ Fish & Game Region 3
Charles Armor

☐ Fish & Game Region 4
Julie Vance

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Don Chadwick

☐ Fish & Game Region 6
Gabriela Gatchel

☐ Fish & Game Region 6 I/M
Brad Henderson

☐ Inyo/Mono, Habitat Conservation Program

☐ Dept. of Fish & Game M
George Isaac

☐ Marine Region

Other Departments

☐ Food & Agriculture
Steve Shaffer

☐ Dept. of Food and Agriculture

☐ Department of General Services
Public School Construction

☐ Dept. of General Services
Anna Garbeff

☐ Environmental Services Section

☐ Dept. of Public Health
Bridgette Binning

☐ Dept. of Health/Drinking Water

☐ Independent
Commissions, Boards

☐ Delta Protection Commission
Linda Flack

☐ Cal EMA (Emergency Management Agency)
Dennis Castrillo

☐ Governor's Office of Planning & Research
State Clearinghouse

☒ Native American Heritage Comm.

☐ Debbie Treadway

☐ Public Utilities Commission
Leo Wong

☐ Santa Monica Bay Restoration
Guangyu Wang

☐ State Lands Commission
Marina Brand

☐ Tahoe Regional Planning Agency (TRPA)
Cherry Jacques

Business, Trans & Housing

☐ Caltrans - Division of Aeronautics
Sandy Hesnard

☐ Caltrans - Planning
Terri Pencovic

☒ California Highway Patrol
Scott Loetscher

☐ Office of Special Projects

☒ Housing & Community Development
CEQA Coordinator

☐ Housing Policy Division

Dept. of Transportation

☐ Caltrans, District 1
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☐ Caltrans, District 2
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Mike Tollstrup

☐ State Water Resources Control Board
Regional Programs Unit

☐ Division of Financial Assistance

☐ State Water Resources Control Board
Student Intern, 401 Water Quality Certification Unit

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☐ Dept. of Toxic Substances Control
CEQA Tracking Center

☐ Department of Pesticide Regulation
CEQA Coordinator

Regional Water Quality Control Board (RWQCB)

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Cathleen Hudson
North Coast Region (1)

☒ RWQCB 2
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Teresa Rodgers
Los Angeles Region (4)

☐ RWQCB 5S
Central Valley Region (5)

☐ RWQCB 5F
Central Valley Region (5)
Fresno Branch Office

☐ RWQCB 5R
Central Valley Region (5)
Redding Branch Office

☐ RWQCB 6
Lahontan Region (6)

☐ RWQCB 6V
Lahontan Region (6)
Victorville Branch Office

☐ RWQCB 7
Colorado River Basin Region (7)

☐ RWQCB 8
Santa Ana Region (8)

☐ RWQCB 9
San Diego Region (9)

☐ Other



December 6, 2010

Tina Gallegos, Associate City Planner
City of San Pablo
Community Services Department
13811 San Pablo Ave.
San Pablo, CA 94806

RE: Notice of Preparation of an EIR for San Pablo Avenue Specific Plan

Dear Ms. Gallegos:

The Contra Costa Environmental Health Division (CCEHD) has received a Notice of Preparation for an EIR for the San Pablo Avenue Specific Plan. The following comments involve issues that would involve CCEHD if associated with this project:

1. A permit from CCEHD is required for any well or soil boring prior to commencing drilling activities, including those associated with environmental investigation and cleanup, and geotechnical investigation.
2. Any abandoned wells (water, environmental, or geotechnical) and septic tanks must be destroyed under permit from CCEHD. If the existence of such wells or septic tanks are known in advance or discovered during construction or other activities, these should be clearly marked, kept secure, and destroyed pursuant to CCEHD requirements.
3. A health permit is required for retail food facilities and public swimming pool/spas. Food facilities include restaurants, stores, bars, cafeterias, snack bars, kiosks at transit sites, and any business or operation that sells or gives food away to the public (including employees or students). Public swimming pools/spas include those found at health clubs, municipals pools, apartments, condominiums, and swim clubs; these facilities also include water parks, spray parks, and interactive water features.

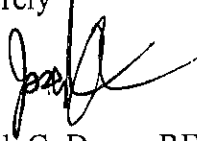
Plans must be submitted to CCEHD and approved prior to the issuance of building permits for such facilities. Prior to the submission of plans, CCEHD staff is available to meet with prospective developers/operators to discuss the requirements for these facilities and the plan review process.



4. Dumpster areas serving retail food facilities are required to have a drain to the sanitary sewer and provided with a hot/cold water supply. It is recommended that developers be informed of this requirement, since it is usually easier to plan for the installation of sewer and water in dumpster areas during initial construction rather than install these afterwards.
5. All retail food and swimming pool/spa facilities must have approved restrooms. This includes kiosks located at transit sites. It is recommended that developers be informed of this requirement, since it is usually easier to plan for the installation of restrooms during initial construction rather than install these afterwards.
6. Medical waste generators include hospitals, clinics, doctors' offices, veterinarians, and laboratories. These facilities must register with CCEHD and meet the requirements of the Medical Waste Management Act.
7. If the business generates waste tires, it must obtain a Tire Program Identification (TPID) number from CalRecycle and comply with the California Tire Recycling Act. CCEHD staff can provide the applicant with information regarding waste tire requirements.

These comments do not limit an applicant's obligation to comply with all applicable laws and regulations. If you should have any questions, please do not hesitate to call me at (925) 692-2535.

Sincerely



Joseph G. Doser, REHS
Supervising Environmental Health Specialist

cc: Christina Safholm, Environmental Health Specialist II

JGD:lj



A Public Agency

WEST COUNTY WASTEWATER DISTRICT

2910 Hilltop Drive • Richmond, CA 94806-1974
Telephone (510) 222-6700 • Fax (510) 222-3277 • www.wcwd.org

2

December 17, 2010

Tina Gallegos, Associate City Planner
City of San Pablo, Planning Division
13831 San Pablo Ave, Building 3
San Pablo, California 94806

Subject: Notice of Preparation (NOP) of an Environmental Impact ReportDraft (EIR)
For the San Pablo Avenue Specific Plan dated November 19, 2010

Dear Tina Gallegos:

We've reviewed the Notice of Preparation (NOP) of an Environmental Impact ReportDraft (EIR) For the San Pablo Avenue Specific Plan dated November 19, 2010 and have several comments regarding the sanitary sewer service for the project area.

The West County Wastewater District owns and operates the sanitary sewer collection system and wastewater treatment plant that has a designed capacity of 12 million gallons per day (mgd); average dry weather flows are currently 6.6 mgd and serves the proposed project area. The sanitary sewer pipelines in the project area are necessary to provide continuous service to the customers in the area. If modifications to the streets or sanitary sewer right-of-ways occur, the pipelines would have to be relocated at the project sponsor's expense.

There are no specific projects or projections of wastewater flow increases in the San Pablo Ave Specific Plan, but it appears that increased wastewater flow will result from full development of the project area. Improvements to increase capacity in the sanitary sewer collection system, both within and outside the project area, may be required for significant increases in wastewater flow. Depending on specific project wastewater flows, improvements to the District's wastewater treatment plant may also be required. The costs of these improvements would be at the sponsor's expense.

A schedule has not been provided for the development of the area. Available wastewater treatment capacity at the District treatment plant is limited and may not be available in future years depending on construction of other developments and connections to the WCWD system.

In addition to the above, for specific projects the Project Sponsor must submit and comply with the following:

- 1 Submit two (2) sets of Tentative Map and/or Development Plan, Geotechnical Reports and Grading Plans for WCWD's Board approval. (Fees will be prepared upon submission of tentative map, grading plans and Geotechnical report).
- 2 Submit two sets of improvement plans and engineer's construction cost estimate for sanitary sewer main extension for WCWD approval. The sewer main construction permit must be obtained from the WCWD prior to start of construction. (i.e. 5% of the sanitary sewer construction cost)
- 3 Submit Grant of Easements for all sanitary sewer mains intended for dedication to the WCWD even within dedicated street rights-of-way. Such easements shall be a minimum of fifteen (15) feet wide and twenty (20) feet wide where the depth of the line is in excess of ten (10) feet deep. Paved access shall be provided to all manholes and rodding inlets for maintenance trucks.
- 4 Obtain a permit from the District for each building, including demolitions, prior to the inspection and approval construction or demolition of building sewer laterals.

Thank you for the opportunity to comment on the proposed project. If you have any questions, please contact me at 510 222-6700.

Sincerely,



E.J. Shalaby, MPA
General Manager

EJS/AKK:ilm-b



TOMARAS & OGAS, LLP

10755-F SCRIPPS POWAY PARKWAY #281 • SAN DIEGO, CALIFORNIA 92131
TELEPHONE (858) 554-0550 • FACSIMILE (858) 777-5765 • WWW.MTOWLAW.COM

btomas@mtowlaw.com

December 17, 2010

VIA E-MAIL

Tina Gallegos, AICP
Associate City Planner
City of San Pablo, Planning Division
13831 San Pablo Avenue, Building 3
San Pablo, CA 94806

Re: Notice of Preparation of Draft Environmental Impact Report for the San Pablo Avenue Specific Plan

Dear Ms. Gallegos:

Our firm represents the Lytton Rancheria of California. The Lytton Rancheria of California, a federally recognized Indian Tribe (hereinafter "Lytton Tribe"), submits the following response to your Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) for the San Pablo Avenue Specific Plan (hereinafter "the Project"). The Lytton Tribe formally requests that it be involved in the Specific Plan and Environmental Impact Report (EIR) process for the proposed Project.

The Lytton Tribe, as one of the City's larger employers and a land holder in the City of San Pablo within the San Pablo Avenue Specific Plan, has an interest in how the City prepares the Specific Plan with respect to the potential impacts arising from that Specific Plan to the Tribe's current and future business expansion and land use. The Tribe has maintained an excellent working relationship with the City, and looks forward to continuing that relationship throughout this process.

As such, the Lytton Tribe requests that the City include the Tribe as a partner in the development of the Specific Plan. Further, the Lytton Tribe requests that the draft EIR specifically commit to the inclusion of the Tribe as a partner in the assessment of impacts on the Tribe's economic development activities and land uses within the City limits.

Letter to Tina Gallegos

Re: NOP for Draft EIR for the San Pablo Avenue Specific Plan

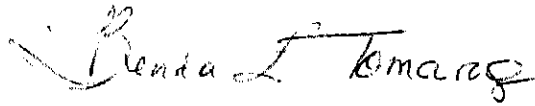
December 17, 2010

Page 2

The Lytton Band appreciates the opportunity to provide comments on the Notice of Preparation for the Draft EIR on the City of San Pablo's San Pablo Avenue Specific Plan and looks forward to working together with the City and other interested agencies.

Very truly yours,

TOMARAS & OGAS, LLP

A handwritten signature in cursive script that reads "Brenda L. Tomaras". The signature is written in dark ink and is positioned above the printed name and title.

Brenda L. Tomaras

Attorneys for the Lytton Rancheria of California



State of California – The Natural Resources Agency
DEPARTMENT OF FISH AND GAME
Bay Delta Region
7329 Silverado Trail
Napa, CA 94558
(707) 944-5500
www.dfg.ca.gov

ARNOLD SCHWARZENEGGER, Governor
John McCamman, Director



December 20, 2010

Ms. Tina Gallegos
City of San Pablo
Planning Division
13831 San Pablo Avenue, Building 3
San Pablo, CA 94806

Dear Ms. Gallegos:

Subject: San Pablo Avenue Specific Plan, Notice of Preparation, SCH #2010112062,
City of San Pablo, Contra Costa County

The Department of Fish and Game (DFG) has reviewed the documents provided for the subject project, and we have the following comments...

Please provide a complete assessment (including but not limited to type, quantity and locations) of the habitats, flora and fauna within and adjacent to the project area, including endangered, threatened, and locally unique species and sensitive habitats. The assessment should include the reasonably foreseeable direct and indirect changes (temporary and permanent) that may occur with implementation of the project. Rare, threatened and endangered species to be addressed should include all those which meet the California Environmental Quality Act (CEQA) definition (see CEQA Guidelines, Section 15380). DFG recommended survey and monitoring protocols and guidelines are available at http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/Protocols_for_Surveying_and_Evaluating_Impacts.pdf.

Please be advised that a California Endangered Species Act (CESA) Permit must be obtained if the project has the potential to result in take of species of plants or animals listed under CESA, either during construction or over the life of the project. Issuance of a CESA Permit is subject to CEQA documentation; therefore, the CEQA document must specify impacts, mitigation measures, and a mitigation monitoring and reporting program. If the project will impact CESA listed species, early consultation is encouraged, as significant modification to the project and mitigation measures may be required in order to obtain a CESA Permit.

For any activity that will divert or obstruct the natural flow, or change the bed, channel, or bank (which may include associated riparian resources) of a river or stream, or use material from a streambed, DFG may require a Lake and Streambed Alteration Agreement (LSAA), pursuant to Section 1600 et seq. of the Fish and Game Code, with the applicant. Issuance of an LSAA is subject to CEQA. DFG, as a responsible agency under CEQA, will consider

Ms. Tina Gallegos
December 20, 2010
Page 2

the CEQA document for the project. The CEQA document should fully identify the potential impacts to the stream or riparian resources and provide adequate avoidance, mitigation, monitoring and reporting commitments for completion of the agreement. To obtain information about the LSAA notification process, please access our website at <http://www.dfg.ca.gov/habcon/1600/>; or to request a notification package, contact the Lake and Streambed Alteration Program at (707) 944-5520.

If you have any questions, please contact Ms. Randi Adair, Environmental Scientist, at (707) 944-5596; or Mr. Liam Davis, Habitat Conservation Supervisor, at (707) 944-5529.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott Wilson".

Scott Wilson
Acting Regional Manager
Bay Delta Region

cc: State Clearinghouse



December 21, 2010

Tina Gallegos, Associate Planner
City of San Pablo
13831 San Pablo Avenue, Building 3
San Pablo, CA 94806

Re: Notice of Preparation of an Environmental Impact Report - San Pablo Avenue
Specific Plan, San Pablo

Dear Ms. Gallegos:

East Bay Municipal Utility District (EBMUD) appreciates the opportunity to comment on the Notice of Preparation of an Environmental Impact Report for the San Pablo Avenue Specific Plan located in the City of San Pablo (City). EBMUD has the following comments.

GENERAL

EBMUD is currently evaluating alternatives for the future construction and installation of a 36-inch diameter major transmission pipeline in 23rd Street, Road 20, and San Pablo Avenue at the intersection of San Pablo Avenue and Road 20 located within the specific plan area. EBMUD requests that the City notify and coordinate with EBMUD at the earliest planning stage for any street improvements in this area to ensure coordination.

WATER SERVICE

EBMUD's Central Pressure Zone (service elevation range from 0 to 100 feet), Maloney Pressure Zone (service elevation range from 0 to 200 feet), and Aqueduct Pressure Zone (service elevation range from 100 to 200 feet) serves the San Pablo Specific Plan area. The Notice of Preparation does not reference specific development projects. Any development project associated with the San Pablo Avenue Specific Plan area will be subject to the following general requirements:

Main extensions that may be required to serve any specific development projects to provide adequate domestic water supply, fire flows, and system redundancy will be at the project sponsor's expense. Pipeline and fire hydrant relocations and replacements due to modifications of existing streets, and off-site pipeline improvements, also at the project sponsor's expense, may be required depending on EBMUD metering requirements and fire flow requirements set by the local fire department. All project sponsors should contact

EBMUD's New Business Office and request a water service estimate to determine costs and conditions of providing water service to the development. Engineering and installation of new and relocated pipeline and services requires substantial lead-time, which should be provided for in the project sponsor's development schedule.

Please note that depending on the size and/or square footage of individual projects within the specific plan area, a Water Supply Assessment (WSA) may be required. The lead agency for future individual projects within the specific plan area that meets the threshold of a WSA pursuant to Section 15155 of the California Environmental Quality Act Guidelines, and Section 10910-10915 of the California Water Code should contact EBMUD to request a WSA. EBMUD requires project sponsors to provide future water demand data and estimates for individual project sites for analysis of the WSA. Please be aware that the WSA can take up to 90 days to complete from the day on which the request is received.

The project sponsor should also be aware that EBMUD will not inspect, install or maintain pipeline in contaminated soil or groundwater (if groundwater is present at any time during the year at the depth piping is to be installed) that must be handled as a hazardous waste or that may pose a health and safety risk to construction or maintenance personnel wearing Level D personal protective equipment. Nor will EBMUD install piping in areas where groundwater contaminant concentrations exceed specified limits for discharge to sanitary sewer systems or sewage treatment plants. Project sponsors for EBMUD services requiring excavation in contaminated areas must submit copies of existing information regarding soil and groundwater quality within or adjacent to the project boundary. In addition, the applicant must provide a legally sufficient, complete and specific written remedial plan establishing the methodology, planning and design of all necessary systems for the removal, treatment, and disposal of all identified contaminated soil and/or groundwater.

EBMUD will not design the installation of pipelines until such time as soil and groundwater quality data and remediation plans are received and reviewed and will not install pipelines until remediation has been carried out and documentation of the effectiveness of the remediation has been received and reviewed. If no soil or groundwater quality data exists or the information supplied by the project sponsor is insufficient EBMUD may require the project sponsor to perform sampling and analysis to characterize the soil being excavated and groundwater that may be encountered during excavation or perform such sampling and analysis itself at the project sponsor's expense.

WATER CONSERVATION

Individual projects within the specific plan area may present an opportunity to incorporate water conservation measures. EBMUD would request that the City include in its conditions of approval a requirement that the project sponsor comply with the California Model Water

Tina Gallegos, Associate Planner

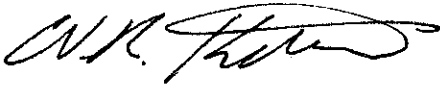
December 21, 2010

Page 3

Efficient Landscape Ordinance (Division 2, Title 23, California Code of Regulations, Chapter 2.7, Sections 490 through 495). Project sponsors should be aware that Section 31 of EBMUD's Water Service Regulations requires that water service shall not be furnished for new or expanded service unless all the applicable water-efficiency measures described in the regulation are installed at the project sponsor's expense.

If you have any questions concerning this response, please contact David J. Rehnstrom, Senior Civil Engineer, Water Service Planning at (510) 287-1365.

Sincerely,

A handwritten signature in black ink, appearing to read 'W.R. Kirkpatrick', with a stylized flourish at the end.

William R. Kirkpatrick
Manager of Water Distribution Planning

WRK:AMW:sb
sb10_248.doc

6

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY

ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION

111 GRAND AVENUE
P. O. BOX 23660
OAKLAND, CA 94623-0660
PHONE (510) 622-5491
FAX (510) 286-5559
TTY 711



*Flex your power!
Be energy efficient!*

December 21, 2010

CC080028
SCH# 2010112062

Ms. Tina Gallegos
City of San Pablo
Planning Division
13831 San Pablo Avenue, Bldg. 3
San Pablo CA 94806

Dear Ms. Gallegos:

San Pablo Avenue Specific Plan Project – Notice of Preparation (NOP)

Thank you for including the California Department of Transportation (Department) in the early stages of the environmental review process for the San Pablo Avenue Specific Plan project. The following comments are based on the NOP. As the lead agency, the City of San Pablo is responsible for all project mitigation, including any needed improvements to State highways. The project's fair share contribution, financing, scheduling, implementation responsibilities and lead agency monitoring should be fully discussed for all proposed mitigation measures. This information should also be presented in the Mitigation Monitoring and Reporting Plan of the environmental document. Required roadway improvements should be completed prior to issuance of the Certificate of Occupancy. Since an encroachment permit is required for work in the state right of way (ROW), and the Department will not issue a permit until our concerns are adequately addressed, we strongly recommend that the City of San Pablo work with both the applicant and the Department to ensure that our concerns are resolved during the California Environmental Quality Act (CEQA) process, and in any case prior to submittal of a permit application. Further comments will be provided during the encroachment permit process; see the end of this letter for more information regarding encroachment permits.

Community Planning

The Department encourages any needed housing, jobs and neighborhood services to be located near major mass transit nodes, and connected to these nodes with streets configured to facilitate walking and biking, as a means of promoting mass transit use and reducing regional vehicle miles traveled and traffic impacts on the state highways.

Traffic Impact Study (TIS)

Please include the information detailed below in the TIS to ensure that project-related impacts to State roadway facilities are thoroughly assessed. We encourage the City to coordinate preparation

Ms. Tina Gallegos/City of San Pablo
December 21, 2010
Page 2

of the study with our office, and we would appreciate the opportunity to review the scope of work. The Department's *"Guide for the Preparation of Traffic Impact Studies"* should be reviewed prior to initiating any traffic analysis for the project; it is available at the following website: <http://www.dot.ca.gov/hq/traffops/developserv/operationalsystems/reports/tisguide.pdf>

The TIS should include:

1. Vicinity map, regional location map, and a site plan clearly showing project access in relation to nearby State roadways. Ingress and egress for all project components should be clearly identified. State ROW should be clearly identified.
2. The maps should also include project driveways, local roads and intersections, parking, and transit facilities.
3. Project-related trip generation, distribution, and assignment. The assumptions and methodologies used to develop this information should be detailed in the study, and should be supported with appropriate documentation.
4. Average Daily Traffic, AM and PM peak hour volumes and levels of service (LOS) on all significantly affected roadways, including crossroads and controlled intersections for existing, existing plus project, cumulative and cumulative plus project scenarios. Calculation of cumulative traffic volumes should consider all traffic-generating developments, both existing and future, that would affect study area roadways and intersections. *The analysis should clearly identify the project's contribution to area traffic and degradation to existing and cumulative levels of service. Lastly, the Department's LOS threshold, which is the transition between LOS C and D, and is explained in detail in the Guide for Traffic Studies, should be applied to all State facilities.*
5. Schematic illustration of traffic conditions including the project site and study area roadways, trip distribution percentages and volumes as well as intersection geometrics, i.e., lane configurations, for the scenarios described above.
6. The project's consistency with both the Circulation Element of the General Plan and the Contra Costa County Congestion Management Agency's Congestion Management Plan should be evaluated.
7. Mitigation should be identified for any roadway mainline section or intersection with insufficient capacity to maintain an acceptable LOS with the addition of project-related and/or cumulative traffic.
8. Special attention should be given to the following trip-reducing measures:
 - Encouraging mixed-use,
 - Maximizing density through offering bonuses and/or credits,
 - Coordinating with transit providers, to increase transit use by expanding routes and emphasizing express service to regional rail stations, and by providing bus shelters with seating at any future bus pullouts,

Ms. Tina Gallegos/City of San Pablo
December 21, 2010
Page 3

- Providing transit information to all future project employees and patrons, and Encouraging bicycle- and pedestrian-friendly design.
9. Please consider developing and applying pedestrian, bicycling and transit performance or quality of service measures and modeling pedestrian, bicycle and transit trips that the project will generate so that impacts and mitigation measures can be quantified. In addition to urban design treatments, these measures could include Travel Demand Management (TDM) policies (for example, lower parking ratios, car-sharing programs, transit subsidies, etc.) to encourage usage of nearby public transit lines.
10. In addition, please analyze secondary impacts on pedestrians and bicyclists that may result from any traffic impact mitigation measures. Please describe any pedestrian and bicycle mitigation measures and safety countermeasures that would therefore be needed as a means of maintaining and improving access to transit facilities and reducing traffic impacts on state highways.

Please forward three hard copies and one CD of the environmental document, along with the TIS, including Technical Appendices, and staff report to the address below as soon as they are available.

Luis Melendez
Community Planning Office, Mail Station 10D
California DOT, District 4
P.O. Box 23660
Oakland, CA 94623-0660

Traffic Impact Fees

Please identify traffic impact fees. Development plans should require traffic impact fees based on projected traffic and/or based on associated cost estimates for public transportation facilities necessitated by development. Please refer to the California Office of Planning and Research (OPR) 2003 General Plan Guidelines, page 163, which can be accessed on-line at the following website: <http://www.opr.ca.gov/index.php?a=planning/gpg.html>

Scheduling and costs associated with planned improvements on Departmental ROW should be listed, in addition to identifying viable funding sources correlated to the pace of improvements for roadway improvements, if any. Please refer to the state OPR's 2003 General Plan Guidelines, page 106.

Encroachment Permit

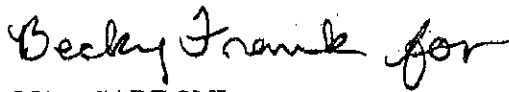
Please be advised that any work or traffic control that encroaches onto the state ROW requires an encroachment permit that is issued by the Department. To apply, a completed encroachment permit application, environmental documentation, and five (5) sets of plans clearly indicating state ROW must be submitted to the address below. Traffic-related mitigation measures should be incorporated into the construction plans during the encroachment permit process. See the website link for more information: <http://www.dot.ca.gov/hq/traffops/developserv/permits/>

Ms. Tina Gallegos/City of San Pablo
December 21, 2010
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Michael Condie, District Office Chief
Office of Permits
California DOT, District 4
P.O. Box 23660
Oakland, CA 94623-0660

Please feel free to call or email Luis Melendez of my staff at (510) 286-5606 or
Luis_Melendez@dot.ca.gov with any questions regarding this letter.

Sincerely,



LISA CARBONI
District Branch Chief
Local Development – Intergovernmental Review

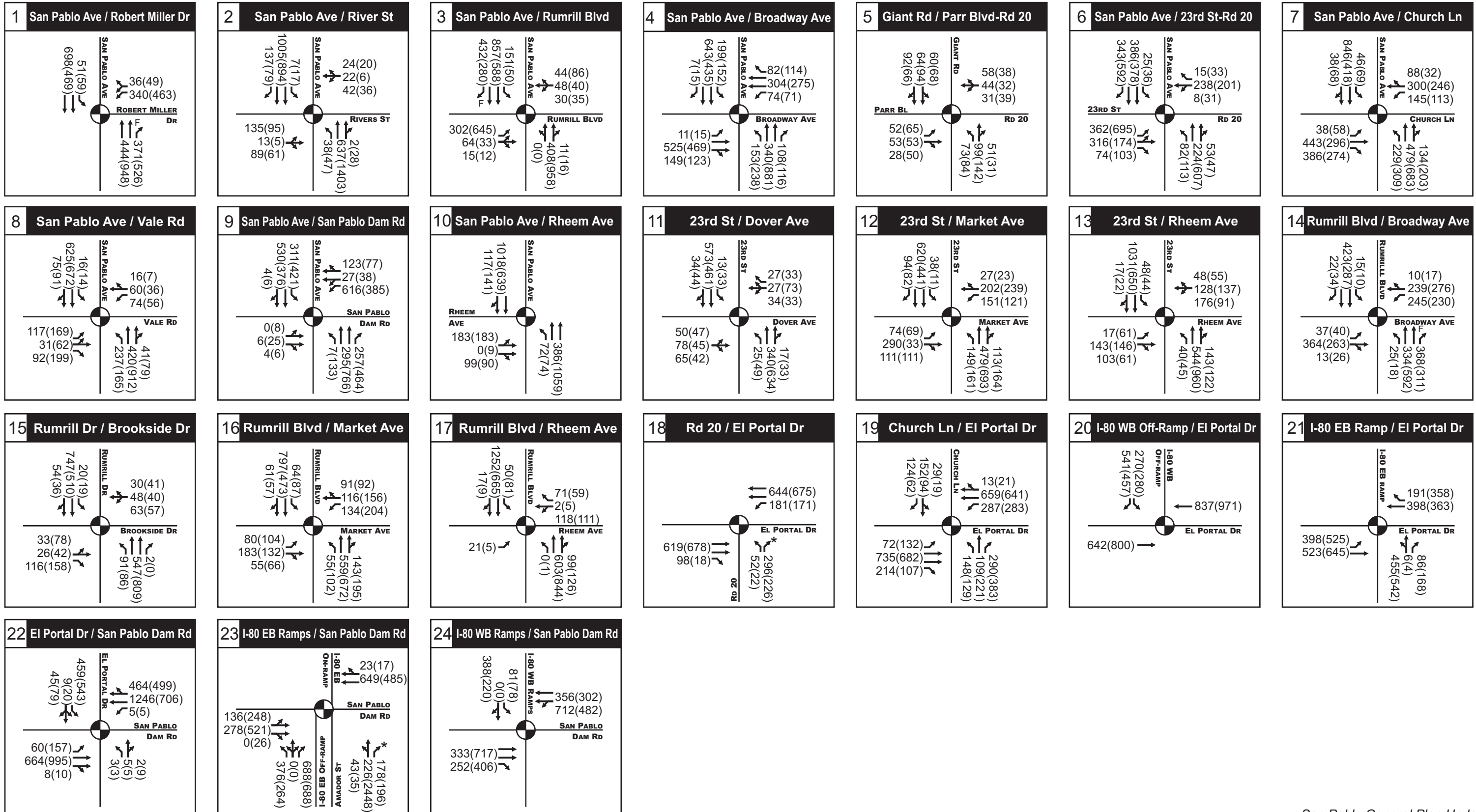
c: State Clearinghouse

Appendix B

Citywide Transportation

Modeling Figures and Results

The following modeling results were used for both the analysis of the 2030 San Pablo General Plan (assumed to be adopted) and for analysis of the San Pablo Avenue Specific Plan. The Chapter 3.2 transportation analysis reports on only those intersections and roadway segments within the Planning Area of the proposed Project; this appendix provides modeling analysis results citywide.



San Pablo General Plan Update

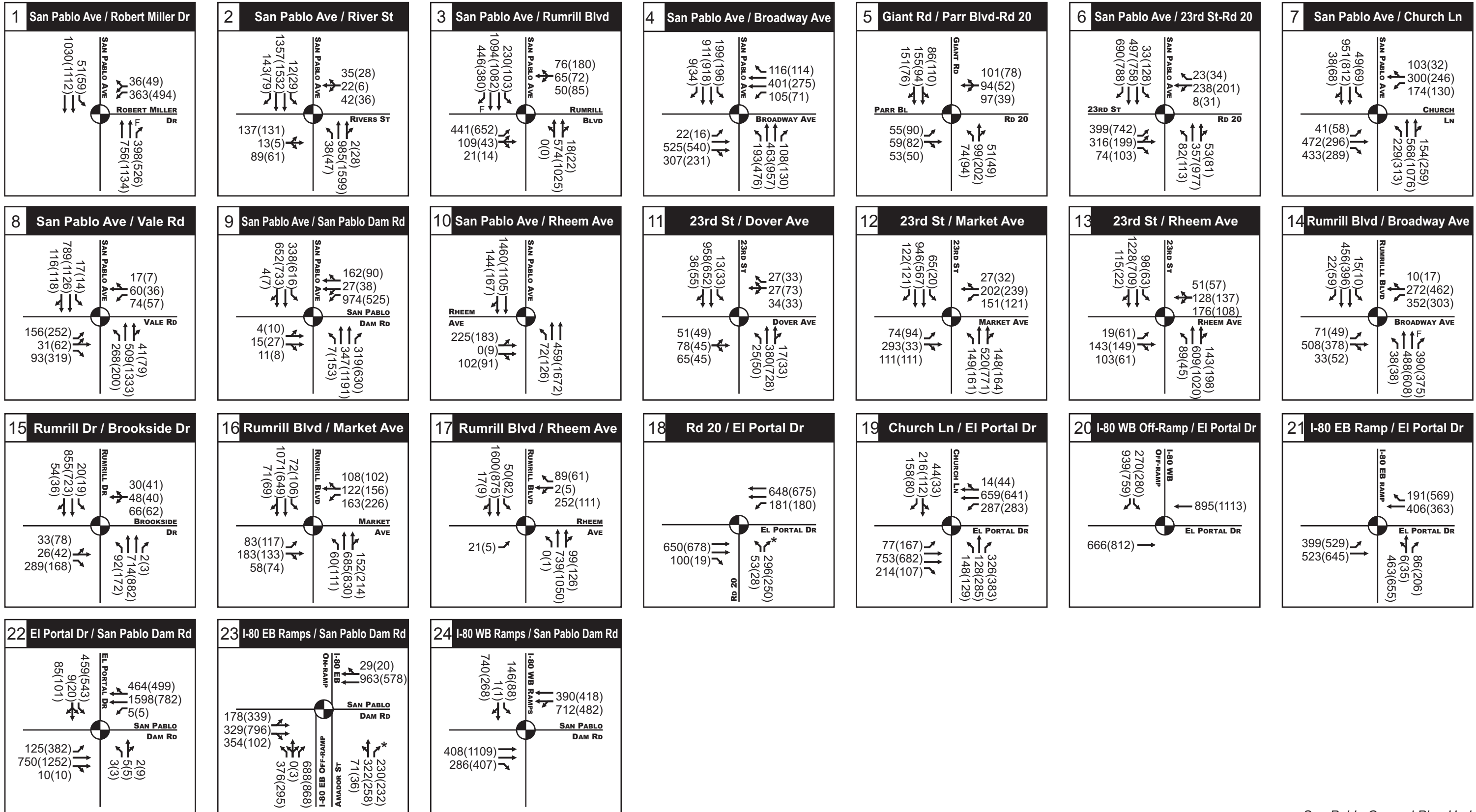
LEGEND

Traffic lanes
 Free Right Movement
 Signalized Intersection
 Stop sign Controlled Movement

xx(yy) AM(PM) Peak Hour Volumes



**Existing Lane Geometry
& Peak Hour Volume
AM(PM)**



San Pablo General Plan Update

LEGEND

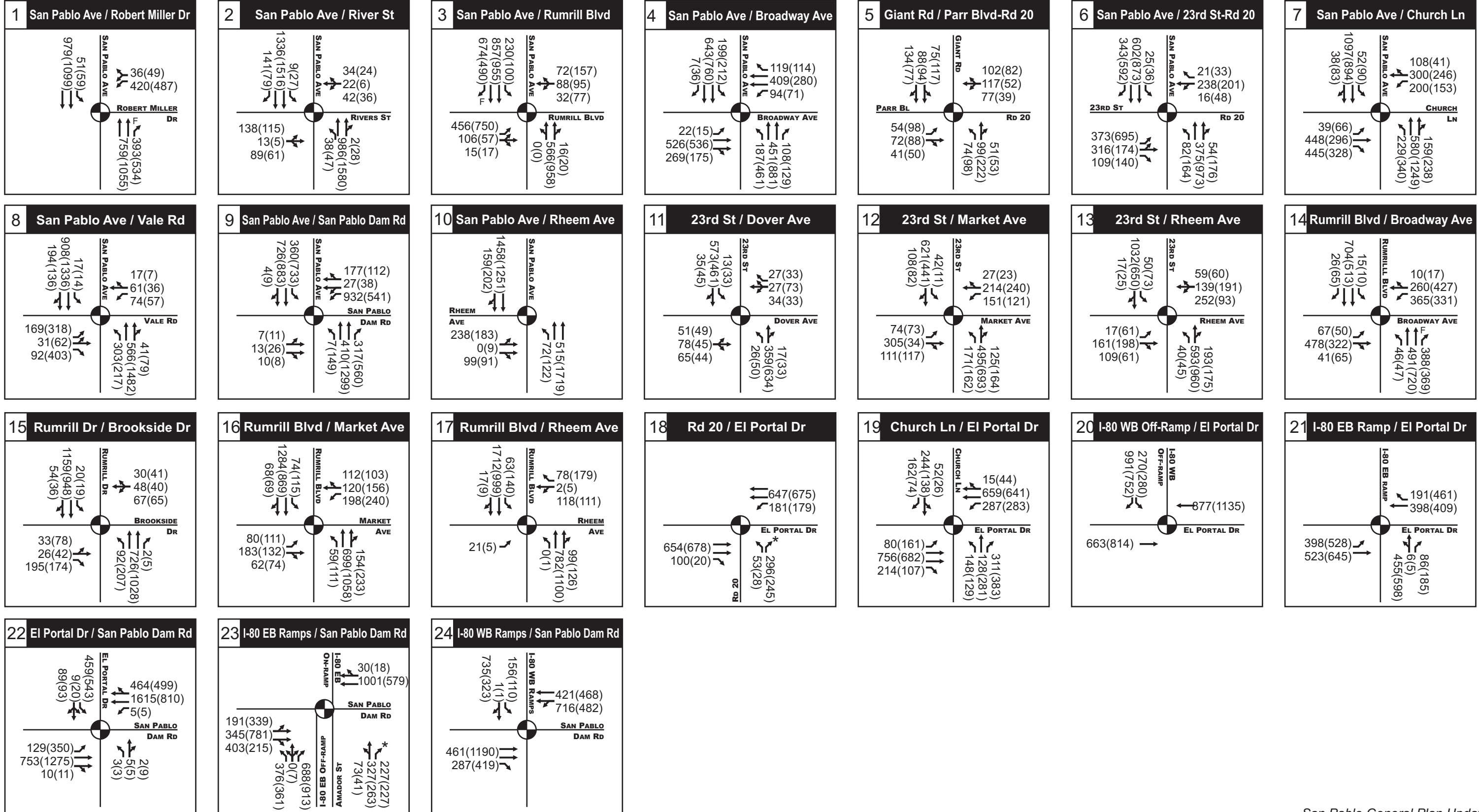
Traffic lanes
 Free Right Movement

Signalized Intersection
 Stop sign Controlled Movement

xx(yy) AM(PM) Peak Hour Volumes



**Cumulative
No Project Alternative
Lane Geometry & Peak Hour Volume
AM(PM)**



San Pablo General Plan Update

LEGEND

Traffic lanes
 Free Right Movement

Signalized Intersection
 Stop sign Controlled Movement

xx(yy) AM(PM) Peak Hour Volumes



**Cumulative
General Plan Update
Lane Geometry & Peak Hour Volume
AM(PM)**

San Pablo General Plan Update
Existing AM Peak Hour

Scenario Report

Scenario: ExAM

Command: ExAM

Volume: ExAM

Geometry: Ex

Impact Fee: Default Impact Fee

Trip Generation: Default Trip Generation

Trip Distribution: Default Trip Distribution

Paths: Default Path

Routes: Default Route

Configuration: Default Configuration

San Pablo General Plan Update
Existing AM Peak HourLevel Of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #101 San Pablo Ave/Robert Miller Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.323

Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 34 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Split Phase			Split Phase			
Rights:	Ignore			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0	0	2	0	1	1	0	2	0	0	1	0	1

Volume Module: >> Count Date: 14 Apr 2005 <<

Base Vol:	0	444	371	51	698	0	0	0	0	340	0	36
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	444	371	51	698	0	0	0	0	340	0	36
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	444	371	51	698	0	0	0	0	340	0	36
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	444	371	51	698	0	0	0	0	340	0	36
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	444	371	51	698	0	0	0	0	340	0	36
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	0	444	371	51	698	0	0	0	0	340	0	36
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	444	371	51	698	0	0	0	0	340	0	36

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	0.00	0.00	0.00	1.81	0.00	0.19
Final Sat.:	0	3440	1720	1720	3440	0	0	0	0	2828	0	329

Capacity Analysis Module:

Vol/Sat:	0.00	0.13	0.22	0.03	0.20	0.00	0.00	0.00	0.00	0.12	0.00	0.11
Crit Volume:	0			349		0			0	188		
Crit Moves:	****			****						****		

San Pablo General Plan Update
Existing AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #102 San Pablo Ave/Rivers St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.525
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 48 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Protected				Split Phase				Split Phase							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	0	2	0	1	0	0	1	0	0	0	0	1	0	0

Volume Module:

Base Vol:	38	637	2	7	1005	137	135	13	89	42	22	24
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	38	637	2	7	1005	137	135	13	89	42	22	24
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	38	637	2	7	1005	137	135	13	89	42	22	24
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	38	637	2	7	1005	137	135	13	89	42	22	24
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	38	637	2	7	1005	137	135	13	89	42	22	24
RTOR Reduct:	0	0	0	0	0	135	0	0	0	0	0	0
RTOR Vol:	38	637	2	7	1005	2	135	13	89	42	22	24
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	38	637	2	7	1005	2	135	13	89	42	22	24

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.99	0.01	1.00	2.00	1.00	0.57	0.05	0.38	0.48	0.25	0.27
Final Sat.:	1650	3290	10	1650	3300	1650	940	91	620	788	413	450

Capacity Analysis Module:

Vol/Sat:	0.02	0.19	0.19	0.00	0.30	0.00	0.14	0.14	0.14	0.05	0.05	0.05
Crit Volume:	38			503			237			88		
Crit Moves:	***			***			***			***		

San Pablo General Plan Update
Existing AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #103 San Pablo Ave//Rumrill Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.442
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 33 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Permitted				Permitted				Split Phase				Split Phase							
Rights:	Include				Ignore				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1	1	0	1	0	2	0	1	1	0	1	0	0	0	0	1	0	0

Volume Module: >> Count Date: 1 Oct 2005 <<

Base Vol:	0	408	11	151	857	432	302	64	15	30	48	44
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	408	11	151	857	432	302	64	15	30	48	44
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	408	11	151	857	432	302	64	15	30	48	44
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	408	11	151	857	432	302	64	15	30	48	44
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	408	11	151	857	432	302	64	15	30	48	44
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	0	408	11	151	857	432	302	64	15	30	48	44
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	408	11	151	857	432	302	64	15	30	48	44

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.95	0.05	1.00	2.00	1.00	1.58	0.34	0.08	0.25	0.39	0.36
Final Sat.:	0	3350	90	1720	3440	1720	2479	578	135	423	677	620

Capacity Analysis Module:

Vol/Sat:	0.00	0.12	0.12	0.09	0.25	0.25	0.12	0.11	0.11	0.07	0.07	0.07
Crit Volume:	0			429			190			122		
Crit Moves:	***			***			***			***		

San Pablo General Plan Update
Existing AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #104 San Pablo Ave//Broadway Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.537
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 49 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected			Protected			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0	1	0	1	0	1	1	0	2

Volume Module:
Base Vol: 153 340 108 199 643 7 11 525 149 74 304 82
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 153 340 108 199 643 7 11 525 149 74 304 82
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 153 340 108 199 643 7 11 525 149 74 304 82
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 153 340 108 199 643 7 11 525 149 74 304 82
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 153 340 108 199 643 7 11 525 149 74 304 82
RTOR Reduct: 0 0 0 74 0 0 7 0 0 0 0 0
RTOR Vol: 153 340 34 199 643 0 11 525 149 74 304 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 153 340 34 199 643 0 11 525 149 74 304 0

Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 1.00 1.00 2.00 1.00 1.00 1.56 0.44 1.00 2.00 1.00
Final Sat.: 1650 3300 1650 1650 3300 1650 1650 2570 730 1650 3300 1650

Capacity Analysis Module:
Vol/Sat: 0.09 0.10 0.02 0.12 0.19 0.00 0.01 0.20 0.20 0.04 0.09 0.00
Crit Volume: 153 322 337 74
Crit Moves: ****

San Pablo General Plan Update
Existing AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #105 Giant Rd/Parr Bl-Rd 20

Cycle (sec): 100 Critical Vol./Cap.(X): 0.239
Loss Time (sec): 9 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 24 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0	1	0	1	0	1	0	0	0	1

Volume Module: >> Count Date: 12 Dec 2006 <<
Base Vol: 73 99 51 60 64 92 52 53 28 31 44 58
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 73 99 51 60 64 92 52 53 28 31 44 58
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 73 99 51 60 64 92 52 53 28 31 44 58
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 73 99 51 60 64 92 52 53 28 31 44 58
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 73 99 51 60 64 92 52 53 28 31 44 58
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 73 99 51 60 64 92 52 53 28 31 44 58
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 73 99 51 60 64 92 52 53 28 31 44 58

Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.66 0.34 0.56 0.59 0.85 1.00 0.65 0.35 0.23 0.33 0.44
Final Sat.: 1650 1089 561 917 978 1406 1650 1080 570 385 546 720

Capacity Analysis Module:
Vol/Sat: 0.04 0.09 0.09 0.07 0.07 0.07 0.03 0.05 0.05 0.08 0.08 0.08
Crit Volume: 73 108 81 133
Crit Moves: ****

San Pablo General Plan Update
Existing AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #106 San Pablo Ave/Rd 20/23rrd St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.542
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 50 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Protected				Split Phase				Split Phase							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	0	2	0	1	1	1	0	0	1	0	1	0	0	1

Volume Module: >> Count Date: 1 Feb 2004 <<
 Base Vol: 82 224 53 25 386 343 362 316 74 8 238 15
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 82 224 53 25 386 343 362 316 74 8 238 15
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 82 224 53 25 386 343 362 316 74 8 238 15
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Volume: 82 224 53 25 386 343 362 316 74 8 238 15
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 82 224 53 25 386 343 362 316 74 8 238 15
 RTOR Reduct: 0 0 0 0 0 199 0 0 74 0 0 15
 RTOR Vol: 82 224 53 25 386 144 362 316 0 8 238 0
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 FinalVolume: 82 224 53 25 386 144 362 316 0 8 238 0

Saturation Flow Module:
 Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 0.91 1.00 1.00 1.00 1.00 1.00
 Lanes: 1.00 1.62 0.38 1.00 2.00 1.00 1.07 0.93 1.00 0.03 0.97 1.00
 Final Sat.: 1650 2669 631 1650 3300 1650 1602 1538 1650 54 1596 1650

Capacity Analysis Module:
 Vol/Sat: 0.05 0.08 0.08 0.02 0.12 0.09 0.23 0.21 0.00 0.15 0.15 0.00
 Crit Volume: 82 193 339 246
 Crit Moves: ****

San Pablo General Plan Update
Existing AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #107 Church Ln/San Pablo Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.763
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 96 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Protected				Protected				Protected							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	1	0	1	1	0	0	1	0

Volume Module: >> Count Date: 1 Aug 2006 <<
 Base Vol: 229 479 134 46 846 38 38 443 386 145 300 88
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 229 479 134 46 846 38 38 443 386 145 300 88
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 229 479 134 46 846 38 38 443 386 145 300 88
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Volume: 229 479 134 46 846 38 38 443 386 145 300 88
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 229 479 134 46 846 38 38 443 386 145 300 88
 RTOR Reduct: 0 0 0 0 0 0 0 229 0 0 0 0
 RTOR Vol: 229 479 134 46 846 38 38 443 157 145 300 88
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 FinalVolume: 229 479 134 46 846 38 38 443 157 145 300 88

Saturation Flow Module:
 Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Lanes: 1.00 1.56 0.44 1.00 1.91 0.09 1.00 1.00 1.00 1.00 0.77 0.23
 Final Sat.: 1650 2579 721 1650 3158 142 1650 1650 1650 1650 1276 374

Capacity Analysis Module:
 Vol/Sat: 0.14 0.19 0.19 0.03 0.27 0.27 0.02 0.27 0.10 0.09 0.24 0.24
 Crit Volume: 229 442 443 145
 Crit Moves: ****

San Pablo General Plan Update
Existing AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #108 San Pablo Ave//Vale Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.451
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 42 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Protected				Protected				Protected							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	1	0	0	1	1	0	0	1	0

Volume Module: >> Count Date: 1 Oct 2005 <<

Base Vol:	237	420	41	16	625	75	117	31	92	74	60	16
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	237	420	41	16	625	75	117	31	92	74	60	16
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	237	420	41	16	625	75	117	31	92	74	60	16
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	237	420	41	16	625	75	117	31	92	74	60	16
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	237	420	41	16	625	75	117	31	92	74	60	16
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	237	420	41	16	625	75	117	31	0	74	60	16
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	237	420	41	16	625	75	117	31	0	74	60	16

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.82	0.18	1.00	1.79	0.21	1.58	0.42	1.00	1.00	0.79	0.21
Final Sat.:	1650	3007	293	1650	2946	354	2371	691	1650	1650	1303	347

Capacity Analysis Module:

Vol/Sat:	0.14	0.14	0.14	0.01	0.21	0.21	0.05	0.04	0.00	0.04	0.05	0.05
Crit Volume:	237			350			74			76		
Crit Moves:	****			****			****			****		

San Pablo General Plan Update
Existing AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #109 San Pablo Ave/San Pablo Dam Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.486
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 44 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Protected				Split Phase				Split Phase							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	2	0	1	1	0	1	1	0	0	1	0	1	0	1	1	0	1	0

Volume Module: >> Count Date: 1 Dec 2005 <<

Base Vol:	7	295	257	311	530	4	0	6	4	616	27	123
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	7	295	257	311	530	4	0	6	4	616	27	123
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	7	295	257	311	530	4	0	6	4	616	27	123
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	7	295	257	311	530	4	0	6	4	616	27	123
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	7	295	257	311	530	4	0	6	4	616	27	123
RTOR Reduct:	0	0	257	0	0	0	0	0	0	0	0	0
RTOR Vol:	7	295	0	311	530	4	0	6	4	616	27	123
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	7	295	0	311	530	4	0	6	4	616	27	123

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	1.99	0.01	0.00	1.20	0.80	2.00	0.18	0.82
Final Sat.:	1650	3300	1650	1650	3275	25	0	1980	1320	3000	297	1353

Capacity Analysis Module:

Vol/Sat:	0.00	0.09	0.00	0.19	0.16	0.16	0.00	0.00	0.00	0.21	0.09	0.09
Crit Volume:	148			311			5			308		
Crit Moves:	****			****			****			****		

San Pablo General Plan Update
Existing AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #110 San Pablo Ave//Rheem Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.457
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 34 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Permitted Include			Permitted Include			Split Phase WideBypass			Split Phase Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0	0	1	1	0	0	0	0	0

Volume Module: >> Count Date: 1 Oct 2005 <<

Base Vol:	72	386	0	0	1018	117	183	0	99	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	72	386	0	0	1018	117	183	0	99	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	72	386	0	0	1018	117	183	0	99	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	72	386	0	0	1018	117	183	0	99	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	72	386	0	0	1018	117	183	0	99	0	0	0
RTOR Reduct:	0	0	0	0	0	0	0	0	90	0	0	0
RTOR Vol:	72	386	0	0	1018	117	183	0	9	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	72	386	0	0	1018	117	183	0	9	0	0	0

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	0.00	1.79	0.21	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1800	3600	0	0	3229	371	1800	0	1800	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.04	0.11	0.00	0.00	0.32	0.32	0.10	0.00	0.01	0.00	0.00	0.00
Crit Volume:	72				568	183				0		
Crit Moves:	***				***	***						

San Pablo General Plan Update
Existing AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #111 23rd St/Dover Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.388
Loss Time (sec): 9 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 30 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected Include			Protected Include			Permitted Include			Permitted Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	0	0	1	0	0	1

Volume Module:

Base Vol:	25	340	17	13	573	34	50	78	65	34	27	27
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	25	340	17	13	573	34	50	78	65	34	27	27
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	25	340	17	13	573	34	50	78	65	34	27	27
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	25	340	17	13	573	34	50	78	65	34	27	27
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	25	340	17	13	573	34	50	78	65	34	27	27
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	13
RTOR Vol:	25	340	17	13	573	34	50	78	65	34	27	14
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	25	340	17	13	573	34	50	78	65	34	27	14

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91
Lanes:	1.00	1.90	0.10	1.00	1.89	0.11	0.26	0.40	0.34	0.91	0.09	1.00
Final Sat.:	1720	3276	164	1720	3247	193	446	695	579	1559	161	1563

Capacity Analysis Module:

Vol/Sat:	0.01	0.10	0.10	0.01	0.18	0.18	0.11	0.11	0.11	0.02	0.17	0.01
Crit Volume:	25				304			50			289	
Crit Moves:	***				***			***			***	

San Pablo General Plan Update
Existing AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #112 23rd St/Market Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.535
Loss Time (sec): 9 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 40 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Protected				Permitted				Permitted							
Rights:	Include				Include				WideBypass				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	0	2	0	1	1	0	0	1	0	1	0	0	1	0

Volume Module: >> Count Date: 1 Aug 2006 <<
 Base Vol: 149 479 113 38 620 94 74 290 111 151 202 27
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 149 479 113 38 620 94 74 290 111 151 202 27
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 149 479 113 38 620 94 74 290 111 151 202 27
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Volume: 149 479 113 38 620 94 74 290 111 151 202 27
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 149 479 113 38 620 94 74 290 111 151 202 27
 RTOR Reduct: 0 0 0 0 0 0 74 0 0 90 0 0
 RTOR Vol: 149 479 113 38 620 20 74 290 21 151 202 27
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 FinalVolume: 149 479 113 38 620 20 74 290 21 151 202 27

Saturation Flow Module:
 Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Lanes: 1.00 1.62 0.38 1.00 2.00 1.00 1.00 0.93 0.07 1.00 0.88 0.12
 Final Sat.: 1720 2783 657 1720 3440 1720 1720 1604 116 1720 1517 203

Capacity Analysis Module:
 Vol/Sat: 0.09 0.17 0.17 0.02 0.18 0.01 0.04 0.18 0.18 0.09 0.13 0.13
 Crit Volume: 149 310 311 151
 Crit Moves: ****

San Pablo General Plan Update
Existing AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #113 23rd St/Rheem Av

Cycle (sec): 100 Critical Vol./Cap.(X): 0.640
Loss Time (sec): 6 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 40 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Permitted				Permitted				Permitted				Permitted							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	0	1	0	0	0	1	0	0

Volume Module: >> Count Date: 1 Aug 2006 <<
 Base Vol: 40 544 143 48 1031 17 17 143 103 176 128 48
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 40 544 143 48 1031 17 17 143 103 176 128 48
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 40 544 143 48 1031 17 17 143 103 176 128 48
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.77 0.77 0.77 0.90 0.90 0.90 0.76 0.76 0.76 0.91 0.91 0.91
 PHF Volume: 52 706 186 53 1146 19 22 188 136 193 141 53
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 52 706 186 53 1146 19 22 188 136 193 141 53
 RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
 RTOR Vol: 52 706 186 53 1146 19 22 188 136 193 141 53
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 FinalVolume: 52 706 186 53 1146 19 22 188 136 193 141 53

Saturation Flow Module:
 Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Lanes: 1.00 1.58 0.42 1.00 1.97 0.03 1.00 0.58 0.42 0.50 0.36 0.14
 Final Sat.: 1800 2851 749 1800 3542 58 1800 1046 754 900 655 245

Capacity Analysis Module:
 Vol/Sat: 0.03 0.25 0.25 0.03 0.32 0.32 0.01 0.18 0.18 0.21 0.21 0.21
 Crit Volume: 52 582 324 193
 Crit Moves: ****

San Pablo General Plan Update
Existing AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #114 Rumrill Blvd/Broadway Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.523
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 48 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Protected				Split Phase				Split Phase							
Rights:	Ignore				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0	1	1	0	2	0	1	1	0	0	1	0	1	0	0	1	0

Volume Module:

Base Vol:	25	334	368	15	423	22	37	364	13	245	239	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	25	334	368	15	423	22	37	364	13	245	239	10
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	25	334	368	15	423	22	37	364	13	245	239	10
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	25	334	368	15	423	22	37	364	13	245	239	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	25	334	368	15	423	22	37	364	13	245	239	10
RTOR Reduct:	0	0	0	0	0	22	0	0	0	0	0	0
RTOR Vol:	25	334	368	15	423	0	37	364	13	245	239	10
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	25	334	368	15	423	0	37	364	13	245	239	10

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	0.97	0.03	1.00	0.96	0.04
Final Sat.:	1650	3300	1650	1650	3300	1650	1650	1593	57	1650	1584	66

Capacity Analysis Module:

Vol/Sat:	0.02	0.10	0.22	0.01	0.13	0.00	0.02	0.23	0.23	0.15	0.15	0.15
Crit Volume:	25	212	377	249								
Crit Moves:	***	***	***	***								

San Pablo General Plan Update
Existing AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #115 Rumrill Dr/Brookside Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.463
Loss Time (sec): 9 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 35 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Protected				Permitted				Permitted							
Rights:	WideBypass				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0	1	1	0	1	1	0	0	1	0	0	1	0	0	1	0	0

Volume Module: >> Count Date: 2 Feb 2006 <<

Base Vol:	91	547	2	20	747	54	33	26	116	63	48	30
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	91	547	2	20	747	54	33	26	116	63	48	30
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	91	547	2	20	747	54	33	26	116	63	48	30
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.86	0.86	0.86	0.87	0.87	0.87	0.78	0.78	0.78	0.75	0.75	0.75
PHF Volume:	106	636	2	23	859	62	42	33	149	84	64	40
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	106	636	2	23	859	62	42	33	149	84	64	40
RTOR Reduct:	0	0	2	0	0	0	0	0	106	0	0	0
RTOR Vol:	106	636	0	23	859	62	42	33	43	84	64	40
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	106	636	0	23	859	62	42	33	43	84	64	40

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	1.87	0.13	0.56	0.44	1.00	0.45	0.34	0.21
Final Sat.:	1720	3440	1720	1720	3208	232	962	758	1720	769	586	366

Capacity Analysis Module:

Vol/Sat:	0.06	0.18	0.00	0.01	0.27	0.27	0.04	0.04	0.02	0.11	0.11	0.11
Crit Volume:	106	460	42	188								
Crit Moves:	***	***	***	***								

San Pablo General Plan Update
Existing AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #116 Rumrill Blvd/Market Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.589
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 55 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	1	0	1	1	0	1

Volume Module:

Base Vol:	55	559	143	64	797	61	80	183	55	134	116	91
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	55	559	143	64	797	61	80	183	55	134	116	91
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	55	559	143	64	797	61	80	183	55	134	116	91
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.79	0.79	0.79	0.93	0.93	0.93	0.87	0.87	0.87
PHF Volume:	60	608	155	81	1009	77	86	197	59	154	133	105
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	60	608	155	81	1009	77	86	197	59	154	133	105
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	60	608	155	81	1009	77	86	197	59	154	133	105
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	60	608	155	81	1009	77	86	197	59	154	133	105

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.59	0.41	1.00	1.86	0.14	1.00	0.77	0.23	1.00	0.56	0.44
Final Sat.:	1720	2739	701	1720	3195	245	1720	1323	397	1720	964	756

Capacity Analysis Module:

Vol/Sat:	0.03	0.22	0.22	0.05	0.32	0.32	0.05	0.15	0.15	0.09	0.14	0.14
Crit Volume:	60			543			256			154		
Crit Moves:	****			****			****			****		

San Pablo General Plan Update
Existing AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #117 Rumrill Blvd/Rheem Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.451
Loss Time (sec): 9 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 34 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	1	0	1	1	0	1

Volume Module:

Base Vol:	0	603	99	50	1252	17	21	0	0	118	2	71
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	603	99	50	1252	17	21	0	0	118	2	71
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	603	99	50	1252	17	21	0	0	118	2	71
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	603	99	50	1252	17	21	0	0	118	2	71
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	603	99	50	1252	17	21	0	0	118	2	71
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	50
RTOR Vol:	0	603	99	50	1252	17	21	0	0	118	2	21
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	603	99	50	1252	17	21	0	0	118	2	21

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.72	0.28	1.00	1.97	0.03	1.00	0.00	0.00	0.98	0.02	1.00
Final Sat.:	1720	2955	485	1720	3394	46	1720	0	0	1691	29	1720

Capacity Analysis Module:

Vol/Sat:	0.00	0.20	0.20	0.03	0.37	0.37	0.01	0.00	0.00	0.07	0.07	0.01
Crit Volume:	0			635			21			120		
Crit Moves:	****			****			****			****		

San Pablo General Plan Update
Existing AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #118 El Portal Dr/Rd 20

Cycle (sec): 100 Critical Vol./Cap.(X): 0.352
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 35 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	North Bound			South Bound			East Bound			West Bound		
Rights:	Protected Include			Protected Include			Protected Include			Protected Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0	0	0	0	0	0	2	1	0	2

Volume Module:

Base Vol:	52	0	296	0	0	0	0	619	98	181	644	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	52	0	296	0	0	0	0	619	98	181	644	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	52	0	296	0	0	0	0	619	98	181	644	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	52	0	296	0	0	0	0	619	98	181	644	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	52	0	296	0	0	0	0	619	98	181	644	0
RTOR Reduct:	0	0	181	0	0	0	0	0	52	0	0	0
RTOR Vol:	52	0	115	0	0	0	0	619	46	181	644	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	52	0	115	0	0	0	0	619	46	181	644	0

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	1720	0	1720	0	0	0	0	3440	1720	1720	3440	0

Capacity Analysis Module:

Vol/Sat:	0.03	0.00	0.07	0.00	0.00	0.00	0.00	0.18	0.03	0.11	0.19	0.00
Crit Volume:	115	0						310		181		
Crit Moves:	***							***		***		

San Pablo General Plan Update
Existing AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #119 Church Ln/El Portal Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.572
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 43 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	North Bound			South Bound			East Bound			West Bound		
Rights:	Permitted Include			Permitted Include			Protected Include			Protected Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	0	1	0	1	0	2	1	0	1

Volume Module: >> Count Date: 23 Mar 2004 <<

Base Vol:	148	109	290	29	152	124	72	735	214	287	659	13
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	148	109	290	29	152	124	72	735	214	287	659	13
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	148	109	290	29	152	124	72	735	214	287	659	13
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	148	109	290	29	152	124	72	735	214	287	659	13
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	148	109	290	29	152	124	72	735	214	287	659	13
RTOR Reduct:	0	0	287	0	0	72	0	0	148	0	0	0
RTOR Vol:	148	109	3	29	152	52	72	735	66	287	659	13
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	148	109	3	29	152	52	72	735	66	287	659	13

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	0.16	0.84	1.00	1.00	2.00	1.00	1.00	1.96	0.04
Final Sat.:	1720	1720	1720	276	1444	1720	1720	3440	1720	1720	3373	67

Capacity Analysis Module:

Vol/Sat:	0.09	0.06	0.00	0.11	0.11	0.03	0.04	0.21	0.04	0.17	0.20	0.20
Crit Volume:	148			181			368			287		
Crit Moves:	***			***			***			***		

San Pablo General Plan Update
Existing AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #120 I-80 WB Off-ramp/El Portal Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.766
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 79 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Split Phase				Split Phase				Permitted				Permitted							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1	0

Volume Module: >> Count Date: 23 Mar 2004 <<

Base Vol:	0	0	0	270	0	541	0	642	0	0	837	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	270	0	541	0	642	0	0	837	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	270	0	541	0	642	0	0	837	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	270	0	541	0	642	0	0	837	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	270	0	541	0	642	0	0	837	0
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	0	0	0	270	0	541	0	642	0	0	837	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	270	0	541	0	642	0	0	837	0

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00
Final Sat.:	0	0	0	1800	0	1800	0	1800	0	0	1800	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.15	0.00	0.30	0.00	0.36	0.00	0.00	0.47	0.00
Crit Volume:	0			541		0				837		
Crit Moves:				****		****				****		

San Pablo General Plan Update
Existing AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #121 I-80 EB ramp/El Portal Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.731
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 85 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Split Phase				Split Phase				Protected				Protected							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0

Volume Module: >> Count Date: 23 Mar 2004 <<

Base Vol:	455	6	86	0	0	0	398	523	0	0	398	191
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	455	6	86	0	0	0	398	523	0	0	398	191
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	455	6	86	0	0	0	398	523	0	0	398	191
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	455	6	86	0	0	0	398	523	0	0	398	191
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	455	6	86	0	0	0	398	523	0	0	398	191
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	455	6	86	0	0	0	398	523	0	0	398	191
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	455	6	86	0	0	0	398	523	0	0	398	191

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.99	0.01	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Final Sat.:	1698	22	1720	0	0	0	1720	1720	0	0	1720	1720

Capacity Analysis Module:

Vol/Sat:	0.27	0.27	0.05	0.00	0.00	0.00	0.23	0.30	0.00	0.00	0.23	0.11
Crit Volume:	461			0			398			398		
Crit Moves:	****						****			****		

San Pablo General Plan Update
Existing AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #122 El Portal Dr/San Pablo Dam Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.730
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 84 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Protected				Protected				Protected							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0	1	0	1	0	1	0	0	1	0	1	1	0	1	0	1	1	0

Volume Module: >> Count Date: 23 Mar 2004 <<

Base Vol:	3	5	2	459	9	45	60	664	8	5	1246	464
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	5	2	459	9	45	60	664	8	5	1246	464
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	3	5	2	459	9	45	60	664	8	5	1246	464
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	3	5	2	459	9	45	60	664	8	5	1246	464
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	5	2	459	9	45	60	664	8	5	1246	464
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	3	5	2	459	9	45	60	664	8	5	1246	464
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	3	5	2	459	9	45	60	664	8	5	1246	464

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.71	0.29	1.79	0.03	0.18	1.00	1.98	0.02	1.00	1.46	0.54
Final Sat.:	1650	1179	471	2684	58	289	1650	3261	39	1650	2405	895

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.17	0.16	0.16	0.04	0.20	0.20	0.00	0.52	0.52
Crit Volume:	7	256		60			855					
Crit Moves:	***	***		***			***					

San Pablo General Plan Update
Existing AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #123 I-80 EB ramps/San Pablo Dam Rd [N=Amador St; S=I-80 EB ramp

Cycle (sec): 100 Critical Vol./Cap.(X): 0.698
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 76 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Split Phase				Split Phase				Split Phase				Split Phase							
Rights:	Include				Ovl				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	1	0	0	1	1	0	1	0	1	0	1	0	1	0	0	1	0	1	0

Volume Module: >> Count Date: 1 Oct 2005 <<

Base Vol:	43	226	178	376	0	688	136	278	0	0	649	23
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	43	226	178	376	0	688	136	278	0	0	649	23
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	43	226	178	376	0	688	136	278	0	0	649	23
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	43	226	178	376	0	688	136	278	0	0	649	23
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	43	226	178	376	0	688	136	278	0	0	649	23
RTOR Reduct:	0	0	0	0	0	136	0	0	0	0	0	0
RTOR Vol:	43	226	178	376	0	552	136	278	0	0	649	23
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	43	226	178	376	0	552	136	278	0	0	649	23

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.16	0.84	1.00	1.22	xxxx	1.78	0.66	1.34	0.00	0.00	1.93	0.07
Final Sat.:	264	1386	1650	1823	0	2676	1084	2216	0	0	3187	113

Capacity Analysis Module:

Vol/Sat:	0.16	0.16	0.11	0.21	0.00	0.21	0.13	0.13	0.00	0.00	0.20	0.20
Crit Volume:	269	309		207			336					
Crit Moves:	***	***		***			***					

San Pablo General Plan Update
Existing AM Peak Hour

Level Of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #124 I-80 WB Ramps/San Pablo Dam Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.751
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 75 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	R	L	-	T	R	L	-	T	R	L	-	T	R
Control:	Split Phase				Split Phase				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	0	0	1	0	0	1	0	0	2	0	0	1	1	0
Volume Module: >> Count Date: 1 Oct 2005 <<																
Base Vol:	0	0	0	0	81	0	388	0	0	333	252	0	712	356	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	81	0	388	0	0	333	252	0	712	356	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	81	0	388	0	0	333	252	0	712	356	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	81	0	388	0	0	333	252	0	712	356	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	81	0	388	0	0	333	252	0	712	356	0	0
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	0	0	0	0	81	0	388	0	0	333	252	0	712	356	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	0	81	0	388	0	0	333	252	0	1424	356	0	0
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	2.00	1.00	0.00	1.00	1.00	0.00	0.00
Final Sat.:	0	0	0	0	1800	0	1800	0	0	3600	1800	0	1800	1800	0	0
Capacity Analysis Module:																
Vol/Sat:	0.00	0.00	0.00	0.05	0.00	0.00	0.22	0.00	0.00	0.09	0.14	0.00	0.40	0.20	0.00	0.00
Crit Volume:	0				388				252				712			
Crit Moves:					****				****				****			

San Pablo General Plan Update
Existing PM Peak Hour

Scenario Report

Scenario: ExPM
Command: ExPM
Volume: ExPM
Geometry: Ex
Impact Fee: Default Impact Fee
Trip Generation: Default Trip Generation
Trip Distribution: Default Trip Distribution
Paths: Default Path
Routes: Default Route
Configuration: Default Configuration

San Pablo General Plan Update
Existing PM Peak Hour

Level Of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #101 San Pablo Ave/Robert Miller Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.474
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 43 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	2	0	1		1	0	2	0	0	
Volume Module:												
Base Vol:	0	948	526	59	469	0	0	0	0	463	0	49
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	948	526	59	469	0	0	0	0	463	0	49
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	948	526	59	469	0	0	0	0	463	0	49
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	948	526	59	469	0	0	0	0	463	0	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	948	526	59	469	0	0	0	0	463	0	49
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	0	948	526	59	469	0	0	0	0	463	0	49
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	948	526	59	469	0	0	0	0	463	0	49
Saturation Flow Module:												
Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	0.00	0.00	0.00	1.81	0.00	0.19
Final Sat.:	0	3440	1720	1720	3440	0	0	0	0	2828	0	329
Capacity Analysis Module:												
Vol/Sat:	0.00	0.28	0.31	0.03	0.14	0.00	0.00	0.00	0.00	0.16	0.00	0.15
Crit Volume:	474			59			0			256		
Crit Moves:	****			****						****		

San Pablo General Plan Update
Existing PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #102 San Pablo Ave/Rivers St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.579
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 54 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Protected				Protected				Split Phase				Split Phase			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	0	1	0	0	1	0	0	0	1	

Volume Module:

Base Vol:	47	1403	28	17	894	79	95	5	61	36	6	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	47	1403	28	17	894	79	95	5	61	36	6	20
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	47	1403	28	17	894	79	95	5	61	36	6	20
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	47	1403	28	17	894	79	95	5	61	36	6	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	47	1403	28	17	894	79	95	5	61	36	6	20
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	47	1403	28	17	894	0	95	5	61	36	6	20
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	47	1403	28	17	894	0	95	5	61	36	6	20

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.96	0.04	1.00	2.00	1.00	0.59	0.03	0.38	0.58	0.10	0.32
Final Sat.:	1650	3235	65	1650	3300	1650	974	51	625	958	160	532

Capacity Analysis Module:

Vol/Sat:	0.03	0.43	0.43	0.01	0.27	0.00	0.10	0.10	0.10	0.04	0.04	0.04
Crit Volume:	716	17					161			62		
Crit Moves:	****	****					****			****		

San Pablo General Plan Update
Existing PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #103 San Pablo Ave//Rumrill Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.626
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 50 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Permitted				Permitted				Split Phase				Split Phase			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	0	0	1	1	0	1	0	1	1	0	1	0	0	0	1	

Volume Module:

Base Vol:	0	958	16	50	588	280	645	33	12	35	40	86
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	958	16	50	588	280	645	33	12	35	40	86
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	958	16	50	588	280	645	33	12	35	40	86
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	958	16	50	588	280	645	33	12	35	40	86
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	958	16	50	588	280	645	33	12	35	40	86
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	0	958	16	50	588	280	645	33	12	35	40	86
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	958	16	50	588	280	645	33	12	35	40	86

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.97	0.03	1.00	2.00	1.00	1.87	0.10	0.03	0.22	0.25	0.53
Final Sat.:	0	3383	57	1720	3440	1720	2923	165	60	374	427	919

Capacity Analysis Module:

Vol/Sat:	0.00	0.28	0.28	0.03	0.17	0.16	0.22	0.20	0.20	0.09	0.09	0.09
Crit Volume:	487	50		345			161					
Crit Moves:	****	****		****			****			****		

San Pablo General Plan Update
Existing PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #104 San Pablo Ave//Broadway Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.582
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 54 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	North Bound				South Bound				East Bound				West Bound			
Rights:	Protected Include				Protected Include				Permitted Include				Protected Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0	1	0	2	0	1	0	1	1	1	0	2	0

Volume Module:
Base Vol: 238 881 116 152 435 15 15 469 123 71 275 114
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 238 881 116 152 435 15 15 469 123 71 275 114
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 238 881 116 152 435 15 15 469 123 71 275 114
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 238 881 116 152 435 15 15 469 123 71 275 114
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 238 881 116 152 435 15 15 469 123 71 275 114
RTOR Reduct: 0 0 71 0 0 15 0 0 0 0 0 0
RTOR Vol: 238 881 45 152 435 0 15 469 123 71 275 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 238 881 45 152 435 0 15 469 123 71 275 0

Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 1.00 1.00 2.00 1.00 1.00 1.58 0.42 1.00 2.00 1.00
Final Sat.: 1650 3300 1650 1650 3300 1650 1650 2614 686 1650 3300 1650

Capacity Analysis Module:
Vol/Sat: 0.14 0.27 0.03 0.09 0.13 0.00 0.01 0.18 0.18 0.04 0.08 0.00
Crit Volume: 441 152 296 71
Crit Moves: ****

San Pablo General Plan Update
Existing PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #105 Giant Rd/Parr Bl-Rd 20

Cycle (sec): 100 Critical Vol./Cap.(X): 0.248
Loss Time (sec): 9 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 25 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	North Bound				South Bound				East Bound				West Bound			
Rights:	Protected Include				Permitted Include				Split Phase Include				Split Phase Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0	1	0	1	0	1	1	0	0	1	0	0	1	0

Volume Module: >> Count Date: 12 Dec 2006 <<
Base Vol: 84 142 31 68 94 66 65 53 50 39 32 38
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 84 142 31 68 94 66 65 53 50 39 32 38
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 84 142 31 68 94 66 65 53 50 39 32 38
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 84 142 31 68 94 66 65 53 50 39 32 38
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 84 142 31 68 94 66 65 53 50 39 32 38
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 84 142 31 68 94 66 65 53 50 39 32 38
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 84 142 31 68 94 66 65 53 50 39 32 38

Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.82 0.18 0.60 0.82 0.58 1.00 0.51 0.49 0.36 0.29 0.35
Final Sat.: 1650 1354 296 984 1361 955 1650 849 801 590 484 575

Capacity Analysis Module:
Vol/Sat: 0.05 0.10 0.10 0.07 0.07 0.07 0.04 0.06 0.06 0.07 0.07 0.07
Crit Volume: 84 114 103 109
Crit Moves: ****

San Pablo General Plan Update
Existing PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #106 San Pablo Ave/Rd 20/23rrd St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.650
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 65 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Protected				Split Phase				Split Phase							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	0	2	0	1	1	1	0	0	1	0	1	0	0	1

Volume Module:

Base Vol:	113	607	47	36	378	592	695	174	103	31	201	33
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	113	607	47	36	378	592	695	174	103	31	201	33
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	113	607	47	36	378	592	695	174	103	31	201	33
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	113	607	47	36	378	592	695	174	103	31	201	33
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	113	607	47	36	378	592	695	174	103	31	201	33
RTOR Reduct:	0	0	0	0	0	382	0	0	103	0	0	33
RTOR Vol:	113	607	47	36	378	210	695	174	0	31	201	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	113	607	47	36	378	210	695	174	0	31	201	0

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.86	0.14	1.00	2.00	1.00	1.60	0.40	1.00	0.13	0.87	1.00
Final Sat.:	1650	3063	237	1650	3300	1650	2399	661	1650	220	1430	1650

Capacity Analysis Module:

Vol/Sat:	0.07	0.20	0.20	0.02	0.11	0.13	0.29	0.26	0.00	0.14	0.14	0.00
Crit Volume:	327	36		435			232					
Crit Moves:	****	****		****			****					

San Pablo General Plan Update
Existing PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #107 Church Ln/San Pablo Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.582
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 55 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Protected				Protected				Protected							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	1	0	1	1	0	0	1	0

Volume Module:

Base Vol:	309	683	203	69	418	68	58	296	274	113	246	32
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	309	683	203	69	418	68	58	296	274	113	246	32
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	309	683	203	69	418	68	58	296	274	113	246	32
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	309	683	203	69	418	68	58	296	274	113	246	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	309	683	203	69	418	68	58	296	274	113	246	32
RTOR Reduct:	0	0	0	0	0	0	0	0	274	0	0	0
RTOR Vol:	309	683	203	69	418	68	58	296	0	113	246	32
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	309	683	203	69	418	68	58	296	0	113	246	32

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.54	0.46	1.00	1.72	0.28	1.00	1.00	1.00	1.00	0.88	0.12
Final Sat.:	1650	2544	756	1650	2838	462	1650	1650	1650	1650	1460	190

Capacity Analysis Module:

Vol/Sat:	0.19	0.27	0.27	0.04	0.15	0.15	0.04	0.18	0.00	0.07	0.17	0.17
Crit Volume:	309			243			296			113		
Crit Moves:	****			****			****			****		

San Pablo General Plan Update
Existing PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #108 San Pablo Ave//Vale Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.434
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 40 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Protected				Protected				Protected							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	1	0	0	1	1	0	0	1	0

Volume Module:

Base Vol:	165	912	79	14	672	91	169	62	199	56	36	7
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	165	912	79	14	672	91	169	62	199	56	36	7
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	165	912	79	14	672	91	169	62	199	56	36	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	165	912	79	14	672	91	169	62	199	56	36	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	165	912	79	14	672	91	169	62	199	56	36	7
RTOR Reduct:	0	0	0	0	0	0	0	0	165	0	0	0
RTOR Vol:	165	912	79	14	672	91	169	62	34	56	36	7
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	165	912	79	14	672	91	169	62	34	56	36	7

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.84	0.16	1.00	1.76	0.24	1.46	0.54	1.00	1.00	0.84	0.16
Final Sat.:	1650	3037	263	1650	2906	394	2195	886	1650	1650	1381	269

Capacity Analysis Module:

Vol/Sat:	0.10	0.30	0.30	0.01	0.23	0.23	0.08	0.07	0.02	0.03	0.03	0.03
Crit Volume:	165			382		116				43		
Crit Moves:	****			****		****				****		

San Pablo General Plan Update
Existing PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #109 San Pablo Ave/San Pablo Dam Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.627
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 61 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Protected				Split Phase				Split Phase							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0	1	1	0	1	1	0	0	1	0	1	0	1	1	0	1	0

Volume Module:

Base Vol:	133	766	464	421	376	6	8	25	6	385	38	77
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	133	766	464	421	376	6	8	25	6	385	38	77
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	133	766	464	421	376	6	8	25	6	385	38	77
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	133	766	464	421	376	6	8	25	6	385	38	77
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	133	766	464	421	376	6	8	25	6	385	38	77
RTOR Reduct:	0	0	212	0	0	0	0	0	0	0	0	0
RTOR Vol:	133	766	252	421	376	6	8	25	6	385	38	77
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	133	766	252	421	376	6	8	25	6	385	38	77

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	1.97	0.03	0.41	1.28	0.31	2.00	0.33	0.67
Final Sat.:	1650	3300	1650	1650	3248	52	677	2115	508	3000	545	1105

Capacity Analysis Module:

Vol/Sat:	0.08	0.23	0.15	0.26	0.12	0.12	0.01	0.01	0.01	0.13	0.07	0.07
Crit Volume:	383			421			19			193		
Crit Moves:	****			****			****			****		

San Pablo General Plan Update
Existing PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #110 San Pablo Ave//Rheem Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.396
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 31 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Split Phase Split Phase
Rights: Include Include WideBypass Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 0 0 0 0 1 1 0 0 1 0 0 0 0 0 0 0 0

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Volume Module:

Base Vol: 74 1059 0 0 639 141 183 9 90 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 74 1059 0 0 639 141 183 9 90 0 0 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 74 1059 0 0 639 141 183 9 90 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 74 1059 0 0 639 141 183 9 90 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 74 1059 0 0 639 141 183 9 90 0 0 0
RTOR Reduct: 0 0 0 0 0 0 0 0 90 0 0 0
RTOR Vol: 74 1059 0 0 639 141 183 9 0 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 74 1059 0 0 639 141 183 9 0 0 0 0

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Saturation Flow Module:

Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 0.00 0.00 1.64 0.36 1.00 1.00 0.00 0.00 0.00 0.00
Final Sat.: 1800 3600 0 0 2949 651 1800 1800 0 0 0 0

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Capacity Analysis Module:

Vol/Sat: 0.04 0.29 0.00 0.00 0.22 0.22 0.10 0.01 0.00 0.00 0.00 0.00
Crit Volume: 530 0 183 0
Crit Moves: ****

San Pablo General Plan Update
Existing PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #111 23rd St/Dover Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.310
Loss Time (sec): 9 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 27 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted
Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 1 0 1 0 1 1 0 0 0 1 0 0 0 0 1 0 1

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Volume Module:

Base Vol: 49 634 33 33 461 44 47 45 42 33 73 33
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 49 634 33 33 461 44 47 45 42 33 73 33
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 49 634 33 33 461 44 47 45 42 33 73 33
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 49 634 33 33 461 44 47 45 42 33 73 33
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 49 634 33 33 461 44 47 45 42 33 73 33
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 49 634 33 33 461 44 47 45 42 33 73 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 49 634 33 33 461 44 47 45 42 33 73 0

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Saturation Flow Module:

Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.91
Lanes: 1.00 1.90 0.10 1.00 1.83 0.17 0.35 0.34 0.31 0.31 0.69 1.00
Final Sat.: 1720 3270 170 1720 3140 300 603 578 539 535 1185 1563

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Capacity Analysis Module:

Vol/Sat: 0.03 0.19 0.19 0.02 0.15 0.15 0.08 0.08 0.08 0.06 0.06 0.00
Crit Volume: 334 33 134 33
Crit Moves: ****

San Pablo General Plan Update
Existing PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #112 23rd St/Market Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.509
Loss Time (sec): 9 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 38 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				WideBypass				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	1	1	0	2	0	1	1	0	0	1	0	1	0	

Volume Module: >> Count Date: 2 Feb 2006 <<
 Base Vol: 161 693 164 11 441 82 69 33 111 121 239 23
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 161 693 164 11 441 82 69 33 111 121 239 23
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 161 693 164 11 441 82 69 33 111 121 239 23
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.95 0.95 0.95 0.78 0.78 0.78 0.84 0.84 0.84 0.80 0.80 0.80
 PHF Volume: 169 729 173 14 565 105 82 39 132 151 299 29
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 169 729 173 14 565 105 82 39 132 151 299 29
 RTOR Reduct: 0 0 0 0 0 0 82 0 0 90 0 0
 RTOR Vol: 169 729 173 14 565 23 82 39 42 151 299 29
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 FinalVolume: 169 729 173 14 565 23 82 39 42 151 299 29

Saturation Flow Module:
 Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Lanes: 1.00 1.62 0.38 1.00 2.00 1.00 1.00 0.48 0.52 1.00 0.91 0.09
 Final Sat.: 1720 2782 658 1720 3440 1720 1720 830 890 1720 1569 151

Capacity Analysis Module:
 Vol/Sat: 0.10 0.26 0.26 0.01 0.16 0.01 0.05 0.05 0.05 0.09 0.19 0.19
 Crit Volume: 451 14 82 328
 Crit Moves: ****

San Pablo General Plan Update
Existing PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #113 23rd St/Rheem Av

Cycle (sec): 100 Critical Vol./Cap.(X): 0.556
Loss Time (sec): 6 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 32 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	1	0	1	0	0	1	0	0	1	

Volume Module: >> Count Date: 2 Feb 2006 <<
 Base Vol: 45 960 122 44 650 22 61 146 61 91 137 55
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 45 960 122 44 650 22 61 146 61 91 137 55
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 45 960 122 44 650 22 61 146 61 91 137 55
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.93 0.93 0.93 0.91 0.91 0.91 0.92 0.92 0.92 0.93 0.93 0.93
 PHF Volume: 48 1032 131 48 714 24 66 159 66 98 147 59
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 48 1032 131 48 714 24 66 159 66 98 147 59
 RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
 RTOR Vol: 48 1032 131 48 714 24 66 159 66 98 147 59
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 FinalVolume: 48 1032 131 48 714 24 66 159 66 98 147 59

Saturation Flow Module:
 Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
 Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Lanes: 1.00 1.77 0.23 1.00 1.93 0.07 1.00 0.71 0.29 0.32 0.49 0.19
 Final Sat.: 1800 3194 406 1800 3482 118 1800 1270 530 579 871 350

Capacity Analysis Module:
 Vol/Sat: 0.03 0.32 0.32 0.03 0.21 0.21 0.04 0.13 0.13 0.17 0.17 0.17
 Crit Volume: 582 48 66 304
 Crit Moves: ****

San Pablo General Plan Update
Existing PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #114 Rumrill Blvd/Broadway Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.538
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 49 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0	1	0	1	0	1	0	1	0

Volume Module:

Base Vol:	18	592	311	10	287	34	40	263	26	230	276	17
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	18	592	311	10	287	34	40	263	26	230	276	17
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	18	592	311	10	287	34	40	263	26	230	276	17
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	18	592	311	10	287	34	40	263	26	230	276	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	18	592	311	10	287	34	40	263	26	230	276	17
RTOR Reduct:	0	0	0	0	0	34	0	0	0	0	0	0
RTOR Vol:	18	592	311	10	287	0	40	263	26	230	276	17
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	18	592	311	10	287	0	40	263	26	230	276	17

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	0.91	0.09	1.00	0.94	0.06
Final Sat.:	1650	3300	1650	1650	3300	1650	1650	1502	148	1650	1554	96

Capacity Analysis Module:

Vol/Sat:	0.01	0.18	0.19	0.01	0.09	0.00	0.02	0.18	0.18	0.14	0.18	0.18
Crit Volume:	296			10			289			293		
Crit Moves:	****			****			****			****		

San Pablo General Plan Update
Existing PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #115 Rumrill Dr/Brookside Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.420
Loss Time (sec): 9 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 32 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	WideBypass			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0	1	1	0	1	0	0	1	0

Volume Module: >> Count Date: 2 Feb 2006 <<

Base Vol:	86	809	0	19	510	36	78	42	158	57	40	41
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	86	809	0	19	510	36	78	42	158	57	40	41
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	86	809	0	19	510	36	78	42	158	57	40	41
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.86	0.86	0.86	0.91	0.91	0.91	0.75	0.75	0.75
PHF Volume:	91	861	0	22	593	42	86	46	174	76	53	55
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	91	861	0	22	593	42	86	46	174	76	53	55
RTOR Reduct:	0	0	0	0	0	0	0	0	0	91	0	0
RTOR Vol:	91	861	0	22	593	42	86	46	82	76	53	55
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	91	861	0	22	593	42	86	46	82	76	53	55

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	1.87	0.13	0.65	0.35	1.00	0.41	0.29	0.30
Final Sat.:	1720	3440	1720	1720	3213	227	1118	602	1720	710	499	511

Capacity Analysis Module:

Vol/Sat:	0.05	0.25	0.00	0.01	0.18	0.18	0.08	0.08	0.05	0.11	0.11	0.11
Crit Volume:	430			22			86			184		
Crit Moves:	****			****			****			****		

San Pablo General Plan Update
Existing PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #116 Rumrill Blvd/Market Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.536
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 49 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Protected				Permitted				Permitted							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	0	1	0	1	0	0	1	0

Volume Module:

Base Vol:	102	672	195	87	473	57	104	132	66	204	156	92
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	102	672	195	87	473	57	104	132	66	204	156	92
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	102	672	195	87	473	57	104	132	66	204	156	92
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	102	672	195	87	473	57	104	132	66	204	156	92
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	102	672	195	87	473	57	104	132	66	204	156	92
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	102	672	195	87	473	57	104	132	66	204	156	92
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	102	672	195	87	473	57	104	132	66	204	156	92

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.55	0.45	1.00	1.78	0.22	1.00	0.67	0.33	1.00	0.63	0.37
Final Sat.:	1720	2666	774	1720	3070	370	1720	1147	573	1720	1082	638

Capacity Analysis Module:

Vol/Sat:	0.06	0.25	0.25	0.05	0.15	0.15	0.06	0.12	0.12	0.12	0.14	0.14
Crit Volume:	434	87		198	204							
Crit Moves:	****	****		****	****							

San Pablo General Plan Update
Existing PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #117 Rumrill Blvd/Rheem Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.399
Loss Time (sec): 9 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 31 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Protected				Permitted				Permitted							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	0	0	0	0	1	0	0	1

Volume Module:

Base Vol:	1	844	126	81	665	9	5	0	0	111	5	59
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	844	126	81	665	9	5	0	0	111	5	59
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	844	126	81	665	9	5	0	0	111	5	59
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	1	844	126	81	665	9	5	0	0	111	5	59
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	1	844	126	81	665	9	5	0	0	111	5	59
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	1	844	126	81	665	9	5	0	0	111	5	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	1	844	126	81	665	9	5	0	0	111	5	0

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.74	0.26	1.00	1.97	0.03	1.00	0.00	0.00	0.96	0.04	1.00
Final Sat.:	1720	2993	447	1720	3394	46	1720	0	0	1646	74	1720

Capacity Analysis Module:

Vol/Sat:	0.00	0.28	0.28	0.05	0.20	0.20	0.00	0.00	0.00	0.07	0.07	0.00
Crit Volume:	485	81		5						116		
Crit Moves:	****	****		****						****		

San Pablo General Plan Update
Existing PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #118 El Portal Dr/Rd 20

Cycle (sec): 100 Critical Vol./Cap.(X): 0.328
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 34 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 0 0 1 0 0 0 0 0 2 0 1 1 0 2 0 0

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Volume Module: >> Count Date: 5 Oct 2005 <<

Base Vol: 22 0 226 0 0 0 0 678 18 171 675 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 22 0 226 0 0 0 0 678 18 171 675 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 22 0 226 0 0 0 0 678 18 171 675 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 22 0 226 0 0 0 0 678 18 171 675 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 22 0 226 0 0 0 0 678 18 171 675 0
RTOR Reduct: 0 0 171 0 0 0 0 0 18 0 0 0
RTOR Vol: 22 0 55 0 0 0 0 678 0 171 675 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 22 0 55 0 0 0 0 678 0 171 675 0

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Saturation Flow Module:

Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 2.00 1.00 1.00 2.00 0.00
Final Sat.: 1720 0 1720 0 0 0 0 3440 1720 1720 3440 0

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Capacity Analysis Module:

Vol/Sat: 0.01 0.00 0.03 0.00 0.00 0.00 0.00 0.20 0.00 0.10 0.20 0.00
Crit Volume: 55 0 339 171
Crit Moves: ****

San Pablo General Plan Update
Existing PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #119 Church Ln/El Portal Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.503
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 37 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 1 0 1 0 0 1 1 0 2 0 1 1 0 1 1 0

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Volume Module:

Base Vol: 129 221 383 19 94 62 132 682 107 283 641 21
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 129 221 383 19 94 62 132 682 107 283 641 21
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 129 221 383 19 94 62 132 682 107 283 641 21
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 129 221 383 19 94 62 132 682 107 283 641 21
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 129 221 383 19 94 62 132 682 107 283 641 21
RTOR Reduct: 0 0 283 0 0 62 0 0 107 0 0 0
RTOR Vol: 129 221 100 19 94 0 132 682 0 283 641 21
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 129 221 100 19 94 0 132 682 0 283 641 21

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Saturation Flow Module:

Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.00 1.00 0.17 0.83 1.00 1.00 2.00 1.00 1.00 1.94 0.06
Final Sat.: 1720 1720 1720 289 1431 1720 1720 3440 1720 1720 3331 109

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Capacity Analysis Module:

Vol/Sat: 0.08 0.13 0.06 0.07 0.07 0.00 0.08 0.20 0.00 0.16 0.19 0.19
Crit Volume: 129 113 341 283
Crit Moves: ****

San Pablo General Plan Update
Existing PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #120 I-80 WB Off-ramp/El Portal Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.793
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 90 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	0	1	0	0	0	0	1	0	0	1

Volume Module:

Base Vol:	0	0	0	280	0	457	0	800	0	0	971	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	280	0	457	0	800	0	0	971	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	280	0	457	0	800	0	0	971	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	280	0	457	0	800	0	0	971	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	280	0	457	0	800	0	0	971	0
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	0	0	0	280	0	457	0	800	0	0	971	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	280	0	457	0	800	0	0	971	0

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00
Final Sat.:	0	0	0	1800	0	1800	0	1800	0	0	1800	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.16	0.00	0.25	0.00	0.44	0.00	0.00	0.54	0.00
Crit Volume:	0			457			0			971		
Crit Moves:				****		****				****		

San Pablo General Plan Update
Existing PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #121 I-80 EB ramp/El Portal Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.834
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 137 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	1	0	0	0	0	1	0	1	0	0	1

Volume Module:

Base Vol:	542	4	168	0	0	0	525	645	0	0	363	358
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	542	4	168	0	0	0	525	645	0	0	363	358
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	542	4	168	0	0	0	525	645	0	0	363	358
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	542	4	168	0	0	0	525	645	0	0	363	358
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	542	4	168	0	0	0	525	645	0	0	363	358
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	542	4	168	0	0	0	525	645	0	0	363	358
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	542	4	168	0	0	0	525	645	0	0	363	358

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.99	0.01	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Final Sat.:	1707	13	1720	0	0	0	1720	1720	0	0	1720	1720

Capacity Analysis Module:

Vol/Sat:	0.32	0.32	0.10	0.00	0.00	0.00	0.31	0.38	0.00	0.00	0.21	0.21
Crit Volume:	546			0			525			363		
Crit Moves:	****						****			****		

San Pablo General Plan Update
Existing PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #122 El Portal Dr/San Pablo Dam Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.683
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 72 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Protected				Protected				Protected							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0	1	0	1	0	1	0	0	1	0	1	1	0	1	0	1	1	0

Volume Module:

Base Vol:	3	5	9	543	20	79	157	995	10	5	706	499
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	5	9	543	20	79	157	995	10	5	706	499
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	3	5	9	543	20	79	157	995	10	5	706	499
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	3	5	9	543	20	79	157	995	10	5	706	499
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	5	9	543	20	79	157	995	10	5	706	499
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	3	5	9	543	20	79	157	995	10	5	706	499
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	3	5	9	543	20	79	157	995	10	5	706	499

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.36	0.64	1.69	0.06	0.25	1.00	1.98	0.02	1.00	1.17	0.83
Final Sat.:	1650	589	1061	2537	103	406	1650	3267	33	1650	1933	1367

Capacity Analysis Module:

Vol/Sat:	0.00	0.01	0.01	0.21	0.19	0.19	0.10	0.30	0.30	0.00	0.37	0.37
Crit Volume:	14			321			157			603		
Crit Moves:	****			****			****			****		

San Pablo General Plan Update
Existing PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #123 I-80 EB ramps/San Pablo Dam Rd [N=Amador St; S=I-80 EB ramp

Cycle (sec): 100 Critical Vol./Cap.(X): 0.719
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 81 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Split Phase				Split Phase				Split Phase				Split Phase							
Rights:	Include				Ovl				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0	1	0	0	1	1	0	1	0	1	0	1	0	1	0	0	1	0	1	0

Volume Module:

Base Vol:	35	244	196	264	0	688	248	521	26	0	485	17
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	35	244	196	264	0	688	248	521	26	0	485	17
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	35	244	196	264	0	688	248	521	26	0	485	17
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	35	244	196	264	0	688	248	521	26	0	485	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	35	244	196	264	0	688	248	521	26	0	485	17
RTOR Reduct:	0	0	0	0	0	248	0	0	0	0	0	0
RTOR Vol:	35	244	196	264	0	440	248	521	26	0	485	17
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	35	244	196	264	0	440	248	521	26	0	485	17

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.13	0.87	1.00	1.12	xxxx	1.88	0.62	1.31	0.07	0.00	1.93	0.07
Final Sat.:	207	1443	1650	1687	0	2812	1029	2163	108	0	3188	112

Capacity Analysis Module:

Vol/Sat:	0.17	0.17	0.12	0.16	0.00	0.16	0.24	0.24	0.24	0.00	0.15	0.15
Crit Volume:	279			235			397			251		
Crit Moves:	****			****			****			****		

San Pablo General Plan Update
Existing PM Peak Hour

Level Of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #124 I-80 WB Ramps/San Pablo Dam Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.616
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 48 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	R	L	-	T	R	L	-	T	R	L	-	T	R
Control:	Split Phase				Split Phase				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	0	0	1	0	0	1	0	0	2	0	0	1	1	0
Volume Module:																
Base Vol:	0	0	0	0	78	0	220	0	0	717	406	0	482	302	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	78	0	220	0	0	717	406	0	482	302	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	78	0	220	0	0	717	406	0	482	302	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	78	0	220	0	0	717	406	0	482	302	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	78	0	220	0	0	717	406	0	482	302	0	0
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	0	0	0	0	78	0	220	0	0	717	406	0	482	302	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	4.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	0	78	0	220	0	0	717	406	0	1928	302	0	0
Saturation Flow Module:																
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	2.00	1.00	1.00	1.00	1.00	0.00
Final Sat.:	0	0	0	0	1800	0	1800	0	0	3600	1800	0	1800	1800	0	0
Capacity Analysis Module:																
Vol/Sat:	0.00	0.00	0.00	0.04	0.00	0.12	0.00	0.20	0.23	0.27	0.17	0.00				
Crit Volume:	0				220				406	482						
Crit Moves:					****				****	****						

San Pablo General Plan Update
2030 No Project AM Peak Hour

Scenario Report

Scenario: 2030NP AM
Command: 2030NP AM
Volume: 2030NP AM
Geometry: 2030
Impact Fee: Default Impact Fee
Trip Generation: Default Trip Generation
Trip Distribution: Default Trip Distribution
Paths: Default Path
Routes: Default Route
Configuration: Default Configuration

San Pablo General Plan Update
2030 No Project AM Peak Hour

Level Of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #101 San Pablo Ave/Robert Miller Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.427
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 40 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
-----|-----|-----|-----|
Control: Protected Protected Split Phase Split Phase
Rights: Ignore Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 1 0 1 0 0
-----|-----|-----|-----|
Volume Module:
Base Vol: 0 756 398 51 1030 0 0 0 0 363 0 36
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 756 398 51 1030 0 0 0 0 363 0 36
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 756 398 51 1030 0 0 0 0 363 0 36
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 756 398 51 1030 0 0 0 0 363 0 36
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 756 398 51 1030 0 0 0 0 363 0 36
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 0 756 398 51 1030 0 0 0 0 363 0 36
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 756 398 51 1030 0 0 0 0 363 0 36
-----|-----|-----|-----|
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.91 1.00 1.00
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 1.82 0.00 0.18
Final Sat.: 0 3440 1720 1720 3440 0 0 0 0 2845 0 310
-----|-----|-----|-----|
Capacity Analysis Module:
Vol/Sat: 0.00 0.22 0.23 0.03 0.30 0.00 0.00 0.00 0.00 0.13 0.00 0.12
Crit Volume: 0 515 0 200
Crit Moves: **** **** ****

San Pablo General Plan Update
2030 No Project AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #102 San Pablo Ave/Rivers St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.639
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 63 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Protected				Protected				Split Phase				Split Phase			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	0	1	0	0	1	0	0	0	1	

Volume Module:

Base Vol:	38	985	2	12	1357	143	137	13	89	42	22	35
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	38	985	2	12	1357	143	137	13	89	42	22	35
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	38	985	2	12	1357	143	137	13	89	42	22	35
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	38	985	2	12	1357	143	137	13	89	42	22	35
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	38	985	2	12	1357	143	137	13	89	42	22	35
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	38	985	2	12	1357	6	137	13	89	42	22	35
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	38	985	2	12	1357	6	137	13	89	42	22	35

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.99	0.01	1.00	2.00	1.00	0.58	0.05	0.37	0.43	0.22	0.35
Final Sat.:	1650	3293	7	1650	3300	1650	946	90	614	700	367	583

Capacity Analysis Module:

Vol/Sat:	0.02	0.30	0.30	0.01	0.41	0.00	0.14	0.14	0.14	0.06	0.06	0.06
Crit Volume:	38			679			239			99		
Crit Moves:	***			***			***			***		

San Pablo General Plan Update
2030 No Project AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #103 San Pablo Ave//Rumrill Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.612
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 48 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Permitted				Permitted				Split Phase				Split Phase			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	0	0	1	1	0	1	0	1	1	0	1	0	0	0	1	

Volume Module:

Base Vol:	0	574	18	230	1094	446	441	109	21	50	65	76
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	574	18	230	1094	446	441	109	21	50	65	76
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	574	18	230	1094	446	441	109	21	50	65	76
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	574	18	230	1094	446	441	109	21	50	65	76
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	574	18	230	1094	446	441	109	21	50	65	76
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	0	574	18	230	1094	446	441	109	21	50	65	76
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	574	18	230	1094	446	441	109	21	50	65	76

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.94	0.06	1.00	2.00	1.00	1.55	0.38	0.07	0.26	0.34	0.40
Final Sat.:	0	3335	105	1720	3440	1720	2415	657	127	450	585	684

Capacity Analysis Module:

Vol/Sat:	0.00	0.17	0.17	0.13	0.32	0.26	0.18	0.17	0.17	0.11	0.11	0.11
Crit Volume:	0			547			286			191		
Crit Moves:	***			***			***			***		

San Pablo General Plan Update
2030 No Project AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #104 San Pablo Ave//Broadway Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.709
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 78 Level Of Service: C

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected			Protected			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0	1	0	1	0	1	1	0	2

Volume Module:
Base Vol: 193 463 108 199 911 9 22 525 307 105 401 116
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 193 463 108 199 911 9 22 525 307 105 401 116
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 193 463 108 199 911 9 22 525 307 105 401 116
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 193 463 108 199 911 9 22 525 307 105 401 116
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 193 463 108 199 911 9 22 525 307 105 401 116
RTOR Reduct: 0 0 105 0 0 9 0 0 0 0 0 0
RTOR Vol: 193 463 3 199 911 0 22 525 307 105 401 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 193 463 3 199 911 0 22 525 307 105 401 0

Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 1.00 1.00 2.00 1.00 1.00 1.26 0.74 1.00 2.00 1.00
Final Sat.: 1650 3300 1650 1650 3300 1650 1650 2082 1218 1650 3300 1650

Capacity Analysis Module:
Vol/Sat: 0.12 0.14 0.00 0.12 0.28 0.00 0.01 0.25 0.25 0.06 0.12 0.00
Crit Volume: 193 456 416 105
Crit Moves: ****

San Pablo General Plan Update
2030 No Project AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #105 Giant Rd/Parr Bl-Rd 20

Cycle (sec): 100 Critical Vol./Cap.(X): 0.408
Loss Time (sec): 9 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 31 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0	1	0	1	1	0	1	0	0	1

Volume Module:
Base Vol: 74 99 51 86 155 151 55 59 53 97 94 101
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 74 99 51 86 155 151 55 59 53 97 94 101
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 74 99 51 86 155 151 55 59 53 97 94 101
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 74 99 51 86 155 151 55 59 53 97 94 101
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 74 99 51 86 155 151 55 59 53 97 94 101
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 74 99 51 86 155 151 55 59 53 97 94 101
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 74 99 51 86 155 151 55 59 53 97 94 101

Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.66 0.34 0.44 0.79 0.77 1.00 0.53 0.47 0.33 0.32 0.35
Final Sat.: 1650 1089 561 724 1305 1271 1650 869 781 548 531 571

Capacity Analysis Module:
Vol/Sat: 0.04 0.09 0.09 0.12 0.12 0.12 0.03 0.07 0.07 0.18 0.18 0.18
Crit Volume: 74 196 112 292
Crit Moves: ****

San Pablo General Plan Update
2030 No Project AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #106 San Pablo Ave/Rd 20/23rrd St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.722
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 82 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Protected				Split Phase				Split Phase							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	0	2	0	1	1	1	0	0	1	0	1	0	0	1

Volume Module:

Base Vol:	82	357	53	33	497	690	399	316	74	8	238	23
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	82	357	53	33	497	690	399	316	74	8	238	23
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	82	357	53	33	497	690	399	316	74	8	238	23
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	82	357	53	33	497	690	399	316	74	8	238	23
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	82	357	53	33	497	690	399	316	74	8	238	23
RTOR Reduct:	0	0	0	0	0	219	0	0	74	0	0	23
RTOR Vol:	82	357	53	33	497	471	399	316	0	8	238	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	82	357	53	33	497	471	399	316	0	8	238	0

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.74	0.26	1.00	2.00	1.00	1.12	0.88	1.00	0.03	0.97	1.00
Final Sat.:	1650	2873	427	1650	3300	1650	1674	1458	1650	54	1596	1650

Capacity Analysis Module:

Vol/Sat:	0.05	0.12	0.12	0.02	0.15	0.29	0.24	0.22	0.00	0.15	0.15	0.00
Crit Volume:	82			471		358				246		
Crit Moves:	***			***		***				***		

San Pablo General Plan Update
2030 No Project AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #107 Church Ln/San Pablo Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.830
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 134 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Protected				Protected				Protected							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	1	0	1	1	0	0	1	0

Volume Module:

Base Vol:	229	568	154	49	951	38	41	472	433	174	300	103
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	229	568	154	49	951	38	41	472	433	174	300	103
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	229	568	154	49	951	38	41	472	433	174	300	103
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	229	568	154	49	951	38	41	472	433	174	300	103
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	229	568	154	49	951	38	41	472	433	174	300	103
RTOR Reduct:	0	0	0	0	0	0	0	0	229	0	0	0
RTOR Vol:	229	568	154	49	951	38	41	472	204	174	300	103
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	229	568	154	49	951	38	41	472	204	174	300	103

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.57	0.43	1.00	1.92	0.08	1.00	1.00	1.00	1.00	0.74	0.26
Final Sat.:	1650	2596	704	1650	3173	127	1650	1650	1650	1650	1228	422

Capacity Analysis Module:

Vol/Sat:	0.14	0.22	0.22	0.03	0.30	0.30	0.02	0.29	0.12	0.11	0.24	0.24
Crit Volume:	229			495		472				174		
Crit Moves:	***			***		***				***		

San Pablo General Plan Update
2030 No Project AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #108 San Pablo Ave//Vale Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.546
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 50 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Protected				Protected				Protected							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	1	0	0	1	1	0	0	1	0

Volume Module:

Base Vol:	268	509	41	17	789	116	156	31	93	74	60	17
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	268	509	41	17	789	116	156	31	93	74	60	17
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	268	509	41	17	789	116	156	31	93	74	60	17
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	268	509	41	17	789	116	156	31	93	74	60	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	268	509	41	17	789	116	156	31	93	74	60	17
RTOR Reduct:	0	0	0	0	0	0	0	0	93	0	0	0
RTOR Vol:	268	509	41	17	789	116	156	31	0	74	60	17
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	268	509	41	17	789	116	156	31	0	74	60	17

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.85	0.15	1.00	1.74	0.26	1.67	0.33	1.00	1.00	0.78	0.22
Final Sat.:	1650	3054	246	1650	2877	423	2502	547	1650	1650	1286	364

Capacity Analysis Module:

Vol/Sat:	0.16	0.17	0.17	0.01	0.27	0.27	0.06	0.06	0.00	0.04	0.05	0.05
Crit Volume:	268			453			93				77	
Crit Moves:	****			****			****				****	

San Pablo General Plan Update
2030 No Project AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #109 San Pablo Ave/San Pablo Dam Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.644
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 64 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Protected				Split Phase				Split Phase							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0	1	1	0	1	1	0	0	1	0	1	0	1	1	0	1	0

Volume Module:

Base Vol:	7	347	319	338	652	4	4	15	11	974	27	162
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	7	347	319	338	652	4	4	15	11	974	27	162
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	7	347	319	338	652	4	4	15	11	974	27	162
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	7	347	319	338	652	4	4	15	11	974	27	162
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	7	347	319	338	652	4	4	15	11	974	27	162
RTOR Reduct:	0	0	319	0	0	0	0	0	0	0	0	0
RTOR Vol:	7	347	0	338	652	4	4	15	11	974	27	162
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	7	347	0	338	652	4	4	15	11	974	27	162

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	1.99	0.01	0.27	1.00	0.73	2.00	0.14	0.86
Final Sat.:	1650	3300	1650	1650	3280	20	440	1650	1210	3000	236	1414

Capacity Analysis Module:

Vol/Sat:	0.00	0.11	0.00	0.20	0.20	0.20	0.01	0.01	0.01	0.32	0.11	0.11
Crit Volume:	174			338			15			487		
Crit Moves:	****			****			****			****		

San Pablo General Plan Update
2030 No Project AM Peak HourLevel of Service Computation Report
CCTALOS Method (Future Volume Alternative)*****
Intersection #110 San Pablo Ave//Rheem Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.611
 Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 48 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Permitted				Permitted				Split Phase				Split Phase			
Rights:	Include				Include				WideBypass				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	0	0	0	1	1	1	0	0	0	0	0	0	0

Volume Module:

Base Vol:	72	459	0	0	1460	144	225	0	102	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	72	459	0	0	1460	144	225	0	102	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	72	459	0	0	1460	144	225	0	102	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	72	459	0	0	1460	144	225	0	102	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	72	459	0	0	1460	144	225	0	102	0	0	0
RTOR Reduct:	0	0	0	0	0	0	0	0	90	0	0	0
RTOR Vol:	72	459	0	0	1460	144	225	0	12	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	72	459	0	0	1460	144	225	0	12	0	0	0

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	0.00	1.82	0.18	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1800	3600	0	0	3277	323	1800	0	1800	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.04	0.13	0.00	0.00	0.45	0.45	0.13	0.00	0.01	0.00	0.00	0.00
Crit Volume:	72				802		225			0		
Crit Moves:	***				***		***					

San Pablo General Plan Update
2030 No Project AM Peak HourLevel of Service Computation Report
CCTALOS Method (Future Volume Alternative)*****
Intersection #111 23rd St/Dover Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.501
 Loss Time (sec): 9 Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 37 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	1	1	1	0	1	1	0	0	1	0	0	0	1	0

Volume Module:

Base Vol:	25	380	17	13	958	36	51	78	65	34	27	27
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	25	380	17	13	958	36	51	78	65	34	27	27
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	25	380	17	13	958	36	51	78	65	34	27	27
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	25	380	17	13	958	36	51	78	65	34	27	27
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	25	380	17	13	958	36	51	78	65	34	27	27
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	13
RTOR Vol:	25	380	17	13	958	36	51	78	65	34	27	14
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	25	380	17	13	958	36	51	78	65	34	27	14

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91
Lanes:	1.00	1.91	0.09	1.00	1.93	0.07	0.26	0.40	0.34	0.91	0.09	1.00
Final Sat.:	1720	3293	147	1720	3315	125	452	692	576	1559	161	1563

Capacity Analysis Module:

Vol/Sat:	0.01	0.12	0.12	0.01	0.29	0.29	0.11	0.11	0.11	0.02	0.17	0.01
Crit Volume:	25				497		51			289		
Crit Moves:	***				***		***			***		

San Pablo General Plan Update
2030 No Project AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #112 23rd St/Market Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.632
Loss Time (sec): 9 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 51 Level Of Service: B

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted
Rights: Include Include WideBypass Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 1 0 1 0 2 0 1 1 0 0 1 0

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Volume Module:

Base Vol: 149 520 148 65 946 122 74 293 111 151 202 27
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 149 520 148 65 946 122 74 293 111 151 202 27
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 149 520 148 65 946 122 74 293 111 151 202 27
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 149 520 148 65 946 122 74 293 111 151 202 27
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 149 520 148 65 946 122 74 293 111 151 202 27
RTOR Reduct: 0 0 0 0 0 74 0 90 0 0 0 0
RTOR Vol: 149 520 148 65 946 48 74 293 21 151 202 27
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 149 520 148 65 946 48 74 293 21 151 202 27

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Saturation Flow Module:

Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.56 0.44 1.00 2.00 1.00 1.00 0.93 0.07 1.00 0.88 0.12
Final Sat.: 1720 2678 762 1720 3440 1720 1720 1605 115 1720 1517 203

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Capacity Analysis Module:

Vol/Sat: 0.09 0.19 0.19 0.04 0.28 0.03 0.04 0.18 0.18 0.09 0.13 0.13
Crit Volume: 149 473 314 151
Crit Moves: ****

San Pablo General Plan Update
2030 No Project AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #113 23rd St/Rheem Av

Cycle (sec): 100 Critical Vol./Cap.(X): 0.657
Loss Time (sec): 6 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 42 Level Of Service: B

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 0 0 1 0 0

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Volume Module:

Base Vol: 89 609 143 98 1228 115 19 143 103 176 128 51
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 89 609 143 98 1228 115 19 143 103 176 128 51
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 89 609 143 98 1228 115 19 143 103 176 128 51
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 89 609 143 98 1228 115 19 143 103 176 128 51
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 89 609 143 98 1228 115 19 143 103 176 128 51
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 89 609 143 98 1228 115 19 143 103 176 128 51
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 89 609 143 98 1228 115 19 143 103 176 128 51

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Saturation Flow Module:

Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.62 0.38 1.00 1.83 0.17 1.00 0.58 0.42 0.50 0.36 0.14
Final Sat.: 1800 2915 685 1800 3292 308 1800 1046 754 892 649 259

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Capacity Analysis Module:

Vol/Sat: 0.05 0.21 0.21 0.05 0.37 0.37 0.01 0.14 0.14 0.20 0.20 0.20
Crit Volume: 89 672 246 176
Crit Moves: ****

San Pablo General Plan Update
2030 No Project AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #114 Rumrilll Blvd/Broadway Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.702
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 77 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Protected				Protected				Split Phase				Split Phase			
Rights:	Ignore				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	0	1	0	2	0	1	0	0	1	1	0	0	

Volume Module:

Base Vol:	38	488	390	15	456	22	71	508	33	352	272	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	38	488	390	15	456	22	71	508	33	352	272	10
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	38	488	390	15	456	22	71	508	33	352	272	10
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	38	488	390	15	456	22	71	508	33	352	272	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	38	488	390	15	456	22	71	508	33	352	272	10
RTOR Reduct:	0	0	0	0	0	22	0	0	0	0	0	0
RTOR Vol:	38	488	390	15	456	0	71	508	33	352	272	10
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	38	488	390	15	456	0	71	508	33	352	272	10

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	0.94	0.06	1.00	0.96	0.04
Final Sat.:	1650	3300	1650	1650	3300	1650	1650	1549	101	1650	1591	59

Capacity Analysis Module:

Vol/Sat:	0.02	0.15	0.24	0.01	0.14	0.00	0.04	0.33	0.33	0.21	0.17	0.17
Crit Volume:	38			228			541		352			
Crit Moves:	***			***			***		***			

San Pablo General Plan Update
2030 No Project AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #115 Rumrill Dr/Brookside Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.471
Loss Time (sec): 9 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 35 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Protected				Protected				Permitted				Permitted			
Rights:	WideBypass				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	0	1	0	1	1	0	1	0	0	1	0	0	

Volume Module:

Base Vol:	92	714	2	20	855	54	33	26	289	66	48	30
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	92	714	2	20	855	54	33	26	289	66	48	30
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	92	714	2	20	855	54	33	26	289	66	48	30
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	92	714	2	20	855	54	33	26	289	66	48	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	92	714	2	20	855	54	33	26	289	66	48	30
RTOR Reduct:	0	0	2	0	0	0	0	0	92	0	0	0
RTOR Vol:	92	714	0	20	855	54	33	26	197	66	48	30
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	92	714	0	20	855	54	33	26	197	66	48	30

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	1.88	0.12	0.56	0.44	1.00	0.46	0.33	0.21
Final Sat.:	1720	3440	1720	1720	3236	204	962	758	1720	788	573	358

Capacity Analysis Module:

Vol/Sat:	0.05	0.21	0.00	0.01	0.26	0.26	0.03	0.03	0.11	0.08	0.08	0.08
Crit Volume:	92			455			197		66			
Crit Moves:	***			***			***		***			

San Pablo General Plan Update
2030 No Project AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #116 Rumrill Blvd/Market Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.602
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 57 Level Of Service: B

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted
Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 0 1 0

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Volume Module:

Base Vol: 60 685 152 72 1071 71 83 183 58 163 122 108

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 60 685 152 72 1071 71 83 183 58 163 122 108

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 60 685 152 72 1071 71 83 183 58 163 122 108

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 60 685 152 72 1071 71 83 183 58 163 122 108

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 60 685 152 72 1071 71 83 183 58 163 122 108

RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0

RTOR Vol: 60 685 152 72 1071 71 83 183 58 163 122 108

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 60 685 152 72 1071 71 83 183 58 163 122 108

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Saturation Flow Module:

Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.64 0.36 1.00 1.88 0.12 1.00 0.76 0.24 1.00 0.53 0.47

Final Sat.: 1720 2815 625 1720 3226 214 1720 1306 414 1720 912 808

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Capacity Analysis Module:

Vol/Sat: 0.03 0.24 0.24 0.04 0.33 0.33 0.05 0.14 0.14 0.09 0.13 0.13

Crit Volume: 60 571 241 163

Crit Moves: ****

San Pablo General Plan Update
2030 No Project AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #117 Rumrill Blvd/Rheem Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.630
Loss Time (sec): 9 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 50 Level Of Service: B

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Permitted Permitted
Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 0 1 0

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Volume Module:

Base Vol: 0 739 99 50 1600 17 21 0 0 252 2 89

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 739 99 50 1600 17 21 0 0 252 2 89

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 739 99 50 1600 17 21 0 0 252 2 89

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 0 739 99 50 1600 17 21 0 0 252 2 89

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 739 99 50 1600 17 21 0 0 252 2 89

RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0

RTOR Vol: 0 739 99 50 1600 17 21 0 0 252 2 39

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 0 739 99 50 1600 17 21 0 0 252 2 39

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Saturation Flow Module:

Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.76 0.24 1.00 1.98 0.02 1.00 0.00 0.00 0.99 0.01 1.00

Final Sat.: 1720 3034 406 1720 3404 36 1720 0 0 1706 14 1720

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Capacity Analysis Module:

Vol/Sat: 0.00 0.24 0.24 0.03 0.47 0.47 0.01 0.00 0.00 0.15 0.15 0.02

Crit Volume: 0 809 21 254

Crit Moves: ****

San Pablo General Plan Update
2030 No Project AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #118 El Portal Dr/Rd 20

Cycle (sec): 100 Critical Vol./Cap.(X): 0.361
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 36 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0	0	0	0	0	0	2	1	0	2

Volume Module:
Base Vol: 53 0 296 0 0 0 0 650 100 181 648 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 53 0 296 0 0 0 0 650 100 181 648 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 53 0 296 0 0 0 0 650 100 181 648 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 53 0 296 0 0 0 0 650 100 181 648 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 53 0 296 0 0 0 0 650 100 181 648 0
RTOR Reduct: 0 0 181 0 0 0 0 0 53 0 0 0
RTOR Vol: 53 0 115 0 0 0 0 650 47 181 648 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 53 0 115 0 0 0 0 650 47 181 648 0

Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 2.00 1.00 1.00 2.00 0.00
Final Sat.: 1720 0 1720 0 0 0 0 3440 1720 1720 3440 0

Capacity Analysis Module:
Vol/Sat: 0.03 0.00 0.07 0.00 0.00 0.00 0.00 0.19 0.03 0.11 0.19 0.00
Crit Volume: 115 0 325 181
Crit Moves: ****

San Pablo General Plan Update
2030 No Project AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #119 Church Ln/El Portal Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.623
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 49 Level Of Service: B

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	0	1	0	1	0	2	1	0	1

Volume Module:
Base Vol: 148 128 326 44 216 158 77 753 214 287 659 14
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 148 128 326 44 216 158 77 753 214 287 659 14
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 148 128 326 44 216 158 77 753 214 287 659 14
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 148 128 326 44 216 158 77 753 214 287 659 14
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 148 128 326 44 216 158 77 753 214 287 659 14
RTOR Reduct: 0 0 287 0 0 77 0 0 148 0 0 0
RTOR Vol: 148 128 39 44 216 81 77 753 66 287 659 14
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 148 128 39 44 216 81 77 753 66 287 659 14

Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.00 1.00 0.17 0.83 1.00 1.00 2.00 1.00 1.00 1.96 0.04
Final Sat.: 1720 1720 1720 291 1429 1720 1720 3440 1720 1720 3368 72

Capacity Analysis Module:
Vol/Sat: 0.09 0.07 0.02 0.15 0.15 0.05 0.04 0.22 0.04 0.17 0.20 0.20
Crit Volume: 148 260 377 287
Crit Moves: ****

San Pablo General Plan Update
2030 No Project AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #120 I-80 WB Off-ramp/El Portal Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 1.019
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	0	1	0	0	0	0	1	0	0	1

Volume Module:

Base Vol:	0	0	0	270	0	939	0	666	0	0	895	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	270	0	939	0	666	0	0	895	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	270	0	939	0	666	0	0	895	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	270	0	939	0	666	0	0	895	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	270	0	939	0	666	0	0	895	0
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	0	0	0	270	0	939	0	666	0	0	895	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	270	0	939	0	666	0	0	895	0

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00
Final Sat.:	0	0	0	1800	0	1800	0	1800	0	0	1800	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.15	0.00	0.52	0.00	0.37	0.00	0.00	0.50	0.00
Crit Volume:	0			939			0			895		
Crit Moves:				****		****				****		

San Pablo General Plan Update
2030 No Project AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #121 I-80 EB ramp/El Portal Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.741
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 88 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	1	0	0	0	1	0	0	1	0	0	1

Volume Module:

Base Vol:	463	6	86	0	0	0	399	523	0	0	406	191
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	463	6	86	0	0	0	399	523	0	0	406	191
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	463	6	86	0	0	0	399	523	0	0	406	191
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	463	6	86	0	0	0	399	523	0	0	406	191
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	463	6	86	0	0	0	399	523	0	0	406	191
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	463	6	86	0	0	0	399	523	0	0	406	191
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	463	6	86	0	0	0	399	523	0	0	406	191

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.99	0.01	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Final Sat.:	1698	22	1720	0	0	0	1720	1720	0	0	1720	1720

Capacity Analysis Module:

Vol/Sat:	0.27	0.27	0.05	0.00	0.00	0.00	0.23	0.30	0.00	0.00	0.24	0.11
Crit Volume:	469			0			399			406		
Crit Moves:	****						****			****		

San Pablo General Plan Update
2030 No Project AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #122 El Portal Dr/San Pablo Dam Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.889
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Protected				Protected				Protected							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0	1	0	1	0	1	0	0	1	0	1	1	0	1	0	1	1	0

Volume Module:

Base Vol:	3	5	2	459	9	85	125	750	10	5	1598	464
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	5	2	459	9	85	125	750	10	5	1598	464
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	3	5	2	459	9	85	125	750	10	5	1598	464
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	3	5	2	459	9	85	125	750	10	5	1598	464
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	5	2	459	9	85	125	750	10	5	1598	464
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	3	5	2	459	9	85	125	750	10	5	1598	464
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	3	5	2	459	9	85	125	750	10	5	1598	464

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.71	0.29	1.66	0.03	0.31	1.00	1.97	0.03	1.00	1.55	0.45
Final Sat.:	1650	1179	471	2490	54	507	1650	3257	43	1650	2557	743

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.18	0.17	0.17	0.08	0.23	0.23	0.00	0.62	0.62
Crit Volume:	7	277		125			1031					
Crit Moves:	***	***		***			***					

San Pablo General Plan Update
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Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #123 I-80 EB ramps/San Pablo Dam Rd [N=Amador St; S=I-80 EB ramp

Cycle (sec): 100 Critical Vol./Cap.(X): 0.997
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Split Phase				Split Phase				Split Phase				Split Phase							
Rights:	Include				Ovl				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	1	0	0	1	1	0	1	0	1	0	1	0	1	0	0	1	0	1	0

Volume Module:

Base Vol:	71	322	230	376	0	688	178	329	354	0	963	29
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	71	322	230	376	0	688	178	329	354	0	963	29
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	71	322	230	376	0	688	178	329	354	0	963	29
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	71	322	230	376	0	688	178	329	354	0	963	29
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	71	322	230	376	0	688	178	329	354	0	963	29
RTOR Reduct:	0	0	0	0	0	178	0	0	0	0	0	0
RTOR Vol:	71	322	230	376	0	510	178	329	354	0	963	29
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	71	322	230	376	0	510	178	329	354	0	963	29

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.18	0.82	1.00	1.27	xxxx	1.73	0.41	0.76	0.83	0.00	1.94	0.06
Final Sat.:	298	1352	1650	1910	0	2590	682	1261	1357	0	3204	96

Capacity Analysis Module:

Vol/Sat:	0.24	0.24	0.14	0.20	0.00	0.20	0.26	0.26	0.26	0.00	0.30	0.30
Crit Volume:	393			295			430			496		
Crit Moves:	***			***			***			***		

San Pablo General Plan Update
2030 No Project AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #124 I-80 WB Ramps/San Pablo Dam Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.966
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	R	L	-	T	R	L	-	T	R	L	-	T	R

Control:	Split Phase				Split Phase				Permitted				Permitted			
Rights:	Include				Include				Include				Include			

Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	0	0	1	0	0	1	0	0	2	0	0	1	1	0

Volume Module:																

Base Vol:	0	0	0	146	1	740	0	408	286	712	390	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	146	1	740	0	408	286	712	390	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	146	1	740	0	408	286	712	390	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	146	1	740	0	408	286	712	390	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	146	1	740	0	408	286	712	390	0
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	0	0	0	146	1	740	0	408	286	712	390	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	146	1	740	0	408	286	1424	390	0

Saturation Flow Module:																

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.01	0.99	0.00	2.00	1.00	1.00	1.00	0.00
Final Sat.:	0	0	0	1800	2	1798	0	3600	1800	1800	1800	0

Capacity Analysis Module:																

Vol/Sat:	0.00	0.00	0.00	0.08	0.41	0.41	0.00	0.11	0.16	0.40	0.22	0.00
Crit Volume:	0			741			286			712		
Crit Moves:				****			****			****		

San Pablo General Plan Update
2030 No Project PM Peak Hour

Scenario Report

Scenario: 2030NP PM
Command: 2030 NP PM
Volume: 2030NP PM
Geometry: 2030
Impact Fee: Default Impact Fee
Trip Generation: Default Trip Generation
Trip Distribution: Default Trip Distribution
Paths: Default Path
Routes: Default Route
Configuration: Default Configuration

San Pablo General Plan Update
2030 No Project PM Peak Hour

Level Of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #101 San Pablo Ave/Robert Miller Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.538
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 49 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
-----|-----|-----|-----|
Control: Protected Protected Split Phase Split Phase
Rights: Ignore Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 1 0 1 0 0
-----|-----|-----|-----|
Volume Module:
Base Vol: 0 1134 526 59 1112 0 0 0 0 494 0 49
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 1134 526 59 1112 0 0 0 0 494 0 49
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 1134 526 59 1112 0 0 0 0 494 0 49
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 1134 526 59 1112 0 0 0 0 494 0 49
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 1134 526 59 1112 0 0 0 0 494 0 49
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 0 1134 526 59 1112 0 0 0 0 494 0 49
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 1134 526 59 1112 0 0 0 0 494 0 49
-----|-----|-----|-----|
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.91 1.00 1.00
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 1.82 0.00 0.18
Final Sat.: 0 3440 1720 1720 3440 0 0 0 0 2845 0 310
-----|-----|-----|-----|
Capacity Analysis Module:
Vol/Sat: 0.00 0.33 0.31 0.03 0.32 0.00 0.00 0.00 0.00 0.17 0.00 0.16
Crit Volume: 567 59 0 272
Crit Moves: **** **** ****

San Pablo General Plan Update
2030 No Project PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #102 San Pablo Ave/Rivers St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.672
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 70 Level Of Service: B

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 1 1 0 1 0 2 0 1 0 0 1! 0 0 0 0 1! 0 0

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Volume Module:

Base Vol: 47 1599 28 29 1532 79 131 5 61 36 6 28

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 47 1599 28 29 1532 79 131 5 61 36 6 28

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 47 1599 28 29 1532 79 131 5 61 36 6 28

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 47 1599 28 29 1532 79 131 5 61 36 6 28

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 47 1599 28 29 1532 79 131 5 61 36 6 28

RTOR Reduct: 0 0 0 0 0 79 0 0 0 0 0 0

RTOR Vol: 47 1599 28 29 1532 0 131 5 61 36 6 28

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 47 1599 28 29 1532 0 131 5 61 36 6 28

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Saturation Flow Module:

Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 1.97 0.03 1.00 2.00 1.00 0.66 0.03 0.31 0.51 0.09 0.40

Final Sat.: 1650 3243 57 1650 3300 1650 1097 42 511 849 141 660

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Capacity Analysis Module:

Vol/Sat: 0.03 0.49 0.49 0.02 0.46 0.00 0.12 0.12 0.12 0.04 0.04 0.04

Crit Volume: 814 29 197 70

Crit Moves: ****

San Pablo General Plan Update
2030 No Project PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #103 San Pablo Ave//Rumrill Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.787
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 87 Level Of Service: C

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Split Phase Split Phase
Rights: Include Ignore Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 0 0 1 1 0 1 0 2 0 1 1 0 1! 0 0 0 0 1! 0 0

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Volume Module:

Base Vol: 0 1025 22 103 1082 380 652 43 14 85 72 180

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 1025 22 103 1082 380 652 43 14 85 72 180

Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0

PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0

Initial Fut: 0 1025 22 103 1082 380 652 43 14 85 72 180

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Volume: 0 1025 22 103 1082 380 652 43 14 85 72 180

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 1025 22 103 1082 380 652 43 14 85 72 180

RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0

RTOR Vol: 0 1025 22 103 1082 380 652 43 14 85 72 180

PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

FinalVolume: 0 1025 22 103 1082 380 652 43 14 85 72 180

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Saturation Flow Module:

Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720

Adjustment: 1.00 1.00 1.00 1.00 1.00 0.91 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 0.00 1.96 0.04 1.00 2.00 1.00 1.84 0.12 0.04 0.25 0.21 0.54

Final Sat.: 0 3368 72 1720 3440 1720 2876 209 68 434 367 919

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Capacity Analysis Module:

Vol/Sat: 0.00 0.30 0.30 0.06 0.31 0.22 0.23 0.21 0.21 0.20 0.20 0.20

Crit Volume: 524 103 355 337

Crit Moves: ****

San Pablo General Plan Update
2030 No Project PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #104 San Pablo Ave//Broadway Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.843
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 146 Level Of Service: D

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected			Protected			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0	1	0	1	0	1	1	0	2

Volume Module:
Base Vol: 476 957 130 196 918 34 16 540 231 71 275 114
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 476 957 130 196 918 34 16 540 231 71 275 114
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 476 957 130 196 918 34 16 540 231 71 275 114
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 476 957 130 196 918 34 16 540 231 71 275 114
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 476 957 130 196 918 34 16 540 231 71 275 114
RTOR Reduct: 0 0 71 0 0 16 0 0 0 0 0 0
RTOR Vol: 476 957 59 196 918 18 16 540 231 71 275 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 476 957 59 196 918 18 16 540 231 71 275 0

Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 1.00 1.00 2.00 1.00 1.00 1.40 0.60 1.00 2.00 1.00
Final Sat.: 1650 3300 1650 1650 3300 1650 1650 2311 989 1650 3300 1650

Capacity Analysis Module:
Vol/Sat: 0.29 0.29 0.04 0.12 0.28 0.01 0.01 0.23 0.23 0.04 0.08 0.00
Crit Volume: 476 459 386 71
Crit Moves: ****

San Pablo General Plan Update
2030 No Project PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #105 Giant Rd/Parr Bl-Rd 20

Cycle (sec): 100 Critical Vol./Cap.(X): 0.335
Loss Time (sec): 9 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 32 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0	1	0	1	1	0	1	0	0	1

Volume Module:
Base Vol: 94 202 49 110 94 76 90 82 50 39 52 78
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 94 202 49 110 94 76 90 82 50 39 52 78
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 94 202 49 110 94 76 90 82 50 39 52 78
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 94 202 49 110 94 76 90 82 50 39 52 78
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 94 202 49 110 94 76 90 82 50 39 52 78
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 94 202 49 110 94 76 90 82 50 39 52 78
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 94 202 49 110 94 76 90 82 50 39 52 78

Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.80 0.20 0.79 0.67 0.54 1.00 0.62 0.38 0.23 0.31 0.46
Final Sat.: 1650 1328 322 1296 1108 896 1650 1025 625 381 508 762

Capacity Analysis Module:
Vol/Sat: 0.06 0.15 0.15 0.08 0.08 0.08 0.05 0.08 0.08 0.10 0.10 0.10
Crit Volume: 251 140 132 169
Crit Moves: ****

San Pablo General Plan Update
2030 No Project PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #106 San Pablo Ave/Rd 20/23rrd St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.852
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 155 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Protected				Split Phase				Split Phase							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	0	2	0	1	1	1	0	0	1	0	1	0	0	1

Volume Module:
Base Vol: 113 977 81 128 758 788 742 199 103 31 201 34
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 113 977 81 128 758 788 742 199 103 31 201 34
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 113 977 81 128 758 788 742 199 103 31 201 34
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 113 977 81 128 758 788 742 199 103 31 201 34
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 113 977 81 128 758 788 742 199 103 31 201 34
RTOR Reduct: 0 0 0 0 0 408 0 0 103 0 0 34
RTOR Vol: 113 977 81 128 758 380 742 199 0 31 201 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 113 977 81 128 758 380 742 199 0 31 201 0

Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 0.91 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.85 0.15 1.00 2.00 1.00 1.58 0.42 1.00 0.13 0.87 1.00
Final Sat.: 1650 3047 253 1650 3300 1650 2365 698 1650 220 1430 1650

Capacity Analysis Module:
Vol/Sat: 0.07 0.32 0.32 0.08 0.23 0.23 0.31 0.29 0.00 0.14 0.14 0.00
Crit Volume: 529 128 470 232
Crit Moves: ****

San Pablo General Plan Update
2030 No Project PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #107 Church Ln/San Pablo Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.715
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 80 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Protected				Protected				Protected							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	1	0	1	1	0	0	1	0

Volume Module:
Base Vol: 313 1076 259 69 812 68 58 296 289 130 246 32
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 313 1076 259 69 812 68 58 296 289 130 246 32
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 313 1076 259 69 812 68 58 296 289 130 246 32
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 313 1076 259 69 812 68 58 296 289 130 246 32
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 313 1076 259 69 812 68 58 296 289 130 246 32
RTOR Reduct: 0 0 0 0 0 0 0 0 289 0 0 0
RTOR Vol: 313 1076 259 69 812 68 58 296 0 130 246 32
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 313 1076 259 69 812 68 58 296 0 130 246 32

Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.61 0.39 1.00 1.85 0.15 1.00 1.00 1.00 1.00 0.88 0.12
Final Sat.: 1650 2660 640 1650 3045 255 1650 1650 1650 1650 1460 190

Capacity Analysis Module:
Vol/Sat: 0.19 0.40 0.40 0.04 0.27 0.27 0.04 0.18 0.00 0.08 0.17 0.17
Crit Volume: 313 440 296 130
Crit Moves: ****

San Pablo General Plan Update
2030 No Project PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #108 San Pablo Ave//Vale Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.629
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 61 Level Of Service: B

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0
Y+R:	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0
Lanes:	1 0 1 1 0	1 0 1 1 0	1 1 0 0 1	1 0 0 1 0

Volume Module:

Base Vol:	200 1333 79	14 1126 118	252 62 319	57 36 7
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	200 1333 79	14 1126 118	252 62 319	57 36 7
Added Vol:	0 0 0	0 0 0	0 0 0	0 0 0
PasserByVol:	0 0 0	0 0 0	0 0 0	0 0 0
Initial Fut:	200 1333 79	14 1126 118	252 62 319	57 36 7
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Volume:	200 1333 79	14 1126 118	252 62 319	57 36 7
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	200 1333 79	14 1126 118	252 62 319	57 36 7
RTOR Reduct:	0 0 0	0 0 0	0 200 0	0 0 0
RTOR Vol:	200 1333 79	14 1126 118	252 62 119	57 36 7
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
FinalVolume:	200 1333 79	14 1126 118	252 62 119	57 36 7

Saturation Flow Module:

Sat/Lane:	1650 1650 1650	1650 1650 1650	1650 1650 1650	1650 1650 1650
Adjustment:	1.00 1.00 1.00	1.00 1.00 1.00	0.91 1.00 1.00	1.00 1.00 1.00
Lanes:	1.00 1.89 0.11	1.00 1.81 0.19	1.61 0.39 1.00	1.00 0.84 0.16
Final Sat.:	1650 3115 185	1650 2987 313	2407 652 1650	1650 1381 269

Capacity Analysis Module:

Vol/Sat:	0.12 0.43 0.43	0.01 0.38 0.38	0.10 0.10 0.07	0.03 0.03 0.03
Crit Volume:	200	622	157	43
Crit Moves:	***	***	***	***

San Pablo General Plan Update
2030 No Project PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #109 San Pablo Ave/San Pablo Dam Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.923
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Split Phase	Split Phase
Rights:	Include	Include	Include	Include
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0
Y+R:	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0
Lanes:	1 0 2 0 1	1 0 1 1 0	0 1 0 1 0	1 1 0 1 0

Volume Module:

Base Vol:	153 1191 630	616 733 7	10 27 8	525 38 90
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	153 1191 630	616 733 7	10 27 8	525 38 90
Added Vol:	0 0 0	0 0 0	0 0 0	0 0 0
PasserByVol:	0 0 0	0 0 0	0 0 0	0 0 0
Initial Fut:	153 1191 630	616 733 7	10 27 8	525 38 90
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Volume:	153 1191 630	616 733 7	10 27 8	525 38 90
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	153 1191 630	616 733 7	10 27 8	525 38 90
RTOR Reduct:	0 0 289	0 0 0	0 0 0	0 0 0
RTOR Vol:	153 1191 341	616 733 7	10 27 8	525 38 90
PCE Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
FinalVolume:	153 1191 341	616 733 7	10 27 8	525 38 90

Saturation Flow Module:

Sat/Lane:	1650 1650 1650	1650 1650 1650	1650 1650 1650	1650 1650 1650
Adjustment:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	0.91 1.00 1.00
Lanes:	1.00 2.00 1.00	1.00 1.98 0.02	0.44 1.20 0.36	2.00 0.30 0.70
Final Sat.:	1650 3300 1650	1650 3269 31	733 1980 587	3000 490 1160

Capacity Analysis Module:

Vol/Sat:	0.09 0.36 0.21	0.37 0.22 0.22	0.01 0.01 0.01	0.18 0.08 0.08
Crit Volume:	596	616	23	263
Crit Moves:	***	***	***	***

San Pablo General Plan Update
2030 No Project PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #110 San Pablo Ave//Rheem Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.566
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 43 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Permitted				Permitted				Split Phase				Split Phase							
Rights:	Include				Include				WideBypass				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0	0	0	0	1	1	0	0	1	0	1	0	0	0	0	0	0

Volume Module:

Base Vol:	126	1672	0	0	1105	167	183	9	91	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	126	1672	0	0	1105	167	183	9	91	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	126	1672	0	0	1105	167	183	9	91	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	126	1672	0	0	1105	167	183	9	91	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	126	1672	0	0	1105	167	183	9	91	0	0	0
RTOR Reduct:	0	0	0	0	0	0	0	0	90	0	0	0
RTOR Vol:	126	1672	0	0	1105	167	183	9	1	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	126	1672	0	0	1105	167	183	9	1	0	0	0

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	0.00	1.74	0.26	1.00	0.99	0.01	0.00	0.00	0.00
Final Sat.:	1800	3600	0	0	3127	473	1800	1781	19	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.07	0.46	0.00	0.00	0.35	0.35	0.10	0.01	0.05	0.00	0.00	0.00
Crit Volume:	836	0	0	0	183	0	0	0	0	0	0	0
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****

San Pablo General Plan Update
2030 No Project PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #111 23rd St/Dover Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.340
Loss Time (sec): 9 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 28 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Protected				Permitted				Permitted							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	0	1	1	0	0	0	1	0	0	0	0	1	0	1

Volume Module:

Base Vol:	50	728	33	33	652	55	49	45	45	33	73	33
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	50	728	33	33	652	55	49	45	45	33	73	33
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	50	728	33	33	652	55	49	45	45	33	73	33
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	50	728	33	33	652	55	49	45	45	33	73	33
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	50	728	33	33	652	55	49	45	45	33	73	33
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	50	728	33	33	652	55	49	45	45	33	73	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	50	728	33	33	652	55	49	45	45	33	73	0

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91
Lanes:	1.00	1.91	0.09	1.00	1.84	0.16	0.36	0.32	0.32	0.31	0.69	1.00
Final Sat.:	1720	3291	149	1720	3172	268	606	557	557	535	1185	1563

Capacity Analysis Module:

Vol/Sat:	0.03	0.22	0.22	0.02	0.21	0.21	0.08	0.08	0.08	0.06	0.06	0.00
Crit Volume:	381	33	139	33	0	0	0	0	0	0	0	0
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****

San Pablo General Plan Update
2030 No Project PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #112 23rd St/Market Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.496
Loss Time (sec): 9 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 37 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Protected				Permitted				Permitted							
Rights:	Include				Include				WideBypass				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	0	2	0	1	1	0	0	1	0	1	0	0	1	0

Volume Module:

Base Vol:	161	771	164	20	567	121	94	33	111	121	239	32
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	161	771	164	20	567	121	94	33	111	121	239	32
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	161	771	164	20	567	121	94	33	111	121	239	32
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	161	771	164	20	567	121	94	33	111	121	239	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	161	771	164	20	567	121	94	33	111	121	239	32
RTOR Reduct:	0	0	0	0	0	94	0	0	90	0	0	0
RTOR Vol:	161	771	164	20	567	27	94	33	21	121	239	32
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	161	771	164	20	567	27	94	33	21	121	239	32

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.65	0.35	1.00	2.00	1.00	1.00	0.61	0.39	1.00	0.88	0.12
Final Sat.:	1720	2837	603	1720	3440	1720	1720	1051	669	1720	1517	203

Capacity Analysis Module:

Vol/Sat:	0.09	0.27	0.27	0.01	0.16	0.02	0.05	0.03	0.03	0.07	0.16	0.16
Crit Volume:	468			20			94			271		
Crit Moves:	****			****			****			****		

San Pablo General Plan Update
2030 No Project PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #113 23rd St/Rheem Av

Cycle (sec): 100 Critical Vol./Cap.(X): 0.575
Loss Time (sec): 6 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 34 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Permitted				Permitted				Permitted				Permitted							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	0	1	0	0	0	1	0	0

Volume Module:

Base Vol:	45	1020	198	63	709	22	61	149	61	108	137	57
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	45	1020	198	63	709	22	61	149	61	108	137	57
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	45	1020	198	63	709	22	61	149	61	108	137	57
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	45	1020	198	63	709	22	61	149	61	108	137	57
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	45	1020	198	63	709	22	61	149	61	108	137	57
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	45	1020	198	63	709	22	61	149	61	108	137	57
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	45	1020	198	63	709	22	61	149	61	108	137	57

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.67	0.33	1.00	1.94	0.06	1.00	0.71	0.29	0.36	0.45	0.19
Final Sat.:	1800	3015	585	1800	3492	108	1800	1277	523	644	817	340

Capacity Analysis Module:

Vol/Sat:	0.03	0.34	0.34	0.04	0.20	0.20	0.03	0.12	0.12	0.17	0.17	0.17
Crit Volume:	609			63			61			302		
Crit Moves:	****			****			****			****		

San Pablo General Plan Update
2030 No Project PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #114 Rumrilll Blvd/Broadway Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.741
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 88 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Protected				Protected				Split Phase				Split Phase			
Rights:	Ignore				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	0	1	0	2	0	1	0	0	1	1	0	0	

Volume Module:

Base Vol:	38	608	375	10	396	59	49	378	52	303	462	17
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	38	608	375	10	396	59	49	378	52	303	462	17
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	38	608	375	10	396	59	49	378	52	303	462	17
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	38	608	375	10	396	59	49	378	52	303	462	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	38	608	375	10	396	59	49	378	52	303	462	17
RTOR Reduct:	0	0	0	0	0	49	0	0	0	0	0	0
RTOR Vol:	38	608	375	10	396	10	49	378	52	303	462	17
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	38	608	375	10	396	10	49	378	52	303	462	17

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	0.88	0.12	1.00	0.96	0.04
Final Sat.:	1650	3300	1650	1650	3300	1650	1650	1450	200	1650	1591	59

Capacity Analysis Module:

Vol/Sat:	0.02	0.18	0.23	0.01	0.12	0.01	0.03	0.26	0.26	0.18	0.29	0.29
Crit Volume:	304			10					430		479	
Crit Moves:	***			***					***		***	

San Pablo General Plan Update
2030 No Project PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #115 Rumrill Dr/Brookside Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.449
Loss Time (sec): 9 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 34 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Protected				Protected				Permitted				Permitted			
Rights:	WideBypass				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	0	1	0	1	1	0	1	0	0	1	0	0	

Volume Module:

Base Vol:	172	882	3	19	723	36	78	42	168	62	40	41
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	172	882	3	19	723	36	78	42	168	62	40	41
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	172	882	3	19	723	36	78	42	168	62	40	41
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	172	882	3	19	723	36	78	42	168	62	40	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	172	882	3	19	723	36	78	42	168	62	40	41
RTOR Reduct:	0	0	3	0	0	0	0	0	168	0	0	0
RTOR Vol:	172	882	0	19	723	36	78	42	0	62	40	41
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	172	882	0	19	723	36	78	42	0	62	40	41

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	1.91	0.09	0.65	0.35	1.00	0.43	0.28	0.29
Final Sat.:	1720	3440	1720	1720	3277	163	1118	602	1720	746	481	493

Capacity Analysis Module:

Vol/Sat:	0.10	0.26	0.00	0.01	0.22	0.22	0.07	0.07	0.00	0.08	0.08	0.08
Crit Volume:	172			380			78			143		
Crit Moves:	***			***			***			***		

San Pablo General Plan Update
2030 No Project PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #116 Rumrill Blvd/Market Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.617
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 60 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	1	0	1	0	0	1	0	1	0	

Volume Module:

Base Vol:	111	830	214	106	649	69	117	133	74	226	156	102
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	111	830	214	106	649	69	117	133	74	226	156	102
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	111	830	214	106	649	69	117	133	74	226	156	102
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	111	830	214	106	649	69	117	133	74	226	156	102
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	111	830	214	106	649	69	117	133	74	226	156	102
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	111	830	214	106	649	69	117	133	74	226	156	102
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	111	830	214	106	649	69	117	133	74	226	156	102

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.59	0.41	1.00	1.81	0.19	1.00	0.64	0.36	1.00	0.60	0.40
Final Sat.:	1720	2735	705	1720	3109	331	1720	1105	615	1720	1040	680

Capacity Analysis Module:

Vol/Sat:	0.06	0.30	0.30	0.06	0.21	0.21	0.07	0.12	0.12	0.13	0.15	0.15
Crit Volume:	522			106			207			226		
Crit Moves:	****			****			****			****		

San Pablo General Plan Update
2030 No Project PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #117 Rumrill Blvd/Rheem Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.460
Loss Time (sec): 9 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 34 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	1	0	1	0	0	0	0	1	0	

Volume Module:

Base Vol:	1	1050	126	82	875	9	5	0	0	111	5	61
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	1050	126	82	875	9	5	0	0	111	5	61
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	1050	126	82	875	9	5	0	0	111	5	61
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	1	1050	126	82	875	9	5	0	0	111	5	61
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	1	1050	126	82	875	9	5	0	0	111	5	61
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	1	1050	126	82	875	9	5	0	0	111	5	61
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	1	1050	126	82	875	9	5	0	0	111	5	61

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.79	0.21	1.00	1.98	0.02	1.00	0.00	0.00	0.96	0.04	1.00
Final Sat.:	1720	3071	369	1720	3405	35	1720	0	0	1646	74	1720

Capacity Analysis Module:

Vol/Sat:	0.00	0.34	0.34	0.05	0.26	0.26	0.00	0.00	0.00	0.07	0.07	0.00
Crit Volume:	588			82			5			116		
Crit Moves:	****			****			****			****		

San Pablo General Plan Update
2030 No Project PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #118 El Portal Dr/Rd 20

Cycle (sec): 100 Critical Vol./Cap.(X): 0.342
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 35 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0	0	0	0	0	0	2	1	0	2

Volume Module:
Base Vol: 28 0 250 0 0 0 0 678 19 180 675 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 28 0 250 0 0 0 0 678 19 180 675 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 28 0 250 0 0 0 0 678 19 180 675 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 28 0 250 0 0 0 0 678 19 180 675 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 28 0 250 0 0 0 0 678 19 180 675 0
RTOR Reduct: 0 0 180 0 0 0 0 0 19 0 0 0
RTOR Vol: 28 0 70 0 0 0 0 678 0 180 675 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 28 0 70 0 0 0 0 678 0 180 675 0

Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 2.00 1.00 1.00 2.00 0.00
Final Sat.: 1720 0 1720 0 0 0 0 3440 1720 1720 3440 0

Capacity Analysis Module:
Vol/Sat: 0.02 0.00 0.04 0.00 0.00 0.00 0.00 0.20 0.00 0.10 0.20 0.00
Crit Volume: 70 0 339 180
Crit Moves: ****

San Pablo General Plan Update
2030 No Project PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #119 Church Ln/El Portal Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.548
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 41 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	0	1	0	1	0	2	1	0	1

Volume Module:
Base Vol: 129 285 383 33 112 80 167 682 107 283 641 44
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 129 285 383 33 112 80 167 682 107 283 641 44
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 129 285 383 33 112 80 167 682 107 283 641 44
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 129 285 383 33 112 80 167 682 107 283 641 44
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 129 285 383 33 112 80 167 682 107 283 641 44
RTOR Reduct: 0 0 283 0 0 80 0 0 107 0 0 0
RTOR Vol: 129 285 100 33 112 0 167 682 0 283 641 44
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 129 285 100 33 112 0 167 682 0 283 641 44

Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.00 1.00 0.23 0.77 1.00 1.00 2.00 1.00 1.00 1.87 0.13
Final Sat.: 1720 1720 1720 391 1329 1720 1720 3440 1720 1720 3219 221

Capacity Analysis Module:
Vol/Sat: 0.08 0.17 0.06 0.08 0.08 0.00 0.10 0.20 0.00 0.16 0.20 0.20
Crit Volume: 285 33 341 283
Crit Moves: ****

San Pablo General Plan Update
2030 No Project PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #120 I-80 WB Off-ramp/El Portal Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 1.040
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	0	1	0	0	0	0	1	0	0	1

Volume Module:

Base Vol:	0	0	0	280	0	759	0	812	0	0	1113	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	280	0	759	0	812	0	0	1113	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	280	0	759	0	812	0	0	1113	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	280	0	759	0	812	0	0	1113	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	280	0	759	0	812	0	0	1113	0
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	0	0	0	280	0	759	0	812	0	0	1113	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	280	0	759	0	812	0	0	1113	0

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00
Final Sat.:	0	0	0	1800	0	1800	0	1800	0	0	1800	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.16	0.00	0.42	0.00	0.45	0.00	0.00	0.62	0.00
Crit Volume:	0			759			0			1113		
Crit Moves:				****		****				****		

San Pablo General Plan Update
2030 No Project PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #121 I-80 EB ramp/El Portal Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 1.040
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	1	0	0	0	1	0	0	1	0	0	1

Volume Module:

Base Vol:	655	35	206	0	0	0	529	645	0	0	363	569
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	655	35	206	0	0	0	529	645	0	0	363	569
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	655	35	206	0	0	0	529	645	0	0	363	569
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	655	35	206	0	0	0	529	645	0	0	363	569
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	655	35	206	0	0	0	529	645	0	0	363	569
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	655	35	206	0	0	0	529	645	0	0	363	569
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	655	35	206	0	0	0	529	645	0	0	363	569

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.95	0.05	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Final Sat.:	1633	87	1720	0	0	0	1720	1720	0	0	1720	1720

Capacity Analysis Module:

Vol/Sat:	0.40	0.40	0.12	0.00	0.00	0.00	0.31	0.38	0.00	0.00	0.21	0.33
Crit Volume:	690			0			529			569		
Crit Moves:	****						****			****		

San Pablo General Plan Update
2030 No Project PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #122 El Portal Dr/San Pablo Dam Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.850
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 152 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	0	1	0	1	0	1	1	0	1

Volume Module:

Base Vol:	3	5	9	543	20	101	382	1252	10	5	782	499
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	5	9	543	20	101	382	1252	10	5	782	499
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	3	5	9	543	20	101	382	1252	10	5	782	499
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	3	5	9	543	20	101	382	1252	10	5	782	499
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	5	9	543	20	101	382	1252	10	5	782	499
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	3	5	9	543	20	101	382	1252	10	5	782	499
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	3	5	9	543	20	101	382	1252	10	5	782	499

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.36	0.64	1.64	0.06	0.30	1.00	1.98	0.02	1.00	1.22	0.78
Final Sat.:	1650	589	1061	2453	99	502	1650	3274	26	1650	2015	1285

Capacity Analysis Module:

Vol/Sat:	0.00	0.01	0.01	0.22	0.20	0.20	0.23	0.38	0.38	0.00	0.39	0.39
Crit Volume:	14			332			382			641		
Crit Moves:	***			***			***			***		

San Pablo General Plan Update
2030 No Project PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #123 I-80 EB ramps/San Pablo Dam Rd [N=Amador St; S=I-80 EB ramp

Cycle (sec): 100 Critical Vol./Cap.(X): 0.918
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Split Phase			Split Phase		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	1	0	0	1	0	0	1	0	0	1	0

Volume Module:

Base Vol:	36	258	232	295	3	868	339	796	102	0	578	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	36	258	232	295	3	868	339	796	102	0	578	20
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	36	258	232	295	3	868	339	796	102	0	578	20
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	36	258	232	295	3	868	339	796	102	0	578	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	36	258	232	295	3	868	339	796	102	0	578	20
RTOR Reduct:	0	0	0	0	0	339	0	0	0	0	0	0
RTOR Vol:	36	258	232	295	3	529	339	796	102	0	578	20
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	36	258	232	295	3	529	339	796	102	0	578	20

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.12	0.88	1.00	1.07	0.01	1.92	0.55	1.29	0.16	0.00	1.93	0.07
Final Sat.:	202	1448	1650	1605	18	2878	904	2124	272	0	3190	110

Capacity Analysis Module:

Vol/Sat:	0.18	0.18	0.14	0.18	0.17	0.18	0.37	0.37	0.37	0.00	0.18	0.18
Crit Volume:	294			276			619			299		
Crit Moves:	***			***			***			***		

Level Of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.725
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	68	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound						
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	
Control:	Split Phase			Split Phase			Permitted			Permitted						
Rights:	Include			Include			Include			Include						
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0				
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Lanes:	0	0	0	0	0	0	0	0	2	0	1	0	1	1	0	0

Volume Module:												
Base Vol:	0	0	0	88	1	268	0	1109	407	482	418	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	88	1	268	0	1109	407	482	418	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	88	1	268	0	1109	407	482	418	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	88	1	268	0	1109	407	482	418	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	88	1	268	0	1109	407	482	418	0
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	0	0	0	88	1	268	0	1109	407	482	418	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	6.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	88	1	268	0	1109	407	2892	418	0

Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.01	0.99	0.00	2.00	1.00	1.00	1.00	0.00
Final Sat.:	0	0	0	1800	7	1793	0	3600	1800	1800	1800	0

Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.05	0.15	0.15	0.00	0.31	0.23	0.27	0.23	0.00
Crit Volume:	0					269		555		482		
Crit Moves:						***		***		***		

San Pablo General Plan Update
2030 Preferred Plan AM Peak Hour

Scenario Report
Scenario: 2030Pref AM

Command: 2030Pref AM
Volume: 2030Pref AM
Geometry: 23rd St Diet
Impact Fee: Default Impact Fee
Trip Generation: Default Trip Generation
Trip Distribution: Default Trip Distribution
Paths: Default Path
Routes: Default Route
Configuration: Default Configuration

San Pablo General Plan Update
2030 Preferred Plan AM Peak Hour

Level Of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #101 San Pablo Ave/Robert Miller Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.430
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 40 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
-----|-----|-----|-----|
Control: Protected Protected Split Phase Split Phase
Rights: Ignore Include Include Include
Min. Green: 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 0 1 0 1 0 0
-----|-----|-----|-----|
Volume Module:
Base Vol: 0 759 393 51 979 0 0 0 0 0 420 0 36
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 759 393 51 979 0 0 0 0 0 420 0 36
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 759 393 51 979 0 0 0 0 0 420 0 36
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 759 393 51 979 0 0 0 0 0 420 0 36
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 759 393 51 979 0 0 0 0 0 420 0 36
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 0 759 393 51 979 0 0 0 0 0 420 0 36
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 759 393 51 979 0 0 0 0 0 420 0 36
-----|-----|-----|-----|
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.91 1.00 1.00
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 1.84 0.00 0.16
Final Sat.: 0 3440 1720 1720 3440 0 0 0 0 0 2880 0 272
-----|-----|-----|-----|
Capacity Analysis Module:
Vol/Sat: 0.00 0.22 0.23 0.03 0.28 0.00 0.00 0.00 0.00 0.15 0.00 0.13
Crit Volume: 0 489 0 228
Crit Moves: **** **** ****

San Pablo General Plan Update
2030 Preferred Plan AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #102 San Pablo Ave/Rivers St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.633
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 62 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Protected				Protected				Split Phase				Split Phase			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	0	1	0	0	1	0	0	0	1	

Volume Module:

Base Vol:	38	986	2	9	1336	141	138	13	89	42	22	34
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	38	986	2	9	1336	141	138	13	89	42	22	34
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	38	986	2	9	1336	141	138	13	89	42	22	34
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	38	986	2	9	1336	141	138	13	89	42	22	34
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	38	986	2	9	1336	141	138	13	89	42	22	34
RTOR Reduct:	0	0	0	0	0	138	0	0	0	0	0	0
RTOR Vol:	38	986	2	9	1336	3	138	13	89	42	22	34
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	38	986	2	9	1336	3	138	13	89	42	22	34

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.99	0.01	1.00	2.00	1.00	0.58	0.05	0.37	0.43	0.22	0.35
Final Sat.:	1650	3293	7	1650	3300	1650	949	89	612	707	370	572

Capacity Analysis Module:

Vol/Sat:	0.02	0.30	0.30	0.01	0.40	0.00	0.15	0.15	0.15	0.06	0.06	0.06
Crit Volume:	38			668			240			98		
Crit Moves:	***			***			***			***		

San Pablo General Plan Update
2030 Preferred Plan AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #103 San Pablo Ave//Rumrill Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.599
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 46 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Permitted				Permitted				Split Phase				Split Phase			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	0	0	1	1	0	1	0	1	1	0	1	0	0	0	1	

Volume Module:

Base Vol:	0	566	16	230	857	674	456	106	15	32	88	72
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	566	16	230	857	674	456	106	15	32	88	72
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	566	16	230	857	674	456	106	15	32	88	72
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	566	16	230	857	674	456	106	15	32	88	72
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	566	16	230	857	674	456	106	15	32	88	72
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	0	566	16	230	857	674	456	106	15	32	88	72
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	566	16	230	857	674	456	106	15	32	88	72

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.95	0.05	1.00	2.00	1.00	1.58	0.37	0.05	0.17	0.46	0.37
Final Sat.:	0	3345	95	1720	3440	1720	2471	632	89	287	788	645

Capacity Analysis Module:

Vol/Sat:	0.00	0.17	0.17	0.13	0.25	0.39	0.18	0.17	0.17	0.11	0.11	0.11
Crit Volume:	291			230			288			192		
Crit Moves:	***			***			***			***		

San Pablo General Plan Update
2030 Preferred Plan AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #104 San Pablo Ave//Broadway Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.606
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 58 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Protected				Permitted				Protected							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0	1	1	0	2	0	1	1	0	1	1	0	1	0	2	0	1

Volume Module:

Base Vol:	187	451	108	199	643	7	22	526	269	94	409	119
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	187	451	108	199	643	7	22	526	269	94	409	119
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	187	451	108	199	643	7	22	526	269	94	409	119
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	187	451	108	199	643	7	22	526	269	94	409	119
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	187	451	108	199	643	7	22	526	269	94	409	119
RTOR Reduct:	0	0	94	0	0	7	0	0	0	0	0	119
RTOR Vol:	187	451	14	199	643	0	22	526	269	94	409	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	187	451	14	199	643	0	22	526	269	94	409	0

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.32	0.68	1.00	2.00	1.00
Final Sat.:	1650	3300	1650	1650	3300	1650	1650	2183	1117	1650	3300	1650

Capacity Analysis Module:

Vol/Sat:	0.11	0.14	0.01	0.12	0.19	0.00	0.01	0.24	0.24	0.06	0.12	0.00
Crit Volume:	187			322					398	94		
Crit Moves:	***			***					***	***		

San Pablo General Plan Update
2030 Preferred Plan AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #105 Giant Rd/Parr Bl-Rd 20

Cycle (sec): 100 Critical Vol./Cap.(X): 0.383
Loss Time (sec): 9 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 30 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Permitted				Split Phase				Split Phase							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0	1	0	0	1	0	1	0	1	0	0	1	0	0	0	1	0	0

Volume Module:

Base Vol:	74	99	51	75	88	134	54	72	41	77	117	102
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	74	99	51	75	88	134	54	72	41	77	117	102
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	74	99	51	75	88	134	54	72	41	77	117	102
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	74	99	51	75	88	134	54	72	41	77	117	102
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	74	99	51	75	88	134	54	72	41	77	117	102
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	74	99	51	75	88	134	54	72	41	77	117	102
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	74	99	51	75	88	134	54	72	41	77	117	102

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.66	0.34	0.51	0.59	0.90	1.00	0.64	0.36	0.26	0.40	0.34
Final Sat.:	1650	1089	561	833	978	1489	1650	1051	599	429	652	569

Capacity Analysis Module:

Vol/Sat:	0.04	0.09	0.09	0.09	0.09	0.09	0.03	0.07	0.07	0.18	0.18	0.18
Crit Volume:	74			148			113			296		
Crit Moves:	***			***			***			***		

San Pablo General Plan Update
2030 Preferred Plan AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #106 San Pablo Ave/Rd 20/23rrd St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.616
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 59 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Protected				Protected				Split Phase				Split Phase			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	0	1	1	1	0	0	1	0	1	

Volume Module:

Base Vol:	82	375	54	25	602	343	373	316	109	16	238	21
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	82	375	54	25	602	343	373	316	109	16	238	21
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	82	375	54	25	602	343	373	316	109	16	238	21
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	82	375	54	25	602	343	373	316	109	16	238	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	82	375	54	25	602	343	373	316	109	16	238	21
RTOR Reduct:	0	0	0	0	0	205	0	0	82	0	0	21
RTOR Vol:	82	375	54	25	602	138	373	316	27	16	238	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	82	375	54	25	602	138	373	316	27	16	238	0

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.75	0.25	1.00	2.00	1.00	1.08	0.92	1.00	0.06	0.94	1.00
Final Sat.:	1650	2885	415	1650	3300	1650	1624	1513	1650	104	1546	1650

Capacity Analysis Module:

Vol/Sat:	0.05	0.13	0.13	0.02	0.18	0.08	0.23	0.21	0.02	0.15	0.15	0.00
Crit Volume:	82			301			344			254		
Crit Moves:	***			***			***			***		

San Pablo General Plan Update
2030 Preferred Plan AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #107 Church Ln/San Pablo Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.875
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	1	0	1	

Volume Module:

Base Vol:	229	580	159	52	1097	38	39	448	445	200	300	108
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	229	580	159	52	1097	38	39	448	445	200	300	108
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	229	580	159	52	1097	38	39	448	445	200	300	108
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	229	580	159	52	1097	38	39	448	445	200	300	108
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	229	580	159	52	1097	38	39	448	445	200	300	108
RTOR Reduct:	0	0	0	0	0	0	0	0	229	0	0	0
RTOR Vol:	229	580	159	52	1097	38	39	448	216	200	300	108
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	229	580	159	52	1097	38	39	448	216	200	300	108

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.57	0.43	1.00	1.93	0.07	1.00	1.00	1.00	1.00	0.74	0.26
Final Sat.:	1650	2590	710	1650	3190	110	1650	1650	1650	1650	1213	437

Capacity Analysis Module:

Vol/Sat:	0.14	0.22	0.22	0.03	0.34	0.34	0.02	0.27	0.13	0.12	0.25	0.25
Crit Volume:	229			568			448			200		
Crit Moves:	***			***			***			***		

San Pablo General Plan Update
2030 Preferred Plan AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #108 San Pablo Ave//Vale Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.632
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 62 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Protected				Protected				Protected							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	1	0	0	1	1	0	0	1	0

Volume Module:

Base Vol:	303	566	41	17	908	194	169	31	92	74	61	17
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	303	566	41	17	908	194	169	31	92	74	61	17
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	303	566	41	17	908	194	169	31	92	74	61	17
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	303	566	41	17	908	194	169	31	92	74	61	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	303	566	41	17	908	194	169	31	92	74	61	17
RTOR Reduct:	0	0	0	0	0	0	0	0	92	0	0	0
RTOR Vol:	303	566	41	17	908	194	169	31	0	74	61	17
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	303	566	41	17	908	194	169	31	0	74	61	17

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.86	0.14	1.00	1.65	0.35	1.69	0.31	1.00	1.00	0.78	0.22
Final Sat.:	1650	3077	223	1650	2719	581	2535	512	1650	1650	1290	360

Capacity Analysis Module:

Vol/Sat:	0.18	0.18	0.18	0.01	0.33	0.33	0.07	0.06	0.00	0.04	0.05	0.05
Crit Volume:	303			551			100					78
Crit Moves:	****			****			****					****

San Pablo General Plan Update
2030 Preferred Plan AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #109 San Pablo Ave/San Pablo Dam Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.662
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 67 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Protected				Split Phase				Split Phase							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	2	0	1	1	0	1	1	0	0	1	0	1	0	1	1	0	1	0

Volume Module:

Base Vol:	7	410	317	360	726	4	7	13	10	932	27	177
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	7	410	317	360	726	4	7	13	10	932	27	177
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	7	410	317	360	726	4	7	13	10	932	27	177
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	7	410	317	360	726	4	7	13	10	932	27	177
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	7	410	317	360	726	4	7	13	10	932	27	177
RTOR Reduct:	0	0	317	0	0	0	0	0	0	0	0	0
RTOR Vol:	7	410	0	360	726	4	7	13	10	932	27	177
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	7	410	0	360	726	4	7	13	10	932	27	177

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	1.99	0.01	0.47	0.87	0.66	2.00	0.13	0.87
Final Sat.:	1650	3300	1650	1650	3282	18	770	1430	1100	3000	218	1432

Capacity Analysis Module:

Vol/Sat:	0.00	0.12	0.00	0.22	0.22	0.22	0.01	0.01	0.01	0.31	0.12	0.12
Crit Volume:	205			360			15			466		
Crit Moves:	****			****			****			****		

San Pablo General Plan Update
2030 Preferred Plan AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #110 San Pablo Ave//Rheem Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.621
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 49 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			WideBypass			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0	0	1	1	0	0	0	0	0

Volume Module:

Base Vol:	72	515	0	0	1458	159	238	0	99	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	72	515	0	0	1458	159	238	0	99	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	72	515	0	0	1458	159	238	0	99	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	72	515	0	0	1458	159	238	0	99	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	72	515	0	0	1458	159	238	0	99	0	0	0
RTOR Reduct:	0	0	0	0	0	0	0	0	90	0	0	0
RTOR Vol:	72	515	0	0	1458	159	238	0	9	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	72	515	0	0	1458	159	238	0	9	0	0	0

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	0.00	1.80	0.20	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1800	3600	0	0	3246	354	1800	0	1800	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.04	0.14	0.00	0.00	0.45	0.45	0.13	0.00	0.01	0.00	0.00	0.00
Crit Volume:	72			809			238			0		
Crit Moves:	***			***			***					

San Pablo General Plan Update
2030 Preferred Plan AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #111 23rd St/Dover Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.566
Loss Time (sec): 9 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 43 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0	1	0	0	0	0	1	0	0	1

Volume Module:

Base Vol:	26	359	17	13	573	35	51	78	65	34	27	27
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	26	359	17	13	573	35	51	78	65	34	27	27
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	26	359	17	13	573	35	51	78	65	34	27	27
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	26	359	17	13	573	35	51	78	65	34	27	27
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	26	359	17	13	573	35	51	78	65	34	27	27
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	13
RTOR Vol:	26	359	17	13	573	35	51	78	65	34	27	14
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	26	359	17	13	573	35	51	78	65	34	27	14

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91
Lanes:	1.00	0.95	0.05	1.00	0.94	0.06	0.26	0.40	0.34	0.91	0.09	1.00
Final Sat.:	1720	1642	78	1720	1621	99	452	692	576	1559	161	1563

Capacity Analysis Module:

Vol/Sat:	0.02	0.22	0.22	0.01	0.35	0.35	0.11	0.11	0.11	0.02	0.17	0.01
Crit Volume:	26			608			51			289		
Crit Moves:	***			***			***			***		

San Pablo General Plan Update
2030 Preferred Plan AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #112 23rd St/Market Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.801
Loss Time (sec): 9 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 93 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				WideBypass				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	0	1	0	0	1	0	1	0	0	1	0	0	1	0

Volume Module:
Base Vol: 171 495 125 42 621 108 74 305 111 151 214 27
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 171 495 125 42 621 108 74 305 111 151 214 27
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 171 495 125 42 621 108 74 305 111 151 214 27
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 171 495 125 42 621 108 74 305 111 151 214 27
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 171 495 125 42 621 108 74 305 111 151 214 27
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 171 495 125 42 621 108 74 305 21 151 214 27
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 171 495 125 42 621 108 74 305 21 151 214 27

Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.80 0.20 1.00 0.85 0.15 1.00 0.94 0.06 1.00 0.89 0.11
Final Sat.: 1720 1373 347 1720 1465 255 1720 1609 111 1720 1527 193

Capacity Analysis Module:
Vol/Sat: 0.10 0.36 0.36 0.02 0.42 0.42 0.04 0.19 0.19 0.09 0.14 0.14
Crit Volume: 171 729 326 151
Crit Moves: ****

San Pablo General Plan Update
2030 Preferred Plan AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #113 23rd St/Rheem Av

Cycle (sec): 100 Critical Vol./Cap.(X): 0.895
Loss Time (sec): 6 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 137 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	0	1	0	0	1	0	1	0	0	1	0	0	1	0

Volume Module:
Base Vol: 40 593 193 50 1032 17 17 161 109 252 139 59
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 40 593 193 50 1032 17 17 161 109 252 139 59
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 40 593 193 50 1032 17 17 161 109 252 139 59
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 40 593 193 50 1032 17 17 161 109 252 139 59
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 40 593 193 50 1032 17 17 161 109 252 139 59
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 40 593 193 50 1032 17 17 161 109 252 139 59
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 40 593 193 50 1032 17 17 161 109 252 139 59

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.75 0.25 1.00 0.98 0.02 1.00 0.60 0.40 0.56 0.31 0.13
Final Sat.: 1800 1358 442 1800 1771 29 1800 1073 727 1008 556 236

Capacity Analysis Module:
Vol/Sat: 0.02 0.44 0.44 0.03 0.58 0.58 0.01 0.15 0.15 0.25 0.25 0.25
Crit Volume: 40 1049 270 252
Crit Moves: ****

San Pablo General Plan Update
2030 Preferred Plan AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #114 Rumrill Blvd/Broadway Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.777
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 102 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Ignore			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0	1	1	0	0	1	0	1	0

Volume Module:

Base Vol:	46	491	388	15	704	26	67	478	41	365	260	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	46	491	388	15	704	26	67	478	41	365	260	10
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	46	491	388	15	704	26	67	478	41	365	260	10
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	46	491	388	15	704	26	67	478	41	365	260	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	46	491	388	15	704	26	67	478	41	365	260	10
RTOR Reduct:	0	0	0	0	0	26	0	0	0	0	0	0
RTOR Vol:	46	491	388	15	704	0	67	478	41	365	260	10
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	46	491	388	15	704	0	67	478	41	365	260	10

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	0.92	0.08	1.00	0.96	0.04
Final Sat.:	1650	3300	1650	1650	3300	1650	1650	1520	130	1650	1589	61

Capacity Analysis Module:

Vol/Sat:	0.03	0.15	0.24	0.01	0.21	0.00	0.04	0.31	0.31	0.22	0.16	0.16
Crit Volume:	46			352					519	365		
Crit Moves:	***			***					***	***		

San Pablo General Plan Update
2030 Preferred Plan AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #115 Rumrill Dr/Brookside Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.505
Loss Time (sec): 9 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 38 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	WideBypass			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0	1	1	0	0	1	0	1	0

Volume Module:

Base Vol:	92	726	2	20	1159	54	33	26	195	67	48	30
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	92	726	2	20	1159	54	33	26	195	67	48	30
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	92	726	2	20	1159	54	33	26	195	67	48	30
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	92	726	2	20	1159	54	33	26	195	67	48	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	92	726	2	20	1159	54	33	26	195	67	48	30
RTOR Reduct:	0	0	2	0	0	0	0	0	92	0	0	0
RTOR Vol:	92	726	0	20	1159	54	33	26	103	67	48	30
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	92	726	0	20	1159	54	33	26	103	67	48	30

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	1.91	0.09	0.56	0.44	1.00	0.46	0.33	0.21
Final Sat.:	1720	3440	1720	1720	3287	153	962	758	1720	795	569	356

Capacity Analysis Module:

Vol/Sat:	0.05	0.21	0.00	0.01	0.35	0.35	0.03	0.03	0.06	0.08	0.08	0.08
Crit Volume:	92					607			103	67		
Crit Moves:	***					***			***	***		

San Pablo General Plan Update
2030 Preferred Plan AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #116 Rumrill Blvd/Market Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.685
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 72 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	1	0	1	0	0	1	0	1	0	

Volume Module:

Base Vol:	59	699	154	74	1284	68	80	183	62	198	120	112
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	59	699	154	74	1284	68	80	183	62	198	120	112
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	59	699	154	74	1284	68	80	183	62	198	120	112
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	59	699	154	74	1284	68	80	183	62	198	120	112
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	59	699	154	74	1284	68	80	183	62	198	120	112
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	59	699	154	74	1284	68	80	183	62	198	120	112
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	59	699	154	74	1284	68	80	183	62	198	120	112

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.64	0.36	1.00	1.90	0.10	1.00	0.75	0.25	1.00	0.52	0.48
Final Sat.:	1720	2819	621	1720	3267	173	1720	1285	435	1720	890	830

Capacity Analysis Module:

Vol/Sat:	0.03	0.25	0.25	0.04	0.39	0.39	0.05	0.14	0.14	0.12	0.13	0.13
Crit Volume:	59			676			245			198		
Crit Moves:	***			***			***			***		

San Pablo General Plan Update
2030 Preferred Plan AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #117 Rumrill Blvd/Rheem Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.585
Loss Time (sec): 9 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 45 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	1	0	1	0	0	0	0	1	0	

Volume Module:

Base Vol:	0	782	99	63	1712	17	21	0	0	118	2	78
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	782	99	63	1712	17	21	0	0	118	2	78
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	782	99	63	1712	17	21	0	0	118	2	78
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	782	99	63	1712	17	21	0	0	118	2	78
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	782	99	63	1712	17	21	0	0	118	2	78
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	63
RTOR Vol:	0	782	99	63	1712	17	21	0	0	118	2	15
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	782	99	63	1712	17	21	0	0	118	2	15

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.78	0.22	1.00	1.98	0.02	1.00	0.00	0.00	0.98	0.02	1.00
Final Sat.:	1720	3053	387	1720	3406	34	1720	0	0	1691	29	1720

Capacity Analysis Module:

Vol/Sat:	0.00	0.26	0.26	0.04	0.50	0.50	0.01	0.00	0.00	0.07	0.07	0.01
Crit Volume:	0			865			21			120		
Crit Moves:	***			***			***			***		

San Pablo General Plan Update
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Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #118 El Portal Dr/Rd 20

Cycle (sec): 100 Critical Vol./Cap.(X): 0.362
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 36 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 0 0 1 0 0 0 0 0 2 0 1 1 0 2 0 0

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Volume Module:

Base Vol: 53 0 296 0 0 0 0 654 100 181 647 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 53 0 296 0 0 0 0 654 100 181 647 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 53 0 296 0 0 0 0 654 100 181 647 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 53 0 296 0 0 0 0 654 100 181 647 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 53 0 296 0 0 0 0 654 100 181 647 0
RTOR Reduct: 0 0 181 0 0 0 0 0 53 0 0 0
RTOR Vol: 53 0 115 0 0 0 0 654 47 181 647 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 53 0 115 0 0 0 0 654 47 181 647 0

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Saturation Flow Module:

Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 2.00 1.00 1.00 2.00 0.00
Final Sat.: 1720 0 1720 0 0 0 0 3440 1720 1720 3440 0

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Capacity Analysis Module:

Vol/Sat: 0.03 0.00 0.07 0.00 0.00 0.00 0.00 0.19 0.03 0.11 0.19 0.00
Crit Volume: 115 0 327 181
Crit Moves: ****

San Pablo General Plan Update
2030 Preferred Plan AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #119 Church Ln/El Portal Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.645
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 52 Level Of Service: B

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Permitted Permitted Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 1 0 1 0 1 0 0 1 1 0 2 0 1 1 0 1 1 0

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Volume Module:

Base Vol: 148 128 311 52 244 162 80 756 214 287 659 15
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 148 128 311 52 244 162 80 756 214 287 659 15
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 148 128 311 52 244 162 80 756 214 287 659 15
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 148 128 311 52 244 162 80 756 214 287 659 15
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 148 128 311 52 244 162 80 756 214 287 659 15
RTOR Reduct: 0 0 287 0 0 80 0 0 148 0 0 0
RTOR Vol: 148 128 24 52 244 82 80 756 66 287 659 15
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 148 128 24 52 244 82 80 756 66 287 659 15

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Saturation Flow Module:

Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.00 1.00 0.18 0.82 1.00 1.00 2.00 1.00 1.00 1.96 0.04
Final Sat.: 1720 1720 1720 302 1418 1720 1720 3440 1720 1720 3363 77

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Capacity Analysis Module:

Vol/Sat: 0.09 0.07 0.01 0.17 0.17 0.05 0.05 0.22 0.04 0.17 0.20 0.20
Crit Volume: 148 296 378 287
Crit Moves: ****

San Pablo General Plan Update
2030 Preferred Plan AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #120 I-80 WB Off-ramp/El Portal Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 1.038
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	0	1	0	0	0	0	1	0	0	1

Volume Module:

Base Vol:	0	0	0	270	0	991	0	663	0	0	877	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	270	0	991	0	663	0	0	877	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	270	0	991	0	663	0	0	877	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	270	0	991	0	663	0	0	877	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	270	0	991	0	663	0	0	877	0
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	0	0	0	270	0	991	0	663	0	0	877	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	270	0	991	0	663	0	0	877	0

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00
Final Sat.:	0	0	0	1800	0	1800	0	1800	0	0	1800	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.15	0.00	0.55	0.00	0.37	0.00	0.00	0.49	0.00
Crit Volume:	0			991			0			877		
Crit Moves:				****			****			****		

San Pablo General Plan Update
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Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #121 I-80 EB ramp/El Portal Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.762
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 78 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	1	0	0	0	0	1	0	1	0	0	1

Volume Module:

Base Vol:	455	6	86	0	0	0	398	523	0	0	398	191
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	455	6	86	0	0	0	398	523	0	0	398	191
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	455	6	86	0	0	0	398	523	0	0	398	191
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	455	6	86	0	0	0	398	523	0	0	398	191
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	455	6	86	0	0	0	398	523	0	0	398	191
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	455	6	86	0	0	0	398	523	0	0	398	191
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	455	6	86	0	0	0	398	523	0	0	398	191

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.99	0.01	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Final Sat.:	1629	21	1650	0	0	0	1650	1650	0	0	1650	1650

Capacity Analysis Module:

Vol/Sat:	0.28	0.28	0.05	0.00	0.00	0.00	0.24	0.32	0.00	0.00	0.24	0.12
Crit Volume:	461			0			398			398		
Crit Moves:	****						****			****		

San Pablo General Plan Update
2030 Preferred Plan AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #122 El Portal Dr/San Pablo Dam Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.898
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0	1	0	1	1	0	1	1	0	1

Volume Module:

Base Vol:	3	5	2	459	9	89	129	753	10	5	1615	464
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	5	2	459	9	89	129	753	10	5	1615	464
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	3	5	2	459	9	89	129	753	10	5	1615	464
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	3	5	2	459	9	89	129	753	10	5	1615	464
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	5	2	459	9	89	129	753	10	5	1615	464
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	3	5	2	459	9	89	129	753	10	5	1615	464
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	3	5	2	459	9	89	129	753	10	5	1615	464

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.71	0.29	1.65	0.03	0.32	1.00	1.97	0.03	1.00	1.55	0.45
Final Sat.:	1650	1179	471	2472	53	527	1650	3257	43	1650	2563	737

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.19	0.17	0.17	0.08	0.23	0.23	0.00	0.63	0.63
Crit Volume:	7	279		129			1040					
Crit Moves:	***	***		***			***					

San Pablo General Plan Update
2030 Preferred Plan AM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #123 I-80 EB ramps/San Pablo Dam Rd [N=Amador St; S=I-80 EB ramp

Cycle (sec): 100 Critical Vol./Cap.(X): 1.033
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Split Phase			Split Phase		
Rights:	Include			Ovl			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	1	0	0	1	0	0	1	0	0	1	0

Volume Module:

Base Vol:	73	327	227	376	0	688	191	345	403	0	1001	30
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	73	327	227	376	0	688	191	345	403	0	1001	30
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	73	327	227	376	0	688	191	345	403	0	1001	30
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	73	327	227	376	0	688	191	345	403	0	1001	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	73	327	227	376	0	688	191	345	403	0	1001	30
RTOR Reduct:	0	0	0	0	0	191	0	0	0	0	0	0
RTOR Vol:	73	327	227	376	0	497	191	345	403	0	1001	30
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	73	327	227	376	0	497	191	345	403	0	1001	30

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.18	0.82	1.00	1.29	0.00	1.71	0.41	0.73	0.86	0.00	1.94	0.06
Final Sat.:	301	1349	1650	1938	0	2562	671	1212	1416	0	3204	96

Capacity Analysis Module:

Vol/Sat:	0.24	0.24	0.14	0.19	0.00	0.19	0.28	0.28	0.28	0.00	0.31	0.31
Crit Volume:	400			291			470			516		
Crit Moves:	***			***			***			***		

San Pablo General Plan Update
2030 Preferred Plan AM Peak Hour

Level Of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #124 I-80 WB Ramps/San Pablo Dam Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.844
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 119 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	0	1	0	0	0	0	2	0	1	0
Volume Module:												
Base Vol:	0	0	0	156	1	735	0	461	287	716	421	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	156	1	735	0	461	287	716	421	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	156	1	735	0	461	287	716	421	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	156	1	735	0	461	287	716	421	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	156	1	735	0	461	287	716	421	0
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	0	0	0	156	1	735	0	461	287	716	421	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	156	1	735	0	461	287	1432	421	0
Saturation Flow Module:												
Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.01	0.99	0.00	2.00	1.00	1.00	1.00	0.00
Final Sat.:	0	0	0	1720	2	1718	0	3440	1720	1720	1720	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.09	0.43	0.43	0.00	0.13	0.17	0.42	0.24	0.00
Crit Volume:	0					736	0			716		
Crit Moves:						****				****		

San Pablo General Plan Update
2030 Preferred Plan PM Peak Hour

Scenario Report
Scenario: 2030Pref PM

Command: 2030Pref PM
Volume: 2030Pref PM
Geometry: 23rd St Diet
Impact Fee: Default Impact Fee
Trip Generation: Default Trip Generation
Trip Distribution: Default Trip Distribution
Paths: Default Path
Routes: Default Route
Configuration: Default Configuration

San Pablo General Plan Update
2030 Preferred Plan PM Peak Hour

Level Of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #101 San Pablo Ave/Robert Miller Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.512
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 47 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
-----|-----|-----|-----|
Control: Protected Protected Split Phase Split Phase
Rights: Ignore Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 2 0 1 1 0 2 0 0 0 0 0 0 1 0 1 0 0
-----|-----|-----|-----|
Volume Module:
Base Vol: 0 1055 534 59 1099 0 0 0 0 487 0 49
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 1055 534 59 1099 0 0 0 0 487 0 49
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 1055 534 59 1099 0 0 0 0 487 0 49
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 1055 534 59 1099 0 0 0 0 487 0 49
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 1055 534 59 1099 0 0 0 0 487 0 49
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 0 1055 534 59 1099 0 0 0 0 487 0 49
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 1055 534 59 1099 0 0 0 0 487 0 49
-----|-----|-----|-----|
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.91 1.00 1.00
Lanes: 0.00 2.00 1.00 1.00 2.00 0.00 0.00 0.00 0.00 1.82 0.00 0.18
Final Sat.: 0 3440 1720 1720 3440 0 0 0 0 2841 0 314
-----|-----|-----|-----|
Capacity Analysis Module:
Vol/Sat: 0.00 0.31 0.31 0.03 0.32 0.00 0.00 0.00 0.00 0.17 0.00 0.16
Crit Volume: 528 59 0 268
Crit Moves: **** *

San Pablo General Plan Update
2030 Preferred Plan PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #102 San Pablo Ave/Rivers St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.653
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 66 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Protected				Split Phase				Split Phase							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	0	2	0	1	0	0	1	0	0	0	0	1	0	0

Volume Module:

Base Vol:	47	1580	28	27	1516	79	115	5	61	36	6	24
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	47	1580	28	27	1516	79	115	5	61	36	6	24
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	47	1580	28	27	1516	79	115	5	61	36	6	24
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	47	1580	28	27	1516	79	115	5	61	36	6	24
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	47	1580	28	27	1516	79	115	5	61	36	6	24
RTOR Reduct:	0	0	0	0	0	79	0	0	0	0	0	0
RTOR Vol:	47	1580	28	27	1516	0	115	5	61	36	6	24
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	47	1580	28	27	1516	0	115	5	61	36	6	24

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.97	0.03	1.00	2.00	1.00	0.63	0.03	0.34	0.55	0.09	0.36
Final Sat.:	1650	3243	57	1650	3300	1650	1048	46	556	900	150	600

Capacity Analysis Module:

Vol/Sat:	0.03	0.49	0.49	0.02	0.46	0.00	0.11	0.11	0.11	0.04	0.04	0.04
Crit Volume:	804			27			181			66		
Crit Moves:	****			****			****			****		

San Pablo General Plan Update
2030 Preferred Plan PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #103 San Pablo Ave//Rumrill Blvd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.797
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 92 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Permitted				Permitted				Split Phase				Split Phase							
Rights:	Include				Ignore				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1	1	0	1	0	2	0	1	1	0	1	0	0	0	0	1	0	0

Volume Module:

Base Vol:	0	958	20	100	955	490	750	57	17	77	95	157
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	958	20	100	955	490	750	57	17	77	95	157
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	958	20	100	955	490	750	57	17	77	95	157
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	958	20	100	955	490	750	57	17	77	95	157
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	958	20	100	955	490	750	57	17	77	95	157
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	0	958	20	100	955	490	750	57	17	77	95	157
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	958	20	100	955	490	750	57	17	77	95	157

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.96	0.04	1.00	2.00	1.00	1.82	0.14	0.04	0.23	0.29	0.48
Final Sat.:	0	3370	70	1720	3440	1720	2846	238	71	403	497	821

Capacity Analysis Module:

Vol/Sat:	0.00	0.28	0.28	0.06	0.28	0.28	0.26	0.24	0.24	0.19	0.19	0.19
Crit Volume:	489			100			412			329		
Crit Moves:	****			****			****			****		

San Pablo General Plan Update
2030 Preferred Plan PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #104 San Pablo Ave//Broadway Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.768
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 98 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Protected				Protected				Permitted				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	0	1	0	2	0	1	0	1	1	1	0	2	

Volume Module:

Base Vol:	461	881	129	212	760	36	15	536	175	71	280	114
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	461	881	129	212	760	36	15	536	175	71	280	114
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	461	881	129	212	760	36	15	536	175	71	280	114
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	461	881	129	212	760	36	15	536	175	71	280	114
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	461	881	129	212	760	36	15	536	175	71	280	114
RTOR Reduct:	0	0	71	0	0	15	0	0	0	0	0	114
RTOR Vol:	461	881	58	212	760	21	15	536	175	71	280	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	461	881	58	212	760	21	15	536	175	71	280	0

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.51	0.49	1.00	2.00	1.00
Final Sat.:	1650	3300	1650	1650	3300	1650	1650	2488	812	1650	3300	1650

Capacity Analysis Module:

Vol/Sat:	0.28	0.27	0.04	0.13	0.23	0.01	0.01	0.22	0.22	0.04	0.08	0.00
Crit Volume:	461			380			356			71		
Crit Moves:	****			****			****			****		

San Pablo General Plan Update
2030 Preferred Plan PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #105 Giant Rd/Parr Bl-Rd 20

Cycle (sec): 100 Critical Vol./Cap.(X): 0.355
Loss Time (sec): 9 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 33 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Protected				Permitted				Split Phase				Split Phase			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	0	1	0	1	0	1	1	0	0	1	0	0	1	

Volume Module:

Base Vol:	98	222	53	117	94	77	98	88	50	39	52	82
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	98	222	53	117	94	77	98	88	50	39	52	82
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	98	222	53	117	94	77	98	88	50	39	52	82
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	98	222	53	117	94	77	98	88	50	39	52	82
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	98	222	53	117	94	77	98	88	50	39	52	82
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	98	222	53	117	94	77	98	88	50	39	52	82
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	98	222	53	117	94	77	98	88	50	39	52	82

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.81	0.19	0.82	0.65	0.53	1.00	0.64	0.36	0.23	0.30	0.47
Final Sat.:	1650	1332	318	1341	1077	882	1650	1052	598	372	496	782

Capacity Analysis Module:

Vol/Sat:	0.06	0.17	0.17	0.09	0.09	0.09	0.06	0.08	0.08	0.10	0.10	0.10
Crit Volume:	275			144			138			173		
Crit Moves:	****			****			****			****		

San Pablo General Plan Update
2030 Preferred Plan PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #106 San Pablo Ave/Rd 20/23rrd St

Cycle (sec): 100 Critical Vol./Cap.(X): 0.811
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 120 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Protected				Protected				Split Phase				Split Phase			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	0	1	1	1	0	0	1	0	1	

Volume Module:

Base Vol:	164	973	176	36	873	592	695	174	140	48	201	33
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	164	973	176	36	873	592	695	174	140	48	201	33
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	164	973	176	36	873	592	695	174	140	48	201	33
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	164	973	176	36	873	592	695	174	140	48	201	33
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	164	973	176	36	873	592	695	174	140	48	201	33
RTOR Reduct:	0	0	0	0	0	382	0	0	140	0	0	33
RTOR Vol:	164	973	176	36	873	210	695	174	0	48	201	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	164	973	176	36	873	210	695	174	0	48	201	0

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.69	0.31	1.00	2.00	1.00	1.60	0.40	1.00	0.19	0.81	1.00
Final Sat.:	1650	2795	505	1650	3300	1650	2399	661	1650	318	1332	1650

Capacity Analysis Module:

Vol/Sat:	0.10	0.35	0.35	0.02	0.26	0.13	0.29	0.26	0.00	0.15	0.15	0.00
Crit Volume:	575			36			435			249		
Crit Moves:	****			****			****			****		

San Pablo General Plan Update
2030 Preferred Plan PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #107 Church Ln/San Pablo Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.774
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 101 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	1	0	1	

Volume Module:

Base Vol:	340	1249	238	90	894	83	66	296	328	153	246	41
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	340	1249	238	90	894	83	66	296	328	153	246	41
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	340	1249	238	90	894	83	66	296	328	153	246	41
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	340	1249	238	90	894	83	66	296	328	153	246	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	340	1249	238	90	894	83	66	296	328	153	246	41
RTOR Reduct:	0	0	0	0	0	0	0	0	328	0	0	0
RTOR Vol:	340	1249	238	90	894	83	66	296	0	153	246	41
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	340	1249	238	90	894	83	66	296	0	153	246	41

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.68	0.32	1.00	1.83	0.17	1.00	1.00	1.00	1.00	0.86	0.14
Final Sat.:	1650	2772	528	1650	3020	280	1650	1650	1650	1650	1414	236

Capacity Analysis Module:

Vol/Sat:	0.21	0.45	0.45	0.05	0.30	0.30	0.04	0.18	0.00	0.09	0.17	0.17
Crit Volume:	340			489			296			153		
Crit Moves:	****			****			****			****		

San Pablo General Plan Update
2030 Preferred Plan PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #108 San Pablo Ave//Vale Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.730
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 85 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Protected				Protected				Protected							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	1	0	0	1	1	0	0	1	0

Volume Module:

Base Vol:	217	1482	79	14	1336	136	318	62	403	57	36	7
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	217	1482	79	14	1336	136	318	62	403	57	36	7
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	217	1482	79	14	1336	136	318	62	403	57	36	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	217	1482	79	14	1336	136	318	62	403	57	36	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	217	1482	79	14	1336	136	318	62	403	57	36	7
RTOR Reduct:	0	0	0	0	0	0	0	0	217	0	0	0
RTOR Vol:	217	1482	79	14	1336	136	318	62	186	57	36	7
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	217	1482	79	14	1336	136	318	62	186	57	36	7

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.90	0.10	1.00	1.82	0.18	1.67	0.33	1.00	1.00	0.84	0.16
Final Sat.:	1650	3133	167	1650	2995	305	2510	538	1650	1650	1381	269

Capacity Analysis Module:

Vol/Sat:	0.13	0.47	0.47	0.01	0.45	0.45	0.13	0.12	0.11	0.03	0.03	0.03
Crit Volume:	217			736		190				43		
Crit Moves:	****			****		****				****		

San Pablo General Plan Update
2030 Preferred Plan PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #109 San Pablo Ave/San Pablo Dam Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 1.032
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Protected				Split Phase				Split Phase							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0	1	1	0	1	1	0	0	1	0	1	0	1	1	0	1	0

Volume Module:

Base Vol:	149	1299	560	733	883	9	11	26	8	541	38	112
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	149	1299	560	733	883	9	11	26	8	541	38	112
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	149	1299	560	733	883	9	11	26	8	541	38	112
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	149	1299	560	733	883	9	11	26	8	541	38	112
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	149	1299	560	733	883	9	11	26	8	541	38	112
RTOR Reduct:	0	0	298	0	0	0	0	0	0	0	0	0
RTOR Vol:	149	1299	262	733	883	9	11	26	8	541	38	112
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	149	1299	262	733	883	9	11	26	8	541	38	112

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	1.98	0.02	0.49	1.15	0.36	2.00	0.25	0.75
Final Sat.:	1650	3300	1650	1650	3267	33	807	1907	587	3000	418	1232

Capacity Analysis Module:

Vol/Sat:	0.09	0.39	0.16	0.44	0.27	0.27	0.01	0.01	0.01	0.18	0.09	0.09
Crit Volume:	650			733			22			271		
Crit Moves:	****			****			****			****		

San Pablo General Plan Update
2030 Preferred Plan PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #110 San Pablo Ave//Rheem Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.579
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 44 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			WideBypass			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0	0	1	0	1	0	0	0	0

Volume Module:

Base Vol:	122	1719	0	0	1251	202	183	9	91	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	122	1719	0	0	1251	202	183	9	91	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	122	1719	0	0	1251	202	183	9	91	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	122	1719	0	0	1251	202	183	9	91	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	122	1719	0	0	1251	202	183	9	91	0	0	0
RTOR Reduct:	0	0	0	0	0	0	0	0	90	0	0	0
RTOR Vol:	122	1719	0	0	1251	202	183	9	1	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	122	1719	0	0	1251	202	183	9	1	0	0	0

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	0.00	1.72	0.28	1.00	0.99	0.01	0.00	0.00	0.00
Final Sat.:	1800	3600	0	0	3100	500	1800	1781	19	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.07	0.48	0.00	0.00	0.40	0.40	0.10	0.01	0.05	0.00	0.00	0.00
Crit Volume:	860			0			183			0		
Crit Moves:	****			****			****					

San Pablo General Plan Update
2030 Preferred Plan PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #111 23rd St/Dover Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.506
Loss Time (sec): 9 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 38 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0	1	0	0	0	0	1	0	0	1

Volume Module:

Base Vol:	50	634	33	33	461	45	49	45	44	33	73	33
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	50	634	33	33	461	45	49	45	44	33	73	33
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	50	634	33	33	461	45	49	45	44	33	73	33
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	50	634	33	33	461	45	49	45	44	33	73	33
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	50	634	33	33	461	45	49	45	44	33	73	33
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	33
RTOR Vol:	50	634	33	33	461	45	49	45	44	33	73	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	50	634	33	33	461	45	49	45	44	33	73	0

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91
Lanes:	1.00	0.95	0.05	1.00	0.91	0.09	0.35	0.33	0.32	0.31	0.69	1.00
Final Sat.:	1720	1635	85	1720	1567	153	611	561	548	535	1185	1563

Capacity Analysis Module:

Vol/Sat:	0.03	0.39	0.39	0.02	0.29	0.29	0.08	0.08	0.08	0.06	0.06	0.00
Crit Volume:	667			33			138			33		
Crit Moves:	****			****			****			****		

San Pablo General Plan Update
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Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #112 23rd St/Market Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.700
Loss Time (sec): 9 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 62 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Protected				Permitted				Permitted							
Rights:	Include				Include				WideBypass				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0	1	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	0

Volume Module:

Base Vol:	162	693	164	11	441	82	73	34	117	121	240	23
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	162	693	164	11	441	82	73	34	117	121	240	23
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	162	693	164	11	441	82	73	34	117	121	240	23
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	162	693	164	11	441	82	73	34	117	121	240	23
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	162	693	164	11	441	82	73	34	117	121	240	23
RTOR Reduct:	0	0	0	0	0	0	0	0	90	0	0	0
RTOR Vol:	162	693	164	11	441	82	73	34	27	121	240	23
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	162	693	164	11	441	82	73	34	27	121	240	23

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.81	0.19	1.00	0.84	0.16	1.00	0.56	0.44	1.00	0.91	0.09
Final Sat.:	1720	1391	329	1720	1450	270	1720	959	761	1720	1570	150

Capacity Analysis Module:

Vol/Sat:	0.09	0.50	0.50	0.01	0.30	0.30	0.04	0.04	0.04	0.07	0.15	0.15
Crit Volume:	857	11		73			263					
Crit Moves:	****	****		****			****					

San Pablo General Plan Update
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Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #113 23rd St/Rheem Av

Cycle (sec): 100 Critical Vol./Cap.(X): 0.896
Loss Time (sec): 6 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 139 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Permitted				Permitted				Permitted				Permitted							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0	1	0	1	0	0	1	0	1	0	0	1	0	0	0	1	0	0

Volume Module:

Base Vol:	45	960	175	73	650	25	61	198	61	93	191	60
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	45	960	175	73	650	25	61	198	61	93	191	60
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	45	960	175	73	650	25	61	198	61	93	191	60
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	45	960	175	73	650	25	61	198	61	93	191	60
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	45	960	175	73	650	25	61	198	61	93	191	60
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	45	960	175	73	650	25	61	198	61	93	191	60
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	45	960	175	73	650	25	61	198	61	93	191	60

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.85	0.15	1.00	0.96	0.04	1.00	0.76	0.24	0.27	0.56	0.17
Final Sat.:	1800	1522	278	1800	1733	67	1800	1376	424	487	999	314

Capacity Analysis Module:

Vol/Sat:	0.03	0.63	0.63	0.04	0.38	0.37	0.03	0.14	0.14	0.19	0.19	0.19
Crit Volume:	1135	73		61			344					
Crit Moves:	****	****		****			****					

San Pablo General Plan Update
2030 Preferred Plan PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #114 Rumrill Blvd/Broadway Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.728
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 84 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Protected				Protected				Split Phase				Split Phase			
Rights:	Ignore				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	0	1	0	2	0	1	0	0	1	1	0	0	

Volume Module:

Base Vol:	47	720	369	10	513	65	50	322	65	331	427	17
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	47	720	369	10	513	65	50	322	65	331	427	17
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	47	720	369	10	513	65	50	322	65	331	427	17
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	47	720	369	10	513	65	50	322	65	331	427	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	47	720	369	10	513	65	50	322	65	331	427	17
RTOR Reduct:	0	0	0	0	0	50	0	0	0	0	0	0
RTOR Vol:	47	720	369	10	513	15	50	322	65	331	427	17
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	47	720	369	10	513	15	50	322	65	331	427	17

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	0.83	0.17	1.00	0.96	0.04
Final Sat.:	1650	3300	1650	1650	3300	1650	1650	1373	277	1650	1587	63

Capacity Analysis Module:

Vol/Sat:	0.03	0.22	0.22	0.01	0.16	0.01	0.03	0.23	0.23	0.20	0.27	0.27
Crit Volume:	360			10			387			444		
Crit Moves:	***			***			***			***		

San Pablo General Plan Update
2030 Preferred Plan PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #115 Rumrill Dr/Brookside Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.537
Loss Time (sec): 9 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 40 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Protected				Protected				Permitted				Permitted			
Rights:	WideBypass				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	0	1	0	1	1	0	1	0	0	1	0	0	

Volume Module:

Base Vol:	207	1028	5	19	948	36	78	42	174	65	40	41
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	207	1028	5	19	948	36	78	42	174	65	40	41
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	207	1028	5	19	948	36	78	42	174	65	40	41
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	207	1028	5	19	948	36	78	42	174	65	40	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	207	1028	5	19	948	36	78	42	174	65	40	41
RTOR Reduct:	0	0	5	0	0	0	0	0	174	0	0	0
RTOR Vol:	207	1028	0	19	948	36	78	42	0	65	40	41
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	207	1028	0	19	948	36	78	42	0	65	40	41

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	1.93	0.07	0.65	0.35	1.00	0.45	0.27	0.28
Final Sat.:	1720	3440	1720	1720	3314	126	1118	602	1720	766	471	483

Capacity Analysis Module:

Vol/Sat:	0.12	0.30	0.00	0.01	0.29	0.29	0.07	0.07	0.00	0.08	0.08	0.08
Crit Volume:	207			492			78			146		
Crit Moves:	***			***			***			***		

San Pablo General Plan Update
2030 Preferred Plan PM Peak Hour

Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #116 Rumrill Blvd/Market Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.701
Loss Time (sec): 12 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 76 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Protected				Permitted				Permitted							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	0	1	0	1	0	0	1	0

Volume Module:

Base Vol:	111	1058	233	115	869	69	111	132	74	240	156	103
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	111	1058	233	115	869	69	111	132	74	240	156	103
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	111	1058	233	115	869	69	111	132	74	240	156	103
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	111	1058	233	115	869	69	111	132	74	240	156	103
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	111	1058	233	115	869	69	111	132	74	240	156	103
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	111	1058	233	115	869	69	111	132	74	240	156	103
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	111	1058	233	115	869	69	111	132	74	240	156	103

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.64	0.36	1.00	1.85	0.15	1.00	0.64	0.36	1.00	0.60	0.40
Final Sat.:	1720	2819	621	1720	3187	253	1720	1102	618	1720	1036	684

Capacity Analysis Module:

Vol/Sat:	0.06	0.38	0.38	0.07	0.27	0.27	0.06	0.12	0.12	0.14	0.15	0.15
Crit Volume:	646	115		206			240					
Crit Moves:	****	****		****			****					

San Pablo General Plan Update
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Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #117 Rumrill Blvd/Rheem Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.508
Loss Time (sec): 9 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 38 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Protected				Permitted				Permitted							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	0	0	0	0	1	0	0	1

Volume Module:

Base Vol:	1	1100	126	140	999	9	5	0	0	111	5	179
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	1100	126	140	999	9	5	0	0	111	5	179
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	1100	126	140	999	9	5	0	0	111	5	179
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	1	1100	126	140	999	9	5	0	0	111	5	179
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	1	1100	126	140	999	9	5	0	0	111	5	179
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	140
RTOR Vol:	1	1100	126	140	999	9	5	0	0	111	5	39
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	1	1100	126	140	999	9	5	0	0	111	5	39

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.79	0.21	1.00	1.98	0.02	1.00	0.00	0.00	0.96	0.04	1.00
Final Sat.:	1720	3086	354	1720	3409	31	1720	0	0	1646	74	1720

Capacity Analysis Module:

Vol/Sat:	0.00	0.36	0.36	0.08	0.29	0.29	0.00	0.00	0.00	0.07	0.07	0.02
Crit Volume:	613	140		5			116					
Crit Moves:	****	****		****			****					

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Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #118 El Portal Dr/Rd 20

Cycle (sec): 100 Critical Vol./Cap.(X): 0.340
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 35 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0	0	0	0	0	0	2	1	0	2

Volume Module:
Base Vol: 28 0 245 0 0 0 0 678 20 179 675 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 28 0 245 0 0 0 0 678 20 179 675 0
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 28 0 245 0 0 0 0 678 20 179 675 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 28 0 245 0 0 0 0 678 20 179 675 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 28 0 245 0 0 0 0 678 20 179 675 0
RTOR Reduct: 0 0 179 0 0 0 0 0 20 0 0 0
RTOR Vol: 28 0 66 0 0 0 0 678 0 179 675 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 28 0 66 0 0 0 0 678 0 179 675 0

Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 2.00 1.00 1.00 2.00 0.00
Final Sat.: 1720 0 1720 0 0 0 0 3440 1720 1720 3440 0

Capacity Analysis Module:
Vol/Sat: 0.02 0.00 0.04 0.00 0.00 0.00 0.00 0.20 0.00 0.10 0.20 0.00
Crit Volume: 66 0 339 179
Crit Moves: ****

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Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #119 Church Ln/El Portal Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.541
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 41 Level Of Service: A

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	0	1	0	1	0	2	1	0	1

Volume Module:
Base Vol: 129 281 383 26 138 74 161 682 107 283 641 44
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 129 281 383 26 138 74 161 682 107 283 641 44
Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 129 281 383 26 138 74 161 682 107 283 641 44
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 129 281 383 26 138 74 161 682 107 283 641 44
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 129 281 383 26 138 74 161 682 107 283 641 44
RTOR Reduct: 0 0 283 0 0 74 0 0 107 0 0 0
RTOR Vol: 129 281 100 26 138 0 161 682 0 283 641 44
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 129 281 100 26 138 0 161 682 0 283 641 44

Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.00 1.00 0.16 0.84 1.00 1.00 2.00 1.00 1.00 1.87 0.13
Final Sat.: 1720 1720 1720 273 1447 1720 1720 3440 1720 1720 3219 221

Capacity Analysis Module:
Vol/Sat: 0.08 0.16 0.06 0.10 0.10 0.00 0.09 0.20 0.00 0.16 0.20 0.20
Crit Volume: 281 26 341 283
Crit Moves: ****

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Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #120 I-80 WB Off-ramp/El Portal Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 1.048
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	0	1	0	0	0	0	1	0	0	1

Volume Module:

Base Vol:	0	0	0	280	0	752	0	814	0	0	1135	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	280	0	752	0	814	0	0	1135	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	280	0	752	0	814	0	0	1135	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	280	0	752	0	814	0	0	1135	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	280	0	752	0	814	0	0	1135	0
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	0	0	0	280	0	752	0	814	0	0	1135	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	280	0	752	0	814	0	0	1135	0

Saturation Flow Module:

Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00
Final Sat.:	0	0	0	1800	0	1800	0	1800	0	0	1800	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.16	0.00	0.42	0.00	0.45	0.00	0.00	0.63	0.00
Crit Volume:	0			752			0			1135		
Crit Moves:				****			****			****		

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Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #121 I-80 EB ramp/El Portal Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.965
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	1	0	0	0	0	1	0	1	0	0	1

Volume Module:

Base Vol:	598	5	185	0	0	0	528	645	0	0	409	461
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	598	5	185	0	0	0	528	645	0	0	409	461
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	598	5	185	0	0	0	528	645	0	0	409	461
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	598	5	185	0	0	0	528	645	0	0	409	461
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	598	5	185	0	0	0	528	645	0	0	409	461
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	598	5	185	0	0	0	528	645	0	0	409	461
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	598	5	185	0	0	0	528	645	0	0	409	461

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.99	0.01	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Final Sat.:	1636	14	1650	0	0	0	1650	1650	0	0	1650	1650

Capacity Analysis Module:

Vol/Sat:	0.37	0.37	0.11	0.00	0.00	0.00	0.32	0.39	0.00	0.00	0.25	0.28
Crit Volume:	603			0			528			461		
Crit Moves:	****						****			****		

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Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #122 El Portal Dr/San Pablo Dam Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.836
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 139 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected				Protected				Protected				Protected							
Rights:	Include				Include				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0	1	0	1	0	1	0	0	1	0	1	1	0	1	0	1	1	0

Volume Module:

Base Vol:	3	5	9	543	20	93	350	1275	11	5	810	499
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	5	9	543	20	93	350	1275	11	5	810	499
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	3	5	9	543	20	93	350	1275	11	5	810	499
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	3	5	9	543	20	93	350	1275	11	5	810	499
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	3	5	9	543	20	93	350	1275	11	5	810	499
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	3	5	9	543	20	93	350	1275	11	5	810	499
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	3	5	9	543	20	93	350	1275	11	5	810	499

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.36	0.64	1.66	0.06	0.28	1.00	1.98	0.02	1.00	1.24	0.76
Final Sat.:	1650	589	1061	2483	101	468	1650	3272	28	1650	2042	1258

Capacity Analysis Module:

Vol/Sat:	0.00	0.01	0.01	0.22	0.20	0.20	0.21	0.39	0.39	0.00	0.40	0.40
Crit Volume:	14			328			350			655		
Crit Moves:	***			***			***			***		

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Level of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #123 I-80 EB ramps/San Pablo Dam Rd [N=Amador St; S=I-80 EB ramp

Cycle (sec): 100 Critical Vol./Cap.(X): 0.979
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound				South Bound				East Bound				West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Split Phase				Split Phase				Split Phase				Split Phase							
Rights:	Include				Ovl				Include				Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	0	1	0	0	1	1	0	1	0	1	0	1	0	1	0	0	1	0	1	0

Volume Module:

Base Vol:	41	263	227	361	7	913	339	781	215	0	579	18
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	41	263	227	361	7	913	339	781	215	0	579	18
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	41	263	227	361	7	913	339	781	215	0	579	18
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	41	263	227	361	7	913	339	781	215	0	579	18
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	41	263	227	361	7	913	339	781	215	0	579	18
RTOR Reduct:	0	0	0	0	0	339	0	0	0	0	0	0
RTOR Vol:	41	263	227	361	7	574	339	781	215	0	579	18
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	41	263	227	361	7	574	339	781	215	0	579	18

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.13	0.87	1.00	1.15	0.02	1.83	0.51	1.17	0.32	0.00	1.94	0.06
Final Sat.:	223	1427	1650	1724	37	2742	838	1931	531	0	3201	99

Capacity Analysis Module:

Vol/Sat:	0.18	0.18	0.14	0.21	0.19	0.21	0.40	0.40	0.40	0.00	0.18	0.18
Crit Volume:	304			314			668			299		
Crit Moves:	***			***			***			***		

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Level Of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #124 I-80 WB Ramps/San Pablo Dam Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.534
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 96 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	R	L	-	T	R	L	-	T	R	L	-	T	R
Control:	Protected				Protected				Protected				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	0	0	1	0	0	1	0	0	2	0	0	1	1	0

Volume Module:

Base Vol:	0	0	0	110	1	323	0	1190	419	482	468	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	110	1	323	0	1190	419	482	468	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	110	1	323	0	1190	419	482	468	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	110	1	323	0	1190	419	482	468	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	110	1	323	0	1190	419	482	468	0
RTOR Reduct:	0	0	0	0	0	0	0	0	0	0	0	0
RTOR Vol:	0	0	0	110	1	323	0	1190	419	482	468	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	6.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	110	1	323	0	1190	419	2892	468	0

Saturation Flow Module:

Sat/Lane:	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720	1720
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.01	0.99	0.00	2.00	1.00	1.00	1.00	0.00
Final Sat.:	0	0	0	1720	5	1715	0	3440	1720	1720	1720	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.06	0.19	0.19	0.00	0.35	0.24	0.28	0.27	0.00
Crit Volume:	0			324			595			468		
Crit Moves:				***			***					

San Pablo General Plan Update
2030 Preferred Plan AM Peak Hour
Mitigated

Scenario Report
Scenario: 2030Pref AM

Command: 2030Pref AM
Volume: 2030Pref AM
Geometry: 23rd St Diet
Impact Fee: Default Impact Fee
Trip Generation: Default Trip Generation
Trip Distribution: Default Trip Distribution
Paths: Default Path
Routes: Default Route
Configuration: Default Configuration

San Pablo General Plan Update
2030 Preferred Plan AM Peak Hour
Mitigated

Level Of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #109 San Pablo Ave/San Pablo Dam Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.684
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 72 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0	1	0	1	1	0	1	0	1

Volume Module:

Base Vol:	7	410	317	360	726	4	7	13	10	932	27	177
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	7	410	317	360	726	4	7	13	10	932	27	177
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	7	410	317	360	726	4	7	13	10	932	27	177
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	7	410	317	360	726	4	7	13	10	932	27	177
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	7	410	317	360	726	4	7	13	10	932	27	177
RTOR Reduct:	0	0	317	0	0	0	0	0	0	0	0	0
RTOR Vol:	7	410	0	360	726	4	7	13	10	932	27	177
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	7	410	0	360	726	4	7	13	10	932	27	177

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	1.99	0.01	0.47	0.87	0.66	2.00	0.13	0.87
Final Sat.:	1650	3300	1650	1500	3282	18	770	1430	1100	3000	218	1432

Capacity Analysis Module:

Vol/Sat:	0.00	0.12	0.00	0.24	0.22	0.22	0.01	0.01	0.01	0.31	0.12	0.12
Crit Volume:	205			360			15			466		
Crit Moves:	****			****			****			****		

San Pablo General Plan Update
2030 Preferred Plan PM Peak Hour
Mitigated

Scenario Report
Scenario: 2030Pref PM

Command: 2030Pref PM
Volume: 2030Pref PM
Geometry: 23rd St Diet
Impact Fee: Default Impact Fee
Trip Generation: Default Trip Generation
Trip Distribution: Default Trip Distribution
Paths: Default Path
Routes: Default Route
Configuration: Default Configuration

San Pablo General Plan Update
2030 Preferred Plan PM Peak Hour
Mitigated

Level Of Service Computation Report
CCTALOS Method (Future Volume Alternative)

Intersection #109 San Pablo Ave/San Pablo Dam Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.950
Loss Time (sec): 0 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0	1	0	1	1	0	1	0	0

Volume Module:

Base Vol:	149	1299	560	733	883	9	11	26	8	541	38	112
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	149	1299	560	733	883	9	11	26	8	541	38	112
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	149	1299	560	733	883	9	11	26	8	541	38	112
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	149	1299	560	733	883	9	11	26	8	541	38	112
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	149	1299	560	733	883	9	11	26	8	541	38	112
RTOR Reduct:	0	0	298	0	0	0	0	0	0	0	0	0
RTOR Vol:	149	1299	262	733	883	9	11	26	8	541	38	112
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	149	1299	262	733	883	9	11	26	8	541	38	112

Saturation Flow Module:

Sat/Lane:	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
Adjustment:	1.00	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00
Lanes:	1.00	2.00	1.00	1.35	1.63	0.02	0.49	1.15	0.36	2.00	0.25	0.75
Final Sat.:	1650	3300	1650	2024	2696	28	807	1907	587	3000	418	1232

Capacity Analysis Module:

Vol/Sat:	0.09	0.39	0.16	0.36	0.33	0.33	0.01	0.01	0.01	0.18	0.09	0.09
Crit Volume:	650			543			22			271		
Crit Moves:	****			****			****			****		

Appendix C

Special Status Species List

The following special status species list pertains to the entire City of San Pablo. The Chapter 3.6 biological resources analysis tailors the results and significance findings to the Planning Area of the proposed Project, which is entirely within the city limits.

SPECIAL-STATUS SPECIES CONSIDERED IN THE EVALUATION OF THE PLANNING AREA

COMMON NAME SCIENTIFIC NAME	LISTING STATUS USFWS/ CDFG/CNPS	GENERAL HABITAT	POTENTIAL TO OCCUR IN THE PLANNING AREA
SPECIES LISTED OR PROPOSED FOR LISTING			
Plants			
California sea-blite <i>Suaeda californica</i>	FE/--/IB.1	Coastal salt marshes and swamps, coastal dunes	Low. All naturally occurring San Francisco Bay area populations thought to have been extirpated. Has been reintroduced on San Francisco Peninsula. Suitable habitat occurs in San Pablo and Wildcat Creek marshes but not within Planning Area.
Pallid (Alameda) manzanita <i>Arctostaphylos pallida</i>	FE/CE/IB.1	Broadleaf upland forest, woodland, chaparral on siliceous shale	Low. The CNDDDB shows 1 recorded occurrence approximately 2.7 miles west of the Planning Area. Potential habitat is limited in the Planning Area due to development and fragmentation.
Santa Cruz tarplant <i>Holocarpha macradenia</i>	FT/CE/IB.1	Grassland, coastal prairie; often with non-natives in light sandy or sandy clay soil; 30 to 850 feet.	Low. All naturally occurring San Francisco Bay area populations thought to have been extirpated.
Soft bird's beak <i>Cordylanthus mollis</i> ssp. <i>mollis</i>	FE/CR/IB.2	Seasonal wetlands in alkali sinks with valley sink scrub, alkali meadows, and alkali marsh communities.	Low. The CNDDDB shows 2 records north of the Planning Area within marsh areas. Suitable habitat is absent from the Planning Area.
Animals			
Fish			
Coho salmon – Central California coast ESU <i>Oncorhynchus kisutch</i>	FE/CE	Accessible Bay Area and coastal rivers and streams with cover, cool water and sufficient dissolved oxygen. Require beds of loose, silt-free gravel for spawning.	Low. Although within the historical range of the species, coho salmon are currently considered extinct in the San Francisco Bay/Sacramento – San Joaquin River system.
Critical Habitat designated			
Central California coast steelhead <i>Oncorhynchus mykiss</i>	FT/CSC	Spawns and rears in coastal streams between the Russian River and Aptos Creek, as well as drainages of the SF and San Pablo Bays, where gravelly substrate and shaded riparian habitat occurs.	Moderate. Migrates through bay waters downstream of Planning Area. May occasionally stray into Wildcat and San Pablo Creeks. Resident rainbow trout populations occur or have occurred in both creeks. Known historical steelhead run in San Pablo Creek thought to be extirpated or nearly so. No suitable spawning habitat within the Planning Area due to high levels of fine sediments in creek beds.
Critical Habitat designated			
California Central Valley steelhead <i>Oncorhynchus mykiss</i>	FT/CSC	Spawns and rears in the Sacramento/ San Joaquin River systems and tributaries where gravelly substrate and shaded riparian habitat occurs.	Moderate. Migrates through bay waters downstream of Planning Area. May occasionally stray into San Pablo or Wildcat Creeks. No suitable spawning habitat within the Planning Area due to high levels of fine sediments in creek beds.
Critical Habitat designated			

SPECIAL-STATUS SPECIES CONSIDERED IN THE EVALUATION OF THE PLANNING AREA

COMMON NAME SCIENTIFIC NAME	LISTING STATUS USFWS/ CDFG/CNPS	GENERAL HABITAT	POTENTIAL TO OCCUR IN THE PLANNING AREA
Sacramento winter-run Chinook salmon <i>Oncorhynchus tshawytscha</i>	FE/CE	Spawns and rears in Sacramento River and tributaries where gravelly substrate and shaded riparian habitat occurs.	Low. Migrates through bay waters downstream of Planning Area. Not known to occur in either the San Pablo or Wildcat Creek Watersheds. Populations are at all time low numbers, highly unlikely to occur in project area creeks.
Critical Habitat designated			
Central Valley spring-run Chinook salmon <i>Oncorhynchus tshawytscha</i>	FT/CT	Spawns and rears in Sacramento River and tributaries where gravelly substrate and shaded riparian habitat occurs.	Low. Migrates through bay waters downstream of Planning Area. Not known to occur in either the San Pablo or Wildcat Creek Watersheds. Populations are at all time low numbers, highly unlikely to occur in project area creeks.
Critical Habitat designated			
<i>Amphibians</i>			
California red-legged frog <i>Rana draytonii</i>	FT/CSC	Breed in stock ponds, pools, and slow-moving streams	Low to Moderate. Potentially suitable aquatic habitat is present in San Pablo and Wildcat Creeks. The CNDDDB shows 3 records within 5 miles of the Planning Area all of which are greater than 4 miles away. One of the records is along San Pablo Creek and there is potential for movement downstream into Planning Area exists.
<i>Birds</i>			
California black rail <i>Laterallus jamaicensis coturniculus</i>	--/CT	Salt marshes along large bays, also freshwater marshes	Low. Documented in marshes along the bay. However, the potential for occurrence within the Planning Area is low due to lack of suitable habitat. Marsh habitat is absent from the Planning Area.
California clapper rail <i>Rallus longirostris obsoletus</i>	FE/CE	Salt-water and brackish marshes with tidal sloughs.	Low. Documented in marshes along the bay. However, suitable habitat is not present within the Planning Area because marsh habitat is absent from the Planning Area.
<i>Mammals</i>			
Salt marsh harvest mouse <i>Reithrodontomys raviventris</i>	FE/CE	Saline emergent wetlands of San Francisco Bay and tributaries.	Low. Documented in marshes along the bay. However, suitable habitat is not present in Planning Area because marsh habitat is absent from the Planning Area.
OTHER SPECIAL-STATUS SPECIES			
<i>Plants</i>			
Alkalil milk vetch <i>Astragalus tener</i> var. <i>tener</i>	--/--/IB.2	Adobe clay soils in valley and foothill grassland.	Low. The CNDDDB shows 1 record approximately 1.6 miles south of the Planning Area. Adobe clay soils not present on Planning Area. All upland habitat on Planning Area has been disturbed in the past, no suitable habitat remains for this species.

SPECIAL-STATUS SPECIES CONSIDERED IN THE EVALUATION OF THE PLANNING AREA

COMMON NAME SCIENTIFIC NAME	LISTING STATUS USFWS/ CDFG/CNPS	GENERAL HABITAT	POTENTIAL TO OCCUR IN THE PLANNING AREA
Bent-flowered fiddleneck <i>Amsinckia lunaris</i>	--/--/IB.2	Coastal bluff scrub, valley and foothill grassland.	Low. The CNDDDB shows 3 recorded occurrences to the east with the closest one being approximately 3.1 miles away from the Planning Area. Upland habitat on Planning Area has been disturbed in the past, no suitable habitat remains for this species.
Diablo helianthella <i>Helianthella castanea</i>	--/--/IB.2	Broadleaved upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland.	Low. The CNDDDB does shows 3 recorded occurrences to the east with the closest one being approximately 2.8 miles away. Suitable habitat does not occur in the Planning Area; Azonal soils are not mapped within the area and areas with similar vegetation associations are limited.
Fragrant fritillary <i>Fritillaria liliacea</i>	FSC/--/IB.2	Coastal prairie and scrub, grasslands, often on serpentine soils; 10 to 1350 feet.	Low. The CNDDDB shows 3 recorded occurrences to the east of the Planning Area with the closest one being along the San Pablo Reservoir. Suitable habitat is limited in the Planning Area due to the developed environment.
Loma Prieta hoita <i>Hoita strobilina</i>	--/--/IB.2	Mesic areas, usually on serpentinite, riparian or cismontane woodland, chaparral	Low to Moderate. No serpentine soils present. Only marginally suitable habitat, dominated by non-native species is available within the Planning Area.
Most beautiful jewel-flower <i>Streptanthus albidus ssp. peramoenus</i>	FSC/--/IB.2	Ridges and slopes with chaparral, valley and foothill grassland, and woodland; on serpentine outcrops	Low. No serpentine soils or outcrops within the Planning Area. Only marginally suitable habitat, dominated by non-native species is available within the Planning Area.
Oregon meconella <i>Meconella oregana</i>	FSC/--/IB.1	Coastal scrub and prairie	Low. Only marginally suitable habitat, dominated by non-native species is available within the Planning Area.
Pacific false bindweed <i>Calystegia purpurata ssp. saxicola</i>	--/--/IB.2	Coastal dunes, coastal scrub, coniferous forest	Low. All upland habitat on Planning Area has been disturbed in the past, no suitable habitat remains for this species.
Robust monardella <i>Monardella villosa ssp. globosa</i>	FSLC/--/IB.2	In clay or sandy soils of coastal prairie and scrub, and valley and foothill grassland	Low. Only marginally suitable habitat, dominated by non-native species is available within the Planning Area.
Suisun marsh aster <i>Symphotrichum lentum</i> (=Aster lentus)	--/--/IB.2	Marshes and swamps (brackish and freshwater).	Low. The CNDDDB shows 1 recorded approximately 3 miles west of the Planning Area. Habitat is limited within the Planning Area due to the level of development and fragmentation.
Western leatherwood <i>Dirca occidentalis</i>	--/--/IB.2	Occurs in mesic situations in a variety of habitats, including riparian woodland and forest, chaparral, broadleaved upland forest, and cismontane woodland.	Low. The CNDDDB shows 3 records southwest of the Planning Area, the closest of which is approximately 1.3 miles away along Wildcat Creek. Riparian woodland understory within the Planning Area is highly disturbed and suitable habitat is limited.

SPECIAL-STATUS SPECIES CONSIDERED IN THE EVALUATION OF THE PLANNING AREA

COMMON NAME SCIENTIFIC NAME	LISTING STATUS USFWS/ CDFG/CNPS	GENERAL HABITAT	POTENTIAL TO OCCUR IN THE PLANNING AREA
Animals			
<i>Invertebrates</i>			
Bridges coast range shoulderband <i>Helminthoglypta neckliniana bridgesi</i>	FSC/--	Inhabits tall grasses and weeds in the hillsides and riparian areas of Contra Costa County	Low to Moderate. Riparian areas within the Planning Area provide habitat. The CNDDDB shows 3 records within 5 miles of the Planning Area, one of which is approximately 1 mile to the east along San Pablo Creek. There is potential for this species to occur within the Planning Area.
Monarch butterfly <i>Danaus plexippus</i>	--/* Wintering sites only	Winter roosts located in wind- protected tree groves (eucalyptus, Monterey pine, cypress) with nectar and water sources nearby.	Low to Moderate. Mature eucalyptus within the Planning Area provide potential winter roosting habitat. The nearest recorded occurrence is 1.2 miles north of the Planning Area.
<i>Fish</i>			
Central Valley fall/late fall- run Chinook salmon <i>Oncorhynchus tshawytscha</i>	FSC/CSC	Spawns and rears in Sacramento River and tributaries where gravelly substrate and shaded riparian habitat occurs.	Low. Migrates through waters of San Pablo Bay to spawning grounds. May occasionally stray into San Pablo and Wildcat Creeks within the Planning Area.
Sacramento perch <i>Archoplites interruptus</i>	--/CSC	Tidal waters, freshwater lower- elevation pools in slow moving streams, and floodplain lakes, often with emergent vegetation.	Low. Species was introduced to and documented from Jewel Lake and Lake Anza (manmade lakes on upper Wildcat Creek) in Tilden Regional Park from the 1980's. Since thought to be extirpated from Lake Anza and to persist in small numbers in Jewel Lake. Species is thought to be extinct throughout most of its native range. The CNDDDB only shows one record and it is approximately 4 miles from the Planning Area
<i>Reptiles</i>			
Western pond turtle <i>Actinemys marmorata</i>	FSC/CSC	Freshwater ponds and slow streams edged with sandy soils for laying eggs.	Low to Moderate. The CNDDDB shows 3 records all southwest of the Planning Area with the closest recorded occurrence within approximately 3.3 miles. Western pond turtles need basking sites and grassy or sandy banks for egg-laying. Habitat for this species is limited within the Planning Area although aquatic habitat may be available in Wildcat Creek within Planning Area.
<i>Birds</i>			
Cooper's hawk <i>Accipiter cooperii</i>	--/* 3503.5	Nests in conifers or deciduous stands near riparian areas	Moderate. Suitable nesting habitat present in larger trees along the San Pablo and Wildcat Creek riparian corridors.
Sharp-shinned hawk <i>Accipiter striatus</i>	--/CSC 3503.5	Nests in mountainous woodlands and forests in either coniferous or deciduous trees	Low. Do not generally breed in the region. May winter in the area.

SPECIAL-STATUS SPECIES CONSIDERED IN THE EVALUATION OF THE PLANNING AREA

COMMON NAME SCIENTIFIC NAME	LISTING STATUS USFWS/ CDFG/CNPS	GENERAL HABITAT	POTENTIAL TO OCCUR IN THE PLANNING AREA
Golden eagle <i>Aquila chrysaetos</i>	--/* 3503.5	Nests in large trees, snags, and cliffs, winters on lakes and reservoirs.	Low. Suitable nesting habitat absent, may forage over San Pablo and wildcat Creek marshes. Would only be present as transient over Planning Area.
Great egret <i>Ardea alba</i>	--/* Rookeries only	Nest colonially in groves of trees. Rookery sites located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes.	Low. Likely forage in marsh areas along the bay. Grassland habitats within the Planning Area are limited and no rookeries are recorded in the immediate vicinity.
Alameda song sparrow <i>Melospiza melodia pusillula</i>	--/CSC	Endemic to central San Francisco Bay. Found in pickleweed marshes, nests in low shrubs and pickleweed above high tide levels	Low. The CNDDDB shows 4 recorded occurrences for this species; the closest of which is 2.2 miles south of the Planning Area. Limited suitable nesting or foraging habitat occurs within the Planning Area because instream habitats with dense cattails and tules are limited.
Allen's hummingbird <i>Selasphorus sasin</i>	FSC/* (AWLY)	Inhabits coastal scrub and a variety of woodlands and riparian habitat, as well as gardens in the urban-wildland interface.	Moderate to High. Suitable nesting and foraging habitat is present in landscaped areas, coyote brush, and riparian woodlands.
American kestrel <i>Falco sparverius</i>	--/3503.5	Nests in cavities in large trees near open areas.	Moderate. Likely forages over Planning Area. May nest in cavities of mature eucalyptus and riparian corridor trees within the Planning Area.
Black-crowned night heron <i>Nycticorax nycticorax</i>	--/* Rookeries only	Various wetland habitats, including salt, brackish, and freshwater marshes, swamps, streams, lakes, and agricultural fields. Nest in large trees, often with other herons or egrets.	Low. May forage along San Pablo and Wildcat Creeks near the bay. However, although suitable nesting trees, such as large eucalyptus occur within the project area, the relatively high levels of disturbance likely preclude nesting. No rookeries documented nearby.
Burrowing owl <i>Athene cunicularia</i>	--/CSC	Nests and forages in low-growing grasslands that support burrowing mammals	Low. The CNDDDB does not show any recorded occurrences for this species within 5 miles of the Planning Area. Limited and only marginally suitable grassland habitat is present. Tall herbaceous layer and lack of suitable burrows combine to preclude use of grasslands by this species.
Great blue heron <i>Ardea herodias</i>	--/* Rookeries only	Nest colonially in groves of trees. Rookery sites located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes.	Low. Likely forage along San Pablo and Wildcat Creeks. Grassland habitats within the Planning Area are limited and no rookeries are recorded in the immediate vicinity.
Great horned owl <i>Bubo virginianus</i>	--/3503.5	Often uses abandoned nests of corvids or squirrels; nests in large oaks, conifers, eucalyptus	High. Suitable nesting habitat present in larger trees along the San Pablo and Wildcat Creek riparian corridors. Although there are no recorded occurrences of this species within 5 miles of the Planning Area.

SPECIAL-STATUS SPECIES CONSIDERED IN THE EVALUATION OF THE PLANNING AREA

COMMON NAME SCIENTIFIC NAME	LISTING STATUS USFWS/ CDFG/CNPS	GENERAL HABITAT	POTENTIAL TO OCCUR IN THE PLANNING AREA
Northern harrier <i>Circus cyaneus</i>	--/CSC	Mostly nests in emergent vegetation, wet meadows or near rivers and lakes, but may nest in grasslands away from water.	Low. The CNDDDB shows 1 recorded occurrence approximately 1.2 miles west of the Planning Area along marsh land. Suitable habitat does not exist within the Planning Area.
Red-shouldered hawk <i>Buteo lineatus</i>	--/3503.5	Usually nests in large trees, often in woodland or riparian deciduous habitats. Forages over open grasslands and woodlands	High. Suitable nesting habitat present in larger trees along the San Pablo and Wildcat Creek riparian corridors. Although there are no recorded occurrences of this species within 5 miles of the Planning Area.
Red-tailed hawk <i>Buteo jamaicensis</i>	--/3503.5	Usually nests in large trees, often in woodland or riparian deciduous habitats	High. Suitable nesting habitat present in larger trees along the San Pablo and Wildcat Creek riparian corridors. Although there are no recorded occurrences of this species within 5 miles of the Planning Area
Salt-marsh common yellowthroat <i>Geothlypis trichas sinuosa</i>	FSC/CSC	Emergent wetlands	Low to Moderate. Resident of S.F. Bay region salt and fresh water marshes. Habitat is limited within the Planning Area; however, species may use riparian woodlands associated with Wildcat and San Pablo Creeks.
San Pablo song sparrow <i>Melospiza melodia samuelis</i>	--/CSC	Salt marshes along northern S.F. and San Pablo Bays.	Moderate. The CNDDDB shows 5 recorded occurrences for this species; 2 of which are found within the Planning Area. Although ideal nesting habitat occurs outside of the Planning Area, Wildcat and San Pablo Creeks could provide suitable nesting and foraging habitat but it is not possible to distinguish subspecies. Cannot rule out potential for presence.
Snowy egret <i>Egretta thula</i>	--/* Rookeries only	Nest colonially in groves of trees. Rookery sites located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes.	Low. Likely forage along San Pablo and Wildcat Creeks near their outlet to the bay. While suitable nesting habitat is available in within the Planning no rookeries are recorded in the immediate vicinity.
White-tailedkite <i>Elanus leucurus</i>	FSC/Fully Protected	Nests in trees adjacent to grasslands, forages over grasslands and agricultural lands	Low. The CNDDDB shows 2 recorded occurrences for this species, the nearest of which is located 1.2 miles to the west along Wildcat Creek near its conjunction with San Francisco Bay. Habitat is limited within the Planning Area.

SPECIAL-STATUS SPECIES CONSIDERED IN THE EVALUATION OF THE PLANNING AREA

COMMON NAME SCIENTIFIC NAME	LISTING STATUS USFWS/ CDFG/CNPS	GENERAL HABITAT	POTENTIAL TO OCCUR IN THE PLANNING AREA
Short-eared owl <i>Asio flammeus</i>	--/CSC	Fresh water and salt marshes and swamps, lowland meadows, irrigated fields	Low. The CNDDDB shows 1 recorded occurrence for this species approximately 1 mile west of the Planning Area in marshland along the bay. Not likely to breed in low quality, degraded habitat in the Planning Area, with presence of higher quality habitat nearby.
<i>Mammals</i>			
Big free-tailed bat <i>Nyctinomops macrotis</i>	--/CSC	Known from isolated populations throughout southwestern U.S., into Mexico. Lives in rocky areas of desert scrub or coniferous forests. Roosts by day in crevices on cliff faces. Feeds on insects. Forms colonies and bear one young each year, in the early summer.	Low. Rare and not known to breed in California. One known record (a suspected vagrant) documented locally (from Alameda County). Suitable maternity colony habitat not present within Planning Area. May migrate through area and be present occasionally on a transient basis.
Fringed myotis <i>Myotis thysanodes</i>	FSC/--	Inhabits a variety of woodland habitats, roosts in crevices or caves, and forages over water and open habitats	Low to Moderate. Roosting habitat may be available in riparian woodlands in the Planning Area; however, habitat is limited because the Planning Area is highly developed.
Hoary bat <i>Lasiurus cinereus</i>	--/*	A relatively common, solitary species that occurs throughout California, wintering along the coast and in southern California, and breeding in areas inland and north of the winter range. Prefers open habitats or habitat mosaics, with trees for cover and open areas or habitat edges for feeding. Prefers to roost in dense foliage of medium to large trees.	Low. Potential roosting habitat is available in eucalyptus and other large trees in the riparian corridor within the Planning Area; however, this species is not expected to breed in the area but may migrate through area and may potentially winter there as well.
Long-eared myotis <i>Myotis evotis</i>	FSC/--	Inhabits woodlands and forests up to approximately 8,200 feet in elevation; roosts in crevices and snags	Low to Moderate. Suitable foraging habitat is limited in the Planning Area. Roosting habitat available in eucalyptus and riparian woodlands in the project area.

SPECIAL-STATUS SPECIES CONSIDERED IN THE EVALUATION OF THE PLANNING AREA

COMMON NAME SCIENTIFIC NAME	LISTING STATUS USFWS/ CDFG/CNPS	GENERAL HABITAT	POTENTIAL TO OCCUR IN THE PLANNING AREA
Silver-haired bat <i>Lasionycteris noctivagans</i>	--/*	Silver-haired bats are commonly associated with old growth forests. Maternity colonies found in tree cavities or small hollows. Typical hibernation roosts include small tree hollows, beneath exfoliating bark, in wood piles, in cliff faces, and in cave entrances. Although highly dependent upon old growth forests they feed predominantly in disturbed areas, often in small clearings and along roadways or water courses.	Low. Although most common in old growth forests, may occur on a transient basis within the Planning Area during spring and fall migration.
Yuma myotis <i>Myotis yumanensis</i>	FSC/CSC	Open forests and woodlands below 8,000 feet in close association with water bodies	Moderate. Vacant or underutilized structures on the Planning Area may provide roosting habitat. Suitable foraging habitat is limited but is available in undeveloped portions of the Planning Area.
Pallid bat <i>Antrozous pallidus</i>	FSC/CSC	Habitats include grasslands, scrubs, woodlands, mixed conifer forests, but it is most common in open, dry habitats with rocky areas for roosting. Day roosts include hollow trees, buildings, caves, crevices, and mines.	Low. The CNDDDB shows 3 records within 5 miles of the Planning Area. The closest record is 1.4 miles to the north east along the San Francisco Bay. Potential roosting habitat may be available in trees on or within the vicinity of the Planning Area. However there is a general lack of suitable habitat in the Planning Area.
Salt marsh wandering shrew <i>Sorex vagrans halicoetes</i>	FSC/CSC	Salt marsh habitat 6-8 feet above sea level, with abundant pickleweed and driftwood.	Low. Recorded in salt marshes along the bay. However, suitable habitat does not occur within the Planning Area.
San Pablo vole <i>Microtus californicus sanpabloensis</i>	--/CSC	Salt marshes of San Pablo Creek, San Pablo Bay.	Low to Moderate. Recorded in 1986 from riparian corridors of both San Pablo and Wildcat creeks immediately upstream of San Pablo Bay marshland, 0.5 miles from the Planning Area. The Planning Area does not provide suitable habitat because salt marshes are not present in the Planning Area.

SPECIAL-STATUS SPECIES CONSIDERED IN THE EVALUATION OF THE PLANNING AREA

COMMON NAME	LISTING STATUS	GENERAL HABITAT	POTENTIAL TO OCCUR IN THE PLANNING AREA
SCIENTIFIC NAME	USFWS/ CDFG/CNPS		

STATUS CODES:

FEDERAL: (U.S. Fish and Wildlife Service)

FE = Listed as Endangered (in danger of extinction) by the Federal Government.

FT = Listed as Threatened (likely to become Endangered within the foreseeable future) by the Federal Government.

FP = Proposed for Listing as Endangered or Threatened.

FC = Candidate to become a proposed species.

FSC = Former FWS Species of Concern. The USFWS office in Sacramento, which is responsible for the central portion of the state, including the project area, no longer lists Species of Concern but recommends that species considered to be at potential risk by a number of organizations and agencies be addressed during project environmental review. Also may be NMFS Species of Concern, which are still listed.

MMPA = Marine Mammal Protection Act

STATE: (California Department of Fish and Game)

CE = Listed as Endangered by the State of California

CT = Listed as Threatened by the State of California

CR = Listed as Rare by the State of California (plants only)

CSC = California Species of Special Concern

3503.5=Protection for nesting species of Falconiformes (hawks) and Strigiformes (owls)

*Special animal—listed on CDFG's Special Animals List

California Native Plant Society

List 1A=Plants presumed extinct in California

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

List 4= Plants of limited distribution

An extension reflecting the level of threat to each species is appended to each rarity category as follows:

.1 – Seriously endangered in California

.2 – Fairly endangered in California

.3 – Not very endangered in California

Source: *CNDDb, 2010; CNPS, 2010; USFWS, 2010*

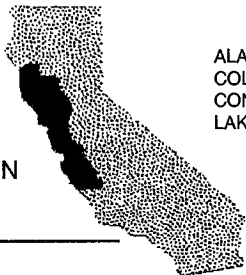
Appendix D

Northwest Information Center

Cultural Resources Consultation

The following pages are a record of the Northwest Information Center response to the cultural resources data request submitted for the entire City of San Pablo in the context of the 2030 San Pablo General Plan update. The feedback from this information request was applied for purposes of cultural resources analysis for the proposed Project, due to proximity in time.

**CALIFORNIA
HISTORICAL
RESOURCES
INFORMATION
SYSTEM**



ALAMEDA
COLUSA
CONTRA COSTA
LAKE

MARIN
MENDOCINO
MONTEREY
NAPA
SAN BENITO
SAN FRANCISCO

SAN MATEO
SANTA CLARA
SANTA CRUZ
SOLANO
SONOMA
YOLO

Northwest Information Center
Sonoma State University
1303 Maurice Avenue
Rohnert Park, California 94928-3609
Tel: 707.664.0880 • Fax: 707.664.0890
E-mail: leigh.jordan@sonoma.edu
<http://www.sonoma.edu/nwic>

July 23, 2008

NWIC File No.: 08-0034

Stan Lai
Dyett & Bhatia
755 Sansome Street
Suite 400
San Francisco, CA 94111

Re: Record search results for the proposed San Pablo General Plan and EIR update.

Dear Mr. Lai:

Per your request received by our office on 10 July 2008, a records search was conducted for the above referenced project by reviewing pertinent Northwest Information Center (NWIC) data maps, historic-period maps, and literature for Contra Costa County on file at this office. Review of this information indicates that the proposed project area contains seven (7) recorded Native American cultural resources: P-07-000074 (CA-CCO-132), P-07-000128 (CA-CCO-247), P-07-000150 (CA-CCO-271), P-07-000151 (CA-CCO-272), P-07-000466 (CA-CCO-357), P-07-000471 (CA-CCO-374), and P-07-000672 (CA-CCO-246). All of these resources represent Native American habitation sites and three of the seven have recorded burials. The proposed project area also includes seven (7) historic-period cultural resources: P-07-000467 (CA-CCO-358H), P-07-000866, P-07-002678, P-07-002679, P-07-002680, P-07-002681, and P-07-002753. All of these resources represent historic-era buildings that are still (as of the original recording) standing. This office has record of forty-seven (47) cultural resource studies, covering approximately 25% of the San Pablo area. Please see the attached bibliography for the citation for each of these studies.

The Office of Historic Preservation's (OHP) Historic Property Directory (HPD) has 58 listings in the San Pablo area. Please refer to the attached pages from the OHP HPD that show the details for these listings (*also included is CA OHP Technical Assistance Bulletin #8 which explains how to use these listings*). The OHP HPD also includes a section on the determinations of eligibility for archaeological resources (*this section was not copied*). P-07-000150 (CA-CCO-271), the Batha Site, is a Native American archaeological site that is part of the Lower San Pablo Creek Archaeological District. P-07-000150 (CA-CCO-271) has an eligibility status code of 2D2, meaning it is a contributor to a district determined eligible for the National Register by consensus through the Section 106 process and it is listed in the California Register.

The CA Inventory of Historic Resources (1976) has two listings in the San Pablo area: the Alvarado Adobe (State Historic Landmark #512) and the Gutierrez Adobe.

The Contra Costa Historic Resources Inventory lists fourteen (14) resources for the San Pablo area: the Bouquet Chateau, St. Paul's Catholic Church and Graveyard, the Tewksbury Home, Depot Business Area, the Stanley Alter Home, the Rumrill-Helms House, the Earthquake Refugee Camp, the Alvarado Adobe, the Blume House, the Texiera Home, the Pullman Street Rectory, the Andrata House, the Mello residence, and Indian Mounds.

The Caltrans Bridge Inventory lists eight bridges/culverts that have been inventoried within the San Pablo area. All of these have been either determined categorically ineligible (the culverts) or do not meet the significance criteria.

At the time of Euroamerican contact the Native Americans that lived in the area were the *Huchiun*, speakers of the Costanoan/Ohlone language, part of the Utian language family (Levy 1978:485). Although the San Pablo area appears to encompass portions of the principal area for the *Huchiun*, there are no Native American resources in or adjacent to the proposed project area referenced in the ethnographic literature.

Based on an evaluation of the environmental setting and features associated with known sites, Native American cultural resources in this part of Contra Costa County have been found near sources of water including perennial and intermittent streams and springs, on midslope terraces and elevated knolls above the floodplain, and near ecotones and other productive environments. The City of San Pablo contains two principal streams, Wildcat and San Pablo Creeks, along with several intermittent streams and wetlands, midslope terraces and numerous ecotones, including the transition from the bay margin to the adjacent uplands. Given the similarity of these environmental factors, coupled with the number of record habitation sites there is a high likelihood that unrecorded Native American cultural resources exist in the City of San Pablo.

Review of historical literature and maps indicate the City of San Pablo has seen a long development history dating back to the early part of the 19th-century, through the Mexican period, and into the American period. Numerous buildings survive from these time periods and provide a link to the historic-era development of San Pablo. Archaeological deposits associated with the occupants of the buildings most likely survive in specific locations. With this in mind, there is a high possibility of identifying historic-period archaeological resources in the City of San Pablo.

RECOMMENDATIONS:

1) As per Senate Bill 18 (Chapter 905, Statutes of 2004), local governments are required to consult with California Native American tribes prior to making certain planning decisions and to provide notice to tribes at certain key points in the planning process. These consultation and notice requirements apply to adoption and amendment of general plans (defined in Government Code §65300 et seq.). Each time a local government considers a proposal to adopt or amend the general plan, they are required to contact the appropriate tribes identified by the Native American Heritage Commission.

2) There are 14 recorded cultural resources in the proposed project area. It is recommended that a professional archaeologist or architectural historian assess these resources prior to any project specific development and provide recommendations.

3) There is a high possibility of identifying Native American sites and a high possibility of identifying historic-period archaeological resources in the project area. We recommend a qualified archaeologist conduct further archival and field study to identify cultural resources during project specific planning. Field study may include, but is not limited to, pedestrian survey, auguring, shovel testing, or geoarchaeological testing as well as other common methods used to identify the presence of archaeological resources.

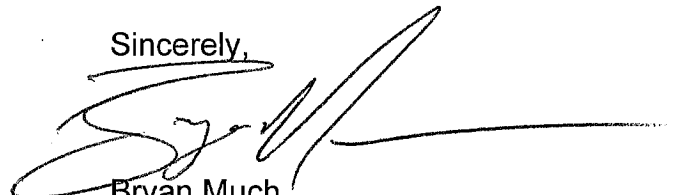
4) Review for possible historic structures has included only those sources listed in the attached bibliography and should not be considered comprehensive. The Office of Historic Preservation has determined that buildings, structures, and objects 45 years or older may be of historical value. ***The City of San Pablo contains numerous buildings listed in the OHP HPD, CA Inventory of Historic Resources, and/or the Contra Costa County Historic Resource Inventory. In addition, numerous un-identified buildings meeting OHP's age threshold are located within the City of San Pablo limits. Therefore, it is recommended that they be assessed by an architectural historian before commencement of project activities.***

5) If cultural resources are encountered during the project, avoid altering the materials and their context until a cultural resource consultant has evaluated the situation. Project personnel should not collect cultural resources. Prehistoric resources include chert or obsidian flakes, projectile points, mortars, and pestles; and dark friable soil containing shell and bone dietary debris, heat-affected rock, or human burials. Historic-period resources include stone or adobe foundations or walls; structures and remains with square nails; and refuse deposits or bottle dumps, often located in old wells or privies.

6) It is recommended that any identified cultural resources be recorded on DPR 523 historic resource recordation forms, available online from the Office of Historic Preservation's website: http://ohp.parks.ca.gov/default.asp?page_id=1069.

Thank you for using our services. Please contact this office if you have any questions, (707) 664-0880.

Sincerely,



Bryan Much
Researcher I

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2007 *Cultural Resources Study of the Wanlass Park Project, San Pablo, Contra Costa County, California (letter report)*
NWIC Report S-034157

PROPERTY-NUMBER	PRIMARY-#	STREET-ADDRESS	NAMES	CITY	OWN	YR-C	OHP-PROG..	PRG-REFERENCE-NUMBER	STAT-DAT	NRS	CRIT
076270	07-001816	421 WASHINGTON AVE	RICHMOND	P	0		HIST.SURV.	4802-0003-0247	11/05/79	1D	C
073760	07-001334	422 WASHINGTON AVE	RICHMOND	P	0		HIST.SURV.	4802-0003-0287	11/05/79	1D	C
075948	07-001501	427 WASHINGTON AVE	RICHMOND	P	0		HIST.SURV.	4802-0003-0082	11/05/79	1D	A
075854	07-001453	428 WASHINGTON AVE	RICHMOND	P	0		HIST.SURV.	4802-0003-0044	11/05/79	1D	A
076164	07-001558	432 WASHINGTON AVE	RICHMOND	P	0		HIST.SURV.	4802-0003-0149	11/05/79	1D	C
012799	07-001174	WESTERN DR	CHINESE FISH CAMP	M	1880		HIST.SURV.	4802-0016-0000		SS2	
012800	07-001175	WESTERN DR	U.S. WHALING STATION, INDEPENDENT	M			HIST.SURV.	4802-0017-0000	10/02/78	1S	
012783	07-001160	WESTERN DR	WINEHAVEN/POINT MOLATE	F	1908		HIST.RES.	NPS-78000658-0000	10/02/78	1S	
							HIST.SURV.	4802-0001-0000	10/28/77	2S	
129137	07-002519	53 WILLARD AVE	RICHMOND	P	1945		PROJ.REVW.	DOE-07-01-0022-0000	12/03/01	6Y	
							HIST.RES.	HUD011127G	12/03/01	6Y	
070107	07-001301	210 WILLARD AVE	RICHMOND	U	1928		PROJ.REVW.	HUD910222J	03/18/91	6Y	
070106	07-001300	223 WILLARD AVE	RICHMOND	U	1937		PROJ.REVW.	HUD910222I	03/18/91	6Y	
131399		335 WILLARD AVE	RICHMOND	P	1930		HIST.RES.	DOE-07-02-0008-0000	03/28/02	6Y	
							PROJ.REVW.	HUD020214H	03/28/02	6Y	
146640		5848 YALE AVE	RICHMOND	P	1942		HIST.RES.	DOE-07-04-0004-0000	05/06/04	6Y	
							PROJ.REVW.	HUD040416B	05/06/04	6Y	
106755	07-001917		CUMMINGS SKYWAY, BRIDGE #28-0213	RODEO			HIST.RES.	DOE-07-97-0002-0000	01/17/97	6Y	
106757	07-001918		CHRISTIE ROAD UNDERPASS BRIDGE, BR	RODEO			PROJ.REVW.	FWA961211A	01/17/97	6Y	
							HIST.RES.	DOE-07-97-0004-0000	01/17/97	6Y	
155394		584 1ST ST	RODEO	P	1928		PROJ.REVW.	FWA961211A	01/17/97	6Y	
096095	07-001827	328 3RD ST	RODEO	M	1927		HIST.RES.	DSA-07-SPS-3284	09/21/05	6Y	
106576	07-001915	100 CLAEYS LANE	RODEO	P	1900		HIST.RES.	DOE-07-97-0001-0000	03/16/95	6J	C
							PROJ.REVW.	FWA961211A	01/17/97	6Y	
095488	07-001824	239 LAKE AVE	RODEO	P	1925		PROJ.REVW.	HUD950215A	04/11/95	6Y	
079992	07-001740	154 LAKE ST	RODEO	U	1922		PROJ.REVW.	HUD930106M	02/03/93	6Y	
140020		532 NAPA AVE	RODEO	P	1948		HIST.RES.	DOE-07-03-0027-0000	05/23/03	6Y	
							PROJ.REVW.	HUD030516A	05/23/03	6Y	
162949		224 PACIFIC AVE	RODEO	P	1949		PROJ.REVW.	HUD060822G	08/28/06	6Y	
010824	07-001131	PARKER AVE	SELBY SMELTER SITE	U	1885		HIST.SURV.	4572-0001-0000		7R	
160474		208 PARKER AVE	RODEO	P	1947		PROJ.REVW.	HUD060207F	02/09/06	6Y	
072948	07-001315	470 PARKER AVE	RODEO	U			HIST.RES.	SPIH-CCO-009	05/08/91	7L	
							ST.HS.LDMK	07-0011	05/03/91	7L	
155420		550 SAN PABLO AVE	RODEO	P	1947		PROJ.REVW.	HUD050822C	09/26/05	6Y	
106577	07-001916	3801 SR 4	RODEO	P	1923		HIST.RES.	DOE-07-97-0003-0000	01/17/97	6Y	
							PROJ.REVW.	FWA961211A	01/17/97	6Y	
106758	07-001919		RODEO CREEK BRIDGE, BRIDGE #28-003	(VIC) RODEO			HIST.RES.	DOE-07-97-0005-0000	01/17/97	6Y	
010625	07-001132	SR 80	OLEUM	(VIC) RODEO			PROJ.REVW.	FWA961211A	01/17/97	6Y	
							HIST.SURV.	4572-0002-0000		7R	
129337	07-002539	3200 11TH ST	SAN PABLO	P	1949		HIST.RES.	DOE-07-02-0003-0000	01/14/02	6Y	
147279		3409 11TH ST	SAN PABLO	P	1954		PROJ.REVW.	HUD020110N	01/14/02	6Y	
							HIST.RES.	DOE-07-04-0010-0000	01/23/04	6Y	
							PROJ.REVW.	HUD031231D	01/23/04	6Y	
146036		1816 14TH ST	SAN PABLO	P	1924		HIST.RES.	DOE-07-04-0002-0000	02/03/04	6Y	
141058		1614 15TH ST	SAN PABLO	P	1935		PROJ.REVW.	HUD040130C	02/03/04	6Y	
							HIST.RES.	DOE-07-03-0028-0000	07/03/03	6Y	
135837		1875 15TH ST	SAN PABLO	P	1952		PROJ.REVW.	HUD030606A	07/03/03	6Y	
							HIST.RES.	DOE-07-02-0075-0000	12/16/02	6Y	
							PROJ.REVW.	HUD021203B	12/16/02	6Y	

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PROPERTY-NUMBER	PRIMARY-#	STREET-ADDRESS	NAMES	CITY-NAME	OWN	YR-C	OHP-PROG.	PRG-REFERENCE-NUMBER	STAT-DAT	NRS	CRIT
6 169781	2759 15TH ST			SAN PABLO	P	1951	PROJ.REVW.	HUD071213L	01/08/08	6Y	
7 129257	1740 16TH ST			SAN PABLO	P	1934	HIST.RES.	DOE-107-01-0037-0000	12/31/01	6Y	
8 132825	1881 16TH ST			SAN PABLO	P	1953	HIST.RES.	HUD011226J	12/31/01	6Y	
9 138782	1958 16TH ST			SAN PABLO	P	1946	HIST.RES.	DOE-07-02-0061-0000	08/05/02	6Y	
10 131423	2721 18TH ST			SAN PABLO	P	1946	PROJ.REVW.	HUD020729C	08/05/02	6Y	
11 161654	2972 19TH ST			SAN PABLO	P	1953	HIST.RES.	DOE-07-03-0021-0000	04/15/03	6Y	
12 136783	2024 20TH ST			SAN PABLO	P	1948	HIST.RES.	HUD030411A	04/15/03	6Y	
13 166216	2996 20TH ST			SAN PABLO	P	1954	PROJ.REVW.	DOE-07-02-0017-0000	06/06/02	6Y	
14 132819	2331 22ND ST			SAN PABLO	P	1929	HIST.RES.	HUD020522K	06/06/02	6Y	
15 012818	ALVARADO SQUARE	BLUME HOUSE		SAN PABLO	P	1905	PROJ.REVW.	HUD060317A	03/21/06	6Y	
16 012808	ALVARADO SQUARE	TEXIERA HOME		SAN PABLO	M	1890	HIST.SURV.	DOE-07-03-0014-0000	02/03/03	6Y	
17 132457	2900 ARUNDEL WY			SAN PABLO	P	1943	HIST.RES.	PROJ.REVW. HUD030128J	02/03/03	6Y	
18 136070	2445 BANCROFT LANE			SAN PABLO	P	1943	HIST.RES.	DOE-07-02-0060-0000	06/04/07	6Y	
19 132190	6211 BAYVIEW AVE	NOT IN SPRA		SAN PABLO	P	1951	PROJ.REVW.	DOE-07-02-0001-0000	08/05/02	6Y	
20 161955	150 BONNIE DR	NOT IN SPRA		SAN PABLO	P	1954	PROJ.REVW.	HUD020729D	08/05/02	6Y	
21 166244	321 BONNIE DR	NOT IN SPRA		SAN PABLO	P	1954	PROJ.REVW.	4806-0011-0000	07/10/02	6Y	
22 146035	1300 BROOKSIDE AVE			SAN PABLO	P	1949	HIST.RES.	HUD060428A	07/10/02	6Y	
23 134262	1811 BUSH AVE			SAN PABLO	P	1940	HIST.RES.	HUD070702S	05/03/06	6Y	
24 012809	1825 CHURCH LANE	ST PAULS CATHOLIC CHURCH & GRAVEY		SAN PABLO	P	1863	HIST.SURV.	DOE-07-04-0001-0000	02/03/04	6Y	
25 012819	1901 CHURCH LANE	OLD RECTORY		SAN PABLO	P	1875	HIST.RES.	HUD040120B	02/03/04	6Y	
26 131422	1501 COLIN ST			SAN PABLO	P	1943	PROJ.REVW.	DOE-07-02-0067-0000	10/01/02	6Y	
27 012814	930 CR 20	RUMRILL HELMS HOUSE		SAN PABLO	P	1884	HIST.SURV.	HUD020926I	10/01/02	6Y	
28 147278	2009 CR 20			SAN PABLO	P	1951	HIST.RES.	DOE-07-02-0016-0000	06/06/02	6Y	
29 012815	2022 CR 20			SAN PABLO	P	1948	PROJ.REVW.	4806-0007-0000	06/06/02	6Y	
30 169728	1401 DOVER AVE			SAN PABLO	P	1943	HIST.RES.	DOE-07-04-0009-0000	01/23/04	6Y	
31 134260	2418 DOVER AVE			SAN PABLO	P	1951	HIST.SURV.	HUD031231B	01/23/04	6Y	
32 129336	1514 EMERIC AVE			SAN PABLO	P	1935	PROJ.REVW.	4806-0008-0000	01/23/04	6Y	
33 138783	1807 EMERIC AVE			SAN PABLO	P	1935	HIST.RES.	HUD071213K	01/07/08	6Y	
34 136544	2201 EMERIC AVE			SAN PABLO	P	1930	PROJ.REVW.	DOE-07-02-0066-0000	10/01/02	6Y	
35 136071	1108 JOHN AVE			SAN PABLO	P	1942	HIST.RES.	HUD020926J	10/01/02	6Y	
36 158312	1439 KAREN RD	NOT IN SPRA		SAN PABLO	P	1954	PROJ.REVW.	DOE-07-02-0002-0000	01/14/02	6Y	
37 144729	240 LINDA DR	NOT IN SPRA		SAN PABLO	P	1953	HIST.RES.	HUD020110M	01/14/02	6Y	
38 137730	1601 MANOR DR			SAN PABLO	P	1943	PROJ.REVW.	DOE-07-03-0022-0000	04/15/03	6Y	
39 137730				SAN PABLO	P	1943	HIST.RES.	HUD030411B	04/15/03	6Y	
40 137730				SAN PABLO	P	1943	PROJ.REVW.	DOE-07-03-0013-0000	01/27/03	6Y	
41 137730				SAN PABLO	P	1943	HIST.RES.	HUD030115A	01/27/03	6Y	
42 137730				SAN PABLO	P	1943	PROJ.REVW.	DOE-07-03-0007-0000	01/06/03	6Y	
43 137730				SAN PABLO	P	1943	HIST.RES.	HUD021210B	01/06/03	6Y	
44 137730				SAN PABLO	P	1943	PROJ.REVW.	HUD051216M	12/30/05	6Y	
45 137730				SAN PABLO	P	1943	HIST.RES.	DOE-07-03-0037-0000	10/20/03	6Y	
46 137730				SAN PABLO	P	1943	PROJ.REVW.	HUD031003B	10/20/03	6Y	
47 137730				SAN PABLO	P	1943	HIST.RES.	DOE-07-03-0017-0000	03/07/03	6Y	
48 137730				SAN PABLO	P	1943	PROJ.REVW.	HUD030303E	03/07/03	6Y	

OFFICE OF HISTORIC PRESERVATION * * * Directory of Properties in the Historic Preservation Data File for CONTRA COSTA County.										Page 59	03-07-08	PRG-REFERENCE-NUMBER		STAT-DAT	NRS	CRIT
PROPERTY-NUMBER	PRIMARY-#	STREET-ADDRESS	NAMES	CITY-NAME	OWN	YR-C	OHP-PROG.	HIST. SURV.	HIST. RES.	PROJ. REVW.	PROJ. REVW.	PROJ. REVW.	PROJ. REVW.	PROJ. REVW.	PROJ. REVW.	PROJ. REVW.
31 35 012810 138784	07-001183	2650 MARKET AVE 1830 MASON ST	1906 EARTHQUAKE CAMP SITE	SAN PABLO SAN PABLO	P P	1906 1951	HIST. SURV. HIST. RES.	4806-0003-0000 DOE-07-03-0023-0000								7N 6Y
30 012811 132191	07-001184	5739 MCBRYDE AVE 24 MONTALVIN DR	BOUQUET CHATEAU NOT IN SRA	SAN PABLO SAN PABLO	P P	1911 1950	HIST. SURV. HIST. RES.	4806-0004-0000 DOE-07-02-0025-0000								7R 6Y
136069		2584 O'HARTE RD	NOT IN SRA	SAN PABLO	P	1952	HIST. RES.	DOE-07-03-0005-0000								6Y
137729		2596 O'HARTE RD	NOT IN SRA	SAN PABLO	P	1952	HIST. RES.	DOE-07-03-0016-0000								6Y
161880		2634 OHARE AVE		SAN PABLO	P	1943	HIST. RES.	DOE-07-03-0016-0000								6Y
147571		1919 PINE AVE		SAN PABLO	P	1951	HIST. RES.	DOE-07-04-0013-0000								6Y
012812	07-001185	1841 PULLMAN ST	PULLMAN STREET RECTORY	SAN PABLO	P	1875	HIST. SURV.	4806-0005-0000								6Y
012813	07-001186	918 RANDY LANE	ANDRATA HOUSE	SAN PABLO	P	1900	HIST. SURV.	4806-0006-0000								6Y
150832		2009 ROAD 20		SAN PABLO	P	1950	HIST. RES.	DOE-07-04-0022-0000								6Y
150539		2778 ROLLINGWOOD DR		SAN PABLO	P	1943	HIST. RES.	DOE-07-04-0020-0000								6Y
136068		2797 ROLLINGWOOD DR		SAN PABLO	P	1943	HIST. RES.	DOE-07-03-0004-0000								6Y
164754		2807 ROLLINGWOOD DR		SAN PABLO	P	1943	HIST. RES.	DOE-07-03-0004-0000								6Y
012816	07-001189	SAN PABLO AVE	ALVARADO ADOBE	SAN PABLO	M	1826	HIST. SURV.	4806-0009-0000								6Y
012817	07-001190	14006 SAN PABLO AVE	MELLO RESIDENCE	SAN PABLO	P	1875	HIST. SURV.	4806-0010-0000								7N
129138	07-002520	1230 SANFORD AVE		SAN PABLO	P	1950	HIST. RES.	DOE-07-01-0023-0000								7R
150410		1914 SANFORD AVE		SAN PABLO	P	1940	HIST. RES.	DOE-07-01-0023-0000								6Y
163418		1748 SUTTER AVE		SAN PABLO	P	1944	HIST. RES.	DOE-07-01-0023-0000								6Y
129335	07-002537	1845 TRUMAN ST	NOT IN SRA	SAN PABLO	P	1950	HIST. RES.	DOE-07-02-0001-0000								6Y
010667	07-001135	CROW CANYON RD	WILLIAM LYNCH HOME	SAN RAMON	P	1888	HIST. SURV.	4583-0003-0000								7R
010668	07-001136	FINLEY RD	TASSAJARA SCHOOL	SAN RAMON	M	1888	HIST. SURV.	4583-0004-0000								7R
010669	07-001137	3686 NORRIS CANYON RD	CHRISTIAN WIEDEMANN RANCH	SAN RAMON	P	1860	HIST. SURV.	4583-0005-0000								7R
010666	07-001134	19251 SAN RAMON BLVD	EL NIDO, THE NES	SAN RAMON	P	1852	HIST. SURV.	4583-0002-0000								3S
010665	07-001133	19600 SAN RAMON VALLEY BLVD	DAVID GLASS HOME	SAN RAMON	P	1859	HIST. SURV.	NPS-02000677-0020								1D
132546		19953 SAN RAMON VALLEY BLVD	MACHINE STORAGE SHED	SAN RAMON	M		HIST. SURV.	4583-0001-0000								7R
132545		19953 SAN RAMON VALLEY BLVD	FUEL SHED	SAN RAMON	M		HIST. RES.	NPS-02000677-0013								1D
132544		19953 SAN RAMON VALLEY BLVD	MACHINE SHOP	SAN RAMON	M		HIST. RES.	NPS-02000677-0011								1D
132543		19953 SAN RAMON VALLEY BLVD	GRANARY	SAN RAMON	M		HIST. RES.	NPS-02000677-0009								1D
132542		19953 SAN RAMON VALLEY BLVD	BARN	SAN RAMON	M		HIST. RES.	NPS-02000677-0010								1D
132541		19953 SAN RAMON VALLEY BLVD	HORSE BARN	SAN RAMON	M		HIST. RES.	NPS-02000677-0012								1D
132540		19953 SAN RAMON VALLEY BLVD	WALNUT PROCESSING SHED #3	SAN RAMON	M		HIST. RES.	NPS-02000677-0008								1D
132539		19953 SAN RAMON VALLEY BLVD	WALNUT PROCESSING SHED #2	SAN RAMON	M		HIST. RES.	NPS-02000677-0016								1D
132538		19953 SAN RAMON VALLEY BLVD	WALNUT PROCESSING SHED #1	SAN RAMON	M		HIST. RES.	NPS-02000677-0015								1D
132536		19953 SAN RAMON VALLEY BLVD	CARPORT	SAN RAMON	M		HIST. RES.	NPS-02000677-0014								1D
132535		19953 SAN RAMON VALLEY BLVD	GLASS TANK HOUSE	SAN RAMON	M		HIST. RES.	NPS-02000677-0005								6X
132534		19953 SAN RAMON VALLEY BLVD	MEAT LOCKER	SAN RAMON	M		HIST. RES.	NPS-02000677-0021								1D
132532		19953 SAN RAMON VALLEY BLVD	GROTTO	SAN RAMON	M		HIST. RES.	NPS-02000677-0006								1D
132531		19953 SAN RAMON VALLEY BLVD	PERGOLA	SAN RAMON	M	1938	HIST. RES.	NPS-02000677-0003								1D
132530		19953 SAN RAMON VALLEY BLVD		SAN RAMON	M		HIST. RES.	NPS-02000677-0002								1D
132529		19953 SAN RAMON VALLEY BLVD	BOONE HOUSE	SAN RAMON	M	1900	HIST. RES.	NPS-02000677-0007								1D