

CITY OF CUPERTINO

Bicycle Transportation Plan



Prepared by the Cupertino Bicycle Pedestrian Commission
Adopted May 3, 2011



CUPERTINO

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I Executive Summary

IN DECEMBER OF 1998 the Cupertino City Council unanimously approved a Bicycle Transportation Plan designed to encourage bicycling as a safe, practical and healthy alternative to the use of the family car. The plan stated that *“with the growing congestion of the South Bay free-ways and the inherent limitations of carpools, vanpools and public transit, commuting to work and/or school by bicycle is a solution of choice for a growing number of Cupertino residents.”*

During the past 12 years Cupertino has witnessed a significant increase in bicycle use not only for commuting, but for utility and recreational purposes as well, by citizens of all ages and skill levels. Given ever increasing gasoline prices, growing efforts to reduce heat-trapping gases related to climate change, and Cupertino’s commitment to becoming an outstanding *Bicycle Friendly City*, this upward trend in bicycle use is projected to accelerate.

Also, during those 12 years Cupertino has responded to the increased bicycle usage with the following major accomplishments:

- The Mary Avenue Bicycle Pedestrian Footbridge
- Nearly three and one-half miles of Bike Lane designation in both directions along Homestead Road from Grant Avenue across Swallow Way to Lawrence Expressway
- One and one half miles of Bike Route designation along Lubec Street, Milford Drive, Castine Avenue, Greenleaf Drive, Beardon Drive, Valley Green Drive, Bandley Drive, Mariani Avenue, and Merritt Drive
- Two and two tenths miles of Bike Route designation from Stelling Road along Erin Way, Kim Street and Bollinger Road to De Anza Blvd.
- Bike Lane designation along Stelling Road from Homestead Road to Prospect Road, and along Prospect Road from Stelling Road to De Anza Blvd.
- Numerous maintenance accomplishments such as the new, wider Bollinger bridge across the Calabazas Creek.

This updated version of our Bicycle Transportation Plan will continue to conform (for additional conformance information, see [Appendix A](#), Plan Conformance to Existing Plans) to the requirements of the Valley Transportation Authority’s (VTA’s) Bicycle Expenditure Program (BEP) as the funding mechanism for bicycle related projects proposed by Member Agencies under the Countywide Bicycle Plan. Funding for these projects, including the development of a Cross-County Bicycle Network, is derived from the following: 1996 Measure B sales tax, Transportation Fund For Clean Air, Transportation Development Act Article 3, Transportation Enhancement funds, and Regional Bicycle/Pedestrian Program funds. As project sponsors, Member Agencies are required to provide a minimum 20 percent match to the BEP funding implementation. The projects list is reviewed and re-adopted every three years for project changes and cost adjustments.

In addition to VTA funding, Cupertino has the opportunity to compete for annual grants from the California Department of Transportation for the purpose of supporting the development of Cupertino’s bicycle transportation system. State sponsored funding from the Bicycle Transportation Account, formerly known as the Bicycle Lane Account, will likely be used in the implementation of the Complete Streets Act (Assembly Bill 1358) signed into law by Governor Schwarzenegger in 2008.

I.I Recommendations

THIS BICYCLE TRANSPORTATION PLAN has been subject to a public review process that has included newspaper noticing, posting on the City of Cupertino's website, public hearings at the Cupertino Bicycle Pedestrian Commission and City Council, and personal distribution to interested parties. Project priorities for the next decade, based on staff and Commission recommendations and public input, address the following bicycling domains: Engineering, Encouragement, Education, and Enforcement.

■ 1.1.1 Engineering

Bikeway engineering priorities and estimated costs are listed below in terms of High, Medium, and Low priority. Of course, as the community desires change, so will the remaining, unimproved bikeway priorities. The bikeway engineering priorities should be reviewed and reopened to community response more often than every 12 years—at least every four years.

Bikeway No.	Linkages	Priority	Cost	Totals
4	Mary Ave—De Anza College—McClellan Rd	High	\$10,000	
13	Greenleaf Dr—Mariani Ave—Merritt Dr—Portal Ave	High	\$75,000	
8	Portal Rd between Merritt Dr & Wilson Park	High	\$100,000	
9	Miller Ave—Wolfe Rd	High	\$100,000	
5	Stelling Rd between Homestead Rd & Rainbow Dr	High	\$150,000	
12	Alves Dr—Bandlely Dr—Lazaneo Dr— Forest Ave—Amherst Dr	High	\$250,000	
14	Rodrigues Ave—Wilson Park—Wintergreen—Cold Harbor Ave—Vicksberg—E Estates Dr—Creekside Park—Phil Ln —Barnhart Ave	High	\$250,000	
3	Orange Ave—Fort Baker Dr	High	\$300,000	
15	McClellan Rd between Foothill Blvd & De Anza Blvd	High	\$2,400,000	
High Priority Subtotal = \$3,635,000				
2	Mira Vista Rd—Janice Ave	Medium	\$10,000	
7	Blaney Ave between Homestead Rd & Bollinger Rd	Medium	\$10,000	
10	Tantau Ave—Barnhart Ave—San Tomas Aquino Trail	Medium	\$25,000	
1	Foothill Blvd between Creston Dr and Santa Lucia Rd	Medium	\$50,000	
11	Stevens Creek Recreational Trail	Medium	\$1,300,000	
Medium Priority Subtotal = \$1,395,000				
6	Greenleaf Dr—Beardon Ave—Valley Green Dr—Bandlely Dr	Low	\$75,000	
16	Rainbow Dr between Bubb Rd & Stelling Rd	Low	\$100,000	
17	Stevens Creek Blvd—San Antonio County Park	Low	\$2,000,000	
Low Priority Subtotal = \$2,175,000				
GRAND TOTAL = \$7,205,000				

■ **1.1.2 Encouragement**

“*Let’s get out and ride*” is an expression we would like more of the community to declare. There are many programs that the Commission and the City should support:

- Active promotion of utilitarian bicycle use for recreation and for bicycle commuting to and from both school and work
- Providing an “Employer Resource Kit” to get bike commuting to work started for Cupertino companies
- Maintaining a bicycle parking rack inventory and assisting to provide parking racks for bicycle trip destinations
- Supporting linkages from the City’s Website, such as to those of both the Mountain View and Sunnyvale Bicycle Commissions’ Websites, to provide bicycle education, safety, maps, and news on upcoming events
- Encouraging the Sheriff’s Department and Cupertino’s Code Enforcement personnel to patrol the community by bicycle

■ **1.1.3 Education**

We should encourage bicycling safety through increased community bicycle educational programs such as:

- Off-bike programs for pedestrian and bicycling safety
- On-bike programs for bike-handling skills
- Motorists programs for sharing the roadways with bicycles

■ **1.1.4 Enforcement**

We should work closely with the Santa Clara County Sheriff’s Department, from whom Cupertino receives enforcement services, to report and discuss semiannually bicycle-related traffic violations and solutions for reducing such violations. Such discussion would address, for example, the schedule of fines imposed on moving violations committed by bicyclists and against bicyclists by motorists.

I.2 Chapter Descriptions

The following is a summary description of the various plan elements. The elements focus on Environment, Engineering, Encouragement, Education, and Enforcement.

■ **1.2.1 Environment**

This chapter describes Cupertino’s ideal climate and topography for year-round cycling, its major land use features, and provides data on present and projected bicycle use.

■ **1.2.2 Engineering**

This chapter describes 22.2 miles of existing bikeway network with an additional 12.1 miles of proposed bikeway network on Cupertino’s major streets, residential avenues and joint use trails. Each of Cupertino’s proposed seventeen bike routes is presented in detail and summary.

■ **1.2.3 Encouragement**

This chapter describes ways in which bicycling can be encouraged and discusses incentives to encourage bicycle commuting sponsored by both governmental agencies and private industry.

■ **1.2.4 Education**

This chapter discusses the challenges posed by bicyclists of all ages who lack the basic skills to safely ride a bicycle in traffic, and the various education programs and approaches designed to improve cyclists' safety.

■ **1.2.5 Enforcement**

This chapter focuses on the importance of increasing the awareness of motorists toward their obligation to share the road with cyclists, and the role of law enforcement officials in citing bicyclists who fail to observe the rules of the road.

I.3 Conclusion

The full implementation of the Cupertino Bicycle Transportation Plan will significantly improve the safety and mobility of Cupertino bicyclists. Increased bicycle use will improve the quality of life of all Cupertino residents due to the resulting reduction in traffic congestion and neighborhood traffic impacts, carbon emissions, and improved air quality, as well as pedestrian safety.

Recommendations to further Cupertino's progress into a bicycle-friendly city include the following:

- As stated in the Cupertino General Plan, give bicycle projects a priority equal to those that serve the automobile, *even if the result is slower automobile traffic*.
- Pursue funding and inter-agency cooperation in the development of the bikeway network.
- Continue the active involvement of the Commission in the traffic engineering and transportation planning decisions that affect the safety of bicyclists on Cupertino's streets and intersections.
- Expand and develop new bicycle safety programs to address the issues faced by bicyclists of all ages as well as motorists.
- Expand and develop bicycle promotion programs to encourage and legitimize bicycle transportation for work, school, shopping, errands, and other utilitarian trips.

2 Environment

Cupertino's Bicycle Transportation Plan is committed to improving the bicycle infrastructure within our City to enable and encourage people to bike to work and school, to utilize a bicycle to run errands, and to enjoy the health and environmental benefits that bicycling provides cyclists of every age.

Cupertino has an estimated population of 54,000 people as of January 1, 2006. It has a mild climate with daytime highs ranging from 45 degrees in January to 95 degrees in July. It has an annual rainfall of approximately 23.0 inches, little or no rain between May and October, and relatively flat terrain. Cupertino has an ideal setting to maximize the utilization of bicycles for commuting, utility, and recreational purposes.

2.1 Land Use

Cupertino's population is housed in a mix of single family residential neighborhoods, as well as higher density apartments and condominiums. There are many employment and educational opportunities in Cupertino; the top employers in Cupertino are listed below in the Employment sub-section. Cupertino is home to De Anza College, one of the largest single-campus community colleges in the country with a fall enrollment average of 22,000 students.¹ Cupertino has three high schools, three middle schools, and eight elementary schools. Cupertino has sixteen neighborhood and regional parks, and a number of shopping centers, which are all listed below. There are adjacent communities to the north (Sunnyvale and Los Altos), to the south (Saratoga and Los Gatos), to the east (San Jose and Santa Clara), and to the west are foothills.

Cupertino's land use is based on a conventional suburban model. There are numerous single-family residential subdivisions, with commercial and employment centers separated from the surrounding residential areas. De Anza College, as well as retail, hotel, office and industrial buildings are located along major transportation corridors. The city center areas are mixed use, with multi-story buildings, high density apartments, and family dwellings located over retail shops.

The foothills are predominantly undeveloped; however, the Lehigh/Hanson Southwest Cement Plant is located in this area at the western end of Stevens Creek Boulevard. Stevens Creek County Park and Reservoir are adjacent to Stevens Canyon Road to the south. Residential housing in the foothills exists around the Fremont Older Open Space Preserve, primarily along Lindy Lane and in Regnart Canyon. The De Anza Oaks development is located near the Lehigh/Hanson Southwest Cement Plant on Stevens Creek Boulevard. The Forum Retirement Community and numerous private residences are located near Rancho San Antonio Open Space Preserve and Stevens Creek County Park as well as along Montebello Road.

¹ De Anza College. "About De Anza." Retrieved 13 August 2009 from <http://www.deanza.edu/about/facts.html>

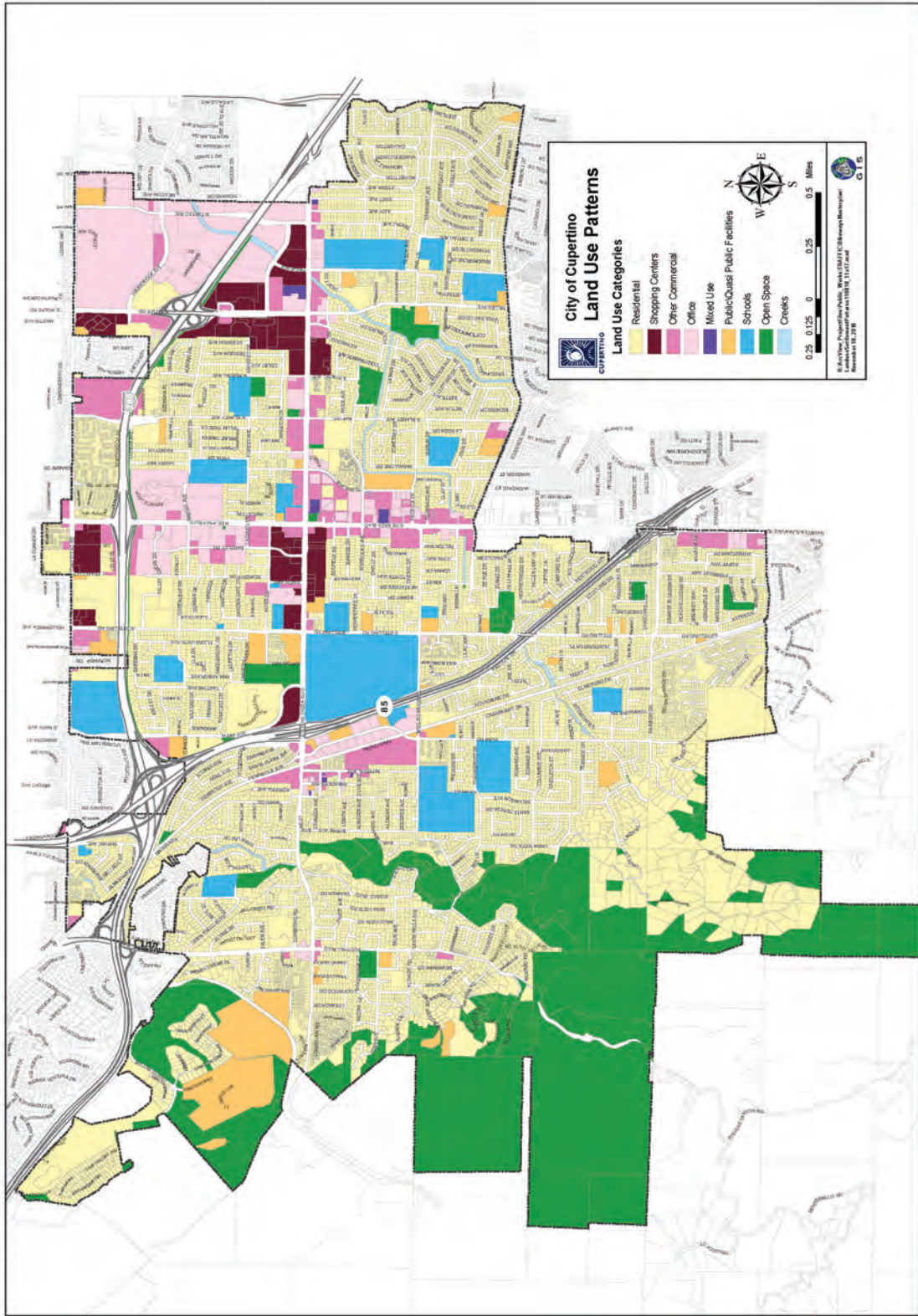


Figure 1: Cupertino Land Use and Zoning

2.2 Employment

■ 2.2.1

Manufacturing Employment

Lehigh/Hanson Southwest Cement Plant

■ 2.2.2

Non-Manufacturing Employment

AMC 16 at Vallco Shopping Center

Apple Computer

ArcSight

BJ's Restaurant

Chordiant Software

City of Cupertino

Corio, Inc. (IBM)

Courtyard by Marriott

Cupertino Inn

Cupertino Medical Center

Cupertino Union School District

Cypress Hotel

Direct Corporation

Foothill/De Anza Community

College District

The Forum Retirement Community

Fremont Union High School District

Hewlett Packard

Hilton Garden Inn

JC Penney

Lucky Supermarket

Macy's

Marina Food

Panasonic Research and Development

Ranch 99 Market

Sears

Sugar CRM

Sunny View Retirement Community

Symantec Corporation

Target

TGI Friday's

Trend Micro

Verigy

Whole Foods

■ 2.2.3

Schools and Colleges

Collins Elementary School

Cupertino High School

De Anza College

Eaton Elementary School

Faria Elementary School

Garden Gate School

Homestead High School

Hyde Middle School

Kennedy Middle School

Lawson Middle School

Lincoln Elementary School

Monta Vista High School

Regnart Elementary School

Sedgwick Elementary School

Stevens Creek Elementary

■ 2.2.4

Parks

Blackberry Farm

Cali Mill Plaza Park

Creekside Park

Cupertino Civic Center Park

Cupertino Memorial Park

Deep Cliff Golf Course

Hoover Park

Jollyman Park

Linda Vista Park

McClellan Ranch Park

Monta Vista Park

Portal Park

Rancho San Antonio County Park

Sterling Barnhart Park

Stevens Creek County Park

Summerset Park

Three Oaks Park

Varian Park

Wilson Park

■ 2.2.5

Public Buildings

City Hall

Community Hall

Cupertino Senior Center

Cupertino Sports Center

Cupertino Library

Quinlan Community Center

■ 2.2.6

Major Shopping Centers

Bottegas Shopping Center

Cupertino Crossroads

Cupertino Village Shopping Center

De Anza Center

De Anza Plaza

Homestead Center

Homestead Square

Idlewide Shopping Center

Loree Shopping Center

Marina Plaza

Marketplace

McClellan Square

Oakmont Square Shopping Center

Pacific Rim Shopping Center

Portal Plaza

Stanley Square

The Oaks Center

Vallco Shopping Center

2.3 Bicycle Usage

The Cupertino environment certainly affords opportunities for recreational, educational, and commute bicycling. There are at least 80 known destinations including schools, city parks and facilities, shopping centers, and employers with a total parking capacity for over 7100 bicycles, although some parking is not visually apparent.

A significant improvement in inter-city transportation occurred with the completion of Cupertino's Mary Avenue Bicycle Pedestrian Footbridge. This cable-stayed bridge across 12 lanes of traffic creates a direct bicycling connection between Cupertino and areas to the north. The original feasibility study predicted that the bridge will be used by 175,000 bicyclists per year, in addition to pedestrians.

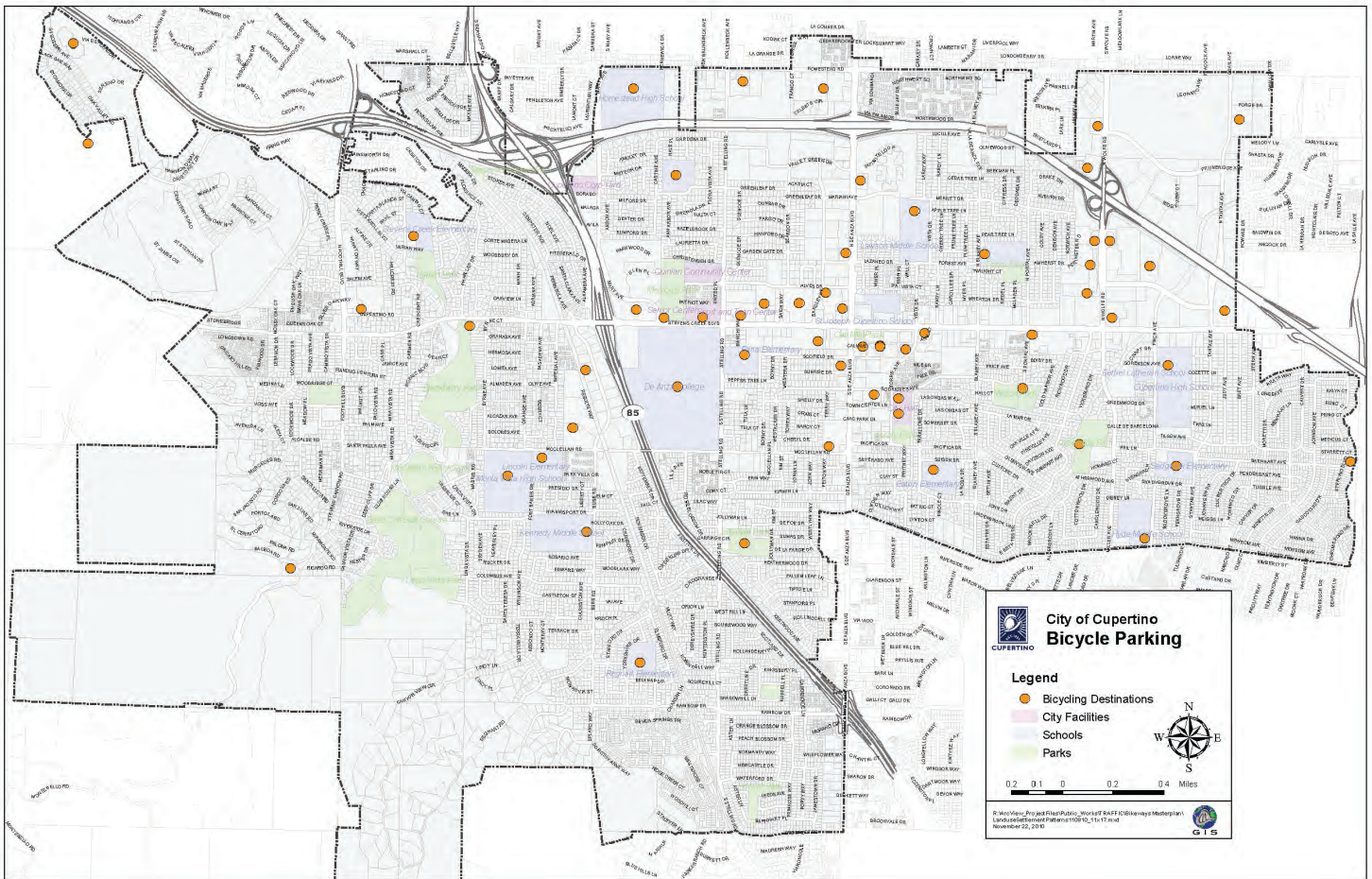


Figure 2: Cupertino Bicycling Destinations

3 Engineering

THE BIKEWAY NETWORK for the City of Cupertino is comprised of existing bikeways and proposed bikeways. Route descriptions for the proposed bikeways begin with Section 3.4 [The Major Cupertino Bikeways](#). First, background information on the characteristics of bicyclists, a brief description of the route selection process, and a description of the bicycle route classifications will be discussed.

3.1 Methodology

The primary considerations in developing the bikeway network are to serve all the existing and potential users, to improve safety and to serve all attractors and generators with direct, non-circuitous routes. Opportunities and constraints for routes selection were determined via extensive field reviews, analysis of existing bikeway locations, and other sources such as aerial photographs, collision histories, review of existing planning documents, input from area bicyclists, and analysis of attractor and generator locations.

■ 3.1.1 Type of Bicyclists

In developing a bikeway network, the primary objective is to engineer one that will serve the needs of all types of bicyclists. There are many types of bicyclists with varying levels of skill and willingness to ride in traffic. These range from the experienced adult cyclist to the casual adult cyclist to the child cyclist. There are many gradations of cycling competency and confidence and just as many opinions as to what makes an ideal bike route. For example, some experienced cyclists avoid separate bike paths, preferring to share the roads with cars. Other cyclists will ride in bike lanes only if parallel residential roads are unavailable.

Children also have special needs:

- Children (being those approximately ten years and older) whose parents feel confident in their ability to walk or bike by themselves.
- Parents are most likely to allow their children to ride only on residential streets, whose major arterial intersections are controlled by traffic signals.
- As their children get older, parents will allow them to ride on busier streets with bike lanes.

In order to serve all types of bicyclists, the bikeway network consists of both the major roads in Cupertino plus a network of cross-city parallel residential streets.

■ 3.1.2 Transportation versus Recreation

The bikeways of the Cupertino Bicycle Transportation Plan do not distinguish between routes used primarily for transportation and those used for recreation, since many routes are used both for commuting and for other transportation purposes. It is acknowledged that some routes may be more often used for transportation than recreation or vice versa. This is accounted for in the prioritization criteria discussed below in Section 3.6 [Bikeway Prioritization](#). It is also acknowledged that some funding sources are exclusively for transportation bicycle facilities.

The recreational trails included in this plan will provide a completely separate right-of-way for the exclusive use of bicyclists and pedestrians. Bicyclists will need to observe reduced speed limits to avoid colliding with walkers, joggers, and those on roller-blades. These trails provide improved com-

muting access to places of employment as well as an enjoyable source of family-oriented recreational activity. City engineers and planners, in charge of the design and construction of the trail system are strongly encouraged to consult with the Commission during the planning phase of these projects.

3.2 Bicycle Technical Guidelines

The Santa Clara Valley Transportation Authority's Bicycle Technical Guidelines (BTG) present standards and guidance for planning, designing, operating, retrofitting and maintaining roadways and bikeways. They are intended to improve the quality of bicycle accommodation and to ensure countywide consistency in the design and construction of not only bicycle projects but all roadways.

Bicycles are permitted on every roadway in California except freeways and toll bridges without accommodation for bicycle and pedestrian access. Moreover, countywide guidelines are intended to aid Cupertino in providing a high quality and seamless bicycle network that facilitates and encourages the use of bicycles as an important transportation mode.

The BTG draw from state and federal design manuals, and are not likely to present an additional burden on member agencies. The BTG also highlights best practices used by member agencies in order to share information among peers and to foster consistency throughout the county.

■ 3.2.1 Traffic Signal Detection

Bike loop-detectors should be maintained to sense the presence of bicyclists at traffic signals. Poorly maintained detectors lead bicyclists to utilize pedestrian push buttons, which inconveniences bicyclists and causes additional delay at intersections, or run lights, which creates safety issues.

3.3 Bikeway Classifications

Chapter 1000 of the Caltrans Highway Design Manual describes three types of bicycle facilities: The Class I Bike Path, the Class II Bike Lane, and the Class III Route.

- **Class I Bike Paths** provide a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross-flow minimized.
- **Class II Bike Lanes** provide a striped lane for one-way bike travel on a street or highway. The bike lane is for the exclusive use of bicycles with certain exceptions: for instance, right turning vehicles must merge into the lane prior to turning, and pedestrians are allowed to use the bike lane when there is no adjacent sidewalk.
- **Class III Bike Route** provides for shared use with pedestrian or motor vehicle traffic and continuity among bikeways. In the American Association of State Highways and Transportation Officials' Guide for the Development of Bicycle Facilities, Class III is called a Designated Shared Roadway rather than a Bike Route. Class III has traditionally been used to designate anything from low volume residential roads that have no need for bike lanes, to arterials with heavy traffic volumes where widening to provide bike lanes would be infeasible.

In order to eliminate the resulting confusion over what a Class III route means, this Plan subdivides Class III into two categories in order to more precisely describe the features of the bike route: the Class IIIA Shared Roadway and Class IIIB Bicycle Boulevards. This also helps to differentiate the various types of bicycle improvements envisioned for each roadway.

- **Class IIIA Shared Roadway** is used where bike lanes or wide shoulders are not feasible due to right-of-way or topographical constraints. Bike lanes should be considered in any long-term reconstruction or redevelopment plans of the adjacent properties where a new roadway cross-section is possible.
- **Class IIIB Bicycle Boulevards**, now formally recognized², are residential streets with low traffic volume where bicycle traffic is given the right-of-way wherever feasible.

Additional detail regarding bikeway classification is available in [Appendix B](#).

3.4 Recommended Bike Network

The following categories are used to describe the bikeway network for the City of Cupertino: **Bike Path** on a paved surface, **Bike Lane** with designation on the roadway surface, **Shared Roadway** signed as a “**Bike Route**,” and **Bicycle Boulevard** signed on residential streets.

Pages 16 through 32 describe each of the proposed bikeways. Bikeway designation is given along with location and limits, and the main attractors and generators served by the route. Also included, where appropriate, are the VTA Cross County Bicycle Corridor³ (CCBC) designations⁴, which can be funded through the VTA’s Bicycle Expenditure Plan (BEP) projects, and may receive priority for future (yet-to-be-developed) funding sources. The main “Work to be done” is described along with the existing bicycle friendly characteristics of the route. If the project(s) have been funded, this information is included. If it has not been funded, the routes were prioritized using the criteria described in Section 3.6 [Bikeway Prioritization](#) with the ranking—high priority, medium priority or low priority.

Bikeway descriptions may include a depiction of the proposed route superimposed on a portion of the Cupertino Bikeway Map⁵. The map includes the symbols to the right, which indicate the designation of existing bikeways.

The map on the following page illustrates the existing Cupertino bikeways. This is followed by the proposed bikeway changes.



2 Santa Clara Valley Transportation Authority. (13 December 2007). [Bicycle Technical Guidelines: A Guide for Local Agencies in Santa Clara County](#). Chapter 5, Section 8.2.

3 Santa Clara Valley Transportation Authority (June 2008 Final Draft). County Bicycle Plan. “Section 3-5 Cross County Bicycle Corridors” Retrieved 4 January 2011 from http://www.vta.org/bike_information/bicycle_plan.html

4 Santa Clara Valley Transportation Authority (June 2008 Final Draft). County Bicycle Plan. “Figure 3-2: Cross County Bicycle Corridors” Retrieved 4 January 2011 from http://www.vta.org/bike_information/bicycle_plan.html

5 California State Automobile Association (2007). [Cupertino and Vicinity](#).



3.4.1: The Major Cupertino Bikeways

Bikeway 1:

Foothill Blvd between Creston Dr and Santa Lucia Rd

Proposed Designation: Bike Lane and Bike Route

Location and Current Status: Existing Bike Lanes from I-280 to Santa Lucia

Work to be Done:

- Improve/restripe bike lanes at ramps at the I-280 over-crossing with “Share the Road” signs
- Install warning signs at freeway on- and off-ramps to watch for bicyclists

Attractors or Links: Stevens Creek County Park; De Anza National Historic Trail; Rancho San Antonio County Park; Monta Vista Park and Recreation Center

Existing Length: 0.8 mi

Total Length: 1.9 miles

Cost: \$50,000

CCBC: Route No. 10B - 2a



Bikeway 2:

Mira Vista Rd — Janice Ave

Proposed Designation: Bicycle Route

Location and Current Status: Unsigned as a bikeway

Work to be Done:

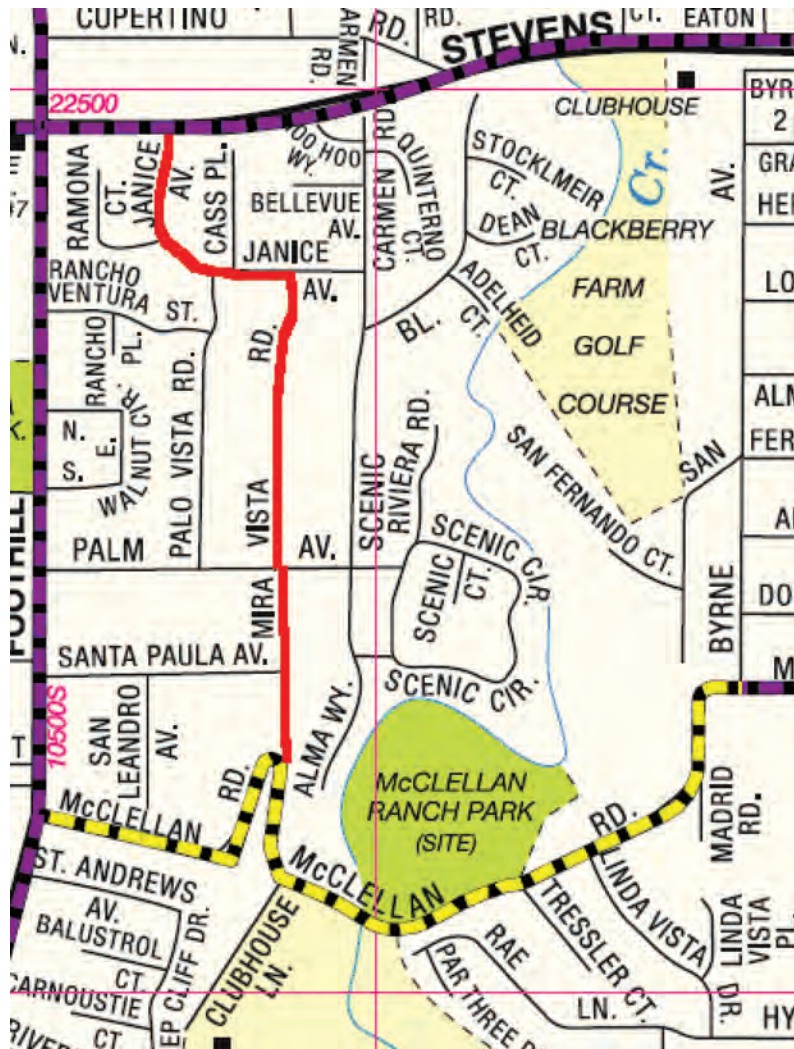
- Signage for bike route along Mira Vista Rd from McClellan Rd through Janice Ave to Stevens Creek Blvd
- Remove stop signs on Janice Ave and Palo Vista Rd

Existing Bicycle Friendly Features: Low traffic volumes. Long smooth speed bumps

Attractors or Links: Residential, McClellan Ranch Park, Monta Vista Park

Total Length: 0.6 miles

Cost: \$10,000



Bikeway 3:

Orange Ave — Fort Baker Dr

Proposed Designation: Bicycle Boulevard

Location and Current Status: Orange Ave and Fort Baker Dr, from Stevens Creek Blvd to Hyannisport Dr. Unsigned as a bikeway.

Work to be Done:

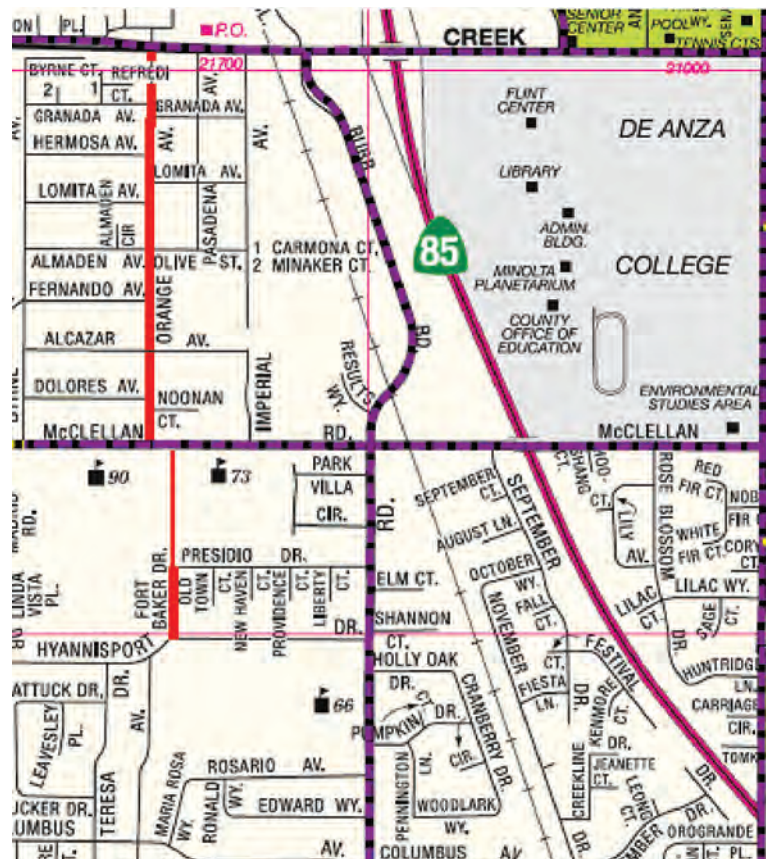
- Improve existing pathway connection from McClellan Rd to Fort Baker Dr through Cupertino Union School District property between Monta Vista High School and Lincoln Elementary School
- Modify barrier at Granada Ave for easier bicycle access, which is currently a major trouble spot for student cyclists
- Pedestrian/Bike cross-walk signal on McClellan Rd at Orange Ave for access to Kennedy Middle School via school path through Lincoln Elementary School
- Convert 4-way stop to 2-way stop at Orange Ave and Almaden Ave, or consider a traffic circle
- Add Bicycle Boulevard signage along Orange Ave

Existing Bicycle Friendly Features: Low traffic volumes and traffic barrier at Granada Ave

Attractors or Links: Monta Vista High School, Kennedy Middle School, Lincoln Elementary School, residential frontage, Cupertino Post Office

Total Length: 0.8 miles

Cost: \$300,000



Bikeway 4:

Mary Ave — De Anza College between Homestead Rd and McClellan Rd

Proposed Designation: Bike Route

Location and Current Status: Bike Lanes on Mary Ave from Homestead Rd to Stevens Creek Blvd

Existing Bicycle Friendly Features: Bicycle / Pedestrian Bridge over I-280 to connect Mary Ave in Cupertino with Mary Ave in Sunnyvale

Work to be Done

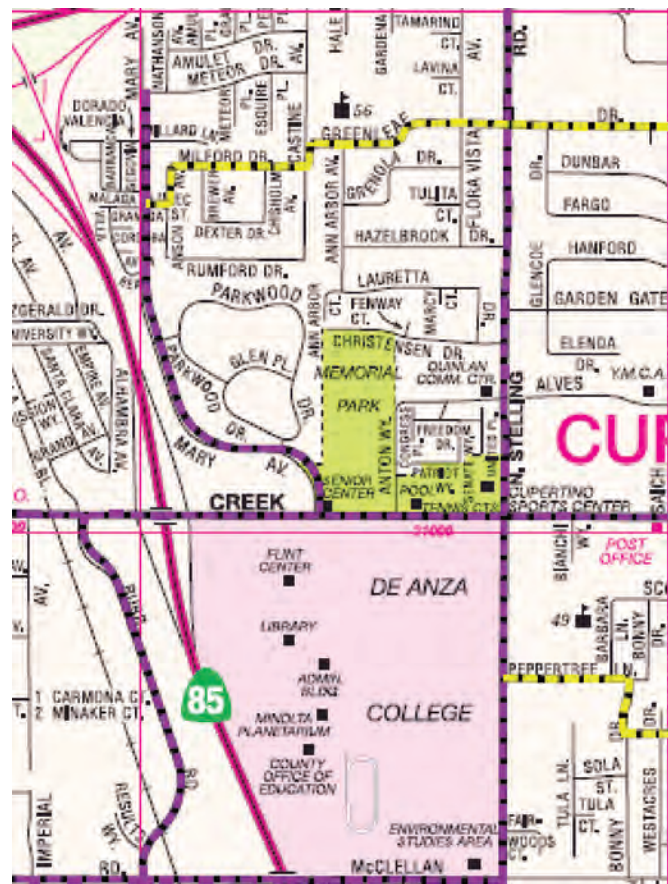
- Continue from Mary Ave Bike Lane, a Bike Route on the peripheral roadway through De Anza College campus to McClellan to eliminate necessity of bicycling on Stevens Creek Blvd

Attractors or Links: Homestead High School, De Anza College, various shopping centers, Monta Vista High School, Kennedy Middle School, UCSC Extension, Memorial Park, Cupertino Post Office, Mary Ave Bicycle / Pedestrian Foot Bridge

Total Length: 2.3 miles

Cost: \$10,000

CCBC: Route No. 7 - 2i, j, k; 7 - 3a



Bikeway 5:

Stelling Rd between Homestead Rd & Prospect Rd

Existing Designation: Bike Lane

Location and Current Status: Bike Lanes are striped continuously between Homestead Rd and Prospect Rd

Work to be Done:

- Replace stop signs with traffic circles south of McClellan Rd to improve safety by preventing young bicyclists from having to stop and go
- Remove two stop signs on Stelling Rd at Orion Lane and Waterford Dr

Attractors or Links: De Anza College, various shopping centers, Memorial Park, Hoover Park, Jollyman Park, Faria Elementary School, Garden Gate School, residential

Total Length: 2.5 miles

Cost: \$150,000

CCBC: Route No. 07 - 4a, b, c (McClellan to Prospect) (Old Highway 9 Corridor)



Bikeway 6:

Greenleaf Dr — Beardon Ave — Valley Green Dr — Bandley Dr

Proposed Designation: Bicycle Boulevard

Location and Current Status: Existing signed bike route

Work to be Done:

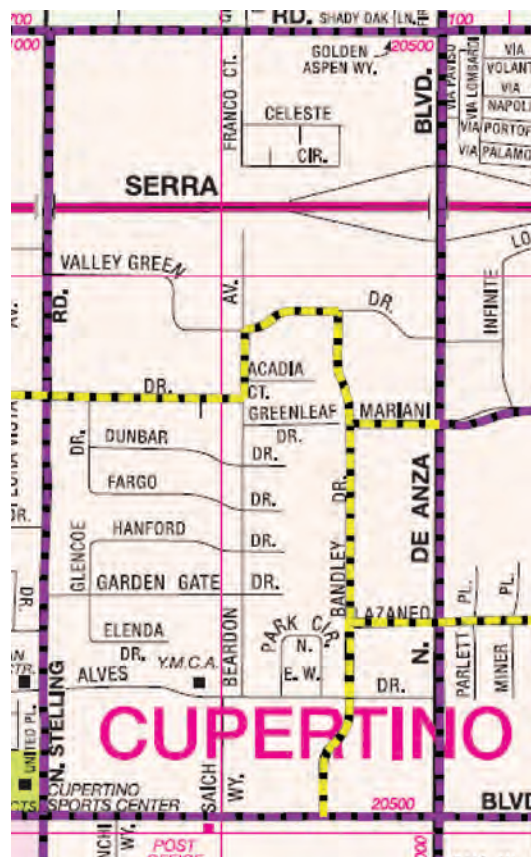
- Install designation signage for bikes
- Install traffic circles at the lower-volume Valley Green Dr intersection at Beardon Ave
- Facilitate crossing Stevens Creek Blvd from Bandley Way for south- and east-bound cyclists by identifying bicycle detection loops

Existing Bicycle Friendly Features: Low traffic volumes and major bikeway for Lawson Middle School

Attractors or Links: Apple Computer, Lawson Middle School

Total Length: 1.1 miles

Cost: \$75,000



Bikeway 7:

Blaney Ave between Homestead Rd & Bollinger Rd

Existing Designation: Bike Lane

Location and Current Status: Existing bike lanes on Blaney Ave between Homestead Rd and Bollinger Rd

Work to be Done:

- Add marked left-turn bike loop-detector on Blaney Ave at Stevens Creek Blvd
- Work with the City of Sunnyvale to install a left-turn bike loop-detector from Homestead Rd onto Blaney Ave from Sunnyvale
- Replace four-way stops with two-way stops onto or crossing Blaney Ave except at pedestrian (school) crossings
- Provide marked bike loop-detectors for left-turn and straight ahead from north- and south-bound Blaney Ave at Stevens Creek Blvd

Existing Bicycle Friendly Features: Left-turn bike loop detector from Blaney Ave onto Homestead Rd (Cupertino side)

Attractors or Links: Collins Elementary School, Lawson Middle School, various shopping and office facilities, City Hall, Library, residential

Total length: 2.0 miles

Cost: \$10,000

Notes: On some stretches, parking is prohibited on one side to make room for bike lanes. Blaney Ave dead ends into Homestead Rd at Sunnyvale boundary. Blaney Ave in San Jose lacks bike lanes.



Bikeway 8:

Portal Ave between Merritt Dr & Wilson Park

Proposed Designation: Bicycle Boulevard

Location and Current Status: Bike route between Merritt Dr and Wilson Park

Work to be Done:

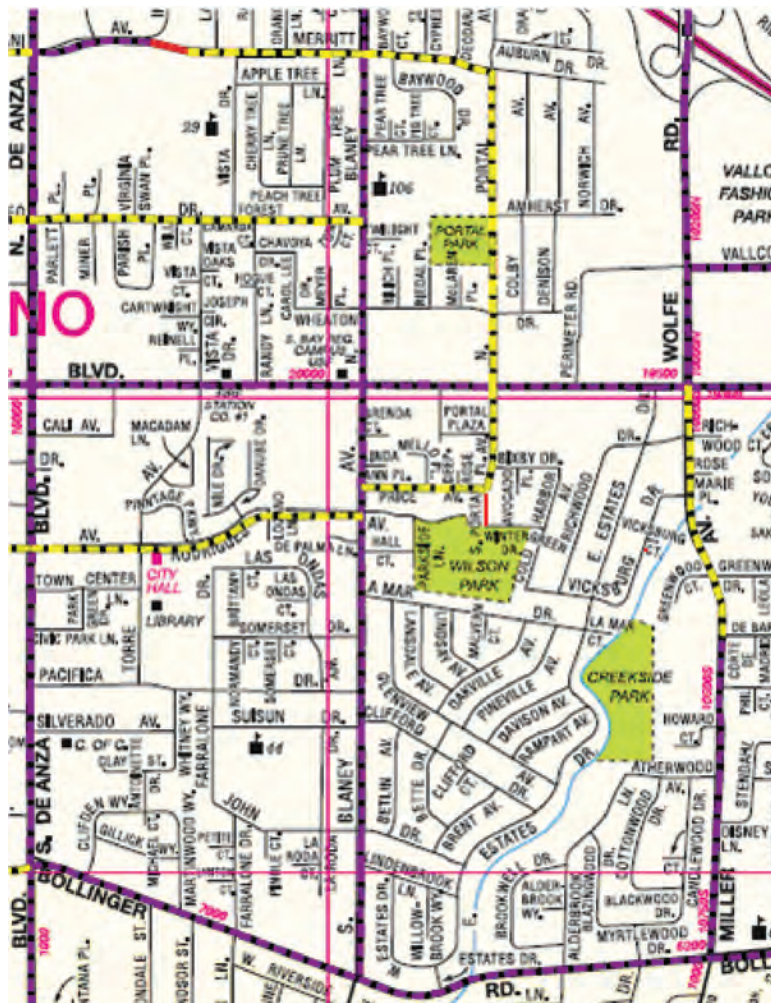
- Provide marked bike loop-detectors for south-bound Portal Ave at Stevens Creek Blvd
- Install route signs and designation signage south-bound on Portal Ave for bikes (right turn for Price; straight for Wilson Park)
- Convert four-way stop to two-way stop at the Portal Ave and Wheaton Dr intersection, with stops on Wheaton Dr

Existing Bicycle Friendly Features: Marked bike loop detectors for north-bound Portal at Stevens Creek

Attractors or Links: Collins Elementary School, Lawson Middle School, various shopping and office facilities, Wilson Park, City Hall, Library, residential

Total Length: 0.7 miles

Cost: \$100,000



Bikeway 9:

Miller Ave — Wolfe Rd

Existing Designation: Bike Lane / Shared Roadway

Location and Current Status: Some “Share the Road” signs installed along Wolfe Rd

Work to be Done:

- Complete a Bike Lane on Wolfe Rd and Miller Ave between I-280 and Bollinger Rd by filling in some gaps between Stevens Creek Blvd and Calle de Barcelona and making improvements at the I-280 on/off ramps
- Where width is less than 72 feet or there is a median, consider restriping from four to two travel lanes plus a center turn lane, or removing parking
- Conform to VTA guidelines for bike lanes through Freeway Interchanges⁶

Attractors or Links: Vallco Shopping Center, Cupertino High School, Creekside Park, residential frontage; connects to existing bike lanes in San Jose

Total length: 1.9 miles

Cost: \$100,000

Notes: One of the I-280 ramps (NB I-280 to NB Wolfe Rd) has already been reconfigured to eliminate free right turns

CCBC: Route No. 09 - 3e, f, g, h, i (Wolfe Rd /Borregas Corridor)



⁶ Santa Clara Valley Transportation Authority. (13 December 2007). Bicycle Technical Guidelines: A Guide for Local Agencies in Santa Clara County. Chapter 5, Section 5.3.

Bikeway 10:

Tantau Ave — Barnhart Ave — San Tomas Aquino Trail

Proposed Designation: Bike Lane, Bicycle Route, and Bike Path

Location and Current Status: Existing Bike Route on Tantau Ave between Barnhart Ave and Stevens Creek Blvd; Bike Route on Barnhart Ave between Tantau Ave and Creek corridor, and Bike Path along creek from Mitty Way to Bollinger Rd.

Work to be Done:

- Install Bike Route signs
- Install Bike Lane signs from Homestead Rd to Pruneridge Ave
- Remove street parking from one side of Tantau Ave between Stevens Creek Blvd and Bollinger Rd to support bike lanes
- Install “San Tomas Aquino Trail” signs along Tantau Ave and Barnhart Ave

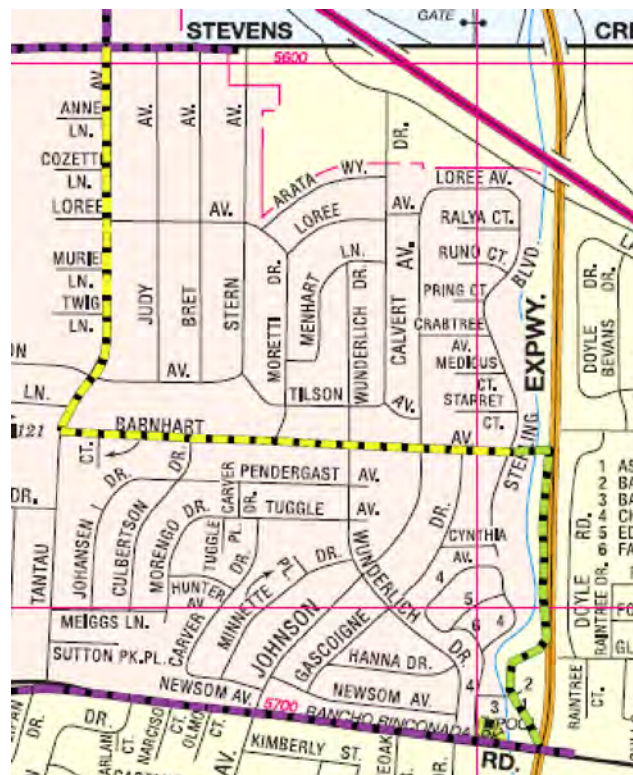
Existing Bicycle Friendly Features: Traffic barriers for through southbound motor vehicle traffic at Stevens Creek Blvd at Tantau Ave reduce traffic volumes on Tantau Ave south of Stevens Creek Blvd

Attractors or Links: Apple Computers, Hewlett Packard, Siemens, Cupertino High School, Sedgwick Elementary School, Sterling Barnhart Park, residential frontage

Total Length: 2.9 miles

Cost: \$25,000

CCBC: Route No. 10A – 1a, b, c, d and T02 – 5b, 6a, 7a



Bikeway 11:

Stevens Creek Recreational Trail

Proposed Designation: Bike Path (on multi-use path)

Location and Current Status: In process of development, preferred route identified

- Reach 1: Foothill Blvd to Stevens Creek Blvd via railroad crossing, east on Stevens Creek Blvd to Blackberry Farm
- Reach 2: Phase 1 from McClellan Rd north to Blackberry Farm was completed in 2009. Phase 2 through the Stockmeir property is in design (2010) with construction funding programmed in fiscal year 2010-2011.
- Reach 3: South from McClellan Ranch Park along private easement, through Linda Vista Park, through western portion of private easement to Stevens Creek County Park [Unscheduled and unfunded]

Work to be Done: To be determined by separate feasibility studies

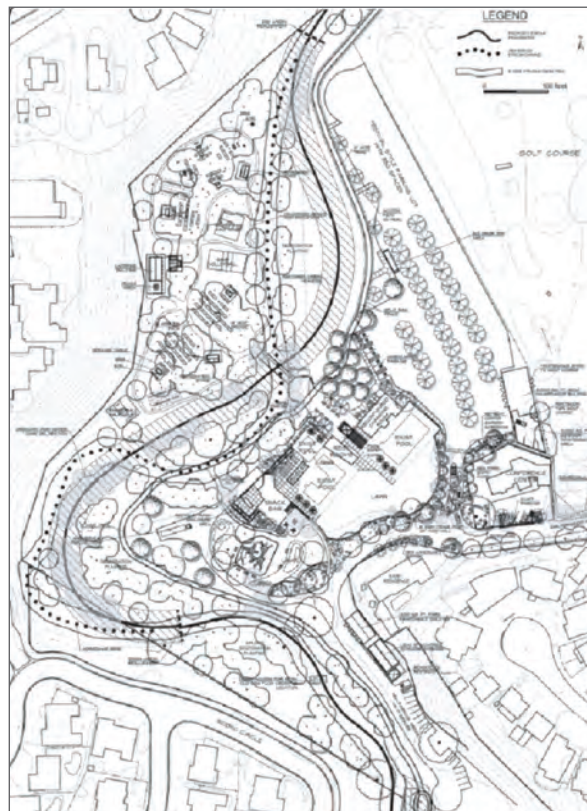
Existing Bicycle Friendly Features: No auto traffic; extra width or two separate paths required where non-bicyclists use is heaviest

Attractors or Links: Stevens Creek County Park, Rancho San Antonio County Park, spur trail to Vasona Park

Total Length: 3 miles (Reaches 2 and 3 south of Stevens Creek Blvd)

Cost: \$1.3 mil, budgeted for Reach 2-Phase 2 that includes trail, landscaping, and parking

Notes: This is considered a long-term project



Bikeway 12:

Alves Dr — Bandlely Dr — Lazaneo Dr — Forest Ave — Amherst Dr

Proposed Designation: Bicycle Boulevard

Location and Current Status: Existing bike route on Lazaneo Dr-Forest Ave between Bandlely Dr and Blaney Ave; existing bike lanes on Vallco Parkway

Work to be Done:

- Designate and install bike route signs on Alves Dr between Stelling Rd and Bandlely Dr
- Construct bike path between Portal School and Portal Park to connect to Portal Dr
- Work with Vallco Shopping Center to provide access through wall to Vallco Shopping Center
- Provide marked bike loop-detectors for all left turns and crossing De Anza Blvd

Existing Bicycle Friendly Features:

- Existing traffic barrier on Forest Ave, west of Randy Ln
- Existing traffic barrier at Stelling Rd and Alves Dr
- Existing low traffic volumes
- Existing 4-way stop at Forest Ave and Blaney Ave

Attractors or Links: Vallco Shopping Center, Apple Computer, CUSD, Lawson Middle School, Collins Elementary School, Memorial Park, Senior Center, Sports Center, Quinlan Community Center

Existing Length: 0.7 miles on Lazaneo Dr/Forest Ave; **Proposed Length:** 0.6 miles on Alves Dr and 0.2 miles for bike path between Blaney Ave and Portal Ave

Total Length: 1.5 mi

Cost: \$250,000



Bikeway 13:

Greenleaf Dr — Mariani Ave – Merritt Dr — Portal Ave

Proposed Designation: Bicycle Route

Location and Current Status: Existing signed bike route from Stelling Rd to Portal Ave at Stevens Creek Blvd

Work to be Done:

- Designate Greenleaf Dr between Beardon Ave and Bandley Dr wall as a Bicycle Route
- Install designation signage for bikes
- Install traffic circle and remove stop signs at the intersection of Greenleaf Dr/Beardon Ave
- Continue signage along Merritt Dr
- Provide marked bike loop-detectors for left turns and crossing De Anza Blvd

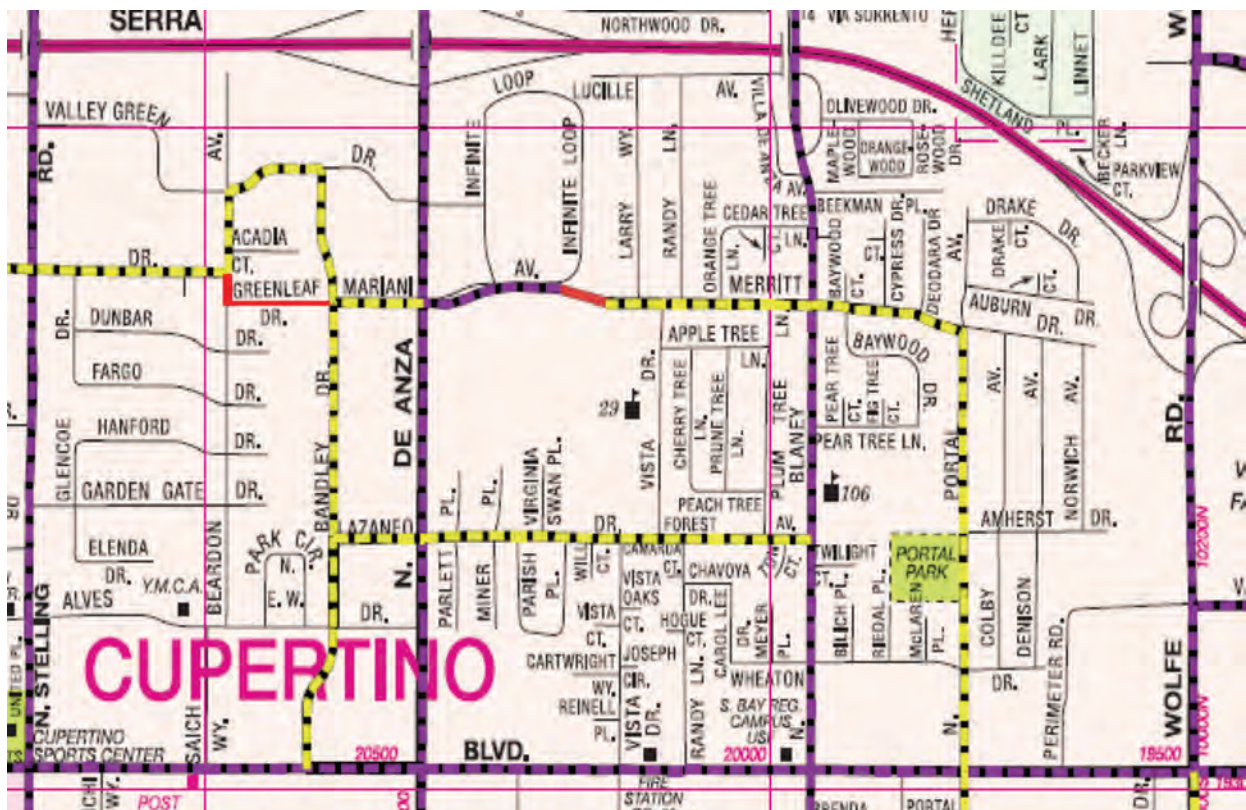
Existing Bicycle Friendly Features: Low traffic volumes

Attractors or Links: City Hall, Apple Computer, Library, Lawson Middle School, Portal Elementary School, Vallco Shopping Center

Existing Length: 1.2 miles, Proposed Length: 0.2 miles for Greenleaf Dr extension to Bandley Dr

Total Length: 1.4 miles

Cost: \$75,000



Bikeway 14:

Rodrigues Ave — Wilson Park — Creekside Park — Phil Ln — Barnhart Ave

Proposed Designation: Bicycle Boulevard

Location and Current Status: Existing signed bike route on Rodrigues Ave between De Anza Blvd and Blaney Ave, and on Barnhart Ave to San Tomas Aquino Trail bridge

Work to be Done: Develop continuous route from Rodrigues Ave to San Tomas Aquino–Saratoga Creek Trail by connecting several existing and proposed route segments. This would involve:

- Route and destination signage of the whole route as a Bicycle Boulevard
- Construct path (with signs) to connect end of Rodrigues Ave through edge of Wilson Park at Wintergreen Dr, Cold Harbor Ave, and Vicksberg Dr to an eventual right turn onto E. Estate Dr, and Creekside Park bridge entrance.
- Install marked bike loop-detector to cross Miller Ave for west-bound traffic from Phil Ln into Creekside Park
- Consider installing bike lanes on Rodrigues Ave between De Anza Blvd and Blaney Ave

Existing Bicycle Friendly Features:

- Existing four-way stop at Rodrigues Ave and Blaney Ave
- Existing Bike/Pedestrian Bridge over Calabazas Creek connecting Creekside Park to E. Estates Dr
- Existing traffic signal at Creekside Park exit at Miller Ave to cross to Phil Ln

CCBC: Route No. 12B – 1d, e, f

Attractors or Links: City Hall, De Anza College, Library, Wilson Park, Creekside Park, Sedgwick Elementary School, Cupertino High School, Hyde Middle School, Sterling Barnhart Park, San Tomas Aquino Trail connection via Barnhart Ave

Existing Length: 1.1 miles, Proposed Length: 1.3 miles

Total length: 2.4 miles

Cost: \$250,000



Bikeway 15:

McClellan Rd between Foothill Blvd & De Anza Blvd

Existing Designation: Bike Lane; Bike Route

Location and Current Status: Existing bike lanes between Byrne Ave and Stelling Rd; signed bike route between Foothill Blvd and Byrne Ave

Work to be Done:

- Widen and/or pave existing shoulder where feasible between Foothill Blvd and Byrne Ave, and between Stelling Rd and De Anza Blvd to provide four-foot shoulders or bike lanes
- Remove/relocate pine tree on south side of roadway across from Bonny Dr
- Install “Share the Road” signs and pavement stencils (“sharrows”) where bike lanes are not feasible

Attractors or Links: De Anza College, Monta Vista High School, Cupertino Library, City Hall, McClellan Ranch Park, Lincoln Elementary School

Existing Length: 1.0 mile Byrne Ave to Stelling Rd; Proposed Length: 1.3 miles

Total Length: 2.3 miles

Cost: \$2,400,000

CCBC: Route No. 12A - 1a, b, c, d, e



Bikeway 16:

Rainbow Dr between Bubb Rd & Stelling Rd

Proposed Designation: Bike Boulevard

Location and Current Status: Existing bike route between Bubb Rd and Stelling Rd

Work to be Done:

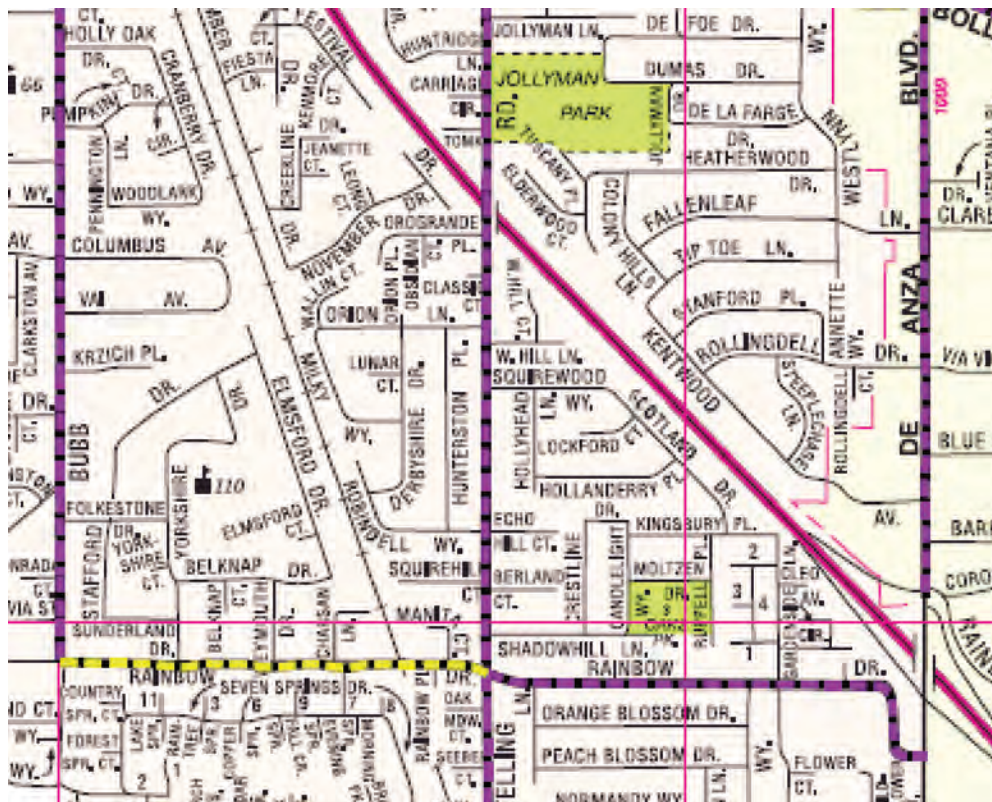
- Stripe bike lanes along Rainbow Dr or pavement stencils (“sharrows”) where there is insufficient width for bike lanes
- Remove stop signs on Rainbow Dr between Bubb Rd and Stelling Rd, and install traffic calming devices that are beneficial to bicyclists

Attractors or Links: Regnart Elementary School, Three Oaks Park, shopping, and linkage to bike lanes in San Jose

Proposed Length: 0.5 miles

Total length: 0.5 mi

Cost: \$100,000



Bikeway 17:

Stevens Creek Blvd — San Antonio County Park

Proposed Designation: Bike/Pedestrian Overpass

Location and Current Status: New Railroad overcrossing from Stevens Creek Blvd to San Antonio Park at the Hammond-Snyder house

Work to be Done:

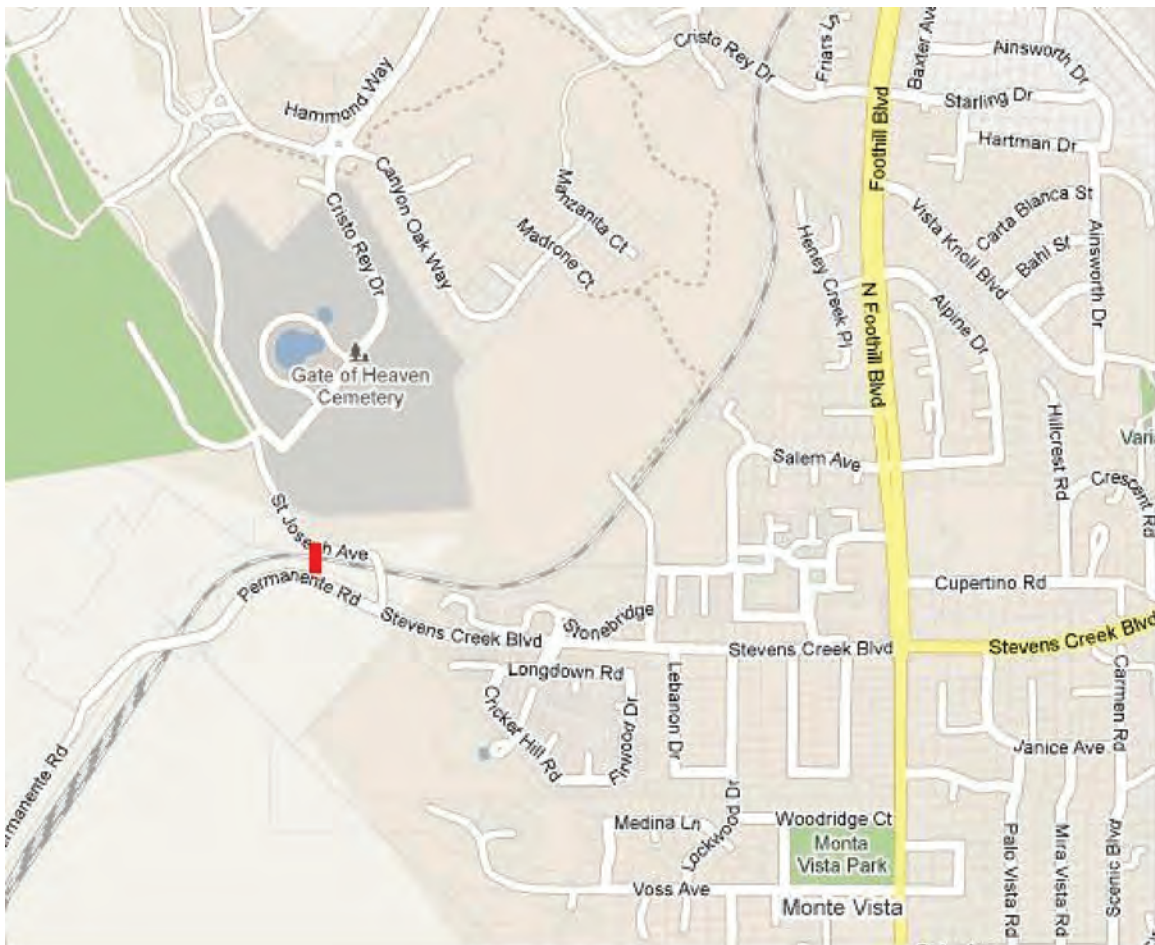
- Negotiate with Union Pacific Rail Road for the construction of a bike/pedestrian bridge over the tracks
- Build the bridge just west of where the road (with locked gate) crosses the tracks to the Hammond-Snyder house

Attractors or Links: San Antonio County Park and Open Space Preserve, Gate of Heaven Cemetery, Foothill Expressway via St Joseph Ave rather than the I-280 undercrossing

Proposed Length: To be determined

Total length: To be determined

Cost: \$2,000,000



3.5 Bikeway Implementation

This section presents the implementation plan for the bikeway network for the City of Cupertino. It describes the components of implementation, including general cost estimates, the prioritization criteria, identification of likely funding sources, and ways in which the projects will become reality.

■ 3.5.1 Process

The actual implementation of this plan will occur incrementally in a variety of ways. Many projects will be incorporated into the Capital Improvement Program (CIP) process and will be implemented as the CIP projects get funded. Other projects can be incorporated into regular maintenance and resurfacing operations. Development and redevelopment in some areas of Cupertino will present the opportunity to implement some of the recommendations of this plan. It is important, as part of these processes, to incorporate the “Best Practices” of the VTA’s Bicycle Technical Guidelines into the City of Cupertino’s zoning ordinances and Public Works construction standards so that we are assured of compliance and consistency in all future projects. Finally, outside funding can be obtained to finance the design and construction of projects, improvements, and programs. The most likely funding sources are addressed in the last section of this chapter.

■ 3.5.2 Cost Estimates

The cost to implement the projects presented in “Recommended Bikeway Network” was developed in conjunction with City staff. It should be recognized that unit costs vary considerably depending on the size of the job and the location. For example, the unit cost of striping only 1000 linear feet can easily cost two to three times that of a 15,000-foot project. Pavement widening costs also vary considerably depending on the terrain and other variables, such as the presence of utility poles, drainage ditches, and culverts. Costs for materials can fluctuate considerably due to the impact of global markets. The cost estimate for each route segment, as well as the total, is summarized in the table below in Topic 3.6.2 [Bikeway Priority](#).

■ 3.5.3 Route Prioritization Criteria

Before any projects identified in this plan can be implemented, they must be prioritized. An objective set of criteria is essential to avoid controversy among various project proponents as well as to efficiently respond to funding applications. The prioritization criteria presented below were derived from criteria specified by various funding sources as well as knowledge of bicycle planning obtained from previous studies. The criteria used in three common funding sources are presented below as background information to the presentation of the prioritization criteria used in this study:

- Bicycle Transportation Account
- Transportation Development Act Article 3
- Proposition 116

3.5.3.1 Bicycle Transportation Account

Will the project be used mostly by bicycle commuters? Does the project have the potential to increase bicycle commuting? Is the project the best alternative for this situation? Will the project improve continuity with existing bikeways? Will the project provide a direct route to activity centers? Is the project consistent with the City’s Bicycle Transportation Plan?

3.5.3.2 Transportation Development Act Article 3

The Metropolitan Transportation Commission (MTC) processes each county’s applications but gives great leeway to each county to prioritize its own projects. Thus, MTC does not

apply criteria directly to the projects. However, its application sheet identifies the following evaluation criteria:

- Elimination of problem areas
- Access to or bicycle parking in high activity areas
- Bicycle/transit or pedestrian/transit use
- Continuity of longer routes
- Local support

3.5.3.3 Proposition 116

Many bikeway projects throughout the state were funded using Proposition 116 funds. Although Proposition 116 funds have all been allocated, the criteria used to allocate these funds were:

- Need, with three subcategories: solves problem areas, serves bicycle commuters and is the best alternative
- Convenience, with four subcategories: removes obstacles/gaps, direct route to activity centers, links activity centers, promotes intermodal trips
- Safety, with three subcategories: eliminates hazards, improves personal safety of bicycle commuters, reduces theft
- Funding Considerations, with three subcategories: comparative costs, other funding sources, and ongoing financial support
- Support, with two subcategories: letters of support and public participation

■ 3.5.4 Bikeway Prioritization

The following topics address the prioritization criteria and priority selection by the Commission and community.

Four main categories were used in prioritizing the bikeway projects:

- Safety
- Connectivity
- Commuter Transportation Trips
- Local Support

3.5.4.1 Safety

Projects that directly or indirectly improve a safety problem or obstacle including railroad tracks, drainage grates, inconsistent shoulder widths, streets with limited sight distance, etc. shall have priority. Other rationale considered is the following:

- **Routes with high vehicle volumes or high speed** have greater potential safety conflicts and thus should have higher priority.
- **Routes or locations with high accident history** (such as bike-motor vehicle, single bike, bike-bike, or bike-pedestrian) should have priority.
- **Routes with narrow lanes or shoulders** for bicycles to ride have greater potential safety conflicts and thus should have priority.

3.5.4.2 Connectivity

Connectivity is important and projects that enable direct travel and that serve the most numbers of bicyclists are rated higher than others. Routes that provide access to major

activity centers facilitating the use of the bicycle for transportation should be ranked higher. Connectivity does the following:

- **Closes gaps** between two streets or otherwise reduces or eliminates circuitous travel
- **Facilitates commuter and utilitarian trips**
- **Directly serves attractors and generators**, including employment sites, schools, and shopping centers
- **Links to other bikeways** in other communities

3.5.4.3 Commuter Transportation Trips

Projects that will be used primarily for transportation should be rated higher than those used primarily for recreation. Such projects improve routes with high existing or potential bicycle traffic. All other things being equal, the route that has *or would have* the most bicycle commute traffic should have more priority.

3.5.4.4 Local Support

Routes which have demonstrated local support are rated higher. These routes have special significant local support or are of particular interest to a community organization as measured by letters or citizens attendance at public meetings.

3.5.5 Bikeway Priority

Bikeway No.	Linkages	Priority
1	Foothill Blvd between Creston Dr and Santa Lucia Rd	Medium
2	Mira Vista Rd—Janice Ave	Medium
3	Orange Ave—Fort Baker Dr	High
4	Mary Ave—De Anza College—McClellan Rd	High
5	Stelling Rd between Homestead Rd & Rainbow Dr	High
6	Greenleaf Dr—Beardon Ave—Valley Green Dr—Bandlely Dr	Low
7	Blaney Ave between Homestead Rd & Bollinger Rd	Medium
8	Portal Rd between Merritt Dr & Wilson Park	High
9	Miller Ave—Wolfe Rd	High
10	Tantau Ave—Barnhart Ave—San Tomas Aquino Trail	Medium
11	Stevens Creek Recreational Trail	Medium
12	Alves Dr—Bandlely Dr—Lazaneo Dr— Forest Ave—Amherst Dr	High
13	Greenleaf Dr—Mariani Ave—Merritt Dr—Portal Ave	High
14	Rodrigues Ave—Wilson Park—Wintergreen—Cold Harbor Ave—Vicksberg—E Estates Dr—Creekside Park—Phil Ln —Barnhart Ave	High
15	McClellan Rd between Foothill Blvd & De Anza Blvd	High
16	Rainbow Dr between Bubb Rd & Stelling Rd	Low
17	Stevens Creek Blvd—San Antonio County Park	Low

4 Encouragement

With the growing densification of Silicon Valley, and its dependence on automobile use as a primary source of transportation, cities and towns throughout the valley are seeking solutions to a looming transportation crisis. Transportation Demand Management (TDM) programs⁸ have been implemented by state and local governments and private industry to encourage carpools, vanpools, train, bus and light rail transit. But, at the end of the day, traffic congestion reigns supreme owing to the abundance of single occupant vehicles. Bicycle commuting is an underutilized opportunity and is often overlooked for attaining significant reductions in traffic congestion.

The use of a bicycle for commuting, utility, and recreational purposes has steadily increased since the dawn of the 10-speed revolution in the early 1970s. The initial eagerness for road bikes was followed by the development of rugged off-road bikes and light weight road bikes that triggered enthusiasm for long distance cycling, mountain biking, road racing, bicycle touring and recreational riding. The bike rage likewise spawned the formation of local bicycle clubs, regional bicycle coalitions and the rebirth of the League of American Wheelmen that was established in 1880, now known as the League of American Bicyclists.

Bicycling for commuting and utility purposes has gained a good deal of publicity in the San Francisco Bay Area in recent years, with events such as Bike to Work Day that feature Energizer Stations to support and applaud the commuting cyclists. Demand for improved access to Caltrain, BART, and local transit has resulted in positive changes for multimodal bicycle commuters. Likewise, the signing and striping of bike lanes and routes, and the installation of bike detection devices at signalized intersections, has greatly increased the readiness of both cyclists and motorists to share the road. Continued efforts to link local bikeways into a system of cross-country bicycle corridors, and the application of VTA's Bicycle Technical Guidelines in the design and construction of bicycle related projects is also encouraging bicycle use.

4.1 City Sponsored Programs

The City of Cupertino has set an example by promoting utilitarian bicycle use among its own employees: A program of providing a City employee bicycle pool, similar to a pool of city motor vehicles, is currently being implemented. The City offers a short bicycle safety course to employees before they can participate in the program. In addition, the City should consider encouraging commuting bicyclists to form or join a local bicycle club.

Additional bicycling encouragement could be supported through the following events or activities:

- Big Bunny Ride
- Bike Races
- Free Basic Bike Repairs
- Healthy Living
- Bike Festival
- Fitness Themes
- "Green" or "Earth Day"
- Safety Classes

⁸ Victoria Transport Policy Institute (26 October 2009). [TDM Encyclopedia](http://www.vtppi.org/tm/tm9.htm) "Commute Trip Reduction (CTR)." Retrieved 15 November 2009 from <http://www.vtppi.org/tm/tm9.htm>

4.2 Bicycle Commuting Programs

According to the 2000 Census⁹, 0.6% of Cupertino residents bicycle to work. Countywide, 1.2% of the residents bike to work, which is slightly higher than the Bay Area average ¹⁰of 1.1%.

The Santa Clara County bike commute modal split is skewed by the presence of Stanford University. Stanford University has an extremely high bike commute rate of 42.4%, which influences the adjacent City of Palo Alto with a bicycle commute rate of 5.6%. Excluding these two locations, the county average would be 0.8%. Therefore, Cupertino is a fairly typical Santa Clara County suburb ¹¹.

The bike commute rate is affected by a number of external factors including the presence and quality of bicycle facilities and roads in general, the number of households with access to a motor vehicle, and the distance residents live from their work. With the implementation of the bikeways, facilities, and improvements provided within the past 10 years, it is estimated that the bicycle commute share for Cupertino could double from the 2000 census with the 2010 census figure.

A Cupertino study of 2007 bicycle commuting along both Stelling Road and Foothill Expressway at I-280¹² reported 580 trips or 290 bicycle commuters (a person who commutes by bicycle, especially between home and work or school) between 7:00 a.m. and 6:45 p.m. The VTA reports that bicycling commuting¹³ has grown by a 9.8 percent Annual Growth Rate since 2007. As a result, we might expect that there are now approximately 350 bicycle commuters traveling daily across I-280 and, given implementation of the proposed bikeways in this Plan, it is expected that this trend will continue citywide. Further bicycle counting along Stelling Road, Foothill Expressway, and along all major corridors throughout Cupertino is recommended to establish a baseline and confirm trends in bicycle commuting.

Promotional programs encouraging bicycle commuting are sponsored by a broad cross-section of employers, ranging from business and industry to schools, universities, and local governments. The most successful programs result from collaboration between the public and private sectors. The specifics of each program differ based on the potential audience, but experience has shown that an effective Bicycle Promotion Program must include the following elements:

- Identification of the many benefits of bicycle commuting
- Incentives to reward the use of a bicycle as a commuting vehicle
- Recognition and support from the program's sponsor for each individual who commutes by bicycle

■ 4.2.1 Bicycle Commuting Campaigns

To help bicycling become a more common option as a means of alternative transportation, the availability, feasibility, and benefits of bicycle commuting must be known. Many people are unaware of the opportunities that bicycle commuting can provide.

⁹ City of Cupertino. [Facts & Figures](http://www.cupertino.org). Retrieved 16 November 2009 from <http://www.cupertino.org>

¹⁰ Metropolitan Transit Commission [Bicycles/Pedestrian Regional Planning](http://www.mtc.ca.gov/planning/bicyclespedestrians/regional.htm). Retrieved 16 November 2009 from <http://www.mtc.ca.gov/planning/bicyclespedestrians/regional.htm>

¹¹ Association of Bay Area Governments [Bay Area Census](http://www.bayareacensus.ca.gov/transportation.htm#commuting). Retrieved 16 November 2009 from <http://www.bayareacensus.ca.gov/transportation.htm#commuting>

¹² Traffic Data Services. (17 September 2007). [Foothill Expy](#) and [Stelling Road Bicycle Trips](#).

¹³ Santa Clara County VTA. 2007, 2008, and 2009 [VTA Monitoring & Conformance Reports](#).

An extensive advertising campaign must be developed to get the message out. The actual components of this campaign will depend upon what group is being targeted; that is, employers, city officials, city employees, students, or the general public. A campaign will be most successful if it is tailored to a specific group, and can address both the questions and doubts of that group.

This campaign should include information about monetary, environmental and health benefits of bicycle commuting. It should also address and attempt to dispel many of the perceived obstacles to bicycle commuting. Many of the TDM programs currently in effect use newsletters, special events, and workshops to educate potential bicycle commuters. Information should be included on what kind of bicycle and other equipment is needed, where safe and secure bicycle parking is located, where bike shops are located, and the available transit-access options. Bicycle route maps, safety information, effective-cycling pamphlets and flyers of upcoming bicycle events can be distributed in employee paycheck envelopes or mailed with utility bills to reach the population of a city, county, or region.

Some of the existing programs go even further and provide a bicyclists information network. These networks can be used by the potential bicycle commuter to learn what the best commute routes are for their personal needs, to locate experienced bicycle commuters in their area who are willing to advise and escort them during their first bicycle commutes, and to find out what events and activities are coming up. The Bay Area's Metropolitan Transportation Commission (MTC) provides this service for potential bicycle commuters including information about bicycle access on bridges and transit throughout the area. Together with the Silicon Valley Bicycle Coalition (SVBC), MTC is the sponsoring agency for Bike to Work Day, which is held in mid-May of each year, in Santa Clara County. Informational websites are available¹⁴.

Many people are unaware of the opportunities that are available today to combine transit with the bicycle commute. Santa Clara County transit buses have front-loading bicycle racks, and both Caltrain and VTA Light Rail have special racks or compartments for carrying bikes. Many Caltrain and BART Stations have bicycle lockers available for rent. In addition, the VTA has smart e-lockers at 12 of its light-rail stations, which are compatible with those located at several BART stations.

■ 4.2.2 Incentives to Use Bicycle Commuting

Many of the existing TDM programs use monetary or other incentives to lure the prospective participant out of their single-occupant vehicle and into a carpool or transit. Many TDM programs include similar incentives for bicycle commuting, but these can often be expanded using the existing transit and carpool incentives as a guideline. The most effective incentives for bicycle commuting currently include the following:

Boltage: Two schools in Cupertino participate in the Boltage program, which is an incentive to encourage children to bike or walk to school. The program incorporates a machine called the Zap, which is a solar powered, wifi internet enabled Radio Frequency Identification (RFID) reader. Children get a RFID tag that attaches to their school backpack, and the Zap reads their unique number when they go past it at the school. The Zap makes a sound and flashes a light that indicates a biking or walking child has been counted. Subsequently the Zap connects to the internet, and uploads its daily counts. Each child and school has an account on a Website that collects each participating child's trips, and the school can run reports to support their incentive programs¹⁵.

¹⁴ Metropolitan Transit Commission Website at <http://www.511.org> and the SVBC Website at <http://www.bikesiliconvalley.org>.

¹⁵ Boltage. "Technology" Retrieved 4 December 2010 from <http://www.boltage.org>

Bicycle Infrastructure: Good bicycle routes providing access to the locations frequented by the bicycle commuter are critical to an encouragement program. Bicycle route maps and identifiable route signs are necessary to guide the bicycle commuter who may be new to the area. Obviously, developing a bicycle route network to serve its employees is beyond the ability of a company to provide, and must be accomplished by local city and county governments. However, a company can lobby the local agencies for improvements to bicycle access for its employees or institute an “Adopt-a-Lane” program to construct, maintain or beautify bicycle facilities in the area. Interest and support by the business community in the bicycle as transportation will serve to increase the interest and support of local governments and potential bike commuters.

Parking: The provision of secure, protected, convenient and inexpensive bicycle parking is crucial to the success of bicycle commuting promotion.¹⁶ Suitable bicycle parking can be provided with bicycle lockers, bicycle storage rooms, locked cages, and attendant parking. Allowing bicycles into the workplace is the least costly for the employer to provide. However, space is not always available in the workplace for the parking of bicycles, and often bicycles are not allowed into the building itself. It may be necessary for the employer and employees to work with building owners/operators to negotiate for permission to bring bicycles inside or for a suitable bicycle storage room. A number of communities have modified their parking ordinances to include requirements for bicycle parking and/or showers and locker rooms. This normally is applicable to requests for new building permits.

Cash Incentives: Several varieties of cash incentives to the employee to encourage the bike commute were found in this research. As part of many TDM programs, a subsidy is given to employees who use transit or other alternative commute modes. Several companies have also made this cash dividend available to bicycle commuters for each day that they commute by bicycle.¹⁷ Discounts or credits at bicycle stores and/or company stores and cafeterias are another means for providing an incentive to employees for their bike commute.¹⁸ The City of Palo Alto provides \$20 per month (taxable income) to eligible employees who ride a bicycle to work. Companies have been very creative in their attempts to lure employees out of their cars. In some of these programs, companies provide company bikes for a trial commute by their employees. Other companies assist the employee in the purchase of a bicycle. This latter program has taken many forms, including reimbursing the employee for the purchase after commuting for a period of time, providing financing for a new bike, or offering an easy payroll deduction plan.¹⁹ Other possible encouragements might include paying employees for their bicycle commute time in excess of the time spent in the auto commute or giving bicycle commuters 15 minutes of additional vacation time for each day that they bike commute.

A parking cash-out program²⁰ is another opportunity to provide a cash incentive to employees while perhaps reducing costs to the employers. Under this program, the employee is able to “cash-out”

16 At Hewlett-Packard in Silicon Valley, over 140 bicycle lockers have been in high demand since they were installed; there is currently a waiting list for their use. At Adobe Systems in Mountain View, bicycle parking is available in certain stairwell areas. Parking is controlled by a formal posted policy approved by Adobe's Facilities and Security Departments and the city's fire department. These parking areas are kept organized with bicycle floor stands like those used for bike display in bike shops. Sun Microsystems, Palo Alto, and Walker, Richer & Quinn, Inc. of Seattle both have secure bike storage rooms with card-key access.

17 Alza Corporation (Palo Alto), Cities of Menlo Park and Palo Alto, Apple Computer and General Electric (San Jose) employees are reimbursed \$1/day for each day they bike commute.

18 Stanford University provides a yearly \$70 voucher to any employee who does not buy a yearly parking permit good for bike services at the campus bike shop or for daily parking fees. The City of Palo Alto distributes monthly \$20 vouchers for three local bike shops to any commuter who bikes 60% of the time. Fleetwood Enterprises in Riverside gives its regular bike commuters a safety package including helmet, reflective vest, and headlamp. The University of California at Davis gives regular bike commuters discount bus coupons for non-pedal days. NIKE in Beaverton, Oregon, gives employees a \$1 credit at company store and cafeteria for each bike commute day.

19 City of Palo Alto and Fleetwood Enterprises (Riverside) offer company-owned bikes for trial bike commutes. Fleetwood Enterprises and Rockwell International (Southern California) go even further by subsidizing the purchase of a new bike and helmet.

20 We were not able to find a cash-out program currently being used. Stanford University is evaluating the possibility of a cash-out program in the future.

their parking privileges and receive the cash-equivalent or transit pass equivalent of the parking spot. Employers who lease parking spaces for their employees can reduce the number of spaces they require and pass this savings on to their employees while promoting commute alternatives.

Convenience Incentives: One of the primary obstacles to transit and bicycle commuting is the perceived inconvenience factor. TDM programs have addressed this concern with the Guaranteed Ride Home. In the event of sickness, family emergency, or even inclement weather, the bicycle commuter is provided with a taxi voucher or other means for a ride home. This is a small price to pay for the peace of mind of the employee and increases the number of bicycle commuters. Many cities and companies provide fleet bicycles for employee use during business hours. Shuttles between company facilities have also been improved to include bike racks. Fleet bikes are also available for the employee to use for their commute on a trial basis as discussed above.

Other convenience incentives are on-site bicycle repair kits for flat tire and broken chain emergencies, on-call repair services with a local bike shop, flex hours so the employee can avoid rush hour or darkness, showers and locker rooms for clean-up and changing after the commute, closet space for storage of clean clothes and relaxed dress codes for bicycle commuters.²¹

The following is a list of some Cupertino employers having bicycle facilities for their bike commuters. Bicycle facilities include bike racks for on-site bicycle parking, lockers for storing bicycles, employee showers, and lockers for employees to change and store clothing.

Company	Employee Bike Racks	Employee Bike Lockers	Employee Lockers	Employee Showers
Apple	Yes	Yes	Yes	Yes
Arc Sight				Yes
BJ'S Restaurant & Brewery	Yes		Yes	
Chordiant Software Inc	Yes	Yes		Yes
Elephant Bar Restaurant	Yes			
Hewlett-Packart	Yes	Yes		
Keller William Realty	Yes			
Numetrics	Yes			Yes
Panasonic		Yes		Yes
Sugar CRM	Yes		Yes	Yes
Sunny View Retirement Cmnty			Yes	
Symantec Corp	Yes			
Target	Yes		Yes	
Trend Micro Inc	Yes	Yes		
Vallco Shopping Mall	Yes			
Veriry			Yes	Yes
Whole Food Market	Yes		Yes	
Zenverge				Yes

Figure 3: Major Employers with Commuting Bicyclists' Facilities

²¹ Hewlett Packard has bike repair stations on site. Silicon Graphics provides bike repair service from a mobile provider.

■ 4.2.3 Support and Applaud Bicycle Commuting

Endorsement of bicycle commuting by those in charge is a significant aspect of a promotion program. Prospective bicycle commuters are more apt to try out this underutilized mode if it is acceptable to the supervisors, elected officials and peers. Organized and advertised rides such as “Bike or Walk to School Day”²², “Ride with the CEO,” or “Ride with the Mayor” clearly demonstrate their support and enthusiasm. At one of the most successful state rides, Cycle Oregon, the Governor of Oregon gave the opening statement and then rode along with participants for a portion of the first day. Advertising campaigns aimed at informing commuters on the merits of bicycling should include endorsements by key officials as well as interviews with peers who currently commute by bicycle. Beat-the-Backup Day and Earth Day provide opportunities to coordinate bicycle events with existing regional events. But it is not enough to encourage bicycle commuting one or two days a year. Bike days should be held on a regular basis, perhaps once a month. Competitions between departments or companies could be set up. Programs by a city or company to promote bicycle commuting should be as comprehensive as the programs established to encourage transit use. If cash subsidies are offered for transit use but not for bicycling, the message that bicycles are not as acceptable as transit is clearly being given.

Implementation of the programs discussed above will do a great deal towards encouraging bicycle commuting. A bicycle commute coordinator is essential to provide the information and encouragement for prospective bicycle commuters. Also, bicycle buddy programs to match new commuters with experienced commuters are helpful.

²² University of North Carolina Highway Safety Research Center. “National Center for Safe Routes to School” Retrieved 15 November 2009 from <http://www.walktoschool.org/>

4.3 Guidelines for a Bicycle Promotion Program

The following section is included to provide the businesses and government agencies in Cupertino with the tools to promote bike commuting among their employees.

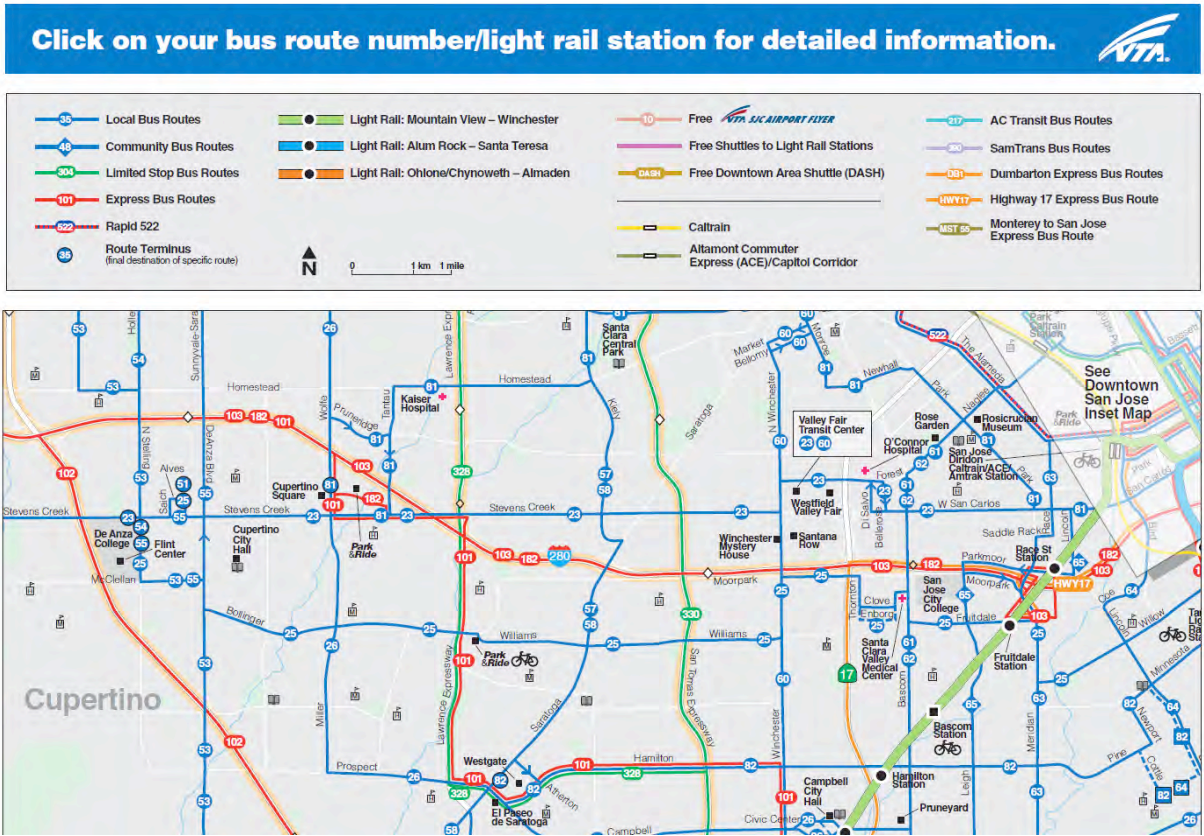


Figure 4: Local Santa Clara VTA Transportation Routes

Although Cupertino has neither Amtrak, Caltrain, nor light-rail service within its boundary, bicycle transport to employers, Caltrain, and light-rail is available from transit centers using the following VTA Bus Routes that originate, pass through, or terminate in Cupertino:

23	DeAnza College to Alum Rock Transit Center via Stevens Creek	54	De Anza College to Sunnyvale/Lockheed Martin Transit Center
25	DeAnza College to Alum Rock Transit Center via Valley Medical Center	55	De Anza College to Great America
26	Sunnyvale/Lockheed Martin Transit Center-Eastridge Transit Center	81	Weekday Vallco Shopping Center to San Jose State University / Sat/Sun Vallco Shopping Center to Santa Clara Transit Center
51	De Anza College to Moffett Field/Ames Center	101	Camden & Highway 85 to Palo Alto
53	West Valley College to Sunnyvale Transit Center	182	Palo Alto to IBM/Baily Avenue Center

The person leading a bike-commuting effort should be a City staff member, preferably the Employee Transportation Coordinator or Bicycle Coordinator. A most imperative element to the success of this program is to have the support of key City officials. The City needs to continue to demonstrate its enthusiasm and support of bicycle commuting. Every department must have a green light to prioritize bicycle commuting as a viable solution to traffic and parking problems. A commitment from Cupertino to improve safety conditions, for example, provide bike routes, remove traffic obstacles, and prosecute both motor vehicle and bicycle traffic offenders, and to provide secure parking is crucial to this endorsement. It is also important that the public see that both Cupertino and City employees take the lead in demonstrating the positive aspects of bicycle commuting by doing it themselves.

Initially, a bicycle promotion program should be targeted at the largest employers within Cupertino while also participating and serving as a role model. The bicycle promotion program can be incorporated into an existing TDM program especially for companies with over 100 employees, which are mandated by some state laws to have a TDM program to promote alternative modes of transportation.

To achieve the greatest response possible, it is imperative to get key decision-makers at Cupertino and each company to support and participate in bicycle commuting. The Employee Transportation Coordinator (ETC) at each company will be the key person in making bicycle commuting a success, since they are the individuals designated at their companies to promote commute alternatives. The ETC will be able to implement company-wide mailings, on-site bicycle events and other tactical program elements of the bicycle promotion program. The human resources or benefits manager is another good source for distributing promotion materials and information and may serve as the program leader for those companies without an ETC. Involving the CEO or President, Mayor, and City Council will set the pace for the program and gain immediate attention throughout the organization.

The following topics serve as supporting guides for developing a successful bicycling commuting program:

- Employer Resource Kit
- Bicycle Education and Safety
- Commuting Events and Activities
- The “Cupertino Bicycle Safety Week”
- White Bike Program
- Worksite Improvements
- Bicycle Hotline
- Incentive Programs
- Media Campaigns

■ **4.3.1 Employer Resource Kit**

A sample Employer Resource Kit should be prepared by the City of Cupertino to assist companies in shaping their bicycle promotion programs. The information kit should include:

- Text for a letter from the CEO or President explaining the purpose of the outreach campaign that urges employees to consider the bicycle when making commute choices. The company can use the text, fill in the correct name, and distribute at the program’s kick-off.

- Articles about bicycling as a great commute alternative. These stories can be used in company newsletters, as well as all-staff memos, bulletin board fliers, or any other outreach method in place at the company.
- A list of programs and events for use in the company's program. The list will provide details of existing events as well as new programs that could be implemented. City-sponsored events should be included in this list.
- A resource list detailing sample bicycle promotion programs, resource centers for bicycle promotion assistance, and local bicycle coalitions. This list will be valuable for the companies that may not be aware of the benefits of bicycle commuting.
- Route maps showing the best bike commute routes in Cupertino to be distributed and posted.
- Bicycle Safety and Road Sharing Brochures developed through the education program discussed in "Bicycle Education and Safety."
- A list of Local Bicycle Stores for employees to find the appropriate equipment for their bicycle commutes.

■ **4.3.2 Commuting Events and Activities**

Special events to highlight efforts to promote bicycle commuting will help direct attention to the program and provide an opportunity to educate bicycle commuters. Events will motivate employees to consider bicycle commuting and put potential riders in touch with peers who already commute by bike.

■ **4.3.3 White Bike Program**

This program involves distributing a fleet of bicycles around the community. Potential users simply find a bicycle, ride it to their destination, and leave it for someone else to use.

■ **4.3.4 Bicycle Hotline**

A telephone number, the City's Website, or an email hotline for reporting potholes, missing bikeway signs or other bicycle related hazards could be provided. Such a system could also be expanded to provide bicycle safety, maps, and news on upcoming events such as those in Mountain View²³ and Sunnyvale²⁴.

■ **4.3.5 Media Campaigns**

Television, radio public service announcements, and the internet can help reach a broad audience that highlight local bicycling news and upcoming cycling events.

■ **4.3.6 Bicycle Education and Safety**

Discussions and demonstrations can be held during the lunch hour at companies, schools, and elsewhere to address "how to" issues and safety concerns. Speakers and instructors can be coordinated through the Silicon Valley Bicycle Coalition or the Commission.

²³ City of Mountain View - Bicycle/Pedestrian Advisory Committee. [Bicycling in Mountain View](http://www.mountainview.gov/services/learn_about_our_city/bicycling_in_mountain_view.asp). Retrieved 11 November 2009 from http://www.mountainview.gov/services/learn_about_our_city/bicycling_in_mountain_view.asp

²⁴ Sunnyvale Bicycle and Pedestrian Advisory Commission. [Bicycling in Sunnyvale](http://sunnyvale.ca.gov/City+Council/Boards+and+Commissions/Bicycle+and+PED/). Retrieved 11 November 2009 from <http://sunnyvale.ca.gov/City+Council/Boards+and+Commissions/Bicycle+and+PED/>

■ 4.3.7 The “Cupertino Bicycle Safety Week”

This weeklong event can promote the benefits of bicycling to a wide audience and for the full range of trip purposes; for example, commuting, recreation, or running errands. Programs in the schools can also be coordinated as part of the program. This event can culminate in the “Bicycle Commute in Cupertino Ride,” which would be one evening of bringing together all the participants. This event is a perfect opportunity for folks who haven’t been on a bicycle in years to rediscover the joy of bicycling. This ride is not intended as a race, but as an opportunity for the participating “bicycle-commute teams” to compete against each other to see who will have the highest number of riders. The winning teams can be awarded a trophy and discount coupon to a bicycle store. The goal is for each participant to have a fun, non work-related event combined with an enjoyable bicycle experience. As a result, some of the participants might consider bicycling as a viable commute alternative.

To maintain interest and attention on bike commuting after the “Bicycle Safety Week” is over, a monthly or quarterly City ride should be organized. These rides would be supervised and designed with clear safety guidelines and a pre-determined route. Or a Bike Day can be instituted on the third Thursday of every month on which everyone is encouraged to only ride his or her bike.

■ 4.3.8 Worksite Improvements

Companies that currently don’t have a suitable park-and-lock area for bicycles should be encouraged to identify and designate such an area. Employees will be more likely to ride their bicycles to work if they have a safe space to park their bicycles.

■ 4.3.9 Incentive Programs

A growing number of companies across the USA are offering incentives to their employees to promote bicycle commuting. In October 2008, Congress passed the Bicycle Commuters Act,²⁵ which was included in the Obama administration’s bailout plan. The act will give companies a tax credit of \$20 per month per bicycling employee beginning in January 2009. Many companies are pressing forward to encourage bicycling commuting. One such company is the food company Cliff Bar in Berkeley. They offer each employee \$500 to either buy or repair a bike if the employee pledges to bike to work a minimum of twice a month. The IRS is in the process of writing the particulars of the act into the tax code, which upon publication is likely to spur a significant increase in bicycle commuting.

The following regional programs designed to encourage and reward bicycle commuting were discussed earlier in this chapter, but are summarized here as a reminder of the many ways to encourage bicycle commuting:

- Bike purchase financing
- Cash dividend to bike commuters
- Credit of work time or vacation time
- Discount coupons or credit at bike store, company stores, and cafeterias

²⁵ The National Center for Bicycling & Walking. The Bicycle Commuter Act of 2008. Retrieved 18 August 2009 from <http://www.bikewalk.org/bca.php>

- Fleet bicycles for day-use or bike-commuting
- Flexible work hours
- Guaranteed ride home
- Mileage reimbursement for company business travel by bike
- Monthly drawings for cash or prizes
- Relaxed dress codes
- Repair kits/on-call repair services
- Showers and clothing lockers on-site or at a nearby health club

4.4 Types of Bicycle Parking Demand and Facilities

To provide appropriate bicycle parking, the type of parking demand must be matched with an appropriate bike parking facility.

Bicycle parking demand falls into three general categories:

- **Short-term** of 2 hours or less
- **Long-term** of 2 hours to full day
- **Overnight** of one night to two weeks or more

Bicycle parking facilities also fall into three general categories:

- **Class I** Facilities are intended for long-term parking and are to protect the entire bicycle or its individual components and accessories from theft. The facility also protects the bicycle from inclement weather, including wind-driven rain.
- **Class II** Facilities are intended for short-term parking with a stationary object to which the user can lock the frame and both wheels with a user-provided lock. A Class II facility must accept a U-shaped lock.
- **Class III** Facilities are intended for short-term parking with a stationary object, sheltered from the rain if possible, which the user can lock the frame and both wheels with a user-provided cable or chain and lock.

Further detail about bicycle parking facilities is available in [Appendix C](#).

4.5 Matching Demand with Facility Type

■ 4.5.1 Short-term Parking

Typical Situation: Short-term bike parking should generally be provided in situations where the bike will be parked for two hours or less. Typical sites are retail, commercial, office buildings for visitors, libraries and other similar sites to accommodate errands.

Appropriate type of parking facility: Short-term parking demand can be accommodated by properly designed and located bicycle racks. Racks should, at a minimum, be able to support the weight of the bike by its frame (not just its wheel) and at least one wheel and the frame should be able to be locked to the rack with a U-type lock or chain and padlock.

In addition, wherever possible, providing bike racks inside of buildings, space permitting, is an easy way to dramatically increase the security of the parked bicycles.

■ **4.5.2 Long-term Parking**

Typical Situation: Long-term parking is used typically by commuters and employees. Racks are notoriously inadequate because bikes parked for long periods are subject to theft, especially the bike components, as well as to vandalism and wear and corrosion from inclement weather.

Appropriate type of parking facility: Employee or commuter bike parking needs are best met by either supplying bike racks in a sheltered supervised location, such as parking garage with an attendant, in a locked room, nook, or cranny inside the building, or by bike lockers.

Each of these methods has advantages and disadvantages. For example, bicycle lockers in most typical applications are reserved in advance, usually by a key deposit and a monthly fee. Although many bike commuters are willing and able to reserve in advance and pay the fee to guarantee that they will have a safe and secure parking space, many are not able to do so due to shortage of space. Also, this rental system does not serve the occasional commuter or one who cannot, pay to reserve in advance.

■ **4.5.3 Overnight Parking**

Typical Situation: There are a few destinations where overnight bike parking would make the difference in the decision as to whether a trip is made by bicycle. Typical examples are airports and AMTRAK stations. Although Cupertino has neither an airport nor a train station, existing or future locations that might attract bicycle parking demand of one day or more should be monitored and addressed as needed, such as the future transit center at Vallco Shopping Mall. It is unreasonable to expect passengers to leave their bicycles for days at a time at unsupervised bicycle racks outside the station.

Appropriate type of parking facility: Similar to long-term bicycle parking, those users of lockers may be even less able or willing to comply with restrictions such as reserving in advance, key deposits, etc.

4.6 Recommended Bicycle Parking

The City's Municipal Code 19.100.040 specifies the regulations²⁶ for off-street parking requirements including bicycle parking. Bicycle parking is required in multi-family residential developments and in commercial districts. Table 19.100.040-A in the Code specifies the required bicycle parking supply in terms of percentage of required auto supply, either Class I or Class II. This method for calculating bicycle parking requirements works as long as auto parking is required. However, it will be important not to waive bicycle parking if for any reason auto parking requirements are reduced or waived. An alternate method of calculating bicycle parking requirements is to base it directly on the size of the building in terms of units or square footage.²⁷

²⁶ City of Cupertino [Municipal Code](http://www.cupertino.org/index.aspx?page=807). "Chapter 19.100: Parking Regulations" Retrieved 15 November 2009 from <http://www.cupertino.org/index.aspx?page=807>

²⁷ Santa Clara County Valley Transportation Authority. (13 Dec 2007). Bicycle Technical Guidelines: A Guide for Local Agencies in Santa Clara County. Chapter 10 Bicycle Parking.

Despite this ordinance and Cupertino's strict definition of bicycle parking types, there are numerous locations with only bicycle racks or "wheel-bender" racks. All these are recommended to be upgraded to Class II or III parking.

While comprehensive recommendations regarding the location of new bicycle parking facilities are beyond the scope of this Plan, the following are locations where the need for Class II parking has been identified by the Commission:

- Cupertino Crossroads
- Cupertino Village Shopping Center
- De Anza Center
- Homestead Square
- Marketplace
- The Oaks Center
- Vallco Shopping Center

In addition, a parking inventory conducted by the Commissioners should be consulted, and all locations with non-standard "wheel-bender" racks should be upgraded to Class II or Class III.

■ **4.6.1 Bike Rack Placement Criteria**

The placement of bike racks is very important for three reasons:

- To avoid adversely impacting pedestrian circulation
- To ensure that they can be used to their maximum design capacity
- To have high visibility to deter thieves and vandals

The City parking ordinance specifies "Spacing of the bicycle units shall be figured on a handlebar width of three feet, distance from bottom of wheel to top of handlebar of three feet and six inches, and a maximum wheel-to-wheel distance of six feet."

4.7 Showers and Lockers

In Cupertino, there are relatively few locations for commuters to shower and change their clothes. Some employer sites have showers and lockers, including Apple. It is recommended that Cupertino consider an ordinance that requires new construction or the expansion of existing buildings to provide showers.

5 Education

Unfortunately, too many bicyclists in the United States lack the basic skills or knowledge to safely ride a bicycle in traffic. Bicycle education programs are designed to increase bicycle safety by improving the ability of bicyclists to ride with traffic as well as heightening motorist awareness. The difficulties faced in helping cyclists develop this skill and knowledge stems from the wide range of age groups that require this training and the necessity to tailor the programs for each one. For example, young children should be taught the basic rules of the road in conjunction with hands-on bicycling instruction. Adults benefit most from a program designed to impart the responsibilities on bicycle riding, to demonstrate how to safely share the road with motor vehicle traffic, and to provide tips on the benefits and methods of bicycle commuting.

Bicycle education programs should be directed at the following groups:

- Child Bicyclists
- Adult Bicyclists
- Law Enforcement Officials
- Motorists

Attempts by a community to provide all these programs can definitely put stress on a system that is already overloaded: money and man-power are in short supply in every jurisdiction. For this reason, a community must explore all possible avenues in designing and implementing a bicycle education strategy. Public departments and agencies such as city planning, public works, sheriff's office, community development, and school districts must be brought into the effort. Community and civic organizations, employers, local businesses, and cycling clubs should also be tapped as resources. Some of the most successful programs are the result of coalitions of public agencies and private groups working together toward a common goal.

In general, bicycle education programs can be described as those which develop awareness and provide information, such as websites with safety and route information, posters, brochures, and DVDs/videos (see [Bike Hotline](#) above), and those that change behavior or develop skills, such as programs with on-bike instruction, teaching adults who supervise children, and instructions for motorists, law enforcement and community events. Cupertino's City Website, <http://www.cupertino.org> and the Commission's webpage, in particular, can reach most community members by providing helpful online maps such as Suggested Routes to School²⁸, instruction guides for tasks like fitting a bicycle helmet, rules of the road, safety guidelines and techniques for riding in traffic, etc. Additionally, placing general information on the basics of holding a Bike or Walk to School Day and linking to bicycling organizations such as League of American Bicyclists or Silicon Valley Bicycle Coalition educates prospective bicyclists of all ages and skill levels. The key to any bicycle education program is to reach the target audience; in other words, getting people to participate.

²⁸ School bicycle-route maps are being developed as the Commission works with other commissions and schools to deploy them.

As previously mentioned, bicycle education programs can take many forms and are generally directed at child and adult bicyclists, motorists, law enforcement officials or the community at large. Children are at the greatest risk for injury due to bicycle-related accidents. Therefore, children tend to receive more attention with bicycle education strategies than adults, motorists, and law enforcement officials. Parents who attend bicycle education events with their children may learn something themselves about bicycle and motorist safety that can help to reinforce the safe cycling of their children. The following sections will include discussion of the characteristics of the bicycle education programs most suitable for each group listed.

5.1 Child Bicyclists

Most bicycle safety efforts target elementary school-aged children and their parents. Programs for beginning bicyclists, between the ages of five and eight, focus on parents and the role they play in selecting the proper size and type of equipment, in supervising their child's use of that equipment, and in teaching the basic mechanical skills needed to start, balance, steer, and stop a bicycle. Parents may be reached through parent-teacher associations, and children through programs sponsored by schools, day care centers, local parks and recreation departments, summer camps, and boys and girls clubs.

Children pose a special safety problem as they learn to ride bicycles. Learning to ride by the rules, look for traffic and use hand signals are not second nature, these skills must be taught. Bicycle education programs should start early as children learn to ride and be modified as they grow to focus on the needs of each age group. There is a critical window for learning and integrating traffic skills bounded by children's development on one end and the age at which they are most at risk for crashes and injuries on the other end. Children between the ages of nine and ten are the optimal target for learning how to enter and exit the roadway; scan ahead, behind and to the side while riding straight, and communicate and cooperate with other road users.

Bicycle education programs directed at children should include basic instruction on rules of the road and training to develop the skills necessary to ride a bike. Bicycle education for children has traditionally taken place in the schools. Cupertino contracts with the Santa Clara County Sheriff's Office, West Valley Division, for law enforcement services within the city. Two of the deputies assigned to Cupertino are School Resource Officers that hold bicycle safety lectures at each elementary and middle school in the city. During the 2009-2010 school year, a total of 6800 Cupertino students participated in Bike Safety or Bike/Pedestrian Safety educational programs. Bike safety lectures were given to individual Cub Scout and Boy Scout Troops (each troop consisting of 10-20 boys) from Eaton, Regnart, Sedgwick, and Stevens Creek Elementary Schools, and Monta Vista High School, and, as a final measure of bike safety, the Cupertino School Resource Officers conducted a booth at the Cupertino Fall Festival.

In the past, Cupertino Union School District has contracted with the bicycle education organizations Safe Moves and ALTRANS, short for Alternative Transportation Solutions, to conduct programs for the elementary and middle schools. Safe Moves provides a hands-on bicycle training program and ALTRANS focuses on encouraging students to use alternative means for getting to school such as walk, bike, carpool, and transit. Classroom and assembly presentations are reinforced with newsletters, trip planning services, and poster contests. Parent-teacher organizations at some local schools sponsor bicycle training and education programs for students during the school year.

■ 5.1.1 Educational Elements

Professor William Moritz at the University of Washington has proposed²⁹ that

“the one-shot method of Driver’s Education for high school sophomores be replaced with a curriculum that spans most of their primary and secondary school career. Four major areas of instruction would be taught at four stages of the students’ development. In grades K-3, students would learn basic pedestrian skills, stranger danger, crossing residential streets, using pedestrian push buttons, taking a school bus, etc. Older students in Grades 4 to 5 are ready to learn bike safety and handling skills, including bike operation on streets with supervised bike rides on neighborhood streets. (This is being done in many states including Hawaii, Montana, Florida, and North Carolina.) Later, in Grade 7-9, they would learn basic mobility skills regarding how to get around town including using transit for utilitarian and recreational trips (how to read a bus schedule, execute a transfer, take rapid transit), and more on safe bicycling practices. By the time students reach Grade 10, they will have already become transit-independent and would be able to go places without having to be driven by someone. In tenth grade, students would take driver’s education, but driver’s education would include focused instruction on how motorists should interact with pedestrians and bicyclists, how to predict their movements, pass safely, learn when different modes have the right-of-way, etc.”

Bicycle education for children should include the following educational elements: kindergarten through third grade, fourth and fifth grades, middle and high school, and university.

Kindergarten through Third Grade

Off-bike programs to teach pedestrian and bicycling safety education.

Fourth and Fifth Grades

On-bike programs to teach bike-handling skills such as bike rodeos, which usually consists of a bicycle safety clinic featuring bike safety inspections (and optional quick tune-ups), and a safety lecture about the rules of the road (10 to 15 minutes). This is followed by a ride on a miniature “chalk street” course set up in a parking lot where young bicyclists are shown where and how to apply the rules.³⁰

Middle School and High School

Education at this level can cover commuting as well as recreational uses, touring, and racing, which can be conducted by volunteer cycling advocates. High schools can include bicycle education as part of driver’s training courses. Effective Cycling³¹ (developed by the League of American Bicyclists) should serve as the foundation for training bicyclists to ride safely in traffic and on the road.

Local Universities

Promote bicycling on campus and introduce Effective Cycling as a physical education course (similar to racquetball, tennis, etc.).

²⁹ City of Berkeley, CA. (1996) [Bicycle Plan](http://www.cityofberkeley.info/ContentPrint.aspx?id=31194) “Chapter 5 Bicycle Education and Safety” Retrieved 15 November 2009 from <http://www.cityofberkeley.info/ContentPrint.aspx?id=31194>

³⁰ Bicycle Life. Retrieved 24 January 2010 from <http://www.bicyclinglife.com/SafetySkills/BicycleRodeo.htm>

³¹ John Forester. (2001). [Effective Cycling](#). Cambridge: The MIT Press.

The Cupertino Library³² and Cupertino Department of Parks and Recreation³³ have offered bicycle “driving” education courses for Middle School students to understand the rules of the road (rules for both bicyclists and motorists), equipment safety, and riding skills improvement. Additional information on education programs and relevant resources are included in [Appendix D](#).

■ 5.1.2 Bicycle Helmets

Bicyclists under the age of 18 are required by California state law to be wearing a properly fitted and fastened bicycle helmet. Before 1994, when this law went into effect, over 25% of bicycle accidents involved head injuries. Of these, more than one-half were life threatening. Since 1994, bicycle fatalities for those under age 18 have dropped to 41%; that is, from a yearly average of 34 from 1991 through 1994, to an average of 20 fatalities per year from 1995 through 2007.³⁴

Many communities have developed special programs to encourage the purchase and use of bicycle helmets. Helmet companies and bicycle shops have offered discounts for community and school programs to provide helmets at little or no cost. Helmet fitting and bicycle brake checks are provided by local cycling groups during Cupertino’s annual Public Safety Fair.

5.2 Adult Bicyclists

There are few materials and programs that focus on the adult rider, with the exception of the Effective Cycling suite of courses offered by the League of American Bicyclists. Most adult bicyclists have not had any formal bicycle education in childhood outside of learning the basic mechanical skills. At the same time, there are misconceptions, myths and outdated advice that further challenge adult bicyclists’ safety. For instance, some believe a bicyclist should ride facing traffic, and it is still common to see a bicyclist at night without the required headlights and reflectors. Bicycle education programs developed for the adult bicyclist need to educate cyclists about their rights and responsibilities on the road and techniques for sharing the road with motorists.

The course suite by the League of American Bicyclists can be offered at bike shops, bike clubs, adult education centers, schools, churches and community centers. Promotional events such as Bike-to-Work Week also provide an opportunity to enhance bicycle education and encourage motorists to share the road. Although it is often difficult to get adults to attend classes, community events such as charity bike rides, bike fairs, and bicycle rodeos are useful in attracting adults and families in more recreational surroundings. Bicycle commuting programs sponsored by Cupertino’s major employers have been successful in educating adult bicyclists and creating new bicycle commuters.

³² Elizabeth Rein (2008, September 20) City Library “Middle-School Bike Skills”

³³ Jeff Ordway (2009, November 12) City of Cupertino Department of Parks and Recreation. [Fall of 2009 Course Catalogue](#). “Fundamental Bike Driving Education” (course identification 39736).

³⁴ California Department of Health Services: Epidemiology and Prevention for Injury Control (EPIC) Branch. “California Bicycle-Related Injuries.” Retrieved 24 August 2009 from http://www.applications.dhs.ca.gov/epicdata/content/ST_bicycle.htm

5.3 Motorists

Motorists are probably the most difficult group to reach with bicycle education. Existing motorist-oriented programs typically reach their intended audience only at specific points in time. Some amount of bicycle education is distributed during driver education courses, driver licensing exams and traffic schools for violators, but these events will only occur once every several years and are generally ineffective in changing driving behavior.

Public awareness campaigns are most useful for educating motorists on how to safely share the road with bicyclists, while at the same time reminding bicyclists of their rights and responsibilities. Cupertino has joined the Street Smarts public education program that uses education to change behavior of motorists, bicyclists, and pedestrians of all ages. Street Smarts' focus is on five behaviors: red-light running, stop sign violations, speeding, school-zone violations, and crosswalk safety. Media campaigns such as Street Smarts, community events, and family activities can be useful in raising awareness regarding bicycle and motorist safety.

6 Enforcement

To make bicycling safer, the Santa Clara County Sheriff's Department, from which Cupertino receives enforcement services, must enforce traffic regulations for children, adult bicyclists, and motorists. If deputies are hesitant to cite bicycle offenders, especially children, the children and adult bicyclists might get the impression that they are not required to observe the rules of the road while on a bicycle. Accident analysis reveals that the majority of reported bicycle and automobile accidents are caused by bicyclists who failed to follow the rules of the road. The most common violations causing accidents are bicyclists who ride on the wrong side of the road, bicycle at night without lights, or are unpredictable as they proceed down the road. Consequently, enforcement should be viewed as an integral part of the bicycle education program, and as an effective way to reduce the frequency of bicycle and automobile accidents.

In 1994, California made it easier to use enforcement as a bicycle education and safety tool. Previously, bicyclists were fined at the same rates as motor vehicle offenders. Changes to the California Vehicle Code allow local authorities to reduce fines for bicycle offenses in their jurisdiction.

In order for Cupertino's bicycle traffic enforcement program to work effectively, deputies need education on how best to approach an offender and what violations should be earmarked for enforcement. The bicycle fine structure should be reviewed periodically to ensure that fines are not excessive, and deputies should be encouraged to impose them with sufficient regularity. Cupertino's bicycle traffic enforcement program should be accompanied by a media campaign to inform residents that bicycling offenders will be cited.

The Santa Clara County Sheriff's Office along with other Santa Clara County Law Enforcement Agencies have joined together to provide traffic school for youth. This program focuses on juveniles that violate traffic laws, such as not wearing helmets while operating bicycles or skateboards, and pedestrian violations. The class, which is a chance to educate youth bike offenders of their biking infractions, is usually held every two to three months for a total of five to six times year. Juveniles are encouraged to take this informative 2-hour traffic diversion class instead of paying a fine. Classes are taught by deputies and local police officers, and are attended by the ticketed youth, accompanied by a guardian. The rules of the road, information on common traffic violations, and a survivor guest speaker who provides a powerful speech, are provided as part of the class. During the 2009-2010 school year, 240 people attended the diversion classes. The Sheriff's Office hopes by educating the juveniles on traffic safety, they will be less likely to re-violate, thus reducing juvenile traffic-involved injuries.

In the future, the Sheriff's Office may wish to look at expanding the traffic diversion class to motorists who cause bicycle-related accidents. These motorists could also be sent to bicycle traffic school where they could learn how to safely share the road.

Traffic issues at local schools are a high priority for the West Valley Patrol Division. The unpredictable nature of children makes it extremely important that drivers pay close attention to their surroundings near schools. Deputies rotate among local schools during arrival and dismissal times to promote safe motorist, bicyclist, and pedestrian behavior and to cite offenders. Several Sheriff's Deputies are on school traffic safety commissions in order to promote communication between parents, school staff, and students. As mentioned earlier, School Resource Officers speak at elementary and middle schools' bicycle safety assemblies each year.

To enhance the observance of the traffic regulations by bicyclists, a selected number of the Sheriff's Department and Cupertino's Code Enforcement personnel are encouraged to patrol the area by bicycle. Throughout the country, many cities have demonstrated the effectiveness of community-based policing utilizing bicycles in place of patrol cars. Clearly, a deputy on a bicycle can speak with greater authority about unsafe bicycling practices and code violations committed by bicyclists.

7 Appendix A

Plan Conformance to Existing Plans

Several existing and ongoing plans address bicycling directly or indirectly in the study area, including county-wide plans and local plans. For example, the Countywide Trails Master Plan addresses the need for new and improved trails in Cupertino. These include the De Anza National Historic Trail, a recreational trail that will trace the route of the De Anza party in their overland march from Mexico to the San Francisco Bay, and the Stevens Creek Trail, a paved recreational trail leading from Stevens Creek Reservoir to the marshlands of the South Bay near Moffett Field paralleling Stevens Creek. Cupertino's Public Works Department has completed a portion of the Stevens Creek Trail as part of the upgrade of the Blackberry Farm facility. This is described in more detail in "Recommended Bikeway Network."

The City of Cupertino completed an update to its 2000-2020 General Plan in 2005. The plan defines the vision and strategy for the City. One goal is to have Cupertino evolve into a more integrated, cohesive, and walk-able community. Cupertino seeks to decrease reliance on private automobiles as the sole means of transportation within its boundaries. The City wants to provide pedestrian and bicycle paths through new development properties, and maintain safe bikeways between neighborhoods and shopping areas. The roadway system will be balanced between automobile and pedestrian/bicycle needs.

The County Congestion Management Program addresses the need for Transportation Demand Management measures to reduce traffic congestion and improve air quality. The Santa Clara Valley Transportation Authority (VTA) buses are all equipped with bike racks. Local planning has included Creekside Park, which has a bike/pedestrian bridge connecting the adjacent neighborhoods to the park. In addition, a pedestrian crossing of Lawrence Expressway at Mitty Way (between I-280 and Bollinger Road) opened in 2007, providing school children safer access to their neighborhoods west of Lawrence Expressway.

The VTA approved a Countywide Bicycle Plan³⁵ (CBP) in August of 2008. Cupertino's Bicycle Transportation Plan seeks to conform to the VTA CBP. VTA published an update to their Bicycle Technical Guidelines³⁶ (BTG) in 2007. As Cupertino implements projects in its bikeways network, the City will use VTA's BTG "best practices" as a standard.

The Complete Streets Act³⁷ (California Assembly Bill 1358) was recently signed into law that requires cities and counties to ensure that local streets and roads meet the needs of all users: bicyclists, pedestrians and transit riders, as well as motorists. Beginning in 2011, revisions to the Cupertino General Plan's circulation element may be needed to balance the diverse ways that people use streets within the city in conformance with AB1358.

The Governor's Office of Planning and Research (OPR) final update to the General Plan Guidelines was published and issued on December 15, 2010. Cities and counties will use these guidelines when updating the parts of their general plans that cover streets and roads.

³⁵ Valley Transportation Authority. (August 2008). [Countywide Bicycle Plan](http://www.vta.org/schedules/bikeways_plan.html). Retrieved 3 January 2011 from http://www.vta.org/schedules/bikeways_plan.html

³⁶ Valley Transportation Authority. (13 December 2007). [Bicycle Technical Guidelines: A Guide for Agencies in Santa Clara County](http://www.vta.org/schedules/pdf/btg_complete.pdf). Retrieved 3 January 2011 from http://www.vta.org/schedules/pdf/btg_complete.pdf

³⁷ Stephanie Potts (2008, October 3). [California Passes Complete Streets Law](http://completestreets.org/CaliforniaCS.html). Retrieved 18 August 2009 from <http://completestreets.org/CaliforniaCS.html>

8 Appendix B

Bikeway Classifications

■ 8.1.1 Class I Bike Path

Class I Bike Paths provide a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross-flow minimized.

Bike paths are an important component of every bikeway network. Some are long enough and well located to provide a car-free environment for a large portion of a bicycling trip. Other bike paths are used to close gaps in a route, such as connecting two dead-end roads or traversing parks.

Bike paths are popular with casual bicyclists and families with children, and they can be popular with experienced bicyclists when well designed and located conveniently to their route. However, their popularity with slow bicyclists including families with children and non-bicyclists such as joggers, in-line skaters, parents with baby strollers, people walking their dogs, etc. limits the usefulness of a bike path to bicyclists who ride over 15 mph. Serious bicyclists can rarely ride as fast on a bike path as they can on city roads. This is due both the design of the bike path and the high numbers of slower users.

Bike paths should be designed in accordance with accepted design guidelines to account for all the other users. The width of the bike path should be increased depending on the stratification of the users. The VTA's Bicycle Technical Guidelines should be consulted for advice on bike path designs.

■ 8.1.2 Class II Bike Lane

Class II Bike Lanes provide a striped lane for one-way bike travel on a street or highway. The bike lane is for the exclusive use of bicycles with certain exceptions; for instance, right turning vehicles must merge into the lane prior to turning, and pedestrians are allowed to use the bike lane when there is no adjacent sidewalk.

Bike lanes are recommended when traffic volumes exceed a certain threshold, for example, 4,000 vehicles a day. Below this traffic volume, there should be adequate gaps in oncoming traffic for motor vehicles to safely pass bicyclists.

The Highway Design manual specifies the minimum width for bike lanes under the following conditions:

- Next to a curb, on-street parking allowed: minimum width is five feet where there is a vertical curb and the parking stalls are marked (or a continuous parking stripe is present). Where parking and/or turnover are infrequent and no parking stalls are marked, 12 feet is the minimum.
- Next to a curb, on-street parking is prohibited: minimum width is four feet with the proviso that there is at least three feet to the longitudinal joint where the asphalt meets the gutter pan.
- On roadways without curb and gutter, where infrequent parking is handled off the pavement: minimum width is four feet.
- Bike lanes are not advisable on long, steep downgrades where bicycle speeds in excess of 30 mph are achievable.

Note: For greater safety, widths wider than the minimums should be provided wherever possible. The VTA Bicycle Technical Guidelines should be consulted for advice on when to provide the minimum or wider bike lane widths.

■ 8.1.3 Class III Bike Route

A Class III Bike Route provides for shared use with pedestrian or motor vehicle traffic and continuity among bikeways. In the American Association of State Highways and Transportation Officials' Guide for the Development of Bicycle Facilities, Class III is called a Designated Shared Roadway rather than a Bike Route. Class III has traditionally been used to designate anything from low volume residential roads that have no need for bike lanes to arterials with heavy traffic volumes where widening to provide bike lanes would not be feasible. In either case, bicycle usage is secondary.

In order to eliminate the resulting confusion over what a Class III route means, this Plan subdivides Class III into two categories in order to more precisely describe the features of the bike route. This also helps to differentiate the various types of bicycle improvements envisioned for each roadway.

Class IIIA Shared Roadway

The designation Class IIIA is used where bike lanes or wide shoulders are not feasible due to right-of-way or topographical constraints. Bike lanes should be considered in any long-term reconstruction or redevelopment plans of the adjacent properties where a new roadway cross-section is possible.

By their very nature, wide curb lanes and Class III bike routes require no special markings, and typically only bike route signs are installed. However, these routes should be well maintained in terms of providing a uniform pavement surface and frequent street sweeping.

In addition, it is recommended that Shared Lane Markings³⁸ be considered in the right-hand portion of the lane. This would be used on roadways with heavy traffic volumes and narrow lanes. These stencils would be supplemented with the "Share the Road" signs currently used in Cupertino.

Class IIIB Bicycle Boulevards

Many of the roadways that have been included in the bikeway network are predominately residential roads. Many residential roads make excellent routes because of low traffic volumes and speeds. Bike lanes are not designated on streets with low traffic volumes, and residential roads often do not have adequate width for bike lanes.

Some residential streets in Cupertino have existing barriers which limit the movements of motor vehicles; for example, southbound Tantau Avenue at Stevens Creek Boulevard, or Lazaneo Drive at Randy Lane. The barriers reduce motor vehicle traffic and make the streets more attractive as bicycle routes. However, some streets also have numerous STOP signs along the route which impede the travel of bicyclists. Removing STOP signs along the bike route helps to encourage bicycling, provided cross traffic is required to stop. Streets that have low traffic volumes and few or no STOP signs make excellent routes for adults of all abilities and older children. (Palo Alto's Bryant Street was redesigned to have low traffic and few STOP signs and is now referred to as a Bicycle Boulevard).

³⁸ California Department of Transportation. (Jan 2010). California Manual of Uniform Traffic Control Devices (MUTCD). Retrieved 3 January 2011 from http://www.dot.ca.gov/hq/traffops/signtech/mutcdsupp/ca_mutcd2010.htm

9 Appendix C

Bicycle Parking Facilities

Bicycle parking facilities also fall into three general categories. Cupertino Ordinance 19.100.040 (0) addresses bicycle parking and defines the classes of bicycle parking as the following:

“Bicycle parking shall be provided in multi-family residential developments and in commercial districts. In commercial districts, bicycle parking facilities shall be one of the following three classification types: Class I, Class II, and Class III.”

■ 9.1.1 Class I Facilities

These facilities are intended for long-term parking and are to protect the entire bicycle or its individual components and accessories from theft. The facility also protects the bicycle from inclement weather, including wind-driven rain. The three design alternatives for Class I facilities are as follows:

- **Bicycle Locker:** A fully enclosed space accessible only by the owner or operator of the bicycle. Bicycle lockers must be fitted with key-locking mechanisms.
- **Restricted Access:** Class I bicycle parking facilities located within a locked room or locked enclosure with the room accessible only to the owners and operators of the bicycles. The maximum capacity of each restricted room shall be ten bicycles. In multiple family residential developments, a common locked garage area with Class II parking facilities shall be deemed restricted access provided the garage is accessible only to the residents of the units for whom the garage is provided.
- **Enclosed Cages:** A fully enclosed chain link enclosure with roof for individual bicycles, where contents are visible from the outside, which can be locked by a user-provided lock. This facility may only be used for multiple family residential uses.

■ 9.1.2 Class II Facilities

These facilities are intended for short-term parking with a stationary object to which the user can lock the frame and both wheels with a user-provided lock. The facility shall be designed so that the lock is protected from physical assault. A Class II facility must be able to accept U-shaped locks and padlocks. Class II facilities must be within constant visual range of persons within the adjacent building and located at street level.

■ 9.1.3 Class III Facilities

These facilities are intended for short-term parking with a stationary object which the user can lock the frame and both wheels with a user-provided cable or chain and lock, and sheltered from rain, if possible.

■ 9.1.4 Other Facilities

Other styles of bike racks besides these three classes are still found in Cupertino. These styles, commonly known as “wheel benders” and defined as Class III by some communities, support only locking one wheel. They are the type that were (and still are unfortunately) quite popular in school yards. They are never recommended except in guarded areas or locked cages or rooms, where they are used in Class I situations.

10 Appendix D

Bicycle Education and Safety

10.1 Promotional Sources

■ **511 (Bay Area Transportation Information)**

Website: <http://www.bicycling.511.org>

Email: bikeleague@bikeleague.org

Overview: Bicycle maps for the Bay Area, and many other bicycling resources and links.

Phone: 5-1-1

■ **Association for Commuter Transportation**

Website: <http://www.actweb.org>

Email: info@actweb.org

Address: 1341 G Street NW, 10th Floor

Washington, DC 20005

Phone: (202) 719-5331; Toll free: (888)719-5772

■ **International Bicycle Fund**

Website: <http://www.ibike.org>

Overview: A non-governmental, nonprofit, advocacy organization, providing information and resources promoting sustainable transport and international understanding to make this planet a healthier and happier place to live. Major areas of activity are non-motorized urban planning, economic development, bike safety education, responsible travel and bicycle tourism, and cross-cultural, educational programs.

■ **League of American Bicyclists**

Website: <http://www.bikeleague.org>

Email: bikeleague@bikeleague.org

Overview: Promote bicycling for fun, fitness, transportation, and work. Bicycle safety and education programs, advocacy, and bicycle-friendly community programs.

Address: 1612 K Street NW, Suite 800

Washington, DC 20006-2850

Phone: (202) 822-1333

Fax: (202) 822-1334

■ **National Center for Bicycling and Walking [formerly the Bicycle Federation of America]**

Website: <http://www.bikewalk.org>

Email: info@bikewalk.org

Overview: Provide workshops such as Active Communities, Training the Trainer, Safe Routes to School, etc.

Address: National Center for Bicycling & Walking

Office of Administration & Finance

20 Crescent Shore Road, Raymond, Maine 04071

Phone: (207) 627-9060

■ **Silicon Valley Bicycle Coalition**

Website: <http://www.bikesiliconvalley.org>

Overview: A leading local group that promotes safe bicycling, bicycle-friendly roads and trail connections throughout the Silicon Valley through teaching and advocacy.

Address: 84 W. Santa Clara St., Suite 330, San Jose, CA 95113

Phone: (408) 287-7259

■ **Traffic Safe Communities Network (Santa Clara County)**

Email: alice.matsushima@hhs.sccgov.org

Overview: TSCN aims to prevent and control traffic-related fatalities and injuries as well as save health care and property costs through research-based best practice approaches. Focus areas are alcohol and impaired driving, bicycle and pedestrian safety, and roadway safety.

Address: SCC Public Health Department

976 Lenzen Ave., Room 1700, San Jose, CA 95126

Phone: (408) 792-3744

10.2 Funding Sources

- California State Legislated Safe Routes to School (SR2S) Funds – available to cities and counties for capital improvements like pathways, bike lanes, and traffic calming (with up to 10% for education, encouragement, and enforcement)
- Caltrans Bicycle Transportation Account
- Congestion Mitigation and Air Quality (CMAQ) for projects that reduce vehicle trips
- Federal Safe Routes to School (SRTS) associated with SAFETEA-LU
- Federal Transportation Enhancements (TE), Metropolitan Transportation Commission's (MTC) Transportation for Livable Communities (TLC), VTA Community Design and Transportation (CDT)
- Santa Clara County Vehicle Emissions Reduction Based at Schools (VERBS) Program
- Transportation Development Act (TDA)
- Transportation Fund for Clean Air (TFCA) for projects that have air quality benefits