

4 Alternatives

CEQA mandates consideration and analysis of alternatives to the proposed General Plan. According to CEQA Guidelines, the range of alternatives “shall include those that could feasibly accomplish most of the basic purposes of the project and could avoid or substantially lessen one or more of the significant impacts” (Section 15126(d)(2)). The alternatives may result in new impacts that do not result from the proposed Specific Plan.

Case law suggests that the discussion of alternatives need not be exhaustive and that alternatives be subject to a construction of reasonableness. The impacts of the alternatives may be discussed “in less detail than the significant effects of the project proposed” (CEQA Guidelines section 15126.6(d)). Also, the Guidelines permit analysis of alternatives at a less detailed level for general plans and other program EIRs, compared to project EIRs. The Guidelines do not specify what would be an adequate level of detail. 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.

4.1 BACKGROUND ON DEVELOPMENT OF ALTERNATIVES

The proposed Plan came about as a result of a thorough planning process. The process emphasized community goals and the opportunities and constraints of the Planning Area. To define the goal and a thorough understanding of the site, the planning team conducted: field visits, existing plans and studies review, stakeholder interviews, monthly coordination meetings with city staff and BART, City Council Study Sessions, and community workshops. Individual stakeholders were interviewed in March and April 2008. Comments received from the interviews were published in a Stakeholders Interviews Summary Report in May 2008. In addition, an Existing Conditions, Opportunities, and Constraints Report was published in May 2008. This report identified major development issues that needed to be addressed in the Specific Plan, along with significant environmental and circulation constraints. A *Market Overview and Absorption Projections Report* was also prepared, analyzing the market demand and absorption potential for residential, retail, and office uses. Subsequently, alternatives were then prepared based on the opportunities and constraints analysis and the comments received from stakeholders.

ALTERNATIVES INITIALLY CONSIDERED

The Station Area Alternatives originally identified in the Alternative Development Scenarios Report were initially intended to respond to community needs and provide a reasonable range of land use scenarios based on alternative eBART station locations. Meetings with the City Council, consulting team, city staff, and property owners provided feedback in order to refine the diagrams. City Council Study Sessions were conducted on May 20 and July 8. The alternative diagrams and draft project description were presented to the Planning Commission as part of the Environmental Impact Report scoping session on June 18, 2008.

The initial Station Area Alternatives presented three land use concepts, The Alternative Plan: Median Station, Alternative 2: Northside West Station, and Alternative 3: Northside East Station. These Alternatives differed in both the amount and the design of new development, as determined by the location of the eBART Station and potential for transit-oriented development. These plans

provided a range of options for physical growth within the Planning Area and represented varying amounts of development capacity. A subsequent fourth alternative was prepared, based on further studies by BART that identified a potential East Median Station.

1. **Median Station.** This option was based on BART's proposed project which includes a single eBART station in the SR 4 median, east of the Hillcrest Interchange and south the Planning Area. The land use plan showed transit-oriented development in the western portion of the Planning Area with business park and retail land uses comprising the remaining portions.
2. **Northside West Station.** This option located the eBART station out of the freeway median, adjacent to the UP right-of-way, near Viera Avenue. BART analyzed various methods to bring the tracks out of the median, including a long or short tunnel or a flyover. This alternative allowed for the development of a transit village, with housing, jobs, and pedestrian retail, just north of the eBART station and the railroad. Commercial retail uses lined the freeway and some business park uses were designated outside the half-mile walking distance of the station.
3. **Northside East Station.** The eBART station was located out of the freeway median adjacent to the UP right-of-way, further east near the Phillips Lane extension in this option. Development based on this option would have been contingent on the construction of a new SR 4 interchange near Phillips Lane. This alternative supported a high-intensity transit village with a wide-variety of uses in the eastern portion of the Planning Area. The western portion of the Planning Area highlighted residential and retail uses.
4. **East Median Station.** This alternative was not included in the *Alternative Development Scenarios Report*, but was presented to the public and City Council at the July 8, 2008 Study Session. This option combined a station in the freeway median with the transit-oriented land use scenario similar to the Northside West Station option. The station located was shifted to the east approximately 900 feet in order to create shorter direct pedestrian and bicycle routes from the eBART station to the development area. This alternative also demonstrated the option of a second eBART station in the eastern portion of the Planning Area which would expand the opportunities for transit-oriented development.

During the planning process, the costs of the alternative eBART station locations were studied, and BART concluded that the Median Station location is the only feasible station location. The other station locations added enormous additional costs that were unfunded; and would delay the project substantially because they would preclude the construction of eBART in tandem with the widening of SR 4. However, because the East Median Station location provides such great advantages to the development of the Hillcrest Station Area, this location continues to be the City's preferred option. Therefore, in the later phases of the planning process, the Median Station and East Median Station alternatives were the focus of the evaluation by the Planning Commission, City Council, and the community.

Ultimately a single proposed plan was prepared, as shown in Chapter 2, Project Description. The Plan shows both the Median Station and the East Median Station locations, and is designed to function with either station location. Policies related to land use, circulation, open space, and infrastructure were developed based on all of the policy discussions throughout the planning process.

4.2 DESCRIPTION OF ALTERNATIVES

This chapter describes and evaluates two alternatives, the Alternative Plan and the No Project scenario, to the proposed Hillcrest Station Area Specific Plan. The Alternative Plan shows a Median Station location, based on BART's proposed project, and a lower intensity of development in the Hillcrest Station Area. Consideration of the No Project alternative is required by CEQA in all EIRs to help decision-makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. The No Project scenario is based on the Antioch 2003 General Plan Update, which represents the continuation of the existing plans and policies if the proposed Plan is not adopted. Table 4.2-1 summarizes the buildout of the proposed plan, the Alternative Plan and the No Project scenario.

Table 4.2-1 Buildout of Alternatives

	<i>Proposed Plan</i>	<i>Alternative Plan</i>	<i>No Project</i>
Residential Units	2,500	650	1,200
Population	5,000	1,680	2,400
Office Area (sf)	1,200,000	630,000	3,000,000
Retail Area (sf)	1,000,000	370,000	500,000
Hotel Rooms	325	-	-
Total Commercial Area (sf)	2,500,000	1,000,000	3,500,000
Employment	5,600 *	2,300 *	4,035 **
Total Daily Trips	45,143	19,827	35,994
Estimated eBART Riders ***	2,060	620	1,124

* Estimated employment for the Proposed Plan and Alternative Plan was calculated using the following assumptions:

- Retail employment is assumed to generate one job for every 500 square feet of gross floor area, based on total gross acres of land.
- Office employment is assumed to generate one job for every 350 square feet of gross floor area, based on total gross acres of land.
- Hotel employment is assumed to generate 0.8 job per hotel room.

** Estimated employment for the No Project scenario was calculated using the following assumptions:

- Retail employment in the TOD area is assumed to generate one job for every 500 square feet of gross floor area, based on total gross acres of land.
- Business park employment is assumed to generate one job for every 1,000 square feet of gross floor area, based on total gross acres of land.

*** Estimated eBART ridership is based on the following assumptions:

- 0.1 rider per job
- 0.6 rider per housing unit

Source: Dyett & Bhatia, 2008

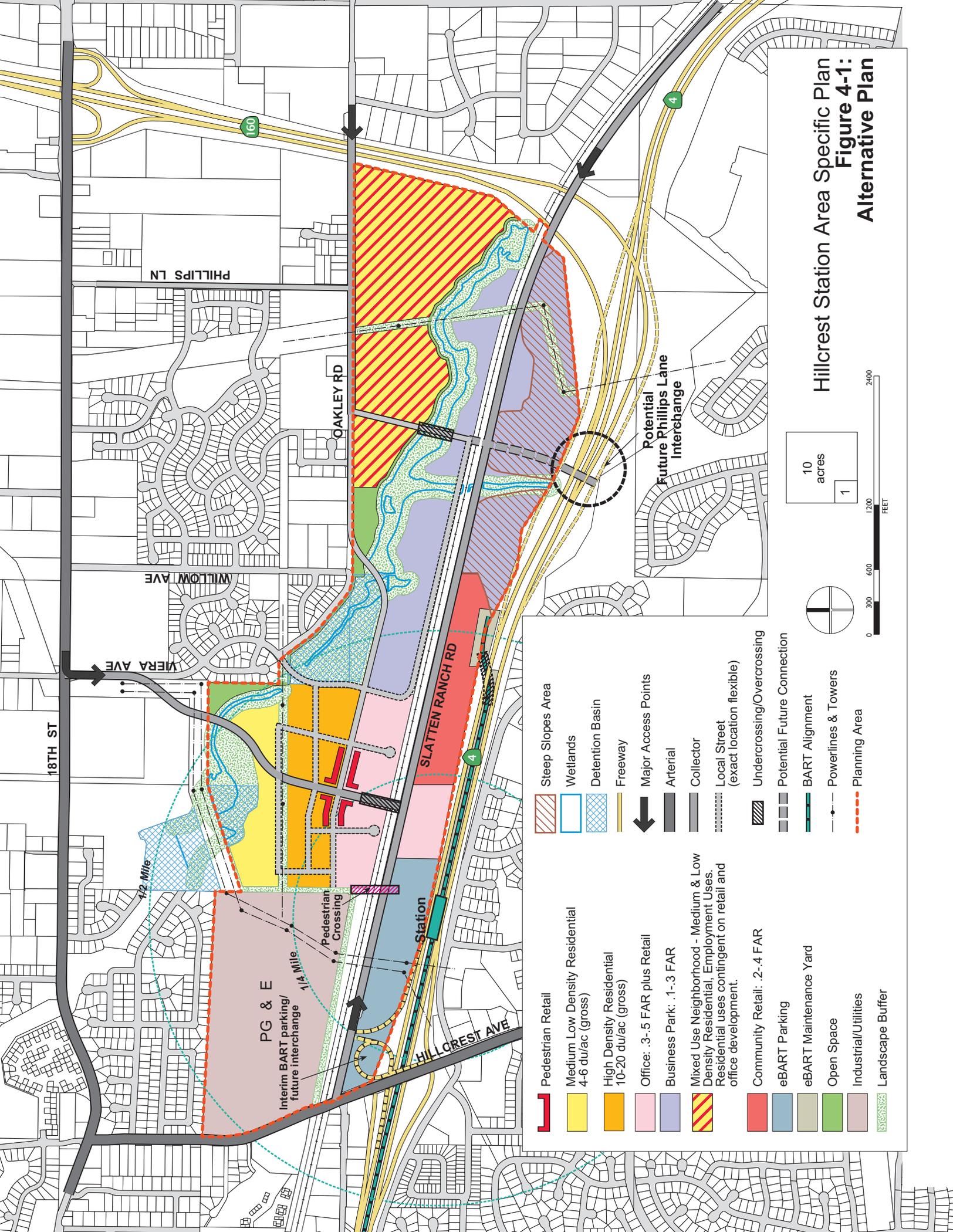
ALTERNATIVE PLAN

The Alternative Plan is based on the BART Proposed Project, which includes one eBART station in the SR 4 median close to Hillcrest Avenue at the Median Station location. The assumed 2035 circulation network is the same as the proposed Plan, with two key exceptions. The Alternative Plan does not include the construction of a Phillips Lane interchange within the planning period; and does not include a potential second station in the eastern portion of the Planning Area. Because the Phillips Lane interchange is not assumed to be built, the Phillips Lane extension would be constructed as a 2-lane collector rather than as a 4-lane arterial.

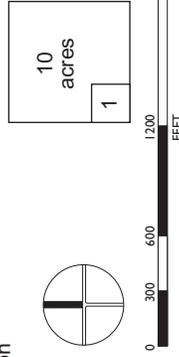
The Alternative Plan assumes a much lower intensity of development than the proposed Plan. The Phillips Lane Interchange is not assumed to be built, and there will be major traffic and circulation constraints. Lower intensity development is assumed in the eastern portion of the site that is further from freeway interchanges. Very little development is expected to occur in the southeast quadrant in the area where there are steep hills. The PG&E electrical transmission towers and lines that cross north-south in the eastern Planning Area would remain in their current location, rather than being relocated as in the proposed Plan.

The Alternative Plan features residential and office use near the station to support the transit investment. The eastern portion is designated as lower intensity uses such as business park and a mixed-use neighborhood focused on commercial and residential uses. The Alternative Plan supports 650 residential units with approximately 1,680 new residents. The designated land uses and transportation system would support approximately 1.0 million square feet of commercial uses, 630,000 square feet of office and 370,000 square feet of retail, with about 2,300 new jobs at buildout. Figure 4-1 illustrates the Alternative Plan Overview.

Hillcrest Station Area Specific Plan Figure 4-1: Alternative Plan



- | | | | |
|--|--|--|---|
| | Pedestrian Retail | | Steep Slopes Area |
| | Medium Low Density Residential
4-6 du/ac (gross) | | Wetlands |
| | High Density Residential
10-20 du/ac (gross) | | Detention Basin |
| | Office: .3-.5 FAR plus Retail | | Freeway |
| | Business Park: .1-.3 FAR | | Major Access Points |
| | Mixed Use Neighborhood - Medium & Low
Density Residential, Employment Uses.
Residential uses contingent on retail and
office development. | | Arterial |
| | Community Retail: .2-.4 FAR | | Collector |
| | eBART Parking | | Local Street
(exact location flexible) |
| | eBART Maintenance Yard | | Undercrossing/Overcrossing |
| | Open Space | | Potential Future Connection |
| | Industrial/Utilities | | BART Alignment |
| | Landscape Buffer | | Powerlines & Towers |
| | | | Planning Area |



NO PROJECT – EXISTING ANTIOCH GENERAL PLAN

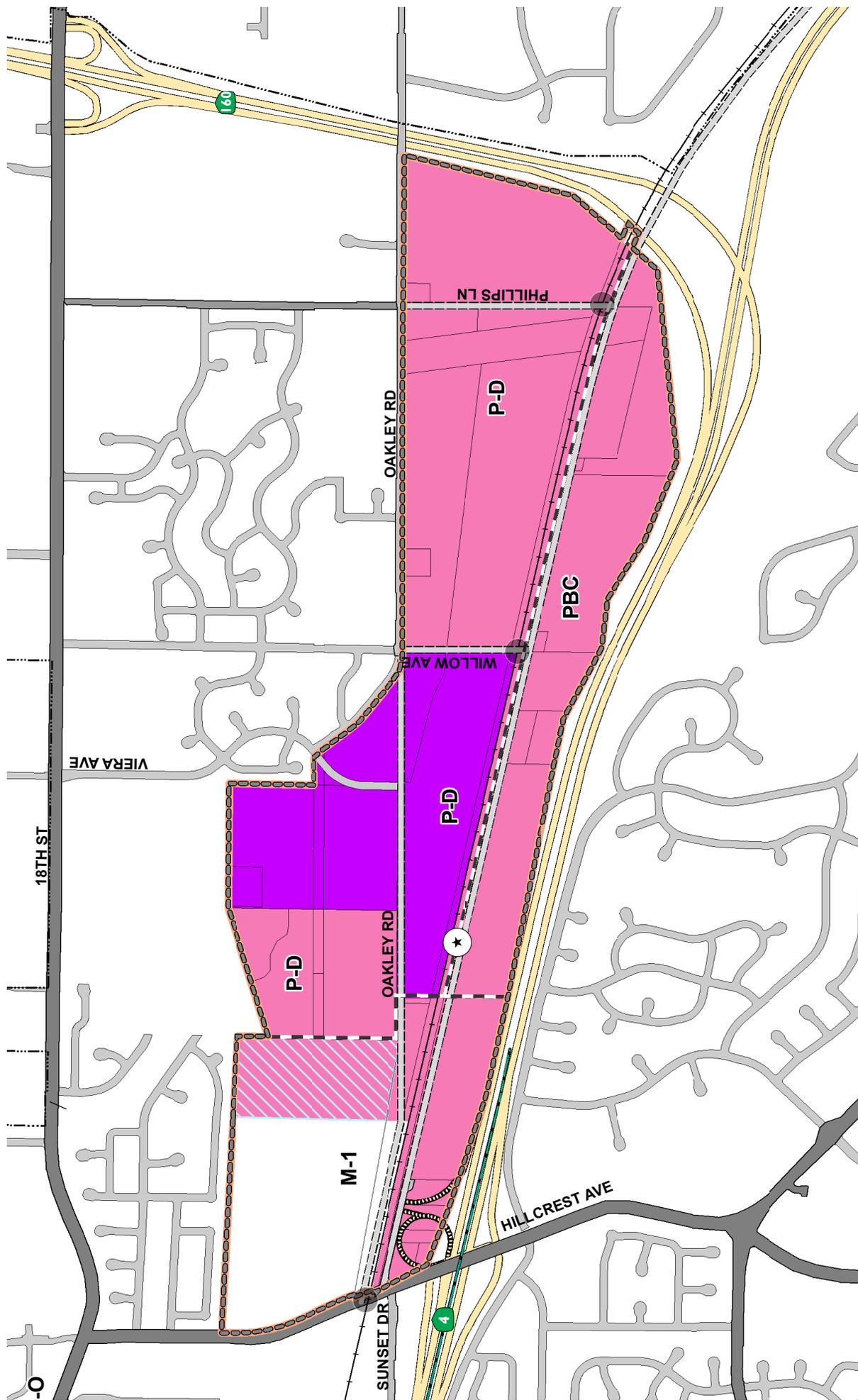
The no project scenario is based on the current General Plan, which was updated in 2003. The Zoning Ordinance was updated to implement the General Plan in 2005. Therefore, this scenario illustrates the expected development if the Planning Area’s existing policies and land use regulations were to remain in place, and planned circulation improvements were to be constructed, including BART service. An overview of the General Plan, plus zoning designations, is illustrated in Figure 4-2. The major differences between the proposed Plan and the General Plan are listed in Table 4.2-2.

Table 4.2-2 General Plan and Proposed Plan Assumptions

<i>Difference</i>	<i>General Plan</i>	<i>Proposed Plan</i>
Planning Horizon	2030	2035
BART Station Location	Near railroad track and Viera Ave	In SR 4 Median near Hillcrest Avenue
Phillips Lane Interchange	Not included	Assumed to be built, but not part of Specific Plan
Viera Avenue	Not extended	Re-aligned and extended to Slatten Ranch Road with railroad grade separation
Willow Avenue	Improved with a railroad grade separation	Does not include a grade separation or specific improvements
Eastern set of PG&E Transmission Towers and Lines	Not relocated	Relocated along the SR 4/SR 160 right-of-way

Source: Dyett & Bhatia, 2008

The General Plan identifies the Planning Area as the SR 4 Industrial Frontage Focus Area. The designated land uses are mostly low-intensity uses such as business park. Transit-oriented development is designated near a BART station located in the Planning Area near the Union Pacific railroad tracks. Based on the land use designations in the 2003 General Plan, and the detailed text and tables in the General Plan that explain allowed densities, this area would support approximately 1,200 housing units and 4,035 jobs. The Existing Conditions, Opportunities, and Constraints Report for the Hillcrest Station Area Specific Plan (Dyett & Bhatia 2008) provides additional detail on the calculations of projected development under the 2003 General Plan and Existing Zoning.



Hillcrest Station Area Specific Plan
Figure 4-2: No Project Overview

Legend:

- Business Park
- Business Park/Public/Institutional
- TOD
- Zoning
- Railroad Grade Separation
- BART Station
- Planning Area
- City Limits
- Future BART Line
- Highway
- Arterial Street
- Collector Street
- Local Street
- Proposed Local Street

Scale: 0, 600, 1,200, 2,400 FEET

Area Scale: 10 acres, 1 acre

North Arrow: [North Arrow Symbol]

Source: Contra Costa County, 2004; City of Antioch, 2007; City of Oakley, 2008.

NORTHSIDE EAST STATION PLAN

One of the alternatives considered during the planning process was a plan based on having one eBART station located out of the SR 4 median near the future Phillips Lane and adjacent to the Union Pacific railroad tracks. The plan is contingent on the construction of the SR 4/Phillips Lane Interchange. The plan framework allows for an intensive mixed-use transit village/lifestyle center in the eastern portion of the Planning Area. This plan has a retail and residential focus, and allows for up to 325 hotel rooms. The western portion of the Planning Area has been designated with lower density residential and commercial uses. The Northside East Station plan would support a higher population, by about 30 percent, than the proposed Plan, due to the higher number of units allowed. The Northside East Station Plan would support about 20 percent fewer jobs than the proposed Plan.

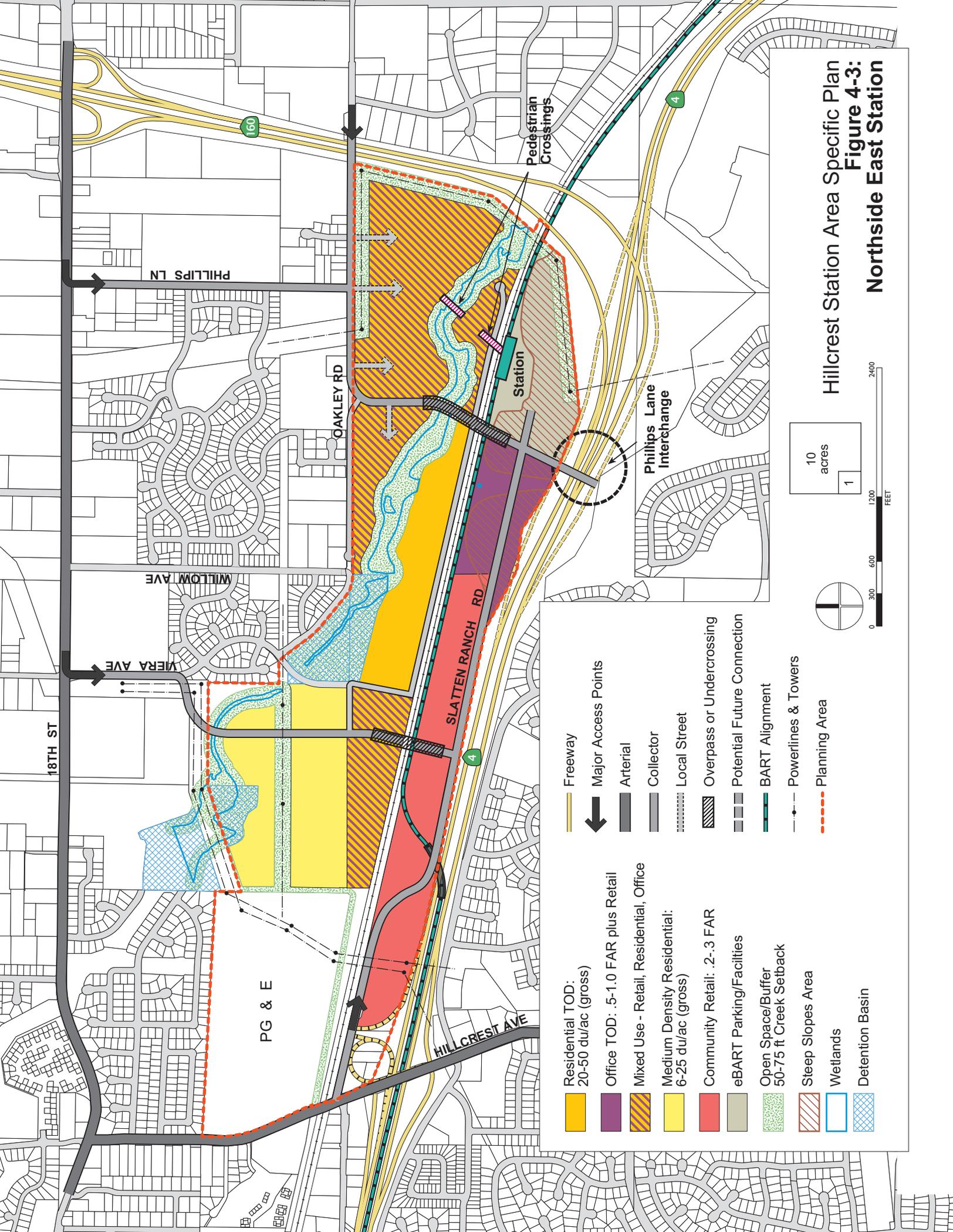
Table 4.2-3 Northside East Station Development Potential

	<i>Acres</i>	<i>Commercial SF</i>	<i>Units</i>	<i>Jobs</i>
Housing	55.8		1,650	
Mixed Use	67.8	669,000	1,810	3,100
Office	18.2	750,500		710
Community Retail	34.4	374,100		750
Open Space	102.8			
Total		1,793,600	3,460	4,560

Source: Dyett & Bhatia, 2008. Existing Conditions, Opportunities, and Constraints Report.

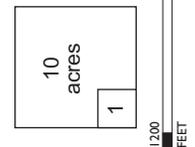
Overall, the development level and environmental impacts would be similar to the proposed Plan, because the Northside East Plan would be assumed to have the same environmental protection and hazard mitigation policies as the proposed Plan. Traffic impacts would be equal to or less than the proposed Plan, because more traffic would use the Phillips Lane Interchange to access development and the eBART station, and less traffic would go through the Hillcrest Interchange. However, the Northside East Plan would allow residential units near the railroad tracks; and thus increase the potential noise and air quality impacts on residents and sensitive receptors.

Because the Northside East Station plan allows more than 2,500 housing units and the station location outside of the SR 4 median has been deemed infeasible by BART, this alternative is not evaluated further.



Hillcrest Station Area Specific Plan
 Figure 4-3:
 Northside East Station

- | | | | |
|--|---|--|-----------------------------|
| | Residential TOD:
20-50 du/ac (gross) | | Freeway |
| | Office TOD: .5-1.0 FAR plus Retail | | Major Access Points |
| | Mixed Use - Retail, Residential, Office | | Arterial |
| | Medium Density Residential:
6-25 du/ac (gross) | | Collector |
| | Community Retail: .2-.3 FAR | | Local Street |
| | eBART Parking/Facilities | | Overpass or Undercrossing |
| | Open Space/Buffer
50-75 ft Creek Setback | | Potential Future Connection |
| | Steep Slopes Area | | BART Alignment |
| | Wetlands | | Powerlines & Towers |
| | Detention Basin | | Planning Area |



4.3 COMPARATIVE IMPACT ANALYSIS

This comparative analysis of alternatives evaluates impacts in the same environmental issue areas analyzed in Chapter 3 of this EIR for the proposed Plan. The analysis of the proposed Plan has determined that there are significant and unavoidable impacts for circulation and noise. In addition, due to regional growth there are cumulatively significant impacts to air quality and climate change; however, the proposed Plan will not make a considerable contribution to those impacts. The alternatives evaluated in this chapter would reduce certain adverse impacts, but the significant and unavoidable impacts for circulation and noise cannot be feasibly mitigated. It is assumed that the Alternative Plan would include the same specific environmental protection and urban design policies as the proposed Plan, while the No Project scenario only includes the general policies from the General Plan.

AESTHETICS AND VISUAL QUALITY

The visual resources impact of the proposed Plan is less than significant.

Alternative Plan

A difference between the Alternative Plan and the proposed Plan is that while the entire Planning Area has designated land uses in both plans, due to the market and cost constraints, the steep hills in the southeastern quadrant adjacent to the SR 4 are not assumed to develop within the planning horizon, prior to 2035. Therefore, the grading that would be necessary to support the Phillips Lane interchange, a potential second eBART station, and Town Center Mixed Use development, is not required in the Alternative Plan. The hills would remain ungraded, and thus the visual character would be more similar to its current condition. The designated land uses in the Alternative Plan are less intense, particularly in the eastern portion of the Planning Area. Therefore building heights will be lower than in the proposed Plan. However, implementation of the existing General Plan policies and the proposed urban design policies would provide sufficient protection for the visual resources so that the impact would be less than significant.

No Project

Under the General Plan business park and transit-oriented development is expected to occur in the Planning Area before 2030. The development would generally be lower density than under the proposed Plan. There would be a large extent of industrial development in the no project scenario, whereas the proposed Plan does not include industrial land use designations. However, the General Plan includes policies that: protect the areas that the City considers to be of high quality visual character, namely the hillsides close to Mt. Diablo; protect view corridors; and limit light and glare particularly in rural areas. Implementation of these policies would reduce any impact of development in the Planning Area on visual resources to less than significant.

AIR QUALITY

The air quality impact of the proposed Plan is cumulatively significant and unavoidable, however, the project contribution is less than considerable, and thus the project impact is less than significant.

Alternative Plan

The Alternative Plan supports fewer new housing units, a lower projected population, and fewer total jobs at buildout. The total impact on air quality would be less than the proposed Plan because there are fewer mobile and stationary sources of criteria air pollutants, toxic air contaminants, and odors. In addition, the land uses and circulation plans under the Alternative Plan are not integrated in such a way to significantly reduce the local VMT to less than the City as a whole. Therefore the project will contribute to the significant cumulative air quality impacts.

No Project

The General Plan for the entire City of Antioch was found to have significant and unavoidable impacts on air quality for being inconsistent with the adopted *Bay Area 2000 Clean Air Plan*. It was expected that the City population would grow approximately 1.5 percent per year between 2003 and 2030 while the daily vehicle miles traveled grow approximately 2.25 percent per year. Recent ABAG projections indicate that the anticipated employment growth rates will continue to keep Antioch's VMT growth rate higher than the anticipated population growth. Due to the high growth rates between 2000 and 2005, Antioch continues to be inconsistent with the adopted *Bay Area 2005 Ozone Strategy*.

Even the implementation of policies that require travel demand management programs for new large development projects, and purchasing low-emission vehicles for the City fleet, the City's impact on regional air quality would be significant and unavoidable. The land uses and circulation plans under the No Project scenario are not integrated in such a way to significantly reduce the local VMT to less than the City as a whole. Therefore the project will contribute to the significant cumulative air quality impacts.

BIOLOGICAL RESOURCES

The impact of the proposed Plan on biological resources is considered less than significant due to the adoption of specific policies and actions to be implemented to protect nesting birds, Swainson's hawks, burrowing owls, bats, potential Valley Elderberry Longhorn Beetle (VELB) habitat, wetlands and riparian habitat, and established trees.

Alternative Plan

The Alternative Plan is assumed to have the same or similar policies and actions as the proposed Plan. Due to the greater potential for not developing the hills in the southeast quadrant and the unnamed creek tributary of East Antioch Creek in the Alternative Plan, approximately 20 more acres of protected species and sensitive habitat would likely remain to support birds and bats than under the proposed Plan. The elderberry bushes that are potential habitat for VELB are located on the hills near the PG&E transmission towers and lines in the eastern portion of the Planning Area. Under the Alternative Plan, since these towers are not moved, the required landscape buffers for the utility easements would potentially protect the bushes. In addition, less of the delineated

wetland area would be developed than in the proposed Plan. Overall, the Alternative Plan would have less impact on biological resources than the proposed Plan.

No Project

The General Plan classified the Planning Area as grasslands, but did not identify any specific special status species in the area. The extensive grasslands in the southern part of the City were identified as belonging to a regional grassland linkage between Mt. Diablo and the Delta wetlands. The General Plan policies that focus on avoiding and minimizing impacts to sensitive habitat types; maintaining and conserving native vegetation; and requiring the preparation of Resource Management Plans (RMP) generally ensure the protection of special status species and sensitive habitats. An RMP would likely be required for East Antioch Creek and wetlands in the Planning Area. In addition federal- and state-mandated mitigations for nesting bird and raptor habitat would protect the species found in the Planning Area. The City of Antioch Tree Ordinance establishes the guidelines for tree preservation and regulation. Overall, the No Project scenario would have similar or less impact on biological resources as the proposed Plan.

CIRCULATION

The proposed Plan would have significant and unavoidable impacts on the regional highway system and local intersections, and less than significant impacts on vehicle miles traveled, transit, parking, pedestrian and bicycle circulation, freight rail, and emergency access. The proposed Plan is generally consistent with adopted regional transportation plans and does not include any hazardous design features. Table 4.3-1 summarizes the total trips for each alternative at buildout in 2035.

Table 4.3-1 Projected 2035 Total Trips for Alternatives

	<i>Alternative Plan</i>	<i>Proposed Plan</i>	<i>No Project</i>
AM Peak Hour	1,222	2,809	3,166
Percent of Proposed Plan	44%		113%
Percent of No Project	39%	89%	
PM Peak Hour	2,132	4,685	4,856
Percent of Proposed Plan	46%		104%
Percent of No Project	44%	96%	
Daily	19,827	45,143	35,994
Percent of Proposed Plan	44%		80%
Percent of No Project	55%	125%	

Source: Fehr & Peers, 2009; Dyett & Bhatia, 2009.

Alternative Plan

The Alternative Plan would generate less than 20,000 total trips per day. This is less than half of the trips generated by the proposed Plan. Table 4.3-2 summarizes the inputs for both the proposed Plan and the Alternative Plan. Based on the lower development density in the Alternative Plan, it will have a lower internal trip capture rate than the proposed Plan.

Table 4.3-2 Development and Land Use Inputs for Proposed and Alternative Plans

	<i>Alternative Plan</i>				<i>Proposed Plan</i>			
	AM		PM		AM		PM	
Office (ksf)	630				1200			
Residential (dwelling units)	650				2500			
Retail (ksf)	370				1000			
Hotel (rooms)	0				325			
Peak Hour Analyzed	AM		PM		AM		PM	
Trip Generation Rate (Office)	1.55		1.49		1.55		1.49	
Trip Generation Rate (Residential)	0.51		0.62		0.51		0.62	
Trip Generation Rate (Retail)	1.03		3.75		1.03		3.75	
Trip Generation Rate (Hotel)	0.56		0.59		0.56		0.59	
Raw Trip Generation Rate (Office)	977		939		1860		1788	
Raw Trip Generation Rate (Residential)	332		403		1275		1550	
Raw Trip Generation Rate (Retail)	381		1388		1030		3750	
Raw Trip Generation Rate (Hotel)	0		0		196		207	
Internal Capture %	15%		14%		24%		29%	
Transit Reduction % for HBW Trips	19%		17%		19%		17%	
Transit Reduction % for Other Trips	6%		5%		6%		5%	
Net Trips (Office)	670		634		1118		1142	
Net Trips (Residential)	259		240		1004		992	
Net Trips (Retail)	293		1258		527		2357	
Net Trips (Hotel)	0		0		175		194	
Net Trips In / Net Trips Out (Office)	590	80	108	526	984	134	194	947
Net Trips In / Net Trips Out (Residential)	52	207	84	156	201	803	347	645
Net Trips In / Net Trips Out (Retail)	178	114	604	654	322	206	1131	1225
Net Trips In / Net Trips Out (Hotel)	0	0	0	0	107	68	103	91

/1/ The Proposed Plan assumes that the Phillips Lane interchange is constructed during the planning period.

Source: Fehr & Peers, 2008

Intersection Operations

Table 4.3-3 summarizes the projected intersection operations for the Alternative Plan. At buildout in 2035, under this Plan six intersections would not meet the level of service (LOS) standards. However, this data table does not reflect the effects of the proposed Plan policies to implement improvements to the Hillcrest Avenue and East 18th Street intersection and to support the City of Oakley's efforts to maintain efficient traffic operations at the Neroly Road and Oakley Road intersection. If the proposed policies are implemented for the Alternative Plan, the Hillcrest Avenue and East 18th Street intersection and the Neroly Road and Oakley Road intersection would likely operate at acceptable levels; and four intersections would not meet the LOS standards.

Table 4.3-3 Alternative Plan Intersection Operations Weekday AM and PM Peak Hour – HCM Methodology

<i>Intersection</i>	<i>Control</i>	<i>Peak Hour</i>	<i>Delay</i>	<i>LOS</i>
1. Hillcrest Avenue at East 18th Street	Signal	AM	74	E
		PM	57	E
2. Viera Avenue at East 18th Street	Signal	AM	16	B
		PM	13	B
3. Phillips Lane at East 18th Street	Signal	AM	6	A
		PM	6	A
4. SR 160 Southbound Ramps at East 18th Street	Signal	AM	23	C
		PM	16	B
5. SR 160 Northbound Ramps at East 18th Street	Signal	AM	11	B
		PM	12	B
6. Bridgehead Road/Neroly Road at Main Street	Signal	AM	15	B
		PM	25	C
7. Hillcrest Avenue at Sunset Drive	Signal	AM	#	F
		PM	#	F
8. Phillips Lane at Oakley Road	Signal	AM	29	C
		PM	33	C
9. Neroly Road at Oakley Road	All-Way Stop	AM	--	F
		PM	--	F
10. Hillcrest Avenue at SR 4 Westbound Ramps	No Control	AM PM	This intersection is replaced with a northbound to westbound loop ramp to SR 4 as part of the planned Hillcrest Interchange Improvement Project.	
11. Hillcrest Avenue at SR 4 Eastbound Ramps	Signal	AM	#	F
		PM	#	F
12. Hillcrest Avenue at East Tregallas Drive/Larkspur Avenue	Signal	AM	#	F
		PM	#	F
13. Hillcrest Avenue at Deer Valley Road/Davidson Drive	Signal	AM	18	B
		PM	23	C
14. Phillips Lane at Slatten Ranch Road	Signal	AM	32	C
		PM	40	D
15. Phillips Lane at SR 4 Westbound Ramps	Signal	AM PM	These intersections do not exist for this scenario	
16. Phillips Lane at SR 4 Eastbound Ramps	Signal	AM PM		
17. SR 4 Westbound Ramps at Slatten Ranch Road	Signal	AM	#	F
		PM	#	F

Bold indicates intersection operating at deficient level of service.

indicates that delay is not meaningful because not all the vehicles are able to traverse the intersection.

Delay is measured in seconds and represents the average intersection control delay calculated using the HCM methods.

Source: Fehr & Peers, 2008.

Without the new SR 4/Phillips Lane Interchange, the intersections shown in Table 4.3-4 would not meet the LOS standard. This table illustrates that the operations at these four intersections would be substantially worse than under the proposed Plan, since they would serve a lower percentage of vehicles. Therefore, significant and unavoidable impacts would remain at the following study intersections: Hillcrest Avenue at Sunset Drive, Hillcrest Avenue at SR 4 Eastbound ramps, Hillcrest Avenue at SR 4 Westbound Ramps, and Hillcrest Avenue at Tregallas Drive/Larkspur Avenue.

Table 4.3-4 2035 Intersection Operations Weekday AM and PM Peak Hour – Percent Vehicles Served for the Alternative Plan and the Proposed Plan

<i>Intersection</i>	<i>Alternative Plan</i>		<i>Proposed Plan</i>	
	<i>AM</i>	<i>PM</i>	<i>AM</i>	<i>PM</i>
7. Hillcrest Ave at Sunset Dr	90%	67%	96%	97%
11. Hillcrest Ave at SR 4 Eastbound Ramps	84%	60%	92%	87%
12. Hillcrest Ave at East Tregallas Dr/Larkspur Ave	82%	67%	92%	88%
17. SR 4 Westbound Ramps at Slatten Ranch Rd	94%	59%	97%	99%

Percent vehicle served is calculated by dividing the actual number of vehicles able to traverse the intersection by the total number of vehicles forecast to traverse the intersection. Intersections with values less than 95% are considered to be operating at deficient levels. The SimTraffic component of the Synchro software was used to determine vehicles served.

Source: Fehr & Peers, 2008.

Freeway Operations

Table 4.3-5 indicates that the eastbound freeway operations on SR 4 under the Alternative Plan would fail for the PM peak hour in 2035. Without the Phillips Lane Interchange, the impacts of any development in the Planning Area would result in a significant and unavoidable impact on SR 4.

Table 4.3-5 2035 SR 4 Delay Index

	<i>Eastbound</i>				<i>Westbound</i>			
	<i>AM</i>		<i>PM</i>		<i>AM</i>		<i>PM</i>	
	<i>Speed (mph)</i>	<i>Delay Index</i>						
Alternative Plan	70	1.00	23	3.04	70	1.00	70	1.00

Bold indicates that the adopted delay index standard of 2.5 or less is not met.

Source: Fehr & Peers, 2008

Pedestrian and Bicycle Access and Circulation

Under the Alternative Plan, pedestrian and bicycle facilities similar to those in the proposed Plan would be implemented. The one exception is that there would a single multi-use trail next the East Antioch Creek rather than a loop trail system as proposed.

Transit

Buildout of the land uses under the Alternative Plan would result in less additional demand for transit than the proposed Plan. Because there would be fewer houses and jobs at buildout under the Alternative Plan, fewer transit riders would be from the Planning Area. BART provided the following eBART ridership generation rates for areas within 0.5 miles of a station: 0.1 riders per job and 0.6 riders per housing unit. Based on these rates, the Alternative Plan and uses would generate approximately 620 eBART riders. This is 30 percent of the riders generated by the proposed Plan, which is estimated to be 2,060. However, because the eBART station is planned to be a terminal station that serves the whole East County area, the total number of projected riders would be the same as under the proposed Plan. This means that more riders would be driving or taking the bus, and fewer would be able to walk or bicycle, to the station and bus facilities. This would exacerbate the congestion on the roads and highways, and increase the demand for parking.

No Project

Roadway Network

The Antioch General Plan Update Draft EIR indicates that some segments of Hillcrest Avenue between East 18th Street and Larkspur, and SR 4 and 160 near the Planning Area would operate at LOS D in 2020. However, only one Hillcrest Avenue segment north of SR 4 would operate at levels worse than the regional standard of 0.85 volume-to-capacity ratio (v/c). The General Plan Update EIR found that such conditions were significant and unavoidable due to regional growth and the cumulative impact on traffic conditions.

The No Project scenario would generate approximately 36,000 trips each day. Even though there would be a similar level of development under the No Project scenario as the proposed Plan, there are fewer retail uses; therefore there are fewer daily trips to and from the Planning Area. However, as seen in Table 4.3-1, the peak hour traffic would be worse than the proposed Plan because the Phillips Lane Interchange would not be built. Therefore, it is reasonable to assume that intersection and freeway operations would be worse in 2035 under the No Project scenario than either the proposed Plan or the Alternative Plan.

Pedestrian and Bicycle Access and Circulation

Under the No Project scenario, basic pedestrian facilities would be provided in the Planning Area. No new bicycle facilities were identified in the General Plan for the area. The closest proposed bike route would be along Hillcrest Avenue. General Plan policies support walking and biking and ensure that general safety measures are maintained. However, there are no specific policies that would ensure that the potential demand for facilities is met in the Planning Area.

Transit

Buildout of the land uses under the No Project scenario would result in less additional demand for transit than the proposed Plan. Because there would be fewer houses and jobs at buildout under the No Project scenario, fewer transit riders would be from the Planning Area. Based on BART's ridership generation rates, the Planning Area under the No Project scenario would generate 1,124 riders. This is 55 percent of the riders generated by the proposed Plan, which is estimated to be 2,060. However, because the eBART station is planned to be a terminal station that serves the whole East County area, the total number of projected riders would be the same as under the proposed Plan. This means that more riders would be driving or taking the bus, and fewer would

be able to walk or bicycle, to the station and bus facilities. This would exacerbate the congestion on the roads and highways, and increase the demand for parking.

CLIMATE CHANGE AND ENERGY

The climate change impact of the proposed Plan is cumulatively significant and unavoidable, however, the project contribution is less than considerable, and thus the project impact is less than significant. While the proposed Plan will use more energy resources than the existing conditions use, it will have no adverse impact on energy generation capacity or distribution.

Alternative Plan

The estimated Alternative Plan buildout population of 1,680 persons would contribute a total of 14,705 metric tons of carbon dioxide equivalent GHG emissions, if adopted State regulations related to reducing GHG emissions are not implemented or enforced. Using emission reduction factors based on vehicle fuel efficiency and commercial building efficiency, the estimated total GHG emissions would be approximately 12,131 metric tons. This is only 34 percent of the emissions generated by the proposed Plan, and thus the GHG emissions are substantially less with the Alternative Plan. As there is little development currently in the Planning Area, these new emissions would represent an increase compared to existing conditions. Therefore the Alternative Plan will contribute to the significant cumulative climate change impacts, but to a lesser degree than the proposed Plan.

In the Alternative Plan, since the land use and circulation plans are not as dense or as well connected with the local and regional road networks, the estimated vehicles miles traveled (VMT) for residents and employees is similar to the City of Antioch. Under the proposed Plan, the estimated VMT per capita will be less than the City as a whole, because the development is more mixed-use and compact, and people can more easily use transit.

Table 4.3-6 Estimated 2035 Alternative Plan GHG Emissions

<i>Type of Energy Use</i>	<i>Estimated MTCO_{2e}¹</i>	<i>Estimated MTCO_{2e} with State Regulation Reduction Factors</i>
Residential	2,544	2,544
Commercial/Industrial/Direct Access	4,921	3,937
Transportation	6,942	5,353
Land-filled Waste	298	298
Total GHG Emissions	14,705	12,131
GHG Emissions per Capita	8.75	7.22

1. Emissions estimated using per capita emissions for the County incorporated areas only.

Source: Dyett & Bhatia, 2008

No Project

The estimated No Project buildout population of 2,400 persons would contribute a total of 21,008 metric tons of carbon dioxide equivalent GHG emissions, if adopted State regulations related to reducing GHG emissions are not implemented or enforced. Using emission reduction factors based on vehicle fuel efficiency and commercial building efficiency, the estimated total GHG emissions would be approximately 17,331 metric tons. This is only 48 percent of the emissions generated by the proposed Plan, and thus the GHG emissions are substantially less under the No Project scenario. As there is little development currently in the Planning Area, these new emissions would represent an increase compared to existing conditions. Therefore the Alternative Plan will contribute to the significant cumulative climate change impacts, but to a lesser degree than the proposed Plan.

Similar to the Alternative Plan, the No Project scenario does not optimize transit-oriented development and connected roadways, and thus the estimated vehicles miles traveled (VMT) for residents and employees is similar to the City of Antioch. Under the proposed Plan, the estimated VMT per capita will be less than the City as a whole, because the development is more mixed-use and compact, and people can more easily use transit.

Table 4.3-7 Estimated 2035 No Project GHG Emissions

<i>Type of Energy Use</i>	<i>Estimated MTCO₂e¹</i>	<i>Estimated MTCO₂e with State Regulation Reduction Factors</i>
Residential	3,635	3,635
Commercial/Industrial/Direct Access	7,030	5,624
Transportation	9,918	7,647
Land-filled Waste	425	425
Total GHG Emissions	21,008	17,331
GHG Emissions per Capita	8.75	7.22

1. Emissions estimated using per capita emissions for the County incorporated areas only.

Source: Dyett & Bhatia, 2008

CULTURAL RESOURCES

The proposed Plan would have less than significant impacts on cultural resources based on the implementation of specific policies that require project sponsors to identify, research, and consult with the appropriate experts to document and protect cultural resources.

Alternative Plan

The Alternative Plan is assumed to have the same or similar policies and actions as the proposed Plan, which would document and preserve historic resources as appropriate. Due to the greater potential for not developing the hills in the southeast quadrant and the unnamed creek tributary of East Antioch Creek in the Alternative Plan, there is less potential to uncover archaeological or paleontological resources. Therefore, the Alternative Plan would also have a less than significant impact on cultural resources.

No Project

The existing General Plan does not include the specific policies intended to identify and protect the potentially historic resources in the Planning Area, or the policies which detail the procedure project sponsors must follow upon the discovery of archaeological or paleontological resources. Therefore, the No Project scenario provides less protection for cultural resources than the proposed Plan. However, because of existing General Plan policies related to the protection of cultural resources, which address potential impacts and their mitigation, the citywide impact on cultural resources is less than significant.

GEOLOGY AND SEISMIC HAZARDS

The potential impacts of geological and seismic hazards are considered less than significant under the proposed Plan based on the implementation of existing regulations and a specific policy related to ensuring slope stability.

Alternative Plan

The Alternative Plan includes less overall development than the proposed Plan and may potentially develop less total area, including the steep slopes in the southeast quadrant of the Planning Area. Therefore, there would be less potential for impacts from geological and seismic hazards than the proposed Plan. In addition, the Alternative Plan would be subject to the same existing regulations and proposed policy related to slope stability as the proposed Plan. Therefore the potential impacts of geological and seismic hazards would be less than significant, and less than the proposed Plan.

No Project

The No Project scenario includes less intense development than the proposed Plan and would likely be less impacted by geological and seismic hazards than the proposed Plan. Although the No Project scenario does not include the specific policy related to slope stability, current State and federal regulations require specific engineering and design criteria to avoid impacts related to geologic, soils, and seismic hazards, such that the impacts would be less than significant.

HAZARDOUS MATERIALS AND SAFETY

The proposed Plan would have less than significant impacts on hazardous materials and safety based on the proposed Plan policies and existing regulations. Policies require the investigation and clean-up of contaminated sites. Policies also require services and facilities related to fire prevention and fire protection.

Alternative Plan

The Alternative Plan proposes development throughout the Planning Area similar to the proposed Plan, with the potential exception of the steep slopes in the southeast quadrant that may not develop in the planning horizon. Two of the primary hazardous contamination sites, Chevron Old Valley Pipeline and the TAOC New Love Pump Station Site, are located near the hills. In addition the PDQ Products property is a potentially contaminated site due to the metals processing that has occurred there. In addition, the hills are the location of the majority of the high fire threat areas. The impacts of hazardous materials contamination under the Alternative Plan could be less than in the proposed Plan, since there is less new development that involves excavation of contaminated

soil. However, the proposed Plan includes policies that require the investigation and clean-up of contaminated sites, so it may facilitate more efficient and timely environmental clean-up than under the Alternative Plan. In the Alternative Plan, development would occur near the existing high-pressure petroleum pipeline, but would be subject to the proposed policies and existing regulations which would limit the potential impacts. There could be greater fire hazard impacts with the Alternative Plan due to the difficulties in providing fire protection access in hillside areas. Overall, with Plan policies and existing Federal and State regulations, the hazardous materials and safety impacts would be less than significant under the Alternative Plan.

No Project

The No Project scenario proposes less intense development throughout the Planning Area than anticipated under the proposed Plan. The No Project scenario would not include the specific hazardous materials and public safety policies and implementation measures contained as part of the proposed Plan. However, hazardous materials generation, storage and clean-up are heavily regulated by federal, State, and local regulations that would apply to both the No Project scenario and the proposed Plan. Development is expected to occur on the steep slope areas in the southeast quadrant, therefore the potential impacts of hazardous materials, soil and water contamination, wildfires, and high-pressure petroleum pipelines are similar to those in the proposed Plan.

HYDROLOGY

The impacts of the proposed Plan on local hydrology would be less than significant due to existing regulations and proposed policies which require cooperative flood management planning.

Alternative Plan

The Alternative Plan involves less total development with fewer residents and employees and may not involve the development of the steep slopes and the unnamed creek tributary in the southeast quadrant of the Planning Area. The Alternative Plan would provide the same wetland buffer as the proposed Plan, though it would not be improved with a linear park on both sides. Overall, due to the fewer number of housing units supported in this plan, the number of required open space and park acres would also be fewer, only 8 compared to 25 in the proposed Plan. The Alternative Plan would have the same policies as the proposed Plan which would support permeable surfaces and natural drainage. The lower population and less intense development would produce fewer non-point source pollution impacting stormwater quality. The potential flood hazard risks to structures, private property, and human health and safety would be the same as under the proposed Plan, since in either plan storm drainage facilities will be provided. Overall, hydrologic impacts would be less than significant.

No Project

The No Project scenario would have similar impacts on local hydrology as the Alternative Plan, and less impact than the proposed Plan, since overall the development would be less intense. Even though the existing General Plan does not include the specific policies intended to reduce the amount of impervious surfaces and increase stormwater management cooperation between agencies, the development under the No Project scenario would have less than significant impacts on hydrology.

LAND USE AND POPULATION

The proposed Plan's impacts on land use and population would be less than significant.

Alternative Plan

The Alternative Plan would designate new land uses in the Planning Area. These land use designations would support approximately 650 housing units and 1 million square feet of commercial uses, substantially less, about 70 percent less, than the proposed Plan. Table 4.3-8 summarizes the land use designations under the Alternative Plan. Implementation of the Alternative Plan would not create a land use pattern that would physically divide an established community. In fact, each development scenario serves as infill development, potentially improving the land use integration. The Alternative Plan would not displace substantial numbers of people or housing units.

4.3-8 Alternative Plan Land Use Summary

<i>Land Use</i>	<i>Acres</i>	<i>Percent of Total</i>
Medium Low Density Residential	14.4	4%
High Density Residential	23.1	6%
Office	34.0	9%
Community Retail	14.3	4%
Mixed Use Neighborhood	59.8	16%
Business Park ¹	63.1	17%
Linear Park ²	3.5	1%
Public/Institutional – BART Yard	2.8	1%
Public/Institutional – Transit Parking	17.6	5%
Wetlands, Buffer, and Detention Basins	51.8	14%
UP ROW	19.5	5%
Arterial and Collector Roads	10.2	3%
Industrial/Utilities - PG&E Substation	61.2	16%
Total	375.2	100%

1. About 20 acres of the business park area is considered steep slopes, which may not develop during the planning horizon due to market and cost constraints.

2. Except for the creek-side trail, the locations of the parks have not been defined. The amount of park/open space land is based on the estimated number of residential units and household size, and land would be dedicated.

Source: Dyett & Bhatia, 2008.

The Alternative Plan would be consistent with adopted regional and local plans, including the MTC Resolution 3434 and the BART Expansion Policy. With the existing and proposed housing within a half-mile of the stations on the eBART corridor, there would be almost 8,000 housing units. This would meet the MTC Resolution 3434 requirement of 6,600 units in the corridor.

Table 4.3-9 Alternative Plan Existing and Planned Corridor Housing

	<i>Existing</i>	<i>Planned</i>	<i>Total</i>
Pittsburg/Bay Point	1,873	1,595	3,468
Railroad Avenue	1,477	1,590	3,067
Hillcrest Median	999	400	1,399
Total	4,349	3,585	7,934

Source: eBART Draft EIR, 2008; ABAG Projections 2005; Pittsburg/Bay Point Specific Plan, 1997; Draft Railroad Avenue Specific Plan, 2008.

No Project

This alternative is already consistent with the City’s General Plan, and the impacts of its growth have been anticipated and mitigated by the General Plan EIR. The existing land use designations would support approximately 1,200 housing units and 3.5 million square feet of commercial uses, which would be almost as much total development as the proposed Plan, about 90 percent of the total. Therefore, the No Project scenario would have similar impacts on land use and housing as the proposed Plan.

Table 4.3-10 Planning Area Land Use Designations

<i>Land Use</i>	<i>Planning Area</i>	<i>Percent of Total</i>
Transit-Oriented Development	73.1	19%
Business Park	241.0	64%
Business Park/Public/Institutional	17.5	5%
Other (PG&E, ROW, etc.)	43.6	12%
Total	375.2	100%

Source: City of Antioch General Plan (2003), GIS (2007), Dyett & Bhatia (2008)

The No Project scenario would be consistent with adopted regional and local plans, including the MTC Resolution 3434 and the BART Expansion Policy. With the existing and proposed housing within a half-mile of the stations on the eBART corridor, there would be more than 8,700 housing units. This would meet the MTC Resolution 3434 requirement of 6,600 units in the corridor.

Table 4.3-11 No Project Existing and Planned Corridor Housing

	<i>Existing</i>	<i>Planned</i>	<i>Total</i>
Pittsburg/Bay Point	1,873	1,595	3,468
Railroad Avenue	1,477	1,590	3,067
Hillcrest Median	999	1,200	2,199
Total	4,349	4,385	8,734

Source: eBART Draft EIR, 2008; ABAG Projections 2005; Pittsburg/Bay Point Specific Plan, 1997; Draft Railroad Avenue Specific Plan, 2008.

NOISE

The proposed Plan would have potentially significant and unavoidable noise impacts due to the high levels of anticipated exterior noise near new development in the future. However policies in the Specific Plan limit the impacts to small areas, and compensate for impacts in those areas by requiring lower interior noise levels.

Alternative Plan

The Alternative Plan would have the same policies as the proposed Plan that reduce the noise impacts on new development, particularly interior noise levels. The traffic volumes on the arterials and highways will be slightly less, though freight train activity is expected to be the same as the proposed Plan. In addition, if the hills in the southeastern quadrant are not graded to the same extent as in the proposed Plan, the noise in that area would be less since the hills would dampen highway noise. Therefore, the Alternative Plan noise contours are only slightly smaller than in the proposed Plan. However, there will be less overall development to be subjected to the future noise and vibration levels. Noise impacts will be significant and unavoidable under the Alternative Plan in certain portions of the Station Area, specifically in the western portion of the Station Area north of the railroad line where residential units would be located.

Table 4.3-12 Noise Contour Areas

<i>Contour</i>	<i>Proposed Plan</i>		<i>Alternative Plan</i>	
	<i>Acres</i>	<i>Percent of Area</i>	<i>Acres</i>	<i>Percent of Area</i>
50 to 55	0.0	0%	0.1	0%
55 to 60	3.4	1%	6.9	2%
60 to 65	103.7	28%	119.7	32%
65 to 70	129.7	35%	126.3	34%
70 to 75	88.0	23%	79.8	21%
75 to 80	35.4	9%	31.2	8%
80 to 85	12.5	3%	9.0	2%
85 to 90	1.9	0%	1.7	0%
Total	375.2	100%	375.2	100%

Source: Charles Salter Associates; Dyett & Bhatia, 2008

No Project

The No Project scenario is subject to the noise standards established in the General Plan, which are the same as the noise standards under the Proposed Plan and the Alternative Plan. The traffic volumes on the arterials and highways will be similar to the proposed Plan, since the total amount of development is similar. Freight train activity is expected to be the same as the proposed Plan. However, because more of the development is non-residential, there will be less residential units that will be impacted by high noise levels.

In addition, if the hills in the southeastern quadrant are not graded to the same extent as in the proposed Plan, the noise in that area would be less since the hills would dampen highway noise. Therefore, the No Project noise contours are slightly smaller than in the proposed Plan, and there will be less residential development subjected to the future noise and vibration levels. Noise impacts will be significant and unavoidable under the No Project Scenario in certain portions of the Station Area, specifically in the central portion of the Station Area north of the railroad line where residential units would be located in the Transit-Oriented Development land use designation.

PUBLIC SERVICES

The proposed Plan will have less than significant impacts on public services because it will: provide adequate open space; pay the appropriate impact fees for fire service and schools; and not require substantial numbers of new police officers.

Alternative Plan

The provision of public services is entirely contingent on new housing units and population in the Planning Area. Because the Alternative Plan supports less than a quarter of the housing units and about a third of the population as the proposed Plan, the potential impact on public services is much less. The Alternative Plan would be required to provide adequate open space for the new population. The new population would contribute to the overcrowding elementary schools as the proposed Plan does, but project sponsors are required to pay school impact fees to help address this concern. Because the Planning Area is outside the existing service areas for the Contra Costa Fire District, the impact fees paid by the project sponsors will contribute to either a new fire station or increasing service capabilities of an existing station. The lower anticipated buildout population would require fewer police officers, only about two officers, instead of the six required by the greater population of the proposed Plan. Overall, similar to the proposed Plan, the public services impacts will be less than significant, because the development will need to provide or pay impact fees to support public services.

No Project

The provision of public services is entirely contingent on new housing units and population in the Planning Area. The No Project scenario supports approximately half the housing units and population as the proposed Plan. Based on the existing General Plan and the Antioch Municipal Code, the No Project scenario would be required to provide adequate open space for the new population. The new population would contribute to the overcrowding elementary schools as the proposed Plan does, but project sponsors are required to pay school impact fees to help address this concern. Because the Planning Area is outside the existing service areas for the Contra Costa Fire District, the impact fees paid by the project sponsors will contribute to either a new fire station or increasing service capabilities of an existing station. The lower anticipated buildout population would require fewer police officers, only about three officers, instead of the six required by the greater population of the proposed Plan. Overall, similar to the proposed Plan, the public services impacts would be less than significant, because the development will need to provide or pay impact fees to support public services.

UTILITIES

The proposed Plan will have less than significant impacts on utilities because: the water supply has been identified as being sufficient, as are the solid waste landfill capacity and energy generation capacity. The Plan provides for the necessary improvements to the water distribution, wastewater collection, and stormwater management systems to be built as part of the future projects; and, project sponsors will pay impact fees to help fund any necessary improvements to the water and wastewater treatment facilities.

Alternative Plan

During the implementation of the Alternative Plan, the necessary utility improvements would be installed and adequately funded through impact fees. Because the number of housing units and density of development is lower in the Alternative Plan as compared to the proposed Plan, the impacts on utilities will also be less. The projected development under Alternative Plan would require approximately 319,000 gallons of potable water per day (358 acre feet per year), or about a third of the proposed Plan's estimated water use. The estimated wastewater flow for the projected development under the Alternative Plan is approximately 211,000 gallons per day, without any peaking factors applied. This would be less than half of the wastewater generated by projected development under the proposed Plan, but more than 30 percent less than the No Project Scenario analyzed in the *2003 Wastewater Collection Master Plan*. Therefore the planned improvements of the existing collection system are likely to be sufficient. The stormwater runoff generated has the potential to be less than the proposed Plan if the hills in the southeast quadrant are not developed during the planning horizon. Overall, the Alternative Plan would require fewer utilities improvements than the proposed Plan. Similar to the proposed Plan, the utilities impacts would be less than significant, because the development will need to provide or pay impact fees to support utilities infrastructure.

No Project

Like the proposed Plan and the Alternative Plan, during the implementation of the No Project scenario, the necessary utility improvements would be installed and adequately funded through impact fees. Because the number of housing units and density of development is lower in the No Project scenario as compared to the proposed Plan, the impacts on utilities will also be less. The No Project scenario would require approximately 456,000 gallons per day (511 acre feet per year), about half of the proposed Plan's water demand. The estimated wastewater flow for projected development of the No Project scenario is approximately 311,000 gallons per day, without any peaking factors applied, which is about 73 percent estimated flow generated by development under the proposed Plan. The *2003 Wastewater Collection Master Plan* was based on the land uses in the General Plan, therefore the planned improvements of the existing collection system would be sufficient. The stormwater runoff generated by development of the No Project scenario will be similar to the proposed Plan, if not more since the General Plan does not include the policies to reduce runoff more than required by the existing regional requirements. Overall, the No Project would require fewer utilities improvements than the proposed Plan. Similar to the proposed Plan, the utilities impacts would be less than significant, because the development will need to provide or pay impact fees to support utilities infrastructure.

4.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA Guidelines require the identification of an environmentally superior alternative among the alternatives analyzed. Further, CEQA Guidelines §§15126.6(e)(1), 15126.6(e)(2) state that the EIR shall identify an “environmentally superior” alternative based on the comparative analysis among project alternatives (but not including the No Project Alternative).

Overall, the Alternative Plan would have the least environmental impact of the alternatives that were evaluated due to its lower development density and least amount of population and jobs. However, there would be significant environmental impacts related to circulation and noise and the Alternative Plan does not achieve the objectives for the Hillcrest Station Area as effectively as the proposed Plan.

The benefits of less intensive development are derived from exposing fewer people and less development to environmental hazards such as flooding, earthquakes, fires, etc. and potentially using fewer resources to construct and operate the development. Under the Alternative Plan, the hills in the southeastern quadrant of the Planning Area may not be developed during the planning horizon; however, development in this area is not precluded. Maintaining the hills and the unnamed creek tributary would decrease potential impacts of most of the environmental topics analyzed. Less intensive development would require fewer public services and less water, energy, and overall infrastructure.

On the other hand, the Alternative Plan does not achieve some of the primary objectives of the Hillcrest Station Area Specific Plan, such as creating an employment center; generating transit ridership; and minimizing impacts on regional highway facilities. The Alternative Plan would support 60 percent fewer jobs than the proposed Plan. Even though the jobs per housing unit ratio would be higher, the 2,300 jobs supported by the land uses in the Alternative Plan would account for less than 6 percent of the City’s total employment. The General Plan land uses for the Planning Area would support more than 4,000 jobs, and the Specific Plan objective is to accommodate at least 5,000 jobs. Therefore, the Alternative Plan does not meet the City’s goal of creating an employment center near transit and regional road network.

Another important goal of the Hillcrest Specific Plan is to serve as the Ridership Development Plan for the eBART project. The land uses are to generate ridership and support the large public investment. The Alternative Plan would only generate about 7 percent of the total eBART ridership projected for the Hillcrest Station, as compared to the proposed Plan, which will generate about 25 percent of the ridership. Therefore, the majority of the riders will be driving or taking the bus to the station, exacerbating traffic congestion and increasing parking demand.

Most critically, the Alternative Plan does not mitigate for the traffic impacts it would have on the local and regional roads. The land use and circulation plans are not as well integrated and traffic congestion is not as well mitigated as in the proposed Plan. The Alternative Plan creates 55 percent fewer daily automobile trips, but the resultant traffic congestion is projected to be much worse than under the proposed Plan. The operations of four intersections and freeway operations on SR 4 would fail under the Alternative Plan. The less intensive development also means that there is a lower internal trip capture rate, which results in a higher than average vehicle miles traveled VMT per resident and employee than the proposed Plan. Therefore, the reductions in traffic congestion, air pollution and greenhouse gas emissions, and noise are not proportionate with the reduction in population.

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