City of Cupertino 2016 Bicycle Transportation Plan

June 2016

alta PLANNING + DESIGN

EST. 1955 CUPERTINO

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Chapter 1:
Existing Conditions

1. About Cupertino

Cupertino is located in the Heart of Silicon Valley in the San Francisco Bay Area. Adjacent communities to the north are Sunnyvale and Los Altos, Saratoga and Los Gatos are to the south. San José and Santa Clara are to the east, and to the west are foothills.

This chapter presents a review of the existing walking, bicycling, and transit access conditions in the City of Cupertino as part of the development of the City's Bicycle Transportation Plan Update. The foundation of a successful Bicycle Transportation Plan is a comprehensive understanding of the existing conditions including:

- Land use and community demographics
- Transportation and recreation facilities and programs
- Activity generators
- Commuter travel

A review of relevant plans and policies is provided in Appendix A. Bicycle projects completed since 2011 are provided in Appendix B.

Land Use and Community Demographics

Land Use

Cupertino's land use is based on a suburban model with numerous single-family residential subdivisions with commercial and employment centers separated from the surrounding residential areas. Cupertino's population is housed in a mix of single family residential neighborhoods, as well as higher density apartments and condominiums. De Anza College — one of the largest single-campus community colleges in the country with a fall enrollment average of 23,000 students[1] — as well as retail, hotel, office and industrial buildings are located along major transportation corridors.

The city center includes mixed use, with multi-story buildings, higher 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. Figure 1-1 shows the "Community Form" from the Cupertino General Plan.

[1] http://www.deanza.edu/about/facts.html.

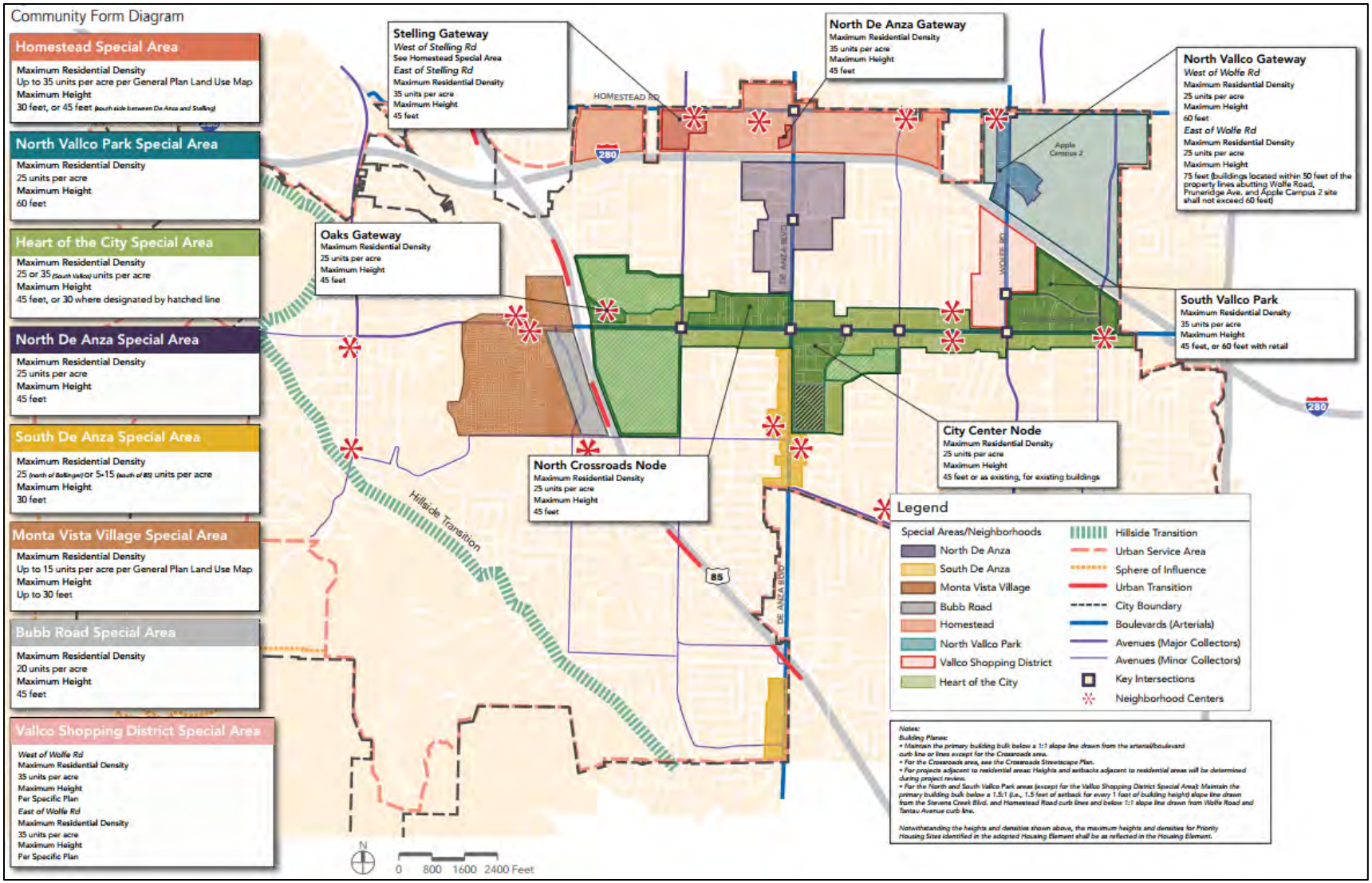


Figure 1-1: Community form from the Cupertino General Plan: Community Vision 2040 (2014)

Community Demographics

Age Distribution

According to the 2014 American Community Survey 5-year estimates, Cupertino is home to almost 60,000 residents. More than one-quarter of these are under 18 years old, representing a large population of school-aged children in the community. See Figure 1-2 for the age distribution of Cupertino residents.

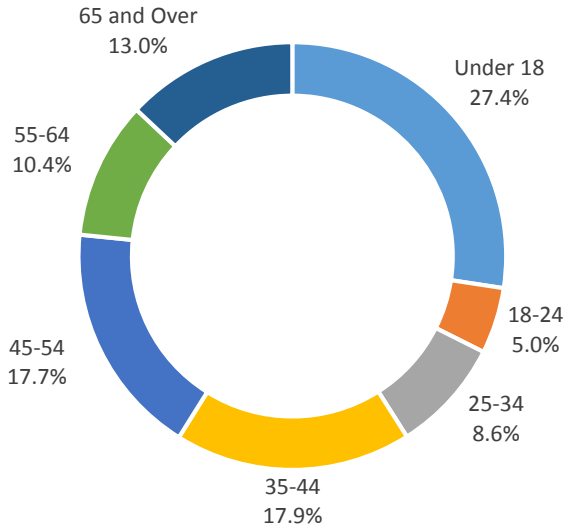


Figure 1-2: Age distribution

Access to Vehicles

Out of 20,643 households in Cupertino, just under four percent (782 households) do not have access to a vehicle for their daily transportation needs, as shown in Figure 1-3. An additional 23.9 percent (4,928 households) have access to only one vehicle. If one person in the household must take the vehicle to work, other household members may rely on walking, bicycling, transit, or other modes of transportation for their daily needs.

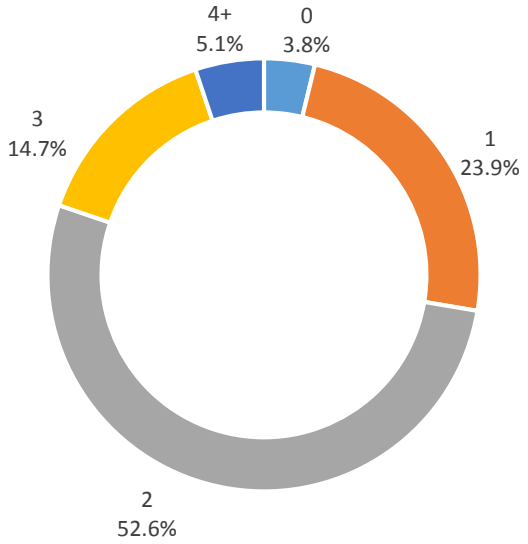


Figure 1-3: Vehicles available by household

Commuter Travel

Cupertino has an ideal setting to use bicycles for commuting, utility, and recreational purposes. 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. Table 1-2 shows that Cupertino has lower rates of bicycling than nearby cities and the state, and that many more Cupertino residents drive alone to work.

Table 1-1: Commute Patterns for Cupertino, Surrounding Cities, and California (ACS)

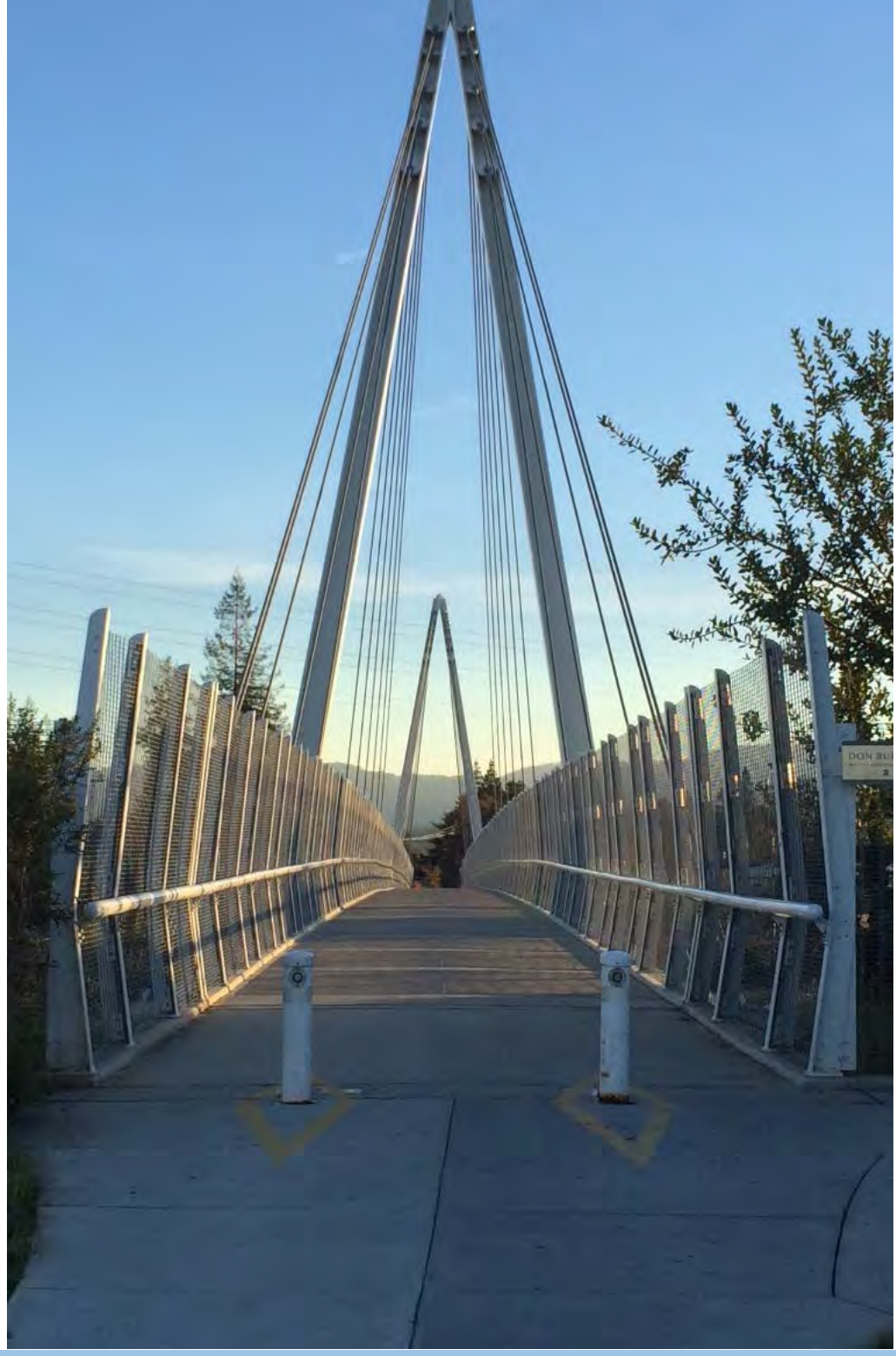
	Cupertino	Santa Clara	Mountain View	San Jose	California
Drove alone	79.2%	77.3%	71.1%	77.5%	73.2%
Carpool	9.5%	9.8%	9.7%	11.3%	11.3%
Public Transportation	2.5%	3.6%	5.2%	3.5%	5.2%
Walked	1.2%	3.3%	2.7%	1.7%	2.7%
Bicycle	0.7%	1.2%	5.0%	0.9%	1.1%
Other	7.0%	4.8%	6.4%	5.2%	6.5%
No Vehicle Available	0.6%	1.7%	3.0%	2.2%	3.5%

Transportation and Recreation Facilities and Programs

This section presents the current state of bicycling in Cupertino as it relates to the Five Es:

- **Engineering** includes bicycle facilities, bicycle parking, sidewalks, crosswalks, as well as signage and maintenance.
- **Education** programs improve and build knowledge and skills related to mobility. They may be delivered in schools, through community programs, or provided through non-profit organizations.
- **Encouragement** programs such as bicycling maps and Bike to School or Work days motivate people to try bicycling.
- **Enforcement** programs reinforce legal and respectful driving, bicycling, and walking behaviors that can make bicycling feel safer.
- **Evaluation** programs provide a method for monitoring improvements and informing future investments

Figure 1-4 shows today's bike network along with the existing activity attractors and generators for existing or potential bicyclists.



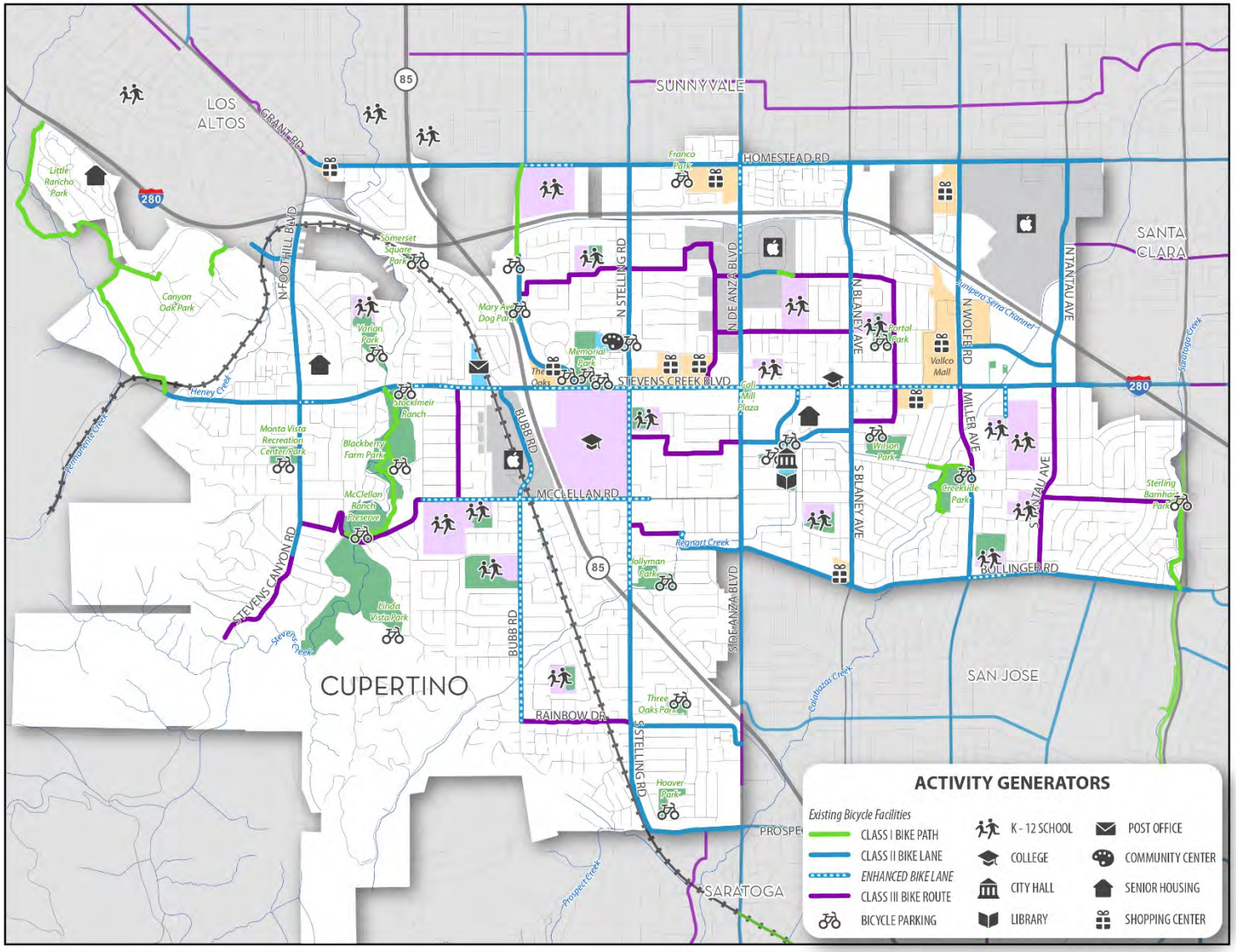


Figure 1-4: Activity generators and existing bicycle network

Engineering

Cupertino's roadway network includes 160 miles of arterial, collector, and local streets. The main arterials are laid out in a traditional grid pattern, but the neighborhoods in between have many loops and cul-de-sacs. Two highways pass through Cupertino, SR-85 and I-280.

These corridors also present some connectivity challenges for the local roadway network, along with the Union Pacific right-of-way and three creeks: Calabazas Creek, Regnart Creek, and Stevens Creek.

Existing Bicycle Network Inventory

Caltrans designates four 'classes' of bikeways that vary in the level of separation from motor vehicles that they provide. Table 1-2 shows the mileage of bikeway by classification. 25.5 percent of the roadway network has bikeways.

Table 1-2: Mileage of Bikeways in Cupertino

Bikeway	Mileage
Class I	4.75
Class II	27.41
Class III	8.56
Class IV	0.00

Class I

A Class I Bicycle or Shared Use Path provides for bicycle and pedestrian travel on a paved right-of-way completely separated from streets or highways. Cupertino has approximately five miles of Class I bikeways, most of which parallel creek corridors in the community or runs through open space.

One regional trail passes through Cupertino. The Stevens Creek Trail is a six mile long discontinuous trail that runs parallel to Stevens Creek. In Cupertino, the trail runs south from Stevens Creek Boulevard to McClellan Road. The Hammond Snyder Loop Trail connects Cupertino to several regional trails in northwest Cupertino. The San Tomas Aquino Creek Trail runs down the eastern-most city border.

Figure 1-5: A bicyclist uses Creekside Park Path, a Class I facility in Cupertino

Class II

Class II Bike Lanes provide a signed, striped and stenciled lane for one-way travel on a roadway. Bicycle lanes are often recommended on roadways where traffic volumes and speeds are too high for comfortably sharing the travel lane. Approximately 27 miles of Class II facilities currently exist in Cupertino. They generally provide for bicyclist travel along select arterial corridors. Some Class II bike lanes in Cupertino are enhanced with green paint and/or buffer striping for an increase in visibility or lateral separation from motorized traffic. Figure 1-5 shows a bicyclist resting on a green bike lane in Cupertino.

Figure 1-6: Green Class II bike lane on Bubb Road

Class III

Class III Bike Routes provide for shared travel lane use and are generally only identified with signs, but some have sharrow markings. Bike routes may have a wide travel lane or shoulder that allow for parallel travel with automobiles. They may also be appropriate on low volume, low speed streets.

Support Facilities

Bicycle parking in Cupertino is available at many shopping centers, schools, and some parks. Most bicycle parking is short-term bicycle racks. Figure 1-6 shows one of several bicycle racks at The Oaks Shopping Center.

Figure 1-7: Bicycle racks at The Oaks Shopping Center

Education Programs

Cupertino has two existing bicycle programs in place, both aimed toward the families of school children.

Bike Rodeos

Bike Rodeos are offered every fall and hosted by either the City or by Santa Clara County Sheriff's School Resource Officers. Bike Rodeos provide on-bicycle safety and handling skills training with opportunities to practice on a short course. Figure 1-8 is from a recent Bike Rodeo hosted by the City.

Figure 1-8: Bike Rodeo organizers next to the bike blender

Safe Routes to School

Six schools began a pilot Safe Routes to School (SRTS) program in 2015: Lincoln Elementary, Sedgwick Elementary, Hyde Middle, Kennedy Middle, Cupertino High, and Monta Vista High. A few other schools such as Lawson Middle and Regnart Elementary also participate in some program activities, but are not officially part of the pilot.

Encouragement Programs

Encouragement Team

The SRTS Coordinator hosts "Encouragement Team" meetings every month focused on publicizing the existence of the City's Safe Routes to School program community and increasing participation. Program promotion has so far been through school and district newsletter posts and email blasts, school websites, the City website, Facebook, Twitter, NextDoor.com, SRTS program flyers, and word of mouth. The Team is also creating a promotional video for the Cupertino SRTS program.

Figure 1-9: International Walk and Ride to School Day in Cupertino

Pedal for the Planet Family Bike Ride

In April 2016, the city hosted a family bike ride in honor of Earth Day. The route chosen was six miles long and started and ended at City Hall so participants could join the Earth Day Festival activities following the ride. Prior to the event, minor tune-ups and maintenance checks were provided by two local bike shops.

International Walk and Bike to School Days
Five of the six pilot schools posted signs and sent information out in their newsletter about International Walk and Ride to School Day (October 7, 2015). Sedgewick Elementary School tracked modes of transportation and rewarded students with pencils and stickers. Figure 1-9 shows student participation.

Enforcement Programs

Targeted Enforcement
The Santa Clara County Sheriff's office handles enforcement in Cupertino. The Cupertino Public Safety Committee, the Bicycle Pedestrian Commission, and City staff consult with the Sheriff's office for targeted enforcement efforts.

Evaluation Programs

Parent Surveys and Student Hand Tallies
The SRTS Coordinator hosts "Evaluation Team" meetings as part of the SRTS Program. The Evaluation Team collected in-class student surveys and parent surveys from the six pilot schools in Fall 2015 and Spring 2016.

Bike Rack Counts
Bike rack counts over a 4-6 month period are currently planned, and will be used to create a "Data Report Card" for each pilot school detailing site-specific mode split data, trends, and recommendations to improve rates of active transportation amongst school children.

Dero
The City of Cupertino runs a Dero program that uses a tracking device to count how many students walk and bike to school.[2] The pilot program began with Lincoln Elementary and Kennedy Middle schools. The program was run by the Public Safety Committee and was recently transferred to the Transportation Division.

The Dero system records walking and bicycling trips to school with RFID tags that students scan when they arrive each morning. Students can log into the Dero website with their parents and see data on their trips. Schools can use the program to track walking and bicycling by classroom, grade level, or school, and often develop friendly competitions or other incentives to encourage participation

Community Resources

Cupertino has several organizations that organize and work within the community. In addition to regional groups such as the Silicon Valley Bicycle Coalition, the following groups are focused in Cupertino and were included as stakeholders in this Plan:

- Walk-Bike Cupertino (http://www.walkbikecupertino.org/)
- Friends of Stevens Creek Trail (http://www.stevenscreektrail.org/)
- Cupertino Safe Routes to School Working Groups (http://www.cupertino.org/index.aspx?page=1307)

[2] http://www.mercurynews.com/san-jose-neighborhoods/ci_15527951?nclick_check=1.

Bicycling Attractors and Generators

For a map of activity generators in Cupertino, see Figure 1-4.

Schools and Colleges

There are 15 schools and colleges in Cupertino that fall under the Cupertino Union School District or Fremont Union High School District.

- 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 School

Parks

Cupertino has 24 parks of varying sizes. Many of the parks have picnic tables and children's play areas, but some lack bicycle parking. Linda Vista Park, Memorial Park, and Portal Park offer larger picnic areas and can be reserved through the city.

- Blackberry Farm
- Cali Mill Plaza Park
- Canyon Oaks Park
- Creekside Park
- Cupertino Civic Center Park
- Cupertino Memorial Park
- Deep Cliff Golf Course
- Franco Park
- Hoover Park
- Jollyman Park
- Linda Vista Park
- Mary Avenue Dog Park
- Memorial Park
- McClellan Ranch Park
- Monta Vista Park
- Oak Valley Park
- Portal Park
- Rancho San Antonio County Park
- Sterling Barnhart Park
- Stevens Creek County Park
- Somerset Park
- Three Oaks Park
- Varian Park
- Wilson Park

Major Shopping Centers

Cupertino has several shopping centers of varying sizes. The Oaks and Vallco are slated for redevelopment in the next several years.

- Bottegas Shopping Center
- Oakmont Square Shopping Center
- Cupertino Village Shopping Center
- Marina Food Shopping Center
- De Anza Plaza Marketplace
- McClellan Square
- Homestead Square
- Idlewild Shopping Center
- Loree Shopping Center
- De Anza Center
- The Oaks Shopping Center
- Vallco Shopping Center
- Cupertino Crossroads
- Pacific Rim Shopping Center
- Portal Plaza
- Stanley Square
- Homestead Center

Public Buildings

- City Hall
- Community Hall
- Cupertino Library
- Cupertino Service Center
- Cupertino Senior Center
- Cupertino Sports Center
- Cupertino Teen Center
- Quinlan Community Center

Employment

Top employers in Cupertino include the two school districts and major tech companies such as Apple, Inc., and Seagate Technology.

- Affymax Inc
- AMC 16 at Vallco Shopping Center
- Apple Computer
- The Forum Retirement Community
- Sunny View Retirement Community
- City of Cupertino
- Fremont Union High School District
- Courtyard by Marriott
- Cupertino Inn Macy's
- Marina Foods
- Panasonic Research and Development
- Foothill/De Anza Community College District
- Durect Corporation
- Pegasystems
- ArcSight
- Corio, Inc. (IBM)
- Hewlett Packard
- Hilton Garden Inn
- JC Penney
- Lucky Supermarkets
- Trend Micro
- Verigy
- Whole Foods
- Ranch 99 Market
- Seagate Technology
- Sears
- Sugar CRM
- BJ's Restaurant
- Symantec Corporation
- Target
- TGI Friday's
- Cupertino Medical Center
- Cupertino Union School District
- Cypress Hotel

Major Development Plans

There are currently two major developments in Cupertino that could vastly change the Cupertino landscape and the connectivity around the city. Apple, Inc. is currently building a research and development campus called "Apple Campus 2" just north of the Vallco Shopping District. The Oaks development proposes to rebuild The Oaks Shopping Center as a mixed-use housing and shopping district. The Oaks is located along Stevens Creek Boulevard between Mary Avenue and I-280. More detail on these development Plans can be found in Appendix A.

Chapter 2:
Needs Analysis

2. Needs Analysis

This chapter outlines a need for bicycling-related improvements with an analysis of collision data, network stress analysis, and community desires expressed through public workshops and outreach.

This chapter is organized as follows:

- Collision Analysis
- Public Outreach
- Bike Network Stress Test
- Objectives, Goals and Policies
- Final Synopsis and Vision Statement

Collision History

Analyzing bicycle-related collision data can help to identify patterns and safety challenges across a city's street network. Along with identifying the collision locations, collision type, severity, time of day, and weather were also reviewed to help frame this Plan's recommendations.

Data for 2009 to 2014 were drawn from the Crossroads Software Traffic Collision database, a service widely used across Santa Clara County.

Total Collisions & Crash Severity

Between 2009 and 2014, there were 4,315 total collisions in Cupertino involving a motor vehicle. Of that number, 169 of them involved a bicycle (3.9 percent). Compared to Cupertino's 0.7 percent bicycle mode share, the likelihood of bicyclist collisions is out of proportion with the number of bicyclists on the road.

Of the 169 bicycle-related collisions in Cupertino over those six years, two were fatally injured, eight suffered severe injuries, 86 had visible injury, and 47 had complaints of pain. Table 2-1 shows the number and percentage of bicycle-related collisions compared to the total number of collisions.

Table 2-1: Number of Bicycle Related Collisions in Cupertino from 2009-2014

Time Period	Total Number of Bicycle Collisions	Injuries	Fatalities
2009	33	25	1
2010	32	27	0
2011	26	18	0
2012	29	29	0
2013	22	17	0
2014	27	17	1
TOTAL	169	133	2

Bicyclist Fatalities

Between 2009 and 2014, two bicyclist fatalities took place in Cupertino. In 2009, a 74 year-old bicyclist was killed on Stevens Creek Boulevard just east of Highway 85 in a collision with a vehicle while the driver was making a right turn into the De Anza College parking lot. In 2014, a 15 year-old high school student was killed on McClellan Road in a collision with a truck. In both cases, the bicyclists were in existing bike lanes at the time of the collision.

Since both collisions, the City of Cupertino has made improvements to many intersection approaches with green paint to alert users to conflict areas.

Primary Collision Factors

The most common collision factors were improper turning (52), automobiles violating a bicyclist's right-of-way (40) and bicyclists riding on the wrong side of the road (27). Other contributing factors included disobeying traffic signals and signs, unsafe speed, and improper turning, as shown in Table 2-2.

Table 2-2: Bicycle-Related Collisions in Cupertino, by Collision Factor

Primary Collision Factor	Number of Collisions	Percentage of Total Bicycle Collisions
Unsafe Speed	7	4.14%
Auto Right-of-Way Violation	39	23.08%
Improper Turning	51	30.18%
Wrong Side of Road	26	15.38%
Violating Traffic Signs or Signals	14	8.28%
Other	32	18.93%
TOTAL	169	100%

The most common collision factor, improper turning, can be addressed with education and infrastructure improvements.

Type of Collision

Table 2-3 shows the types of collisions involving a bicycle. By far, the most common type of collision was a broadside collision. In this type of collision, the auto and bicyclist are often traveling at 90 degree angles to each other. This type of collision typically occurs at intersections, driveways, or within parking lots, many times when a driver is making a right turn across a bicyclist's path of travel. Sideswipes generally occur when a car or bicycle fails to yield while changing lanes.

These types of collisions, broadside and sideswipe, can be addressed with education and infrastructure improvements.

Table 2-3: Bicycle-Related Collisions in Cupertino, by Type

Type of Collision	Number of Collisions	Percentage of Total Bicycle Collisions
Broadside	103	60.95%
Not Stated	2	1.18%
Sideswipe	25	14.80%
Head On	2	1.18%
Rear End	13	7.70%
Vehicle Pedestrian	2	1.18%
Other	21	12.43%
TOTAL	169	100%

Top Collision Locations

The three corridors with the highest number of reported collisions were Stevens Creek Boulevard (25), Stelling Road (18), and Homestead Road (22). Many of the collisions occurred at the intersections of streets with bicycle facilities.

Stevens Creek Boulevard and Homestead Road, as the major arterial east/west corridors in Cupertino, both have higher volumes of auto traffic and vehicle speeds. East/west travel across Cupertino is difficult without using one of these two roadways, so it is not surprising to see collisions concentrated there.

Stelling Road is a key north/south corridor through Cupertino. The high number of collisions on Stelling Road may point to bicyclists avoiding the parallel De Anza Boulevard, which has higher volumes of automobiles and higher traffic speeds.

The intersection of Stevens Creek Boulevard at De Anza Boulevard reported the most collisions (8). Figure 2-1 shows the locations of all bicycle-related collisions during this time period.

For key roadways essential to cross-city trips, greater separation between bicyclists and drivers can help improve safety.

Weather and Time of Day

84 percent of collisions occurred during daylight hours. 15 collisions were at night and 12 at dusk or dawn. Only one collision occurred in rainy weather.

As weather and visibility were not a factor in the vast majority of collisions, this instead suggests a need for improvements to infrastructure and education of roadway users about their rights and responsibilities on the roadway.

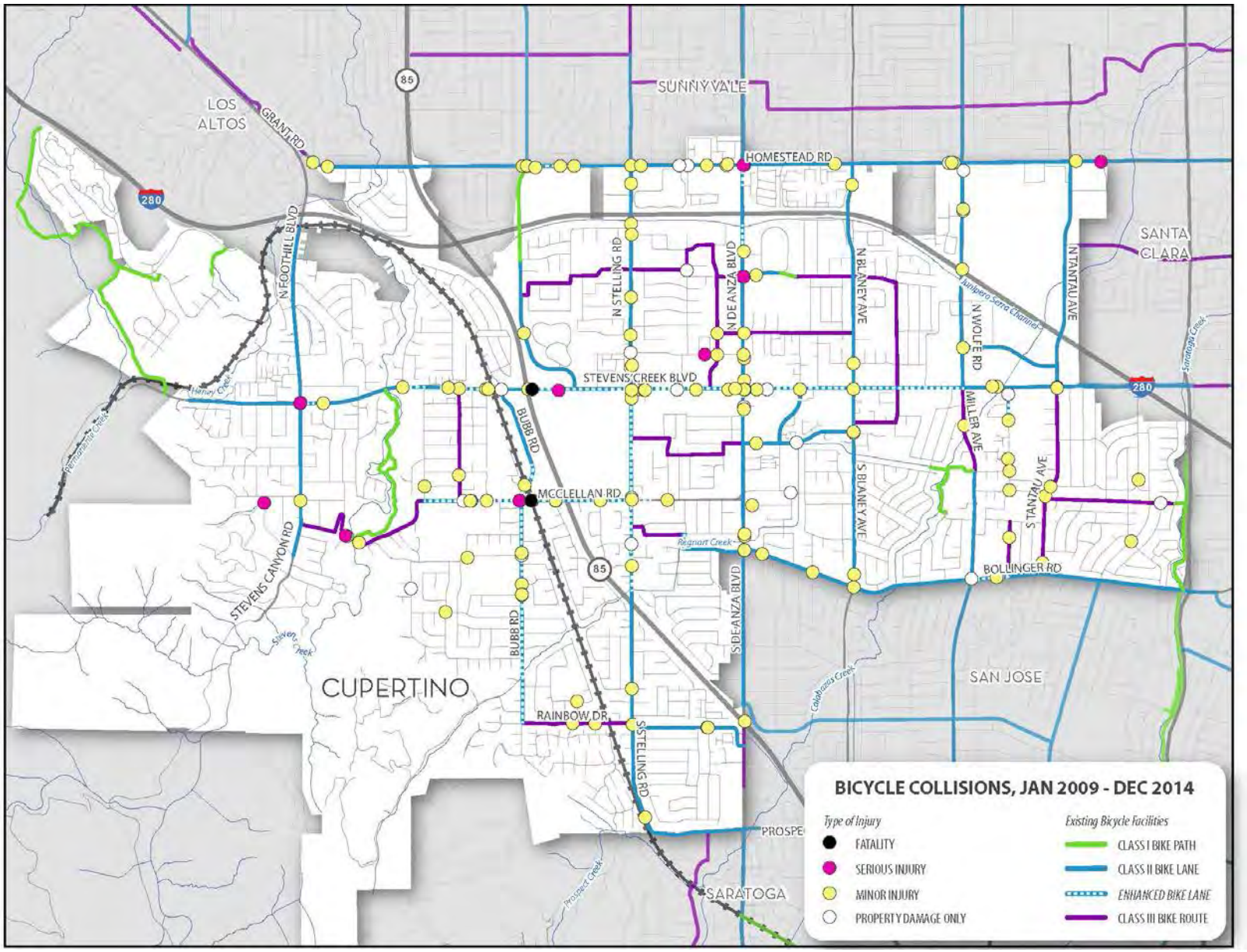


Figure 2-1: Bicycle-related collisions between January 2009 and December 2014

Collision Summary

Many collisions involving bicyclists occurred along arterials or at the intersections of arterials with existing bicycle infrastructure during daylight hours.

Most reported collisions involving bicyclists were either broadside or sideswipe collisions, many of them taking place at intersections.

To address the risks leading to these collisions, the City should take the following steps:

- Improve education for drivers and bicyclists about safely operating in and around intersections, especially right turns.
- Implement enhanced bikeway treatments at intersections
- Improve & enhance existing bikeways on the arterial network
- Prioritize the creation of alternative cross-city routes that do not require travel on the arterial network
- Ensure bicyclists have enough time to cross intersections by reviewing signal timing standards along key bikeways

Community/Public Outreach

A full list of community comments can be found in Appendix C: Community Input

League of American Bicyclists: Bicycle-Friendly Community Designation

Every two years, the League of American Bicyclists accepts applications to their Bicycle Friendly Communities program. The City of Cupertino was awarded Bronze designation in 2011 and applied for Silver designation in 2015. Cupertino was re-issued a Bronze designation from the League and was provided the following suggestions to reach Silver status in future applications:

- Adopt bicycle facility selection criteria that increases separation and protection of bicyclists based on levels of motor vehicle speed and volume.
- Continue to increase the amount of high-quality bicycle parking throughout the community, particularly at bus stops and grocery stores.
- Continue to expand the bike network, especially along arterials, through the use of different types of bicycle facilities that appeal to residents of all ages/abilities.
- Install a bicycle wayfinding system with distance and destination information at strategic locations around the community.
- Expand the Safe Routes program to all schools.
- Support more family-oriented bicycle events.
- Encourage De Anza College to apply to the Bicycle Friendly University program.
- Expand City staff time dedicated to bike program work
- Adopt and implement the 2016 Bike Plan Update

Bicycle Pedestrian Commission Meeting #1

The Cupertino Bicycle Pedestrian Commission (BPC) met on November 18, 2015. The purpose of the BPC meeting was to gather input on community priorities for the Bicycle Transportation Plan Update. The meeting was attended by the full commission as well as eight members of the public.

Input from the Commission regarding the Bicycle Transportation Plan Update focused primarily on:

- Safety for all roadway users
- Easy and comfortable access to schools
- Focus on routes to Vallco & Apple campuses
- Bike networks that appeal to residents of all ages & abilities

The Bicycle Pedestrian Commission also shared their recently adopted mission statement, to be achieved by 2025:

- Be a top five city in California for bicycling and walking
- Achieve Gold status as a Bicycle Friendly Community
- Achieve 40 percent walk/bike mode share for middle school & high school students
- Achieve 20 percent walk/bike mode share for local trips
- Achieve 15 percent walk/bike mode share for commute trips and trips to De Anza College

Public Workshop #1

On December 1, 2015, Cupertino held a Bicycle Transportation Plan Update community meeting in Cupertino City Hall. A presentation was given to participants about the need for the Bicycle Transportation Plan Update and next steps. Figure 2-2 shows this meeting.

Figure 2-2: Public workshop #1 presentation

Following the presentation, meeting attendees were broken out into five groups to conduct a visioning exercise for the future of bicycling in Cupertino. Feedback received on the vision for bicycling in Cupertino included the following key themes:

- Roadways with dedicated bicycle facilities are preferred by families with school-aged children
- Stevens Creek Boulevard is the main east-west bike route for Cupertino
- Cupertino as an internationally-renowned city for bicycle infrastructure

Following the visioning exercise, attendee groups were given city maps and asked to mark areas where improvement is needed. These maps inform areas of specific attention for recommended infrastructure projects in the Bicycle Transportation Plan Update. Figure 2-3 shows one such map.

Figure 2-3: A marked up map from Public workshop #1

Feedback received on specific infrastructure included the following key themes:

- Install enhanced bicycle facilities on Stevens Creek Boulevard
- Install secure bicycle parking at destinations
- Create an official route through De Anza College
- Construct a Class I trail along the UPPR right of way
- Install separated bikeways on arterials
- Create a Bike Boulevard network parallel to arterials
- Install bicycle detection at traffic signals

At the end of the meeting, each group nominated a spokesperson to share their vision with the room (see Figure 2-4).

Figure 2-4: Visions for bicycling in Cupertino is shared with the room during public workshop #1

Public Workshop #2

On March 9, Cupertino held a Bicycle Transportation Plan Update community meeting in Cupertino City Hall. A presentation was given to participants about the progress made since the first public workshop in December, and the proposed recommendations for the Bicycle Transportation Plan Update. The recommendations took the form of goals, objectives, and policies; citywide infrastructure, site specific infrastructure, and citywide programmatic recommendations.

Following the presentation, workshop attendees were broken out into four groups to give detailed feedback on infrastructure recommendations across the City. Each group was led by a workshop facilitator. The workshop also solicited feedback on proposed policies and programmatic recommendations.

Feedback received on the plan recommendations included the following themes:

- Strong support for the Cupertino Loop Trail concept in general, and the I-280 Path and the UPRR Trail in particular
- Strong support for the proposed Class IV facilities, but some questions about driveway and intersection conflicts
- A strong desire for bike boulevard access to local schools so students could stay off of arterial roads
- A strong desire to create low-stress connections across Stevens Creek, the Union Pacific Rail right of way, Highway 85, and Interstate 280
- A strong focus on education and safety programs for students
- Increased focus on improving the safety of intersections where key bikeways cross arterial roadways

At the end of the meeting, each group nominated a spokesperson to share their group's key comments on the plan recommendations.

Bicycle Pedestrian Commission Meeting #2

The Cupertino Bicycle Pedestrian Commission (BPC) met on March 16, 2016. The purpose of the BPC meeting was to review the draft Bicycle Transportation Plan Update and provide comments on recommended infrastructure, policies, and programs. The meeting was attended by the full commission as well as nine members of the public.

Input from the Commission regarding the Bicycle Transportation Plan Update focused primarily on:

- School commute safety should be the #1 priority for the bike plan recommendations
- Access and continuity of cross-city bike routes

- Greater attention at key intersections for bikeways crossing major arterials
- Strong support for the Cupertino Loop Trail concept
- Input on programmatic elements, especially education and ticket diversion courses
- Interest in reviewing cost estimates and prioritization of projects
- Support for Class IV facilities

Draft prioritization and cost estimates were provided to the BPC at their April meeting. Comments made by BPC Commissioners was included with City Staff feedback.

Bike Network Stress Test

Background

The Cupertino Bicycle Transportation Plan Update measured the quality of the existing bike network according to the Bike Network Stress Test.

This analysis system, first used in the Google Bike Vision Plan, measures the amount of stress potential bicyclists would experience when traveling to a given destination along the best available route. Understanding the amount of stress a potential bicyclist is likely to experience helps to identify potential projects that will ensure all residents feel safe and comfortable riding a bicycle for local trips.

The Bike Network Stress Test is based on academic research that quantifies the amount of stress bicyclists experience on different types of roads and different types of bicycle infrastructure, as well as the willingness of potential bicyclists to travel out-of-direction to utilize a lower-stress route compared to a higher-stress direct route.

The Average Route Stress metric measures the overall experience of a potential bicyclists for the best route they could be expected to take from anywhere within Cupertino to a given destination. The Average Route Stress metric, from very low average stress to very high average stress, can roughly correlate to the likelihood that regular residents of Cupertino will be willing to ride a bicycle when trying to reach a key destination.

Bike Network Stress Test Scenarios

For the Cupertino Bicycle Transportation Plan Update, four scenarios of the Bike Network Stress Test were identified for analysis. Because the Bike Network Stress Test analysis is based on the routes chosen to reach a specific destination (or set of destinations) it was important to analyze the routes chosen to various locations within Cupertino to accurately identify the strengths and weaknesses of the bike network. Also, residents take trips for varying reasons, be it trips to work, shopping, school, or recreation. Measuring network quality for different types of trips is as important as achieving geographic balance.

The following trip scenarios were selected for analysis in Cupertino:

- **Access to Major Business Centers** - with destinations in the north east at the two Apple campuses and the Vallco Shopping Center
- **Access to Civic Center** – with destinations in the center of Cupertino at City Hall and the main branch of the library
- **Access to West Cupertino** – with destinations at schools on the west side of Cupertino
- **Access to Tri-School East** – with destinations at schools on the east side of Cupertino

Comparing the average route stress for residents of Cupertino across these scenarios helps identify corridors of low-stress bicycle travel, and areas in need of improvement.

Scenario #1: Access to Major Business Centers

For scenario #1, the Bike Network Stress Test used destination points at the Apple Campus on De Anza Boulevard, the Apple 2 Campus on the north side of Interstate 280, and at the Vallco Shopping Center on the corner of Wolfe Road at Stevens Creek Boulevard, as shown in Figure 2-5.

For access to jobs and retail, only areas of southern and eastern Cupertino had routes in the medium stress range. Most other locations in Cupertino saw higher stress routes when traveling to northeastern Cupertino, especially those coming from Western Cupertino. The few medium stress routes coming from west of Highway 85 came via the buffered bike lanes on Stelling Road.

De Anza Boulevard acts as a key barrier to access for routes starting north of Stevens Creek Boulevard. While areas around the Vallco Mall and the Apple 2 Campus show the highest average stress for routes, these areas will also be subject to bike network upgrades as part of redevelopment ongoing in this area of Cupertino.

Scenario #2: Access to Civic Center

For scenario #2, the Bike Network Stress Test set a single destination point at the Cupertino Civic Center, which houses City Hall and the Cupertino Library, as shown in Figure 2-6.

Bike route access to the Civic Center is fairly uniformly medium stress across most of central Cupertino, with the bike lanes on Torre Avenue and Rodrigues Avenue providing lower-stress access to the north, east, and west – especially to eastern Cupertino via the Creekside Park bike path.

Stevens Creek Boulevard and De Anza Boulevard both act as significant barriers to bicycle access to these destinations, with locations on the far side of both boulevards much more likely to have higher stress bike routes. The only area nearby the Civic Center seeing the highest stress routes are bounded by De Anza Boulevard and McClellan Road.

Western Cupertino also saw higher stress routes to the Civic Center, with the Union Pacific rail right-of-way and Highway 85 limiting the number of network connections to the east. Stelling Road is the only street to extend medium stress routes west of the freeway.

Access from northeastern Cupertino along Wolfe Road and Tantau Avenue also show up as high-stress routes.

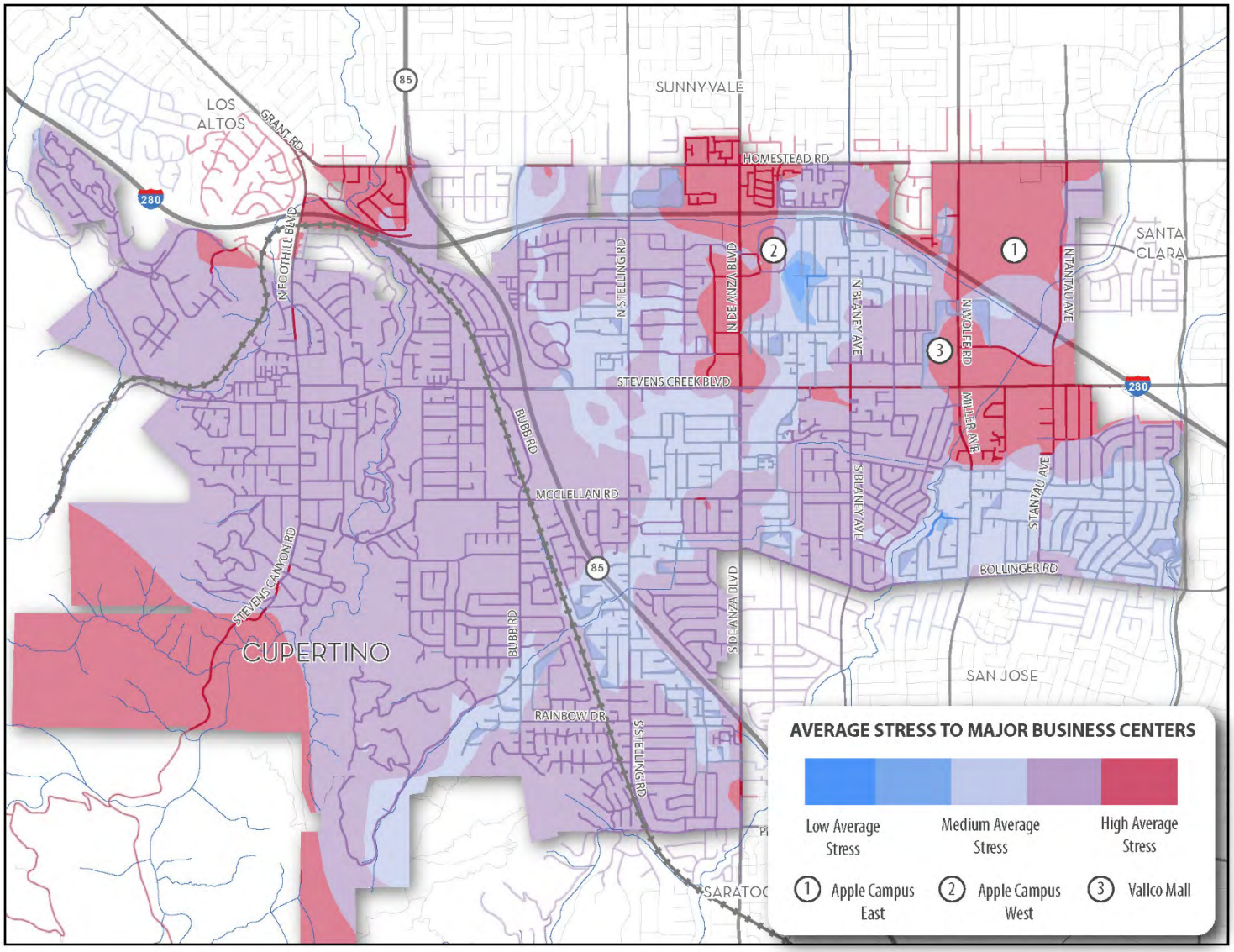


Figure 2-5: Scenario #1: Access to Major Business Centers

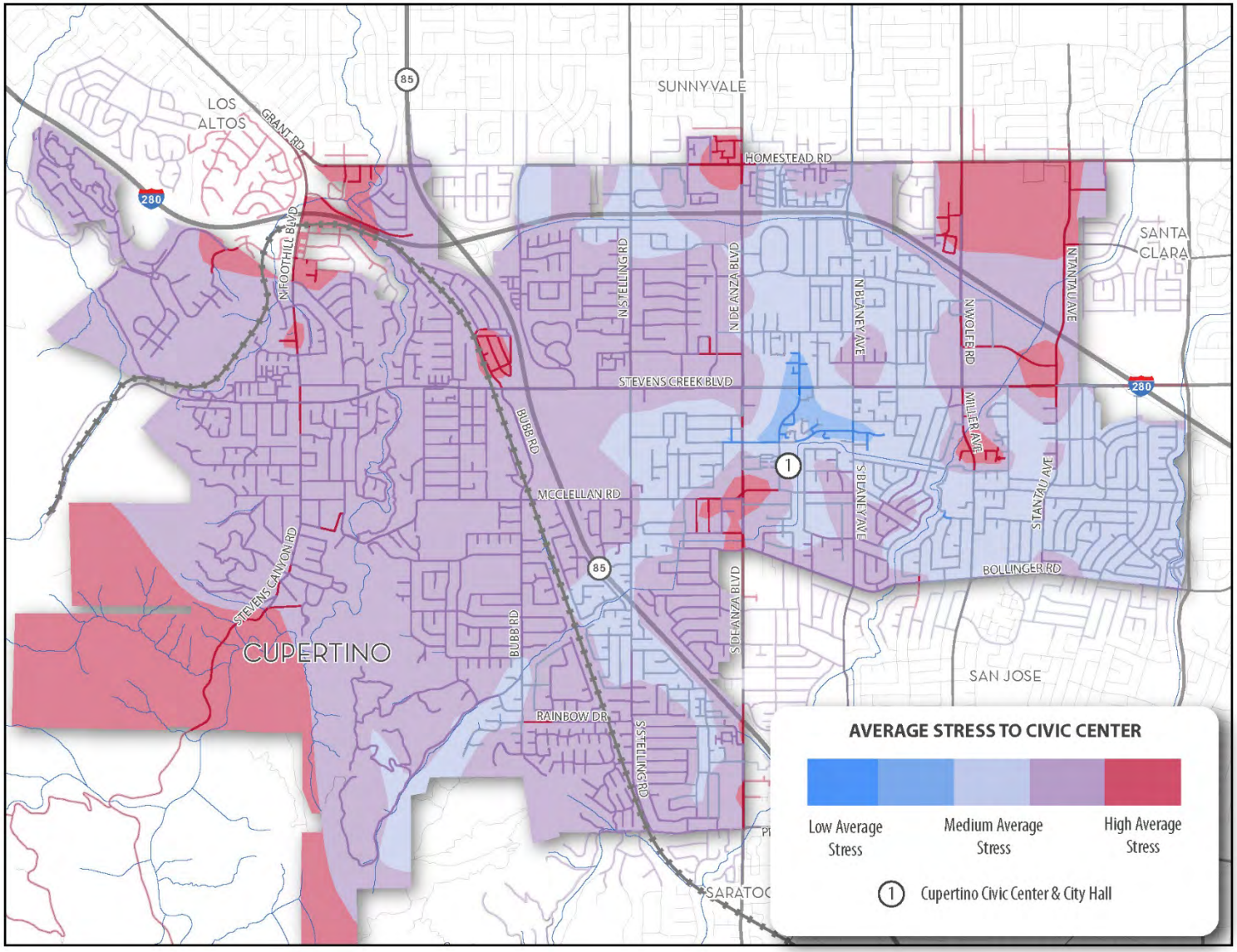


Figure 2-6: Scenario #2: Access to Civic Center

Scenario #3: West Cupertino

For scenario #3, the Bike Network Stress Test set destination points at Monta Vista High, Lincoln Elementary, JFK Middle, Regnart Elementary, and the Stevens Creek Rim Trail trailhead.

Low stress routes to the Tri-School area are limited to the streets around Bubb Road as shown in Figure 2-7. Medium stress routes are concentrated in southwestern Cupertino and far eastern Cupertino. While the eastern Cupertino locations show up as lower-stress (because the average route stress is evened out over this relatively longer trip), the map shows significant barriers of stress along the route in between.

Connectivity to the east and lower-stress corridors are limited by the Union Pacific rail right of way and Highway 85. This is especially apparent for routes to Regnart Elementary. Even the benefit provided by the bike lanes on Stelling Road is offset by the higher-stress Rainbow Road that routes are forced to use because of the limited railroad crossings.

The areas west of Stevens Creek also see high route stress scores, primarily due to routes needing to use the higher-stress Foothill Boulevard or McClellan Road to reach destinations to the north or to the east.

Scenario #4: Tri-School East

For scenario #4, the Bike Network Stress Test set destination points at the three schools in eastern Cupertino: Cupertino High, Sedgewick Elementary, and Hyde Middle School.

Figure 2-8 shows that medium stress routes expand across southern Cupertino to these schools, with access on neighborhood streets provided across Calabazas Creek by the Creekside Park path. The neighborhood around the Creekside Park path is the only area with lower-stress routes. Utilizing neighborhood streets south of Stevens Creek Boulevard allows medium-stress routes to expand westward past Highway 85 and into Western Cupertino via Stelling Road and McClellan Road.

This analysis provides the starkest contrast yet for Stevens Creek Boulevard. The vast majority of routes in the highest two categories for route stress come from north of Stevens Creek Boulevard or must use Stevens Creek Boulevard for part of their trip eastward.

Nearby these Eastern Cupertino schools, routes along Tantau Avenue, Miller Avenue, or Prospect Road show up with much higher average stress.

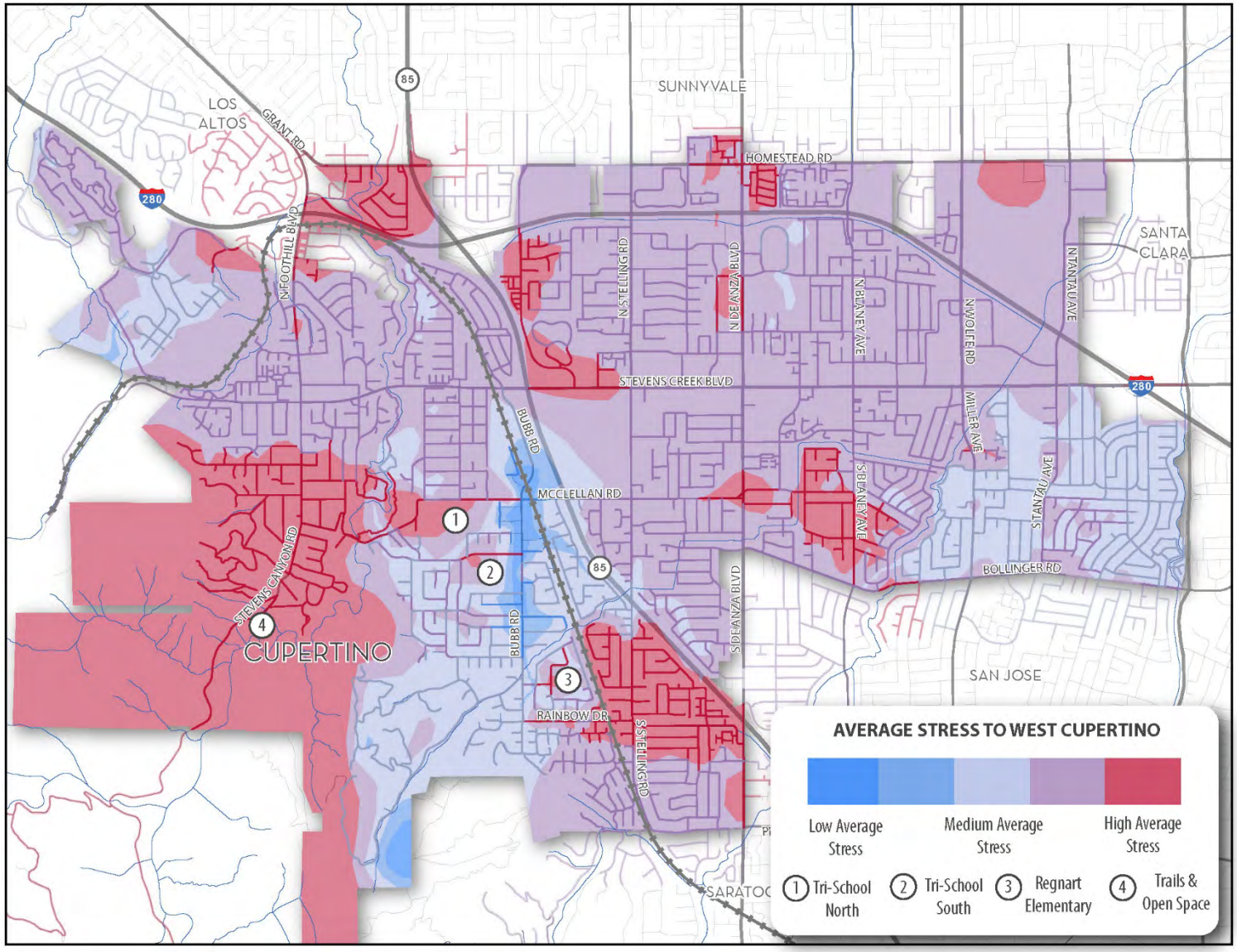


Figure 2-7: Scenario #3: Access to West Cupertino

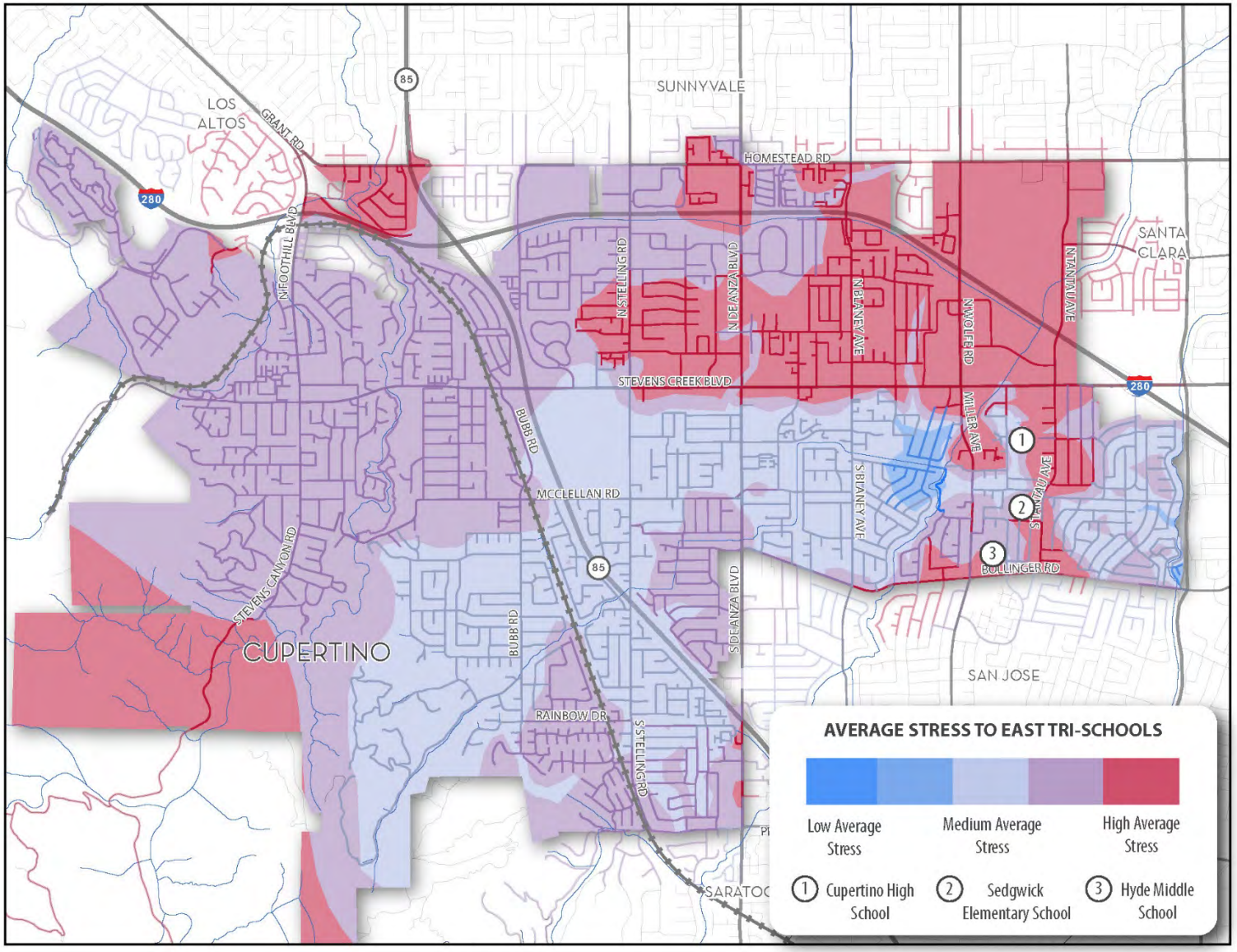


Figure 2-8: Scenario #4: Access to three east Cupertino schools

Key Findings and Summary of Needs

Based on the evaluation of Cupertino's safety, existing bicycle networks, bicycle network stress analysis, and community-identified needs, the following key themes were identified.

Plan a Low Stress Bicycle Network

Access to key destinations across Cupertino is limited by the arterial roadway network. Even when major roads have bike lanes, they don't appeal to all potential bicyclists in Cupertino. In addition to improving existing arterial bike lanes, a low-stress bicycle network should be prioritized, including paths & low-stress streets.

Construct a Trail along the Union Pacific Right of Way

Developing the natural and long-standing Union Pacific corridor into a trail could transform the path into a community gem. Creating accessible routes to the trail and upgrading the trail surface will significantly improve the bicycling and walking in Cupertino.

Improve Intersections

Many of the collisions in Cupertino occurred at, or near, intersections along the bikeway network. Improving intersections, and approaches to intersections, may result in significant reductions in collisions.

Provide Bicycle Parking

A bicycle network isn't complete without secure, convenient bike parking at the end of a trip. Cupertino has a few scattered bicycle racks, but a comprehensive bicycle parking program would increase bicycling by making residents confident they'll have a safe place to leave their bike when they arrive at their destination.

Expand the SRTS Program

While Cupertino has a pilot SRTS Program many of the schools do not yet participate. Expanding the program could educate families about the benefits of bicycling to and from schools and help create a healthier Cupertino.

Provide Education for Bicyclists and Drivers

In addition to a need for education on rights and responsibilities of all road users, Cupertino residents expressed concerns over the negative view many drivers have about bicycling.

Vision Statement, Objectives, Goals & Policies

This Bicycle Transportation Plan Update will guide the development and implementation of improving the City's bicycling environment for years to come. The foundation for recommendations and implementation strategies are directly informed by this Plan's Vision, Goals, and Objectives.

A **vision** is a broad inspirational statement for the desired future state.

Goals are general statements of what the City and residents hope to achieve over time.

Objectives are more specific statements that mark progress towards the goal.

Policies are actions that guide the City to achieve the objectives and goals.

This Plan reviewed existing plans, existing conditions, the bike network stress test, collision analysis, and community input to frame this Plan's goals, objectives and policies in order to advance bicycling in Cupertino. Specific goals, objectives, and policies are listed on the following pages.

Vision Statement

The City of Cupertino envisions an exceptional bicycling environment that supports active living and healthy transportation choices, provides for safer bicycling, and enables people of all ages and abilities to access jobs, school, recreation, shopping, and transit on a bicycle as a part of daily life.

GOAL 1

Programs

Increase awareness and value of bicycling through encouragement, education, enforcement, and evaluation programs.

Objective 1.A: Identify and support educational opportunities for those who drive, bicycle, and walk about their rights and responsibilities.

Policy 1.A.1: *Support and expand the City of Cupertino Safe Routes to School program.*

Policy 1.A.2: *Partner with the Silicon Valley Bicycle Coalition to offer routine adult and family bicycle education classes in Cupertino.*

Objective 1.B: Identify and support encouragement programs that promote bicycling as an ordinary form of transportation.

Policy 1.B.1: *Incorporate messaging in all City media that promotes the benefits of active lifestyles and raises awareness of walking and bicycling facilities in the community.*

Objective 1.C: Incorporate active transportation into promotion of tourism and economic development.

Policy 1.C.1: *Partner with tourism and economic development agencies to promote Cupertino as a destination for active recreation and active lifestyles.*

Policy 1.C.2: *Create a Bicycle Friendly Business program to recognize and promote bicycle-friendly businesses in Cupertino.*

Policy 1.C.3: *Collaborate with county and regional partners to create bikeway connections to the local tourism generators, and to promote active recreation in the region.*

Objective 1.D: Identify and support enforcement to support improved safety.

Policy 1.D.1: *Work with Santa Clara County Sherriff's Office to review collision locations and 'close-call' reports and identify locations for increased enforcement of motorist and bicyclist behavior.*

Objective 1.E: Identify and support evaluation programs that measure how well Cupertino is progressing to meet this Plan's goals.

Policy 1.E.1: *Review the Bicycle Transportation Plan performance measures at regular intervals to review progress and update priorities as necessary.*

Policy 1.E.2: *Conduct bicycle counts citywide on regular intervals to better understand the profile of residents bicycling in Cupertino as well as measure the impacts of newly implemented infrastructure & programs.*

GOAL 2

Safety

Improve bicyclist safety through the design and maintenance of roadway improvements.

Objective 2.A: Reduce the number and severity of bicycle related collisions, injuries, and fatalities.

Policy 2.A.1: *Annually review the number, locations, and contributing factors of bicycle related collisions to identify and implement ongoing improvements at collision locations throughout the transportation network.*

Policy 2.A.2: *Identify opportunities to reduce bicyclist exposure by reducing locations or lengths of conflict areas with vehicles or by providing dedicated and separated facilities where feasible.*

Policy 2.A.3: *Adopt a Vision Zero policy to eliminate traffic fatalities by 2026.*

Policy 2.A.4: *Study the need for 15 mph School Zone speed limits and adopt in appropriate locations by 2020.*

Policy 2.A.5: *Develop a City policy for the regular documentation of bike facility quality and maintenance of bicycle facilities throughout the City.*

GOAL 3

Mobility

Increase and improve bicycle access to community destinations across the City of Cupertino for all ages and abilities.

Objective 3.A: Plan, design, construct, and manage a complete bicycle network that accommodates the needs of all mobility types, users, and ability levels.

Policy 3.A.1: *Implement the recommendations from this Bicycle Transportation Plan Update.*

Policy 3.A.2: *Integrate bicycle facilities as part of the design and construction of upgrades or resurfacing of all existing roadways.*

Objective 3.B: Work to eliminate barriers to bicycle travel.

Policy 3.B.1: *Create a low-stress network in parallel to the arterial bikeway network, providing an alternative that is appealing to residents of all ages and abilities.*

Policy 3.B.2: *Upgrade and improve the existing arterial bikeway network to increase bicyclist comfort and lower barriers for more risk-averse users.*

Policy 3.B.2: *Improve or add bicycle crossings of Highway 85, Interstate 280, the Union Pacific railroad corridor, and creeks.*

Policy 3.B.3: *Develop a city-wide wayfinding system, providing access to appropriate locations such as employment centers, schools, and commercial centers.*

Policy 3.B.4: *Prioritize the installation of bicycle parking in the public right-of-way at key commercial and retail destinations.*

Performance Measures

Performance measures monitor the progress made towards achieving the goals of this Bicycle Transportation Plan Update. The measures outlined in Table 2-4 should be reviewed and updated on a regular basis.

The performance measures include target dates. 2026 targets assume a 10 year time frame from Plan adoption and a reasonable expectation of ability to meet the measure.

Table 2-4: Performance Measures

Goal	Objective	Performance Measure
Programs	***Objective 1.A:*** Identify and support educational opportunities for those who drive, bicycle, and walk about their rights and responsibilities.	Measure 1.A: Work with the Fremont Union High School and Cupertino Union School Districts to have SRTS programs implemented in all schools by 2020.
	Objective 1.B: Identify and support encouragement programs that promote bicycling as an ordinary form of transportation.	Measure 1.A.1: Work with the Silicon Valley Bicycle Coalition to offer adult bicycle education courses in Cupertino by 2020.
	Objective 1.C: Incorporate active transportation into promotion of tourism and economic development.	Measure 1.B: Support an Open Streets event in Cupertino by 2020.
	Objective 1.D: Identify and support enforcement programs to support improved safety.	Measure 1.C: Include promotion of bicycling in all City promotional materials by 2018.
	Objective 1.E: Identify and support evaluation programs that measure how well Cupertino is progressing to meet this Plan's goals.	Measure 1.D: Develop a memorandum of understanding with the Santa Clara County Sheriffs to prioritize enforcement on key bicycling corridors.
		Measure 1.E: Institute a bi-annual citywide bicycle counts program by 2020.

Goal	Objective	Performance Measure
Safety	***Objective 2.A:*** Reduce the number and severity of pedestrian and bicycle related collisions, injuries, and fatalities.	Measure 2.A.1: Adopt a Vision Zero policy by 2017. Measure 2.A.2: Reduce the number of bicycle related collisions & injuries by 50 percent from 2013 levels by 2026. Measure 2.A.3: Reduce the number of bicyclist fatalities to zero by 2026. Measure 2.A.4: Study 15 mph School Zone speed limits at appropriate school locations by 2020.
Mobility	***Objective 3.A:*** Plan, design, construct, and manage a complete bicycle network that accommodates the needs of all mobility types, users, and ability levels. ***Objective 3.B:*** Work to eliminate barriers to bicycle travel.	Measure 3.A: Endorse the NACTO Urban Bikeways Design Guide by 2018. Measure 3.B.1: Implement 50 percent of this Plan's planned bikeways by 2026. Measure 3.B.2: Achieve Gold Bicycle Friendly Community status by 2026.

Chapter 3:

Infrastructure Recommendations

3. Infrastructure Recommendations

The following chapter presents recommended bicycle infrastructure projects to support and promote bicycling in Cupertino. Many of these recommendations came from public input, city staff, and collision analysis.

The recommendations in these chapters set the foundation for improving safety for those who currently bicycle and to encourage more trips by bicycle within Cupertino and connecting to regional destinations.

Citywide Projects

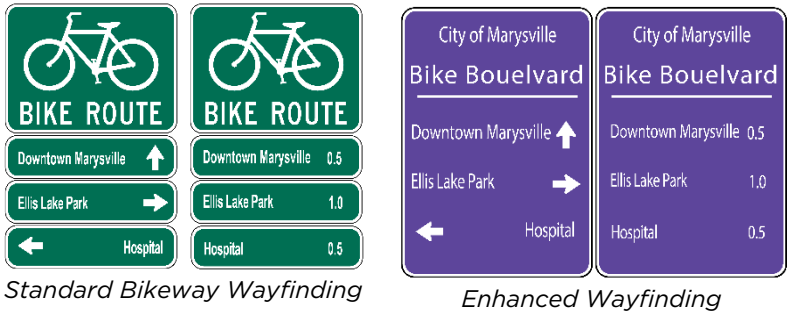
Bicycle Wayfinding Program

A high quality bicycling environment includes not only bicycle facilities, but also an easily navigable network. Bicycle wayfinding assists residents, tourists and visitors in finding key community destinations by bicycle. Signs may also include "distance to" information, which displays mileage to community destinations, as seen in Figure 3-1.

The City of Cupertino currently has signage installed alerting bicyclists to the presence of bike routes on upcoming cross-streets, but it has not been deployed in a comprehensive manner to date. Appendix D: Bicycle Design Guidelines provides more information about wayfinding.

Recommendation

This Plan recommends the development of a comprehensive bicycle wayfinding program that offers guidance to key destinations including schools, parking, regional trails, landmarks, and civic buildings.



Standard Bikeway Wayfinding *Enhanced Wayfinding*

Figure 3-1: Wayfinding

Bicycle Detection

Detection of bicyclists at actuated (not timed) traffic signals is important for safety of bicyclists and motorists. The California Manual on Uniform Traffic Control Devices (CA MUTCD) requires all new and modified traffics signals be able to detect bicyclists with passive detection (rather than having to push a button). Details regarding detection are provided in Appendix D: Bicycle Design Guidelines.

Recommendation

This Plan recommends Cupertino adhere to this requirement by ensuring passive detection of bicyclists at all signalized intersections.

Bicycle Parking

Available bicycle parking in Cupertino is scarce, and many instead lock their bikes to street fixtures such as trees, telephone poles, and sign poles. Additionally, many existing bike parking facilities do not meet current bicycle rack standards. Specifically, many racks are not designed for two points of contact with the bicycle frame, which allow for the both the wheels and the frame to be securely locked.

Recommended Types of Bicycle Parking

Bicycle parking can be categorized into short-term and long-term parking. Bicycle racks are the preferred device for short-term bike parking, serving people who leave their bicycles for relatively short periods of time, typically for shopping, errands, eating or recreation. Bicycle racks provide a high level of convenience and moderate level of security.

Long-term bike parking includes bike lockers, bike rooms, or secure enclosures. Long-term parking serves people who intend to leave their bicycles for longer periods of time and are typically found in multifamily residential buildings, transit stations, and commercial buildings. These facilities provide a high level of security but are less convenient than bicycle racks.

The City should also consider the needs of electric bicycle users in any study of the provision of bike parking. The needs of e-bike users are different than typical bicyclists, including capabilities for charging bicycle batteries and enhanced safety/anti-theft options.

Recommendation

This Plan recommends the City update the existing bike parking ordinance (code 19.124) requiring all new major development to provide bicycle parking in accordance with the rates specified in Table 3-1.

Table 3-1: Guidelines for Bicycle Parking Location and Quantities

Land Use or Location	Physical Location	Quantity
Parks	Adjacent to restrooms, picnic areas, fields, and other attractions	8 bicycle parking spaces per acre
Schools	Near office and main entrance with good visibility	8 bicycle parking spaces per 40 students
Public Facilities (libraries, community centers)	Near main entrance with good visibility	8 bicycle parking spaces per location
Commercial, retail and industrial developments over 10,000 square feet	Near main entrance with good visibility	1 bicycle parking space per 15 employees or 8 bicycles per 10,000 square feet
Shopping Centers over 10,000 square feet	Near main entrance with good visibility	8 bicycle parking spaces per 10,000 square feet
Transit Stations	Near platform, security or ticket booth	1 bicycle parking space or locker per 30 automobile parking spaces
Multi-Family Residential	Near main entrance with good visibility	1 short-term bicycle parking space per 10 residential units AND 1 long-term bicycle parking space per 2 residential units

Consistent with Association of Pedestrian and Bicycle Professionals (APBP), this Plan also recommends the City and private developers only install bicycle parking that provide two points of contact to support the bicycle frame, and that allow the frame and at least one wheel to be secured with a standard U-lock. The racks shown in Figure 3-2 are the recommended standard rack types. Long-term bike parking should provide some weather protection and greater security than bicycle racks. Long-term parking should be a secure room, locker or enclosure.

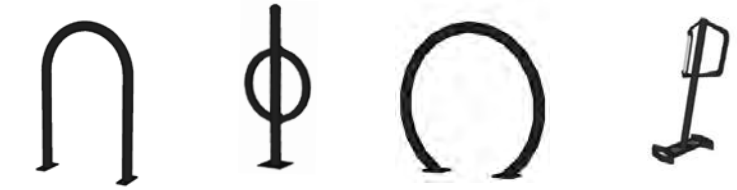


Figure 3-2: Types of bicycle racks

It is also recommended the City study existing bicycle parking locations and identify non-recommended parking types in need of replacement. The study could include where bike racks are needed (currently not installed) and where existing bike parking should be expanded.

Driveway Lip Standards

The lip between driveways and the gutter pan are useful for appropriately directing stormwater flow, but excessively vertical lips can be a significant hazard to bicyclists exiting the roadway via a driveway.

Recommendation

This Plan recommends Cupertino develop special driveway standards on key bicycle corridors throughout the City for new development that allow an easier transition to and from the roadway for bicyclists.

Bikeway Projects

The recommendations on following pages include a number of treatments that are described below in greater detail and shown in Figure 3-7.

Class I Shared Use Paths

A Class I Bicycle or Shared Use Path provides for bicycle and pedestrian travel on a paved right-of-way completely separated from streets or highways. These recommended facilities can be popular for recreational bicycling as well as for commuting.

Figure 3-3: Class I shared use paths

Class II Bike Lanes

Class II Bike lanes provide a signed, striped and stenciled lane on a roadway. Bicycle lanes are often recommended on roadways where traffic volumes and speeds are too high for comfortably sharing the travel lane.

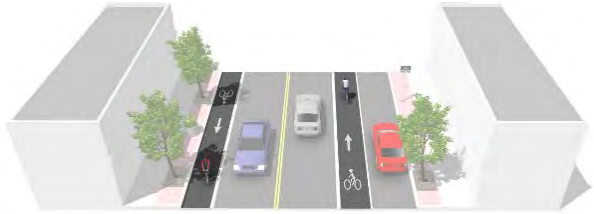


Figure 3-4: Class II bike lanes

Bicycle lanes can be further enhanced by green paint (which highlights areas of potential conflict) and paint buffers (providing greater lateral separation from either travel lanes or parking lanes).

Class III Bike Routes

Class III Bike Routes provide for shared travel lane use and are generally only identified with signs. Bike Routes are appropriate on low volume, low speed streets.

Figure 3-5: Class III bike routes

Bicycle Boulevards, a subset of Class III bike routes, include traffic calming features, interventions to reduce total vehicle volumes, and enhanced wayfinding & signage.

Class IV Separated Bikeways

Class IV separated bikeways are a new class of bicycle facility. Caltrans recently released design guidance for communities wishing to implement Class IV Bikeways. Generally, Class IV bikeways are on-street bicycle facilities that are separated from vehicle traffic by some kind of physical protection—including a curb, on-street parking, flexible bollards, or concrete planters. Separated bikeways are often referred to as cycle tracks or protected bike lanes.

Figure 3-6: Class IV separated bikeways

Retrofitting the Bicycle Network

Cupertino today boasts a significant existing system of arterial bike lanes and neighborhood bike routes. This Plan is focused on enhancing and expanding that system to support riding by community members of all ages and abilities.

This Plan recommends more than 50 miles of new and upgraded bicycling facilities of all types throughout the City of Cupertino. The recommendations below will culminate in a series of overlapping networks that residents can use according to their preference when making trips across and through the City.

Cupertino Loop Trail

As further detailed in the Trail Feasibility Study subchapter, this Plan recommends a series of Class I shared use paths. When joined together with low-stress on-street facilities, this would form the "Cupertino Loop Trail", providing access around Cupertino, largely separated from vehicle traffic. This network primarily supports recreational riders and long-range bicycle trips. A map of the Cupertino Loop Trail is show in Figure 3-8.

Separated Bikeways Network

This Plan recommends converting bike lanes on Stevens Creek Boulevard, Stelling Road, McClellan Road, Blaney Avenue, and Finch Avenue to a network of Class IV separated bikeways. This network will provide a connected east/west and north/south spine of direct bike routes for residents wanting to quickly reach key destinations throughout Cupertino. This network will provide better bicycle access for De Anza College students, commuters, and residents making local shopping trips. A map of the Separated Bikeways Network is shown in Figure 3-9.

Bike Boulevard Network

In parallel to the Cupertino Loop Trail and the Separated Bikeways Network, this Plan recommends a network of Bike Boulevards. These enhanced bike routes will provide neighborhood-friendly alternatives parallel to bike network options on major City streets. This network supports families and young students wanting to reach schools, parks, and community amenities on quiet streets with low-traffic volumes. A map of the Bike Boulevard Network is shown in Figure 3-10.

The mileage of recommended bikeway projects are summarized by bikeway class in Table 3-2.

Table 3-2: Recommended Bikeway Mileage by Class

Bikeway Class	Proposed Miles
Class I	7.73
Class II	1.59
Class II (Buffered)	13.70
Class III	8.19
Class III (Bike Blvd)	8.63
Class IV	10.86
TOTAL	**50.70**

A map of the recommended improvements is shown in Figure 3-7 and the complete list of bikeway projects is in Table 3-3.

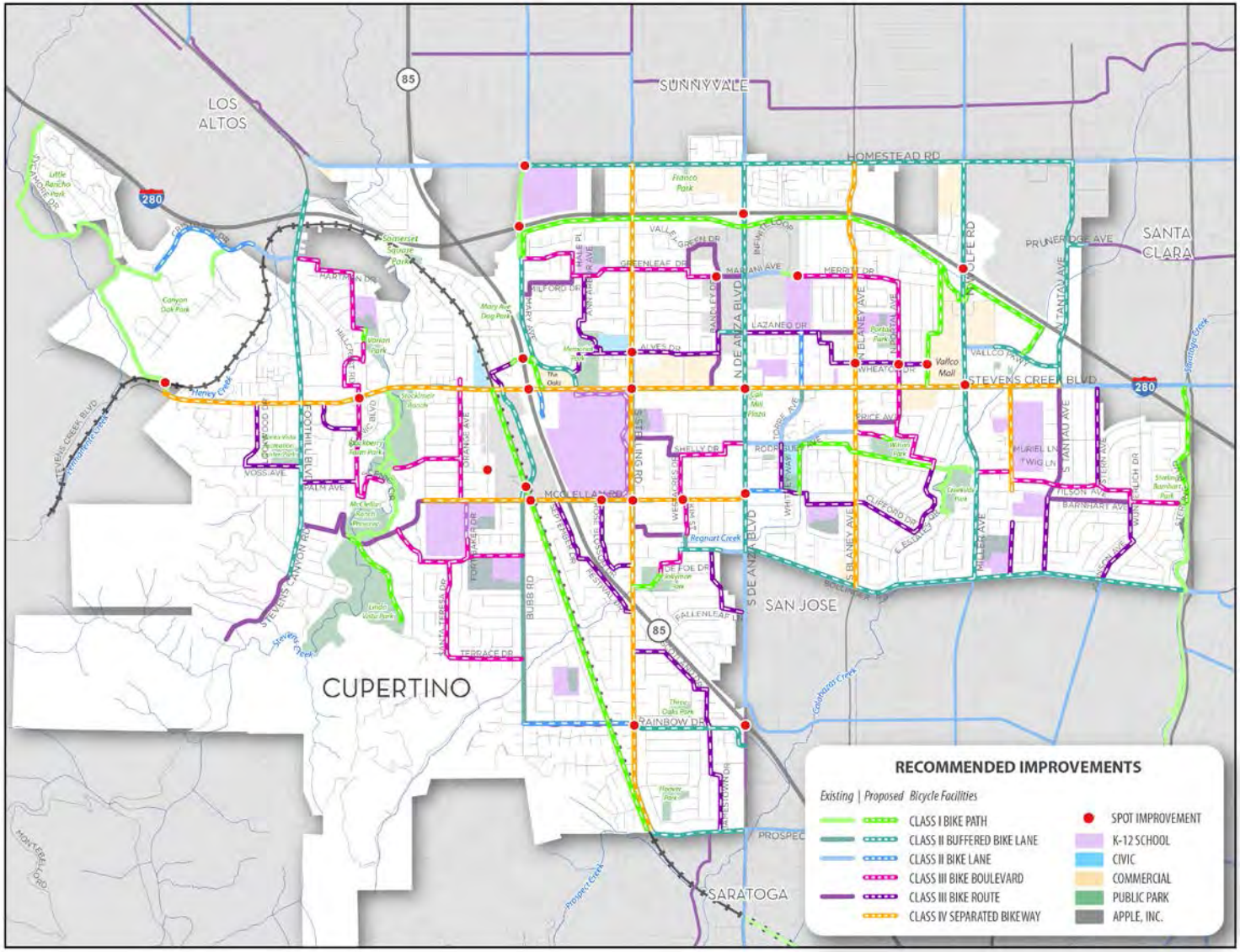


Figure 3-7: Bikeway projects

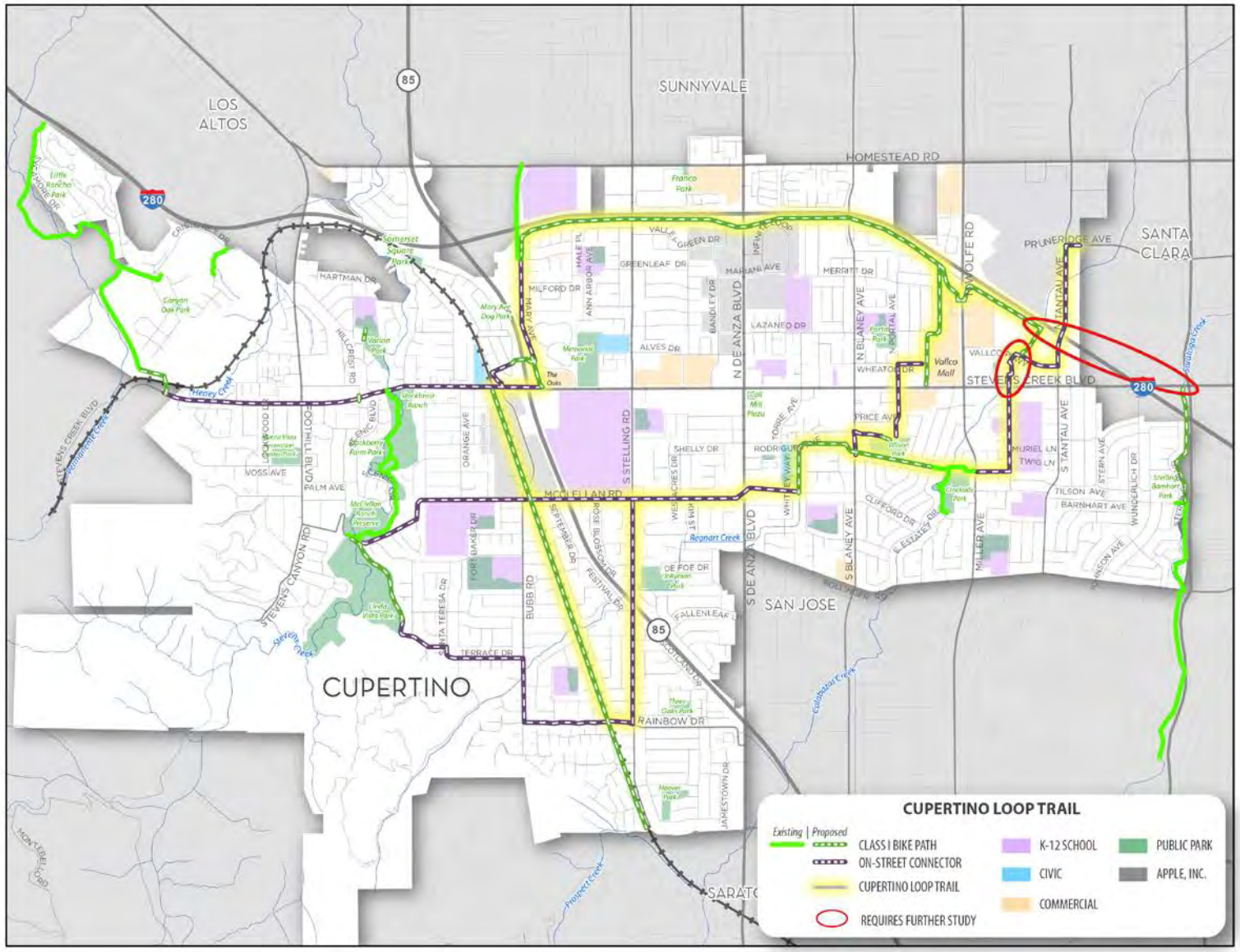


Figure 3-8: Cupertino loop trail

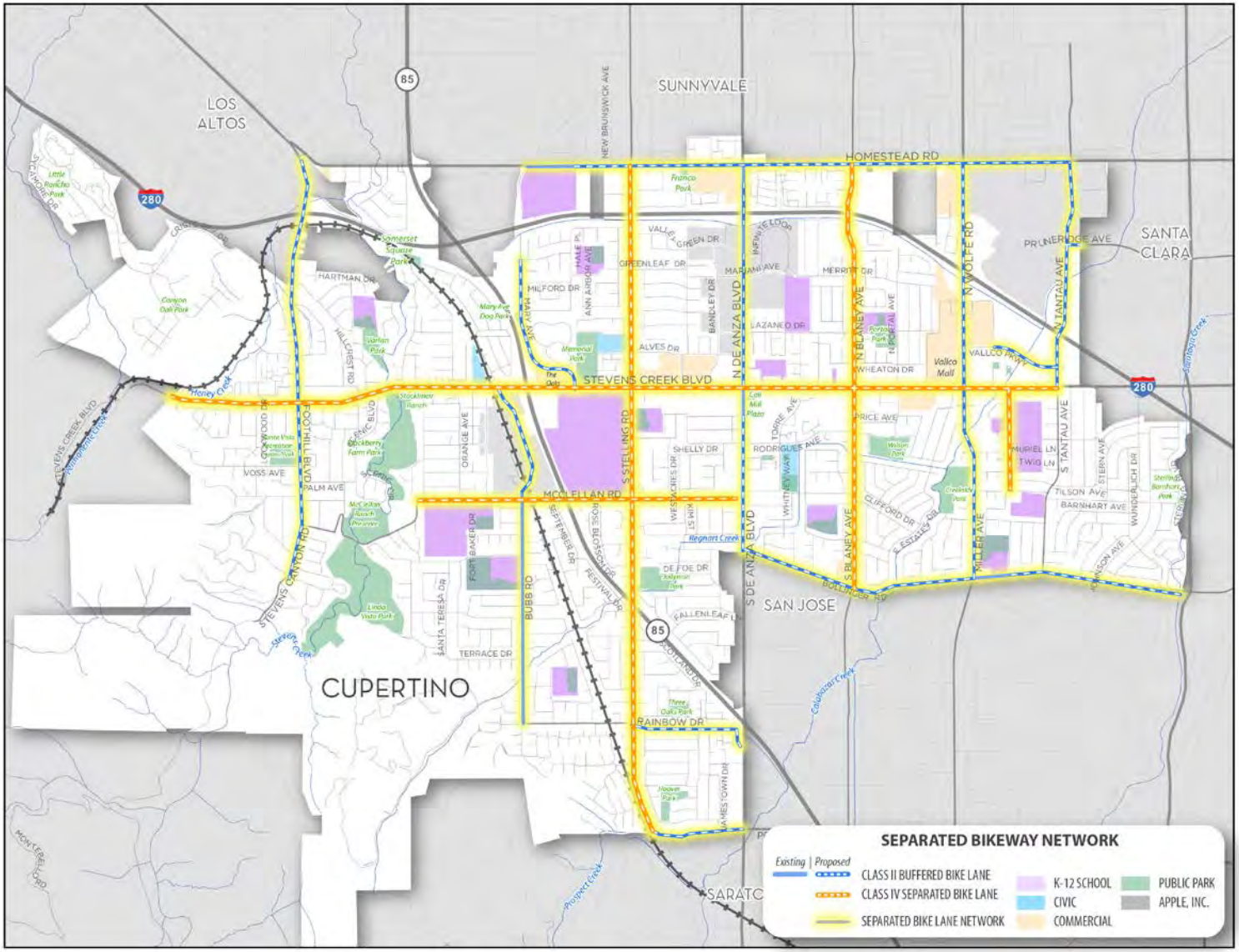


Figure 3-9: Separated bikeway network

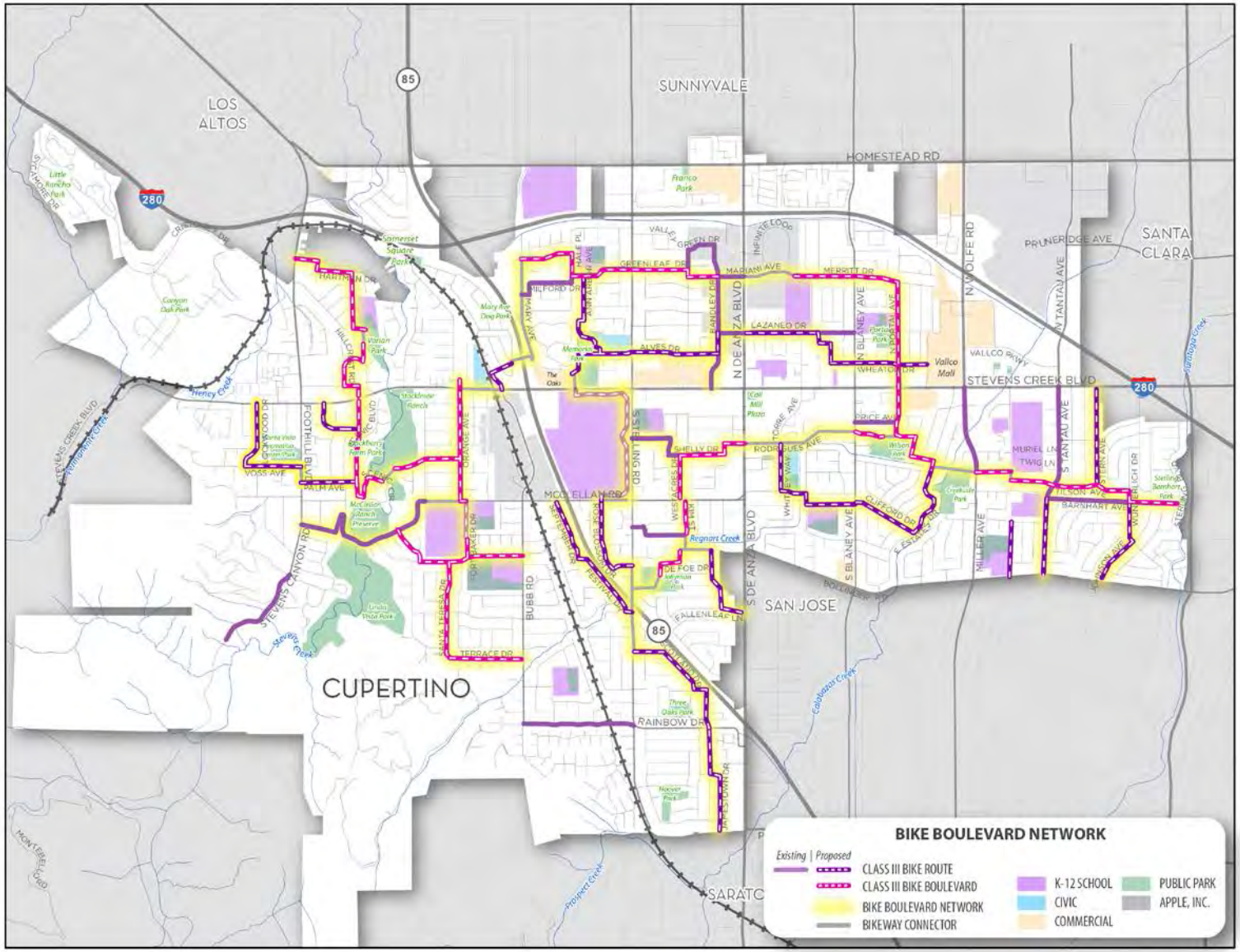


Figure 3-10: Bike Boulevard projects

Note: Bike routes and bike boulevards are grouped into corridors comprised of multiple individual street segments, since the utility of these bike routes and bike boulevards becomes tangible only when the entire corridor is implemented as a whole. The indented rows below each corridor detail the individual street segments. Additionally, each bike route and bike boulevard corridor has been assigned a number for easier reference.

Table 3-3: Bikeway Projects

Location	Start	End	Class	Length (miles)	Notes
Blaney Ave	Homestead Rd	Bollinger Rd	Class IV	1.91	Study parking removal to accommodate Class IV. Buffered bike lanes also possible.
Bollinger Rd	De Anza Blvd	Lawrence Expy	Class II	2.00	Study lane reduction to update existing by adding buffer
Bollinger Rd	De Foe Dr	Westlynn Wy	Class II	0.18	Narrow lane width to accommodate buffered bike lanes
Bollinger Rd to Stevens Creek Bike Route (Bike Route #1)				0.84	
Stern Ave	Tilson Ave	Stevens Creek Blvd	Class III	0.43	
Wunderlich Dr	Johnson Ave	Barnhart Ave	Class III	0.19	
Johnson Dr	Bollinger Rd	Wunderlich Dr	Class III	0.22	
Bubb Rd	Stevens Creek Blvd	McClellan Rd	Class II	0.53	Study removal of one southbound travel lane to accommodate buffered bike lanes
Campus Dr/ Stevens Creek Blvd Connector	Campus Dr	Stevens Creek Blvd	Class II	0.11	Contra-flow bike lane
Carmen Rd	Stevens Creek Blvd - south side	Stevens Creek Blvd - north side	Bridge	0.02	Study bicycle/pedestrian bridge over Stevens Creek Blvd
Civic Center to Creekside Park Bike Route (Bike Route #2)				1.24	
Torre Ave	Rodrigues Ave	Pacifica Dr	Class III	0.20	
Pacifica Dr	Torre Ave	Farallone Ave	Class III	0.11	
Farallone Ave	Pacifica Dr	Suisun Dr	Class III	0.05	
Suisun Dr	Blaney Ave	Farallone Ave	Class III	0.22	
Clifford Dr	Blaney Ave	Estates Dr	Class III	0.30	
Estates Dr	Clifford Dr	Creekside Path	Class III	0.36	

Location	Start	End	Class	Length (miles)	Notes
Civic Center to Jollyman Park Bike Blvd (Bike Blvd #1)				0.86	
Rodrigues Ave	De Anza Blvd	Terry Way	Class III	0.09	Consider Bike Blvd treatments
Terry Way	Rodrigues Ave	Shelly Dr	Class III	0.05	Consider Bike Blvd treatments
Shelly Dr	Terry Way	Westacres Dr	Class III	0.20	Consider Bike Blvd treatments
Westacres Dr	Shelly Dr	McClellan Rd	Class III	0.19	Consider Bike Blvd treatments
Kim St	McClellan Rd	Kirwin Ln	Class III	0.14	Consider Bike Blvd treatments
De Foe Dr	Bollinger Rd	Jollyman Park	Class III	0.18	Consider Bike Blvd treatments
Civic Center to Sterling Barnhart Park Bike Blvd (Bike Blvd #2)				1.41	
Rodrigues Ave	Blaney Ave	Wilson Park	Class III	0.13	Consider Bike Blvd treatments
Wintergreen Dr	Portal Ave	Cold Harbor Ave	Class III	0.09	Consider Bike Blvd treatments
Cold Harbor Ave	Wintergreen Dr	Vicksburg Dr	Class III	0.09	Consider Bike Blvd treatments
Vicksburg Dr	Cold Harbor Ave	Estates Dr	Class III	0.10	Consider Bike Blvd treatments
Estates Dr	Vicksburg Dr	Creekside Park Path	Class III	0.03	Consider Bike Blvd treatments
Calle de Barcelona	Miller Ave	Finch Ave	Class III	0.16	Consider Bike Blvd treatments
Tilson Ave	Finch Ave	Wunderlich Dr	Class III	0.54	Consider Bike Blvd treatments
Wunderlich Dr	Tilson Ave	Barnhart Ave	Class III	0.05	Consider Bike Blvd treatments
Barnhart Ave	Wunderlich Dr	Sterling Blvd	Class III	0.22	Consider Bike Blvd treatments
Cristo Rey Dr	150 feet East of Cristo Rey Pl	Roundabout	Class II	0.57	Bike lane only in uphill direction, sharrows downhill. Connects to existing bike lanes 180 ft. east of King Way
De Anza Blvd	Homestead Rd	Bollinger Rd	Class II	1.75	Study reconstruction of medians and/or lane reduction in both directions to accommodate buffered bike lanes; coordinate with City of San Jose & VTA. See Studies section.
Deep Cliff Golf Course Trail	McClellan Rd	Linda Vista Dr	Class I	0.45	Easement and study needed
Finch Ave	Stevens Creek Blvd	Phil Ln	Class IV	0.45	Two-way Class IV on east side of street, requires study of parking removal

Location	Start	End	Class	Length (miles)	Notes
Foothill Blvd Bike Route (Bike Route #3)				0.81	
Palm Ave	Scenic Blvd	Foothill Blvd	Class III	0.25	
Voss Ave	Foothill Blvd	Lockwood Dr	Class III	0.25	
Lockwood Dr	Voss Ave	Stevens Creek Blvd	Class III	0.31	
Foothill Blvd/Stevens Canyon Rd	I-280 Off-ramp	Rancho Deepcliff Dr	Class II	1.74	Narrow lane widths to accommodate buffered bike lane, some areas constrained south of Stevens Creek Blvd
Foothill to Stevens Creek Bike Blvd (Bike Blvd #3)				0.99	
Starling Dr	Foothill Blvd	Chace Dr	Class III	0.10	Consider Bike Blvd treatments
Chace Dr	Starling Dr	Hartman Dr	Class III	0.04	Consider Bike Blvd treatments
Hartman Dr	Chace Dr	Ainsworth Dr	Class III	0.16	Consider Bike Blvd treatments
Ainsworth Dr	Hartman Dr	Varian Way	Class III	0.25	Consider Bike Blvd treatments
Varian Way	Ainsworth Dr	Varian Park	Class III	0.06	Consider Bike Blvd treatments
Amelia Ct	Varian Park	Crescent Rd	Class III	0.08	Consider Bike Blvd treatments
Crescent Rd	Amelia Ct	Hillcrest Rd	Class III	0.10	Consider Bike Blvd treatments
Hillcrest Rd	Crescent Rd	Cupertino Rd	Class III	0.09	Consider Bike Blvd treatments
Cupertino Rd	Hillcrest Rd	Carmen Rd	Class III	0.06	Consider Bike Blvd treatments
Carmen Rd	Cupertino Rd	Stevens Creek Blvd	Class III	0.04	Consider Bike Blvd treatments
Golden Gate Elementary to Memorial Park Bike Route (Bike Route #4)				0.42	
Ann Arbor Ave	Greenleaf Dr	Lauretta Dr	Class III	0.20	
Lauretta Dr	Ave Arbor Ave	Ann Arbor Ct	Class III	0.01	
Ann Arbor Ct	Lauretta Dr	End of Street	Class III	0.06	
Memorial Park	Christensen Dr	Alves Dr	Class III	0.16	
Homestead Rd	Mary Ave Bridge	Tantau Ave	Class II	0.51	Study buffered bike lanes, may only be feasible in some sections. Coordinate with City of Sunnyvale.
Hwy 85 to Stevens Creek Blvd Bike Route (Bike Route #5)				0.19	
Peninsula Ave	Stevens Creek Blvd	Grand Ave	Class III	0.09	
Grand Ave	Peninsula Ave	Alhambra Ave	Class III	0.10	

Location	Start	End	Class	Length (miles)	Notes
Hyde Avenue Bike Route (Bike Route #6)				0.24	
Hyde Ave	Shadygrove Dr	Bollinger Rd	Class III	0.24	
I-280 Channel Bike Path	Meteor Dr/Mary Ave	Vallco Pkwy	Class I	2.94	Requires study & coordination with Caltrans and Santa Clara Valley Water District; alignment along the south side of I-280
Jollyman Park	Stelling Rd	Dumas Dr	Class I	0.15	Update path through park to Class I
Lazaneo Dr	Bandley Dr	De Anza Blvd	Class II	0.09	Buffered bike lanes
Mary Ave	Meteor Dr	Stevens Creek Blvd	Class II	0.71	Study buffered bike lanes or 2-way Class IV on west side
Mary Ave to Portal Ave Bike Blvd (Bike Blvd #4)				1.51	
Meteor Dr	Mary Ave	Castine Ave	Class III	0.23	Consider Bike Blvd treatments
Castine Ave	Meteor Dr	Greenleaf Dr	Class III	0.10	Consider Bike Blvd treatments
Greenleaf Dr	Castine Ave	Beardon Dr	Class III	0.53	Consider Bike Blvd treatments
Beardon Dr	Greenleaf Dr	Greenleaf Dr	Class III	0.03	Consider Bike Blvd treatments
Greenleaf Dr	Beardon Dr	End of street	Class III	0.14	Consider Bike Blvd treatments
Merritt Dr	End of street	Portal Ave	Class III	0.47	Consider Bike Blvd treatments
Mary Ave to Vallco Mall Bike Route (Bike Route #7)				1.78	
Memorial Park	Mary Ave	Alves Dr	Class III	0.20	
Alves Dr	Anton Way	Bandley Dr	Class III	0.53	
Bandley Dr	Alves Dr	Lazaneo Dr	Class III	0.10	
Lazaneo Dr	De Anza Blvd	Randy Ln	Class III	0.32	
Randy Ln	Lazaneo Dr	Chavoya Dr	Class III	0.05	
Chavoya Dr	Randy Ln	Carol Lee Dr	Class III	0.05	
Carol Lee Dr	Chavoya Dr	Wheaton Dr	Class III	0.09	
Wheaton Dr	Carol Lee Dr	End of street	Class III	0.43	
McClellan Rd	Byrne Ave	De Anza Blvd	Class IV	1.43	Short-term Class II from Bonny Dr to De Anza Blvd. Study conversion to Class IV.
Miller Ave	Bollinger Rd	Stevens Creek Blvd	Class II	0.87	Buffered bike lanes
Oaks Development Bike Path	Stevens Creek Blvd	Mary Ave	Class I	0.13	

Location	Start	End	Class	Length (miles)	Notes
Pacifica Dr	De Anza Blvd	Torre Ave	Class II	0.16	Study parking removal and lane reconfiguration and intersection to accommodate Class II
Perimeter Rd	I-280 Channel Trail	Stevens Creek Blvd	Class I	0.59	Study bike path as part of Vallco Mall redevelopment
Portal Ave Bike Blvd (Bike Blvd #5)				0.69	
Portal Ave	Merritt Dr	Wintergreen Dr	Class III	0.69	Consider Bike Blvd treatments
Prospect Rd	Stelling Rd	De Anza Blvd	Class II	0.42	Narrow travel lanes east of Galway to accommodate buffered bike lanes; study parking lane or turn lane removal west of Galway to accommodate buffered bike lanes
Rainbow Dr	Upland Wy	Stelling Rd	Class II	0.50	Study roadway widening to accommodate Class II facilities
Rainbow Dr	Stelling Rd	De Anza Blvd	Class II	0.57	Study removal of center turn lane to accommodate buffered bike lanes. Remove buffers to add turn pockets at key intersections. Study in tandem with pedestrian improvements.
Regnart Creek Trail	Pacficia Dr	Estates Dr	Class I	0.82	Study implementation of Class I pathway along creek access road
Rose Blossom/Huntridge Bike Route (Bike Route #8)				0.41	
Rose Blossom Dr	McClellan Rd	Huntridge Ln	Class III	0.32	
Huntridge Ln	Rose Blossom Dr	Stelling Rd	Class III	0.09	
San Tomas-Aquino Creek Trail	Stevens Creek Blvd	Sterling Barnhart Park	Class I	0.50	Study extension of existing trail
SR-85 Crossing	Grand Ave	Mary Ave	Bridge	0.13	Study bicycle/pedestrian bridge over SR-85
Stelling Rd	Homestead Rd	Prospect Rd	Class IV	3.02	Study Class IV, requires parking removal, lane reconfiguration, and median removal in some locations.
Stevens Creek Blvd	Foothill Blvd	Tantau Ave	Class IV	3.43	Study Class IV, coordinate project with VTA plans for BRT. Upgrade bike lane buffers & striping where possible as interim measure.
Stevens Creek Blvd	Cupertino City Limit	Foothill Blvd	Class IV	0.62	Study Class IV, separate from VTA BRT study.

Location	Start	End	Class	Length (miles)	Notes
Stevens Creek Bike Blvd (Bike Blvd #6)				1.12	
San Fernando Ave	Orange Ave	Stevens Creek Trail	Class III	0.30	Consider Bike Blvd treatments
Scenic Cir	Scenic Circle Path	Scenic Blvd	Class III	0.19	Consider Bike Blvd treatments
Scenic Blvd	Scenic Cir	Carmen Rd	Class III	0.26	Consider Bike Blvd treatments
Carmen Rd	Scenic Blvd	Stevens Creek Blvd	Class III	0.17	Consider Bike Blvd treatments
Janice Ave	Carmen Rd	Stevens Creek Blvd	Class III	0.25	
Tantau Ave	Homestead Rd	Stevens Creek Blvd	Class II	1.00	Partly Apple 2 Campus mitigation measures. Continue buffered bike lanes south to Stevens Creek Blvd
Tantau Ave Bike Route (Bike Route #9)				0.41	
Tantau Ave	Bollinger Rd	Barnhart Ave	Class III	0.41	
Tri-School East/West Bike Blvd (Bike Blvd #7)				0.66	
Linda Vista Dr	McClellan Rd	Hyannisport Dr	Class III	0.19	Consider Bike Blvd treatments
Hyannisport Dr	Linda Vista Dr	Bubb Rd	Class III	0.47	Consider Bike Blvd treatments
Tri-School North/South Bike Blvd (Bike Blvd #8)				0.76	
Santa Teresa Dr	Hyannisport Dr	Terrace Dr	Class III	0.55	Consider Bike Blvd treatments
Terrace Dr	Santa Teresa Dr	Bubb Rd	Class III	0.32	Consider Bike Blvd treatments
Union Pacific to Hwy 85 Bike Route (Bike Route #10)				1.48	
September Dr	McClellan Rd	Festival Dr	Class III	0.28	
Festival Dr	September Dr	Orogrande Pl	Class III	0.34	
Orogrande Pl	Festival Dr	Stelling Rd	Class III	0.03	
Squirewood Way	Stelling Rd	Scotland Dr	Class III	0.13	
Scotland Dr	Squirewood Way	Kingsbury Pl	Class III	0.22	
Kingsbury Pl	Scotland Dr	Gardenside Ln	Class III	0.06	
Gardenside Ln	Kingsbury Pl	Rainbow Dr	Class III	0.18	

Location	Start	End	Class	Length (miles)	Notes
Poppy Way	Rainbow Dr	Plum Blossom Dr	Class III	0.21	
Plum Blossom Dr	Poppy Way	Jamestown Dr	Class III	0.04	
Jamestown Dr	Plum Blossom Dr	Prospect Rd	Class III	0.25	
Union Pacific Trail	Stevens Creek Blvd	Prospect Rd	Class I	2.10	Study rail-with-trail along Union Pacific ROW
Vallco Pkwy	Perimeter Rd	Tantau Ave	Class II	0.30	Narrow travel lanes to accommodate buffered bike lanes
Varian Park Path	Amelia Ct	Varian Wy	Class I	0.05	
Vista Dr	Forest Ave	Stevens Creek Blvd	Class II	0.24	Study parking removal on west side of street
West Cupertino North/South Bike Bld (Bike Blvd #9)				0.63	
Orange Ave	Mann Dr	McClellan Rd	Class III	0.55	Consider Bike Blvd treatments
Fort Baker Dr	Presidio Dr	Hyannisport Dr	Class III	0.08	Consider Bike Blvd treatments
Westlynn/Fallenleaf Bike Route (Bike Route #11)				0.37	
Westlynn Way	Bollinger Rd	Fallenleaf Ln	Class III	0.28	
Fallenleaf Ln	Westlynn Way	De Anza Blvd	Class III	0.09	
Wilson Park	Rodrigues Ave	Wilson Park Path	Class I	0.03	Study Class I facility along northern edge of park
Wolfe Rd	Homestead Rd	Stevens Creek Blvd	Class II	1.00	Study buffered bike lanes accommodation

Spot Improvements, Projects for Coordination with Caltrans, and Studies

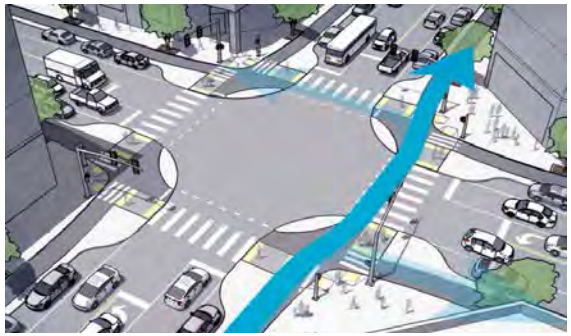
Spot Improvements

Spot improvements are designed to address locations where there are specific biking challenges identified through the planning process. Recommended spot improvements are listed in Table 3-4. Examples for some treatments are shown in Figure 3-11 on the following page.

Table 3-4: Spot Improvements

Location	Improvement
Bubb Rd & McClellan Rd at Union Pacific ROW	Coordinate bicycle crossing for future rail trail with nearby traffic signals
Carmen Rd at Stevens Creek Blvd	Study bicycle/pedestrian bridge over Stevens Creek Blvd
De Anza Blvd at I-280	Add green paint to freeway on-ramps and off-ramps approaches, stripe bike lane through intersection crossings, coordinate with Caltrans
De Anza Blvd at SR-85	Add green paint to freeway on-ramps and off-ramps approaches, stripe bike lane through intersection crossings, coordinate with Caltrans
Greenleaf Dr/Mariani Ave at Bandley Dr	Reconfigure wall to allow for bicycle access
Highway 85 at Grand Ave/Mary Ave	Study bicycle/pedestrian bridge over Highway 85
Imperial Avenue at Alcazar Ave	Remove fence on Imperial Ave cul-de-sac to allow through bicycle travel
Mary Ave at Homestead Rd	Reconfigure intersection so northbound bicyclists can safely filter from the pathway to the roadway
Mary Ave Bridge	Add signage and striping to better delineate bicycle & pedestrian space on the bridge
McClellan Rd at De Anza Blvd/Pacifica Dr	Reconstruct intersection to facilitate easier east/west bicycle travel
McClellan Rd at Rose Blossom Dr	Facilitate north/south bicycle travel at intersection
McClellan Rd at Westacres Dr/Kim St	Study peanut roundabout to facilitate north/south bicycle travel
Merrit Dr/Infinite Loop	Improve signage/striping to delineate bike/ped space in connector
Portal Ave at Wheaton Dr	Study conversion to roundabout
Rainbow Dr at Stelling Rd	Study removal of slip lanes; study protected intersection
Stelling Rd at Alves Dr	Study improved crossing treatments for bicycle traffic on Alves Dr
Stelling Rd at McClellan Rd	Study protected intersection
Stevens Creek Blvd at SR-85	Enhance freeway crossing, coordinate with Caltrans
Stevens Creek Blvd at Stelling Rd	Study protected intersection
Stevens Creek Blvd at De Anza Blvd	Add bike lane striping though intersection to improve visibility
Stevens Creek Blvd at Wolfe Rd	Study removal of slip lanes/pork chop islands
Wheaton Dr at Blaney Ave	Enhance bicycle crossing along Wheaton Dr
Wheaton Dr at Perimeter Rd	Connect bike boulevard to proposed bike path
Wolfe Rd at I-280	Add green paint to freeway on-ramps and off-ramps approaches, stripe bike lane through intersection crossings, coordinate with Caltrans

Peanut roundabouts create low-stress bicycle connections at offset intersections



Protected intersection, which uses physical separation to offer a refuge for waiting bicyclists. See Appendix D for more information

Figure 3-11: Example spot improvements

Projects for Coordination with Caltrans & VTA

Cupertino has several state and interstate routes that travel through the city. These state routes are important for local and regional mobility, but also provide a challenge for walking and bicycling. The projects described in Table 3-5 (repeated from Table 3-4) are intended to address community identified need and will require collaboration with Caltrans & VTA.

Table 3-5: Projects for Coordination with Caltrans & VTA

Location	Start	End	Description
I-280 Channel Bike Path	Mary Ave Bridge	Tantau Ave	Class I along the south side of I-280
Saratoga Creek Trail Extension	Sterling Barnhart Park	Stevens Creek Blvd	Study creek trail extension, requires coordination with VTA, County, and Caltrans (at I-280 undercrossing)
SR-85 bridge	Mary Ave	Grand Ave	Study bicycle/pedestrian bridge over SR-85
Stevens Creek Blvd	Foothill Blvd	Tantau Ave	Study Class IV separated bike lanes, coordinate with VTA for future BRT

Project for Coordination with Union Pacific Railroad

The Union Pacific Railroad Trail cuts through the western part of Cupertino. In 2001, The Santa Clara Valley Transportation Authority (VTA) commissioned a study for the implementation of rail-with-trail along the Union Pacific right of way between Cupertino and Los Gatos, which was subsequently adopted by the VTA board.

This Plan recommends the City coordinate with UPRR to provide a formal Class I trail between Stevens Creek Boulevard and Prospect Road, as shown in Figure 3-4. Further discussion of opportunities and constraints along this rail corridor are discussed in Chapter 4: Trail Feasibility Study.

Studies

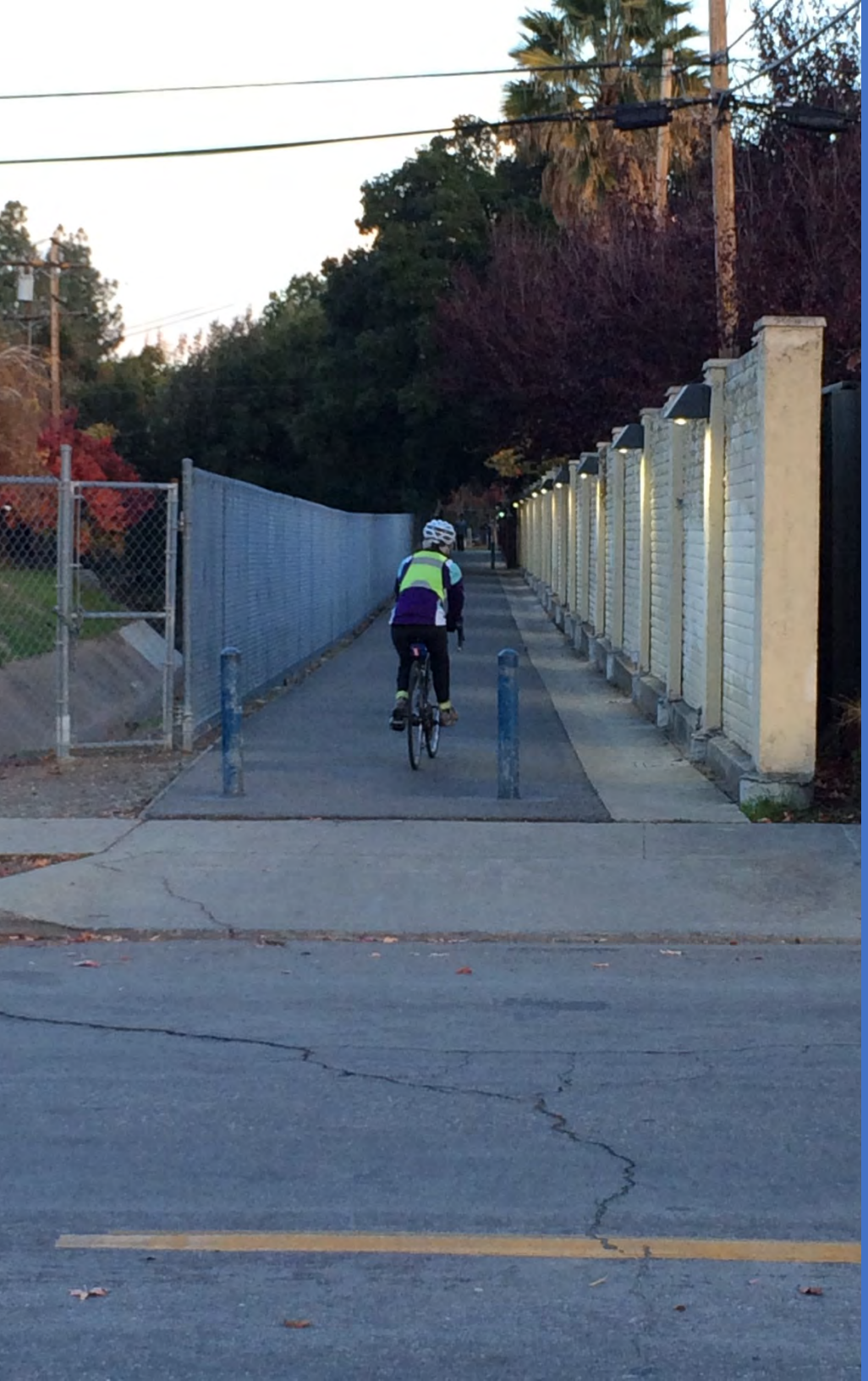
A number of improvements intended to address bicycling mobility will require further study including projects which require parking lane removal or a road diet to accommodate the recommended treatment. These projects are listed in Table 3-6 (repeated from Table 3-3) and shown on Figure 3-4.

Table 3-6: Projects for Study

Location	Start	End	Description
Blaney Ave	Homestead Rd	Bollinger Rd	Study parking removal on one side of street for Class IV facility
Bollinger Rd	De Anza Blvd	Johnson Ave	Study 4-3 road diet to add buffers to bike lane; coordinate with San José
Bubb Rd	Stevens Creek Blvd	McClellan Rd	Study reducing one southbound lane to accommodate buffered bike lanes
Carmen Rd	Stevens Creek Blvd	--	Study bicycle/ pedestrian bridge over Stevens Creek Blvd
De Anza Blvd	Homestead Rd	Bollinger Rd	Study reconstruction of medians and/or lane reduction in both directions to accommodate buffered bike lanes; coordinate with City of San José & VTA
Deep Cliff Golf Course Trail	McClellan Rd	Linda Vista Dr	Class I trail, easement needed
Finch Ave	Stevens Creek Blvd	Phil Ln	Study two-way Class IV on east side. Requires parking removal & bicycle signal phase at Stevens Creek Blvd

Location	Start	End	Description
Homestead Rd	Swallow Dr	Stevens Creek	Coordinate with Sunnyvale to reconfigure Homestead, accommodating buffered bike lanes
McClellan Rd	Byrne Ave	Stelling Rd	Study Class IV, removal of center turn lane to implement
McClellan Rd	Stelling Rd	De Anza Blvd	Study Class IV, may require limited roadway widening to implement
Pacifica Ave	De Anza Blvd	Torre Ave	Study parking removal & lane reconfiguration to accommodate Class II
Rainbow Dr	Bubb Rd	Stelling Rd	Study roadway widening to accommodate Class II
Rainbow Dr	Stelling Rd	De Anza Blvd	Study removal of 2-way turn lane to accommodate buffered bike lanes. Add turn pockets at Stelling & at Gardenside/Poppy & at De Anza by removing buffers; coordinate with pedestrian crossing improvements
Regnart Creek Trail	Pacifica Dr	Estates Dr	Study conversion of SCVWD access road to Class I path
San Tomas Aquino/Saratoga Creek Trail Ext.	Sterling Barnhart Park	Stevens Creek Blvd	Study Class I Trail extension
SR-85 bicycle & pedestrian bridge	Mary Ave	Grand Ave	Study bicycle & pedestrian bridge crossing over SR-85; may require easement from The Oaks
Stelling Rd	Homestead Rd	Alves Dr	Study Class IV, implementation possible within existing roadway
Stelling Rd	Alves Dr	McClellan Rd	Study Class IV, requires removal of median to maximize roadway reconfiguration
Stelling Rd	McClellan Rd	Prospect Rd	Study Class IV, removal of center turn lane or parking lanes to implement

Location	Start	End	Description
Stevens Creek Blvd	Foothill Blvd	Tantau Ave	Study Class IV as part of future Bus Rapid Transit. Short-term improvements - study lane width reductions for enhanced buffers where possible. Coordinate with VTA
Stevesn Creek Blvd	Cupertino City Limit	Foothill Blvd	Study Class IV, with median removal and/or road widening potentially necessary. Coordinate with study of West Cupertino UPRR Crossing project.
Union Pacific Trail	Stevens Creek Blvd	Prospect Rd	Class I trail-with-rail
Vista Dr	Lazaneo Dr/Forest Ave	Stevens Creek Blvd	Study parking removal on west side of street to accommodate Class II bike lanes
West Cupertino UPRR Crossing	Hammond-Snyder Trail	Stevens Creek Blvd	Study bicycle/pedestrian crossing of UPRR ROW
Wolfe Rd/Miller Ave	Homestead Rd	Bollinger Rd	Study roadway reconfiguration and median removal to accommodate buffered bike lanes with minimal lane reduction



Chapter4:
Trail Feasibility Study

4.Trail Feasibility Study

Trail Network Feasibility Study

From the outset of the outreach process for this Plan, interest in a trail network throughout Cupertino has been a regular concern for many stakeholder groups. This chapter provides a preliminary feasibility study for potential off-street trail networks in Cupertino.

Off-street trail systems can serve a number of purposes when implemented correctly. They can serve as a recreational amenity, a low-stress alternative to on-street bicycle trips, a commute corridor for longer bicycle trips, and a neighborhood amenity that increases adjacent property values and improves quality of life.

Recommendation: Cupertino Loop Trail

This feasibility study recommends the implementation of a loop trail through central Cupertino. This would be accomplished by implementing Class I trails along Regnart Creek, along the I-280 flood control canal, and along the UPRR rail right of way. These trail segments would be connected to each other by a series of low-stress on-street bikeways recommended in this Plan.

Figure 4-1 shows potential alignments for the Cupertino Loop Trail, as well as other potential locations to implement off-street trail infrastructure within the City. Table 4-1 provides brief descriptions of each recommended trail section and brief descriptions.

Further study will be required to pursue construction of a trail network. This feasibility study presents a roadmap for future study & prioritization of a trail network for Cupertino.

Recommendation: Study Saratoga Creek-to-Cupertino Loop Trail Connector

While outside of Cupertino City Limits, the freeway frontage along the Agilent Technologies campus could potentially connect an extension of the Saratoga Creek Trail with the proposed Cupertino Loop Trail. The City should encourage to the City of Santa Clara to consider such a connector if both trails are built out.

Stevens Creek Trail Extension

In 2009, a coordinated Stevens Creek Trail planning effort was undertaken between the cities of Cupertino, Los Altos, Mountain View and Sunnyvale. An advisory body composed of council members from each city (the Joint Cities Working Team (JCWT)) was installed, and a trail consultant engaged to assess the feasibility of potential route options. The consultant subsequently published a Feasibility Study in March 2015. It identified three route options through Cupertino, but made no specific recommendation. These options were:

- Mary Avenue to Stevens Creek Blvd, utilizing the Don Burnett Pedestrian Bridge
- Foothill Blvd to Stevens Creek Blvd
- Construction of a new pedestrian bridge across I-280 connecting Cupertino's Homestead Villa and Oakdell

Ranch neighborhoods. A tunnel under I-280 was found to be infeasible.

A series of public outreach events then followed, intended to gauge public reaction to the study. After considering both the feasibility study and public input, the JCWT issued its recommendation to the four cities in September 2015. No specific route recommendation was made for Cupertino. However, the JCWT did recognize the need for a long term trail vision, and that should circumstances change regarding the availability of land in the area that further studies be undertaken to identify a feasible route. For further information, refer to the Four Cities Coordinated Stevens Creek Trail Feasibility Study (September 2015 final version).

Table 4-1: Recommended Trail Network Segments

Location	Start	End	Description
Bike/Ped bridge over UPRR	Stevens Creek Blvd	Hammond-Snyder Loop Trail	Identified in 2015 BTP Update
Deep Cliff Golf Course	McClellan Rd	Linda Vista Dr	Identified in 2015 BTP Update
Carmen Rd Bridge at Stevens Creek Blvd	--	--	Bicycle & pedestrian bridge over Stevens Creek Blvd connecting Carmen Rd
I-280 Canal Bike Path	Mary Ave Bridge	Vallco Pwky	Access road on south side of canal
Regnart Creek, Phase 1	Pacifica Dr	S Blaney Dr	Access road on north side of creek
Regnart Creek, Phase 2	S Blaney Dr	Estates Dr	Access road on south side of creek
SR-85 bike/ped bridge	Mary Ave	Grand Ave	Bicycle & pedestrian bridge over SR-85
San Tomas Aquino Creek Trail Extension	Stevens Creek Blvd	Sterling Barnhart Park	Identified in 2015 BTP Update
The Oaks Path	Mary Ave	Stevens Creek Blvd	West side of proposed development
Union Pacific ROW	Stevens Creek Blvd	Prospect Rd	Trail-by-Rail on west side of ROW
Vallco West Pathway	I-280 Canal	Stevens Creek Blvd	Identified in South Vallco Connectivity Plan
West Cupertino UPRR Crossing	Hammond-Snyder Trail	Stevens Creek Blvd	Identified in 2015 BTP Update
Wilson Park	Rodriguez Ave	Portal Ave	Identified in 2015 BTP Update

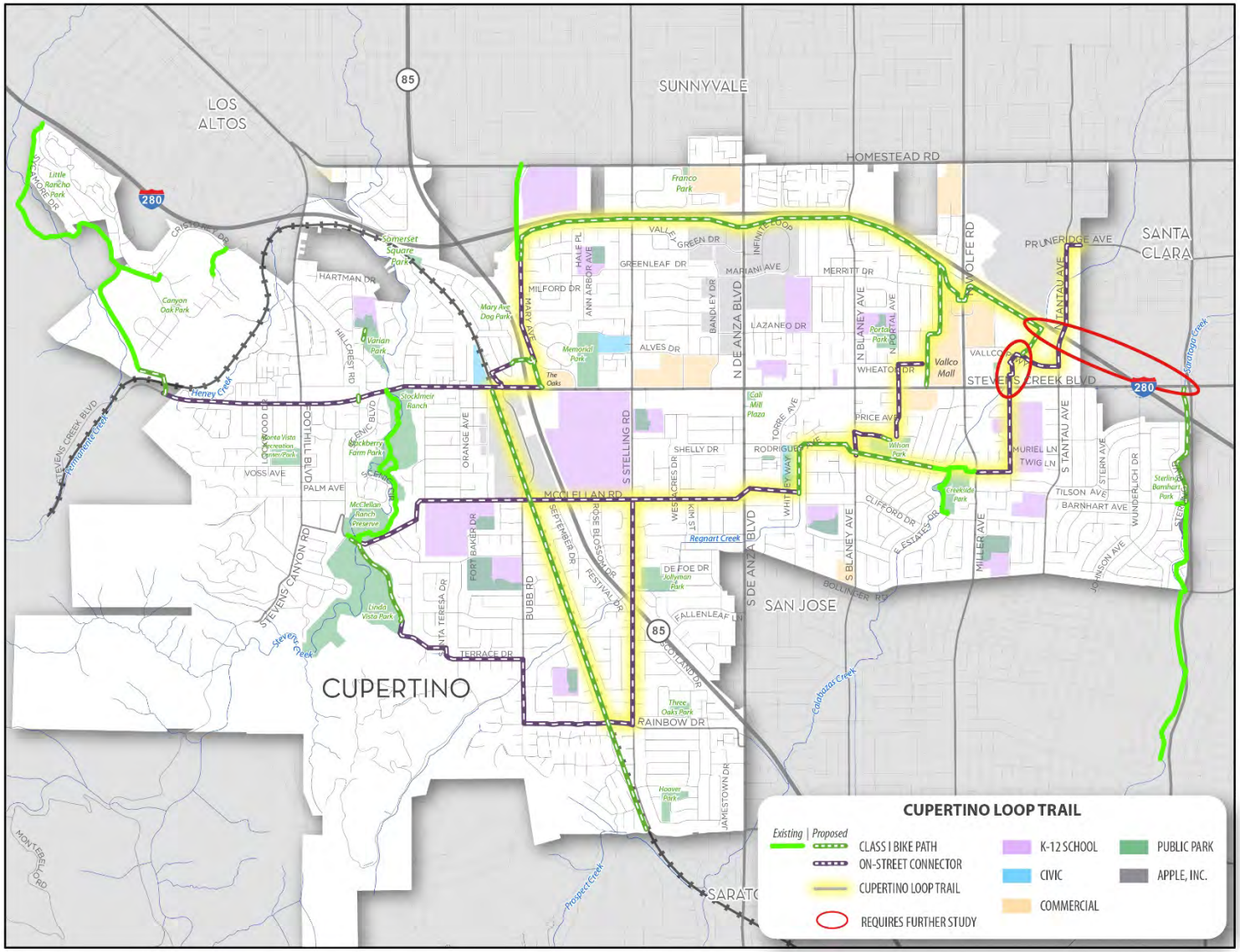


Figure 4-1: Recommended trails & Cupertino Loop Trail alignment

Cupertino Loop Trail Recommendations

Regnart Creek, Phase 1
Limits: Pacifica Drive to S Blaney Avenue

Length: 0.479 mi

Type: Multi-use path

Partners: Water District

Utility: High

Feasibility: High

Priority: High

Regnart Creek, from Pacifica Drive to South Blaney Avenue, has right of way available for a multi-use path on an access road on the west/north side of the creek. While available right of way exists on Regnart Creek south of Pacifica Drive, it terminates at the back a strip mall fronting on De Anza Boulevard. Even were an alignment through the strip mall parking lot created, there are no feasible crossings of De Anza Boulevard to continue an off-street trail further to the west.

This trail section would require an enhanced crossing when transitioning to the south side of Regnart Creek east of South Blaney Avenue. This trail section could also offer connections to the Cupertino Civic Center, Rodriguez Avenue, and De Palma Lane.

To connect with the Cupertino Loop Trail alignment to the west, an on-street connection is recommended along Pacifica Drive, McClellan Road, Stelling Road, and Rainbow Drive. Connections to the Union Pacific Rail/Trail segment can take place at either McClellan Road or Rainbow Drive. If recommendations in this plan are implemented, the majority of these on-street route connections will be made via protected bike lanes.

To the east of this segment, the Cupertino Loop Trail could either continue on the southern side of Regnart Creek to Creekside Park or travel north on South Blaney Avenue. Connecting through a recommended pathway through Wilson Park, on-street routes could connect this segment to a proposed trail along the western side of the Vallco shopping center.

Regnart Creek, Phase 2
Limits: S Blaney Avenue to E Estates Drive

Length: 0.340 mi

Type: Multi-use path

Partners: Water District

Utility: Medium

Feasibility: High

Priority: High

Regnart Creek, from South Blaney Avenue to East Estates Drive, has right of way available for a multi-use path on an access road on the south side of the creek. Additional design consideration would be needed at South Blaney Avenue where the proposed trail alignment would transition from the north side of the creek to the south side of the creek.

At East Estates Drive, this segment would connect to the existing Creekside Park pathway, connecting across Calabazas Creek east to Miller Avenue.

Further study is needed for an appropriate link to the Cupertino Loop Trail to the northeast. Routes via the Vallco Mall are possible, but may not be ideal.

Vallco West Pathway
Limits: Stevens Creek Boulevard to I-280 Canal

Length: 0.57 mi

Type: Multi-use path

Partners: Private Developers

Utility: Medium

Feasibility: High

Priority: Medium

As part of the South Vallco Connectivity Plan, a pathway was recommended along the western edge of the Vallco parcel, following the route of Perimeter Road. A gravel right of way currently runs alongside Perimeter Road that could be converted to a Class I pathway.

Such a pathway could connect at the northern end with the I-280 Canal recommended alignment. To the south, the pathway alignment would connect with Stevens Creek Boulevard. The last block of Perimeter Road before Stevens Creek Boulevard would need a significant reconfiguration to accommodate a Class I pathway.

The Vallco West Pathway could have added utility by enhancing connectivity with the neighborhoods to the west, allowing a connection to a proposed bike route in this Plan.

I-280 Canal

Limits: Vallco Parkway to Mary Avenue Bridge

Length: 2.88 mi

Type: Multi-use path

Partners: Water District, Caltrans

Utility: High

Feasibility: Medium

Priority: High

The Interstate 280 canal runs east/west along the southern side of the freeway from Highway 85 to Calabazas Creek. For the majority of its length, the canal is faced on either side by sound walls. This alignment could provide a high level of utility for bicyclists traveling east/west across Cupertino.

Segments of the canal access road may require retrofitting to accommodate a 12' multi-use path cross section. Coordination with both the water district and Caltrans would be required to implement a multi-use trail on this alignment.

At Wolfe Road, the trail alignment could take advantage of an existing undercrossing of the roadway within the Vallco development. The current sidewalk appears wide enough for use as a multi-use trail in this undercrossing.

Some roadway right-of-way acquisition may be necessary at the Blaney Avenue overcrossing to accommodate a trail alignment alongside a 300 foot-long section of Lucille Avenue where the access road briefly ends.

De Anza Boulevard and Stelling Road, both have at-grade crossings with the canal. A crossing at De Anza Boulevard would either need a re-designed intersection with the freeway off-ramp to accommodate through bicycle traffic or a bicycle/pedestrian bridge would need to be built at this site. At Stelling Road, a study would need to be conducted for whether a controlled or uncontrolled trail crossing is warranted. An undercrossing is infeasible at both locations due to the proximity to the flood control channel.

Special attention should be paid to trailhead connections at Vallco Parkway, Wolfe Road, Lucille Ave, De Anza Boulevard, Stelling Road, and the Mary Avenue Bridge.

The Oaks Pathway
Limits: Mary Avenue to Stevens Creek Boulevard

Length: 0.12 mi

Type: Multi-use path

Partners: Private Developers

Utility: Low

Feasibility: Medium

Priority: Medium

The Oaks Pathway is a proposed public benefit offered by the development team engaged in the redevelopment of The Oaks Shopping Center. This pathway would run along the western side of The Oaks property between Mary Avenue and Stevens Creek, nearby the on-ramp to Highway 85.

This pathway could serve as part of a mostly on-street connector between the I-280 Canal and the Union Pacific rail right of way. From terminus of the I-280 Canal alignment at the Mary Avenue Bridge, the on-street route would travel south on Mary Avenue to The Oaks Pathway, then travel west on Stevens Creek Boulevard (or along the proposed bike/ped bridge over Highway 85) to a proposed trailhead at the Union Pacific rail right of way.

The Plan recommends Mary Avenue be studied for conversion to a "complete street," which may include either removal of the center turn lane or conversion of the angled parking to parallel parking in order to accommodate either buffered bike lanes or a protected bike lane. Stevens Creek Boulevard, in this stretch, is also recommended for a protected bike lane, pending further study and coordination with VTA plans for BRT.

This segment is the least essential to the Cupertino Loop Trail, as there is also the potential to continue enhanced on-street bike facilities on Mary Avenue southeast to its intersection at Stevens Creek Boulevard. This segment may carry greater utility if a bicycle/pedestrian bridge over Highway 85 immediately to the north is deemed infeasible.

Bridge over SR-85 at Stevens Creek Boulevard
Limits: Mary Avenue to Alhambra Avenue

Length: 0.11 mi

Type: Bicycle & Pedestrian Highway Overcrossing

Partners: Private Developers

Utility: High

Feasibility: Medium

Priority: High

A dedicated bicycle & pedestrian overcrossing of Highway 85 may be possible about 600 feet north of Stevens Creek Boulevard, from Mary Avenue in the east to approximately the intersection of Grand Avenue and Alhambra Avenue to the west.

The desire for a separate bicycle & pedestrian crossing at this location has been a priority voiced by members of the community at every opportunity for outreach during this plan process. Increasing opportunities for east/west connections across Cupertino, especially those that can appeal to residents of all ages and abilities, is a high priority for this Plan.

Siting a bicycle & pedestrian crossing approximately 600 feet north of Stevens Creek Boulevard will allow for a crossing not significantly raised from the roadway, as Highway 85 is in a trench at this location. Depending on the exact siting for the overcrossing, an easement may be required from the adjacent Oaks development. On the western side, a break in the freeway sound wall would be required to create a trailhead at Grand Avenue.

A potential facility here would not only enhance east/west connectivity across Cupertino, but could also facilitate regional north/south mobility. A bridge at this location would provide a low-stress crossing between facilities on Mary Avenue, the potential Union Pacific Trail, and the Stevens Creek Trail.

Union Pacific Rail Right of Way
Limits: Stevens Creek Boulevard to Prospect Road

Length: 2.10 mi

Type: Rail-with-Trail Pathway

Partners: Union Pacific Railroad, PG&E, Water District

Utility: High

Feasibility: Low

Priority: High

In 2001, VTA commissioned and adopted a plan for the construction of a rail with trail multi-use path along the Union Pacific right of way running from Cupertino to Los Gatos. In the intervening years, projects have moved forward along this corridor in Saratoga. When VTA formally adopted the conversion study, they committed to providing matching county funds for any future projects along this corridor.

The Cupertino Loop Trail alignment recommends a rail trail from Stevens Creek Boulevard to Prospect Road within the City of Cupertino, following the recommendations of the 2001 VTA study. To the north of Stevens Creek Boulevard, rail berm height, right of way constraints, and a lack of viable trailhead connections to the street network make a rail trail more infeasible.

Between Stevens Creek Boulevard and Prospect Road, an access road runs along the western side of the rail ROW, approximately 50 feet from the rail center line to the edge of the right of way. This would allow for the minimum 25 foot setback from rail required by Union Pacific.

A few constraints exist on this segment, including the need for a new bridge at Regnart Creek, potential oak tree removal, and complex intersection crossings at Bubb Road, McClellan Road, and Rainbow Road.

Coordination would be needed not only with Union Pacific, but also PG&E and the water district as both have utilities running along or through portions of this alignment.

The Cupertino Loop Trail alignment would connect back to proposed trail segments on Regnart Creek either via McClellan Road or Stelling Road. Final alignment for the Cupertino Loop Trail should be partly based on which on-street sections the City is able to implement.

Additional Recommended Trail Segments

West Cupertino Union Pacific Rail Overcrossing
Limits: Stevens Creek Boulevard to Hammond-Snyder Loop Trail

Length: 0.10 mi

Type: Bicycle-Pedestrian Bridge

Partners: Union Pacific Railroad, Santa Clara County

Utility: Medium

Feasibility: Low

Priority: Medium

Constructing a grade-separated bicycle & pedestrian bridge over the Union Pacific rail right of way between Stevens Creek and the Hammond-Snyder Loop Trail in western Cupertino was identified as a high-priority project in the 2015 Cupertino Bike Plan Update.

This proposed project would help connect northwestern Cupertino to Stevens Creek Boulevard and improve access to the many recreational facilities like the Permanente Creek Trail and Mora Trail.

Any potential crossing of the rail right of way at this location would also require sidewalk construction along Stevens Creek Boulevard to connect the facility to existing sidewalk further to the east. Depending on the touchdown location on Stevens Creek Boulevard, the City may need to extend the current terminus of the bike lanes on Stevens Creek Boulevard westward to join the two facilities in a continuous route.

Stevens Creek Trail Extension at Deep Cliff Golf Course
Limits: McClellan Road to Linda Vista Drive

Length: 0.44 mi

Type: Multi-use path

Partners: Deep Cliff Golf Course

Utility: Low

Feasibility: Medium

Priority: Medium

Extending the Stevens Creek Trail south of its current terminus at McClellan Road to the parking lot for Linda Vista Park was identified in the 2015 Cupertino Bike Plan Update. This alignment would require an easement along the edge of the Deep Cliff Golf Course.

While this segment would be an attractive recreational amenity, it provides low utility for bicycle commute trips.

Saratoga Creek Trail Extension
Limits: Sterling Barnhart Park to Stevens Creek Boulevard

Length: 0.33 mi

Type: Multi-use path

Partners: Water District, Santa Clara County

Utility: Medium

Feasibility: Medium

Priority: Medium

An extension of the Saratoga Creek Trail was identified as a low-priority project in the 2015 Cupertino Bike Plan Update. The northerly portion of this alignment has significant right-of-way constraints between Calvert Drive and Stevens Creek Boulevard. Reaching Stevens Creek Boulevard, however, would significantly increase the utility of this corridor for bicycle trips.

This extension of the Saratoga Creek Trail could have greatly improved utility if it is able to connect to the Cupertino Loop Trail. This could be possible via Agilent Technologies campus along I-280 in the City of Santa Clara. This would allow an extension of the path from Stevens Creek Boulevard to Tantau Avenue, where it could re-cross I-280 to reach the Cupertino Loop Trail. This project would need to be explored by the City of Santa Clara.

Trail Segments Not Recommended

Calabazas Creek Trail in Central Cupertino
Limits: Miller Avenue to Sorenson Avenue

Length: 0.12 mi

Type: Multi-use path

Partners: Santa Clara Valley Water District

Utility: Low

Feasibility: Medium

Priority: Low

The majority of Calabazas Creek through Cupertino, in contrast to Regnart Creek, has no viable access roads that could easily be converted to multi-use paths. The one exception is a short segment between Miller Avenue and Sorenson Avenue on the southern side of the creek bed.

This segment is not recommended for implementation primarily due to its limited utility for bicycling trips. The segment creates no significant new network connections, as Calle de Barcelona to the south provides a through connection between Miller Avenue and Finch Avenue. The access road dropping into the creekbed north of Sorenson Avenue precludes a through connection along the creek to Stevens Creek Boulevard. A trailhead at Miller Avenue would also be problematic for southbound bicyclists, as the raised median precludes left turns from this location.

If implemented, the two-way separated bikeway proposed for Finch Avenue provides a superior bike network alternative between Creekside Park and Stevens Creek Boulevard.

A trail alignment on the north side of Calabazas Creek may be possible between Miller Avneue and Stevens Creek Boulevard, but further study would be required. It also appears that such an alignment would require the removal of a significant number of trees along the creek. Were such a trail alignment to be pursued, significant work would be needed on both ends of the trail to ensure adequate and safe transitions to the roadway and/or nearby intersections.

Chapter 5:
Recommended Programs

5. Recommended Programs

The following chapter presents recommended bicycle related program recommendations. The recommendations are organized in four E's:

- **Education** programs are designed to improve safety and awareness. They can include programs that teach students how to safely ride or teach drivers to expect bicyclists. They may also include brochures, posters, or other information that targets bicyclists or drivers.
- **Encouragement** programs provide incentives and support to help people leave their car at home and try biking instead.
- **Enforcement** programs enforce legal and respectful bicycling and driving. They include a variety of tactics, ranging from police enforcement to neighborhood signage campaigns.
- **Evaluation** programs are an important component of any investment. They help measure success at meeting the goals of this plan and to identify adjustments that may be necessary.

Education Programs

Education programs are important for teaching safety rules and laws as well as increasing awareness regarding bicycling opportunities and existing facilities. Education programs may need to be designed to reach groups at varying levels of knowledge and there may be many different audiences: pre-school age children, elementary school students, teenage and college students, workers and commuters, families, retirees, the elderly, new immigrants, and non-English speakers. The programs listed in this chapter are not exhaustive and will be further detailed when designed and implemented.

Rail Safety Education

The Union Pacific rail spur to the Permanente Quarry presents safety challenges for bicyclists across western Cupertino. Rail safety education and messaging can help address these challenges.

The Federal Rail Administration has partnered with Operation Lifesaver on a national program designed to end collisions, deaths and injuries related to rail crossings. Information can be found at: http://oli.org/ and shown in Figure 3-1.

Recommendation

This Plan recommends the City seek funding to develop and implement rail safety education.

Figure 3-1: Operation Lifesaver offers education tools

StreetSmarts Campaign

On a citywide scale, the City could start a StreetSmarts media campaign, similar to those in San José, Marin County, Davis, and other California cities. Developed by the City of San José, StreetSmarts uses print media, radio spots, and television spots to educate people about safe driving, bicycling, skateboarding, and walking behavior. More information about StreetSmarts can be found at www.getstreetsmarts.org.

Outreach conducted during this planning effort identified a need to raise public awareness of bicycling and walking as viable forms of transportation, and to combat negative stereotypes about people who choose to walk or bicycle.

Local resources for conducting a StreetSmarts campaign can be maximized by assembling a group of local experts, law enforcement officers, businesspeople, civic leaders, and dedicated community volunteers. These allies could assist with a successful safety campaign based on the local concerns and issues. It may be necessary to develop creative strategies for successful media placement in order to achieve campaign goals.

Recommendation

This Plan recommends the City consider implementation of a public awareness program such as StreetSmarts.

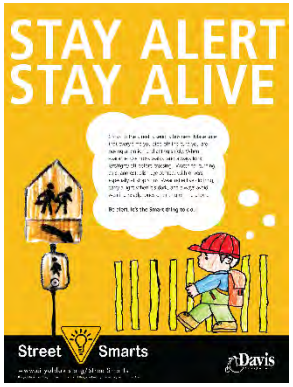


Figure 3-2: Davis, CA Street Smarts Campaign Posters

Adult Bicycling Skills Classes

Most bicyclists do not receive training on safe bicycling practices, the rules of the road, and bicycle handling skills. Adult education programs were identified as a need by the community through the survey and public workshop.

Bicycling skills classes can address this education gap. The League of American Bicyclists (LAB) offers classes taught by certified instructors. Information can be found at: http://www.bikeleague.org/. The Silicon Valley Bicycle Coalition (SVBC) offers adult bicycle education classes periodically and at the request of local jurisdictions. More information can be found at: http://bikesiliconvalley.org/.

Recommendation

This Plan recommends the City support adult bicyclist skills classes. Of the City's largest employers, those listed below may consider offering classes for employees:

- Apple, Inc.
- City of Cupertino
- Verigy
- Seagate Technology
- Foothill/De Anza Community College District

Student Bicycle Traffic Safety Education

Student education programs are an essential component of bicycle education. Students are taught traffic safety skills that help them understand basic traffic laws and safety rules.

Bicycle education curriculum typically includes two parts: knowledge and skills. Knowledge lessons are typically in-class, while skills are practiced on a bicycle. Lessons can include helmet and bicycle fit, hand signals, and riding safely with traffic.

Benefits

Student bicycle traffic safety education can benefit the Cupertino community by:

- Improving safety by teaching children about lifelong safety skills
- Create awareness with students and parents
- Encourage families to consider bicycling to school on a more frequent basis

The City in partnership with school districts is currently piloting an education program for six schools:

- Cupertino High
- Hyde Middle
- Kennedy Middle
- Lincoln Elementary
- Monta Vista High
- Sedgwick Elementary

A few other schools such as Lawson Middle and Regnart Elementary also participate in some program activities, but are not officially part of the pilot. Figure 3-3 shows a safety assembly held at a Cupertino middle school in 2015.

Figure 3-3: A County Safety Resource Officer presents to a group of Cupertino middle school students

Recommendation

This Plan recommends the City continue its pilot education program and expand it to include all Cupertino schools.

Encouragement Programs

Everyone from young children to elderly residents can be encouraged to increase their rates of bicycling or to try bicycling instead of driving for short trips.

Back-to-School Encouragement Marketing

Families set transportation habits during the first few weeks of the school year and are often not aware of the multiple transportation options and routes available to them. Because of this, many families will develop the habit of driving to school using the same congested route as everyone else.

A back-to-school encouragement marketing campaign can promote bus, carpool, walking, and bicycling to school. The marketing campaign can include suggested route maps, safety education materials, volunteer opportunities, event calendars, and traffic safety enforcement notices. It can also include an illustrative guide that includes the Suggested Walking and Biking to School maps.

Objectives

The event's objectives are to:

- Share information about the Cupertino Safe Routes to School Program activities, classes, and events throughout the year.
- Encourage families to plan out their routes at the beginning of the school year to consider alternatives to driving alone as a family.
- Promote Safe Routes to School to encourage families to try walking, bicycling, and carpooling to school as well as participating in Safe Routes to School activities and events.

Benefits

Back to school encouragement marketing can benefit the Cupertino community by:

- Informing families about ways to walk and bicycle to school
- Informing families about school support for walking and bicycling to school

Recommendation

This Plan recommends the City continue its pilot education program and expand it to include all Cupertino schools.

Employer-Based Encouragement Programs

Though the City cannot host these programs, it can work with or provide information to employers about commuting by bicycle. Popular employer-based encouragement programs include hosting a bicycle user group to share information about how to bicycle to work and to connect experienced bicyclists with novice bicyclists. Employers can host bicycle classes and participate in Bike to Work day.

Employers can also set up a National Bike Challenge (https://nationalbikechallenge.org/) account so that employees can log their hours and set up an internal contest for who logs the most hours.

Recommendation

This Plan recommends the City collaborate with employers to implement bicycle related programs.

Bicycle Friendly Community

LAB recognizes communities that improve bicycling conditions through education, encouragement, enforcement, and evaluation programs. Communities can achieve diamond, platinum, gold, silver, or bronze status, or an honorary mention. Bicycle friendliness can indicate that a community is healthy and vibrant. Like good schools and attractive downtowns, bicycle friendliness can increase property values, spur business growth, and increase tourism.

Cupertino applied for Bicycle Friendly Community status in 2015 and received a Bronze designation.

Recommendation

This Plan recommends the City reapply for a higher Bicycle Friendly Community status after implementation of the priority projects identified in this Plan. This Plan is a valuable resource for completing the LAB application efficiently.

More information and application steps: http://www.bikeleague.org/programs/bicyclefriendlyamerica/communities/

Bicycle Helmet Giveaway

The California Office of Traffic Safety (OTS) grant program can fund bicycle helmets for giveaways to children at schools or children observed bicycling without wearing helmets. Typically this type of program is a partnership with the Police Department.

Recommendation

This Plan recommends the City seek an OTS grant and conduct helmet giveaways for children.

Open Streets Events

Open Streets events, sometimes called "Ciclovia," celebrate walking and bicycling by closing key streets to vehicle traffic for a set amount of time and opening them up for walking, bicycling, and other community activities. These events can create opportunities for people to try walking or bicycling away from the potential stresses of adjacent vehicle traffic. Open Streets events of comparable size in California have ranged in cost from $50,000 to $200,000. These events require a high level of coordination between various city and county departments, and it is recommended the City find a partner non-profit organization to lead the event planning and logistics work

Recommendation

This Plan recommends the City work with local community groups to host Open Streets events on a semi-annual basis.

Bike to Work Month and Day

Bike Month (http://bikeleague.org/bikemonth) is a regional event to promote bicycling to work and is typically held in May. SVBC organizes Bike Month and provides ideas for events. The Cupertino Bicycle Pedestrian Commission sponsored an Energizer Station on Bike to Work Day in 2015.

Popular events include:

- Bike to Work Day (typically the 3rd Thursday of the month)
- Bike education classes
- BikePools or Bike Trains (group rides)

Recommendation

This Plan recommends the City consider sponsoring a Bike to Work Day event. The event can include a Bike to Work Day celebration with Pedal Pools (group rides), raffles and prizes,

and speeches from Council Members or the Mayor. The type of events held can be developed through community input.

Walk & Roll Days

Walk and Bike to School Days are events to encourage students to try walking or bicycling to school. The most popular events of this type are International Walk to School Day (held in early October) and Bike to School Day (held in early May). Many communities have expanded on this once a year event and hold monthly or weekly events such as Walk and Roll the First Friday (of every month) or Walk and Roll Wednesdays (held every Wednesday).

Holding weekly or monthly Walk & Roll to School Day promotes regular use of active transportation and helps establish good habits. Events can take on a wide range of activities, with some schools choosing to make them weekly rather than monthly, such as with a "Walk & Roll Wednesday."

Benefits

Participation in Monthly Walk & Roll Days can benefit the Cupertino community by:

- Building community
- Saving parents' money by not using a car
- Reducing traffic congestion around the school

Recommendation

It is recommended the City, school districts, schools, PTAs, and parent champions work together to expand Walk and Bike to School days to be held on a weekly basis.

Walking School Buses and Bike Trains

A Walking School Bus is an organized group of students who walk to school under the supervision of a parent/adult volunteer. Bike Trains are similar to Walking School Buses, with students bicycling together. Parent champions take turns walking or bicycling along a set route to and from school, collecting children from designated "bus stops" along the way.

Schools and parent champions can encourage parents to form Walking School Buses or Bike Trains at the back-to-school orientation or other fall events. The school districts can provide safety vests or marked umbrellas to indicate the leader(s). Incentives for the parent volunteers can include coffee at the school or gift cards for coffee shops.

Benefits

Walking School Buses and Bike Trains benefit the Cupertino community by:

- Improving safety - Children are in walking groups, accompanied by an adult
- Saving parents' money by not using a car
- Saving parents' time when they aren't leading the bus or train
- Reducing traffic congestion around the school

Recommendation

This Report recommends the City work with school districts, schools and parent champions to develop a Walking School Bus and Bike Train program.

Example outreach materials:

- Michigan Safe Routes 2 School's Walking School Bus program: http://saferoutesmichigan.org/wsb

- Sonoma Safe Routes to School's Walking School Bus Basics: http://sonomasaferoutes.org/resources/walking-school-bus-basics.pdf/view
- Sonoma Safe Routes to School's Bike Train Guide for Volunteers: http://sonomasaferoutes.org/resources/bike-train-guide-for-volunteers.pdf/view
- Marin County Safe Routes to Schools' SchoolPool Marin materials: http://www.schoolpoolmarin.org/

Suggested Walking and Biking Routes to School Maps

Suggested Walking and Biking Routes to School Maps can help parents overcome fears related to traffic and/or lack of knowledge of family friendly routes to school. These types of maps show stop signs, traffic signals, crosswalks, paths, overcrossings, crossing guard locations, and similar elements that can help parents make decisions about choosing the route that best fits their family's walking or biking needs. Figure 3-4 shows an example of these maps. Cupertino has Suggested Walking and Biking maps for all elementary and middle schools.

Recommendation

This plan recommends the City update the Suggested Walking and Biking Routes to School maps for the six SRTS schools. It is recommended to update these maps for each Cupertino school as they are incorporated into the SRTS Program. These maps should be reviewed and updated every four years to reflect improvements as they are implemented in the community.

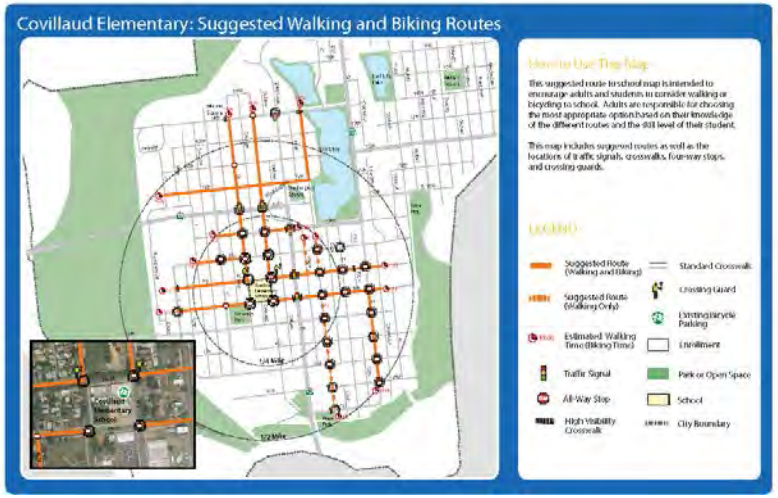


Figure 3-4: Marysville has Suggested Routes to School Maps for three schools

Enforcement Programs

Enforcement programs enforce legal and respectful use of the transportation network. These programs will help educate motorists, bicyclists, and pedestrians about the rules and responsibilities of the road.

Bicycle-Related Ticket Diversion Class

Diversion classes are classes offered to bicyclist offenders of certain traffic violations, such as running a stoplight.

California Assembly Bill 209, signed by Governor Brown on September 21, 2015 allows for such programs for violations not committed by a driver of a motor vehicle. This program is a good way to educate bicyclists about rights and responsibilities. Similar programs existing throughout California. More information:

- www.marinbike.org/Campaigns/ShareTheRoad/Index.shtml#StreetSkills
- http://www.cityoflivermore.net/citygov/police/ops/traffic/bikesafety/diversion.asp

The Santa Clara Sheriff's Office offers ticket diversion classes to juveniles. No classes are currently offered to those 18 years of age or older.

Recommendation

This Plan recommends the City continue to encourage the Sheriff's Office to offer juvenile diversion classes, further encourage the Sheriff's Office to offer classes to all age groups. It is recommended to give warnings to first time offenders then offer diversion classes on the second offense.

Vision Zero Targeted Enforcement

Cities that adopt Vision Zero policies, such as San Francisco and San José, have adopted enforcement goals targeting the vehicle code infractions most likely to result in injury collisions or fatalities. Law enforcement officers are then tasked with the goal of a certain percentage of their traffic stops be related to these high-risk infractions.

Recommendation

This Plan recommends that, if a Vision Zero policy is adopted, the City coordinate with the Sheriff's Department to implement targeted enforcement within the City of Cupertino. Targeted enforcement goals will be determined following comprehensive study of historical collision data in Cupertino.

Revision of E-Bike Regulations

New legislation in California at the state level has provided new guidance for the operation of electric bicycles, while still providing latitude for local jurisdictions to more closely regulate their operations. As electric bicycle use grows, it will be important to craft regulations meeting the needs of Cupertino's residents.

Recommendation

This Plan recommends the City of Cupertino work with the Sheriff's Office and Santa Clara County to adopt e-bike regulations for their use in Cupertino.

Evaluation Programs

Evaluation programs help the City measure how well it is meeting the goals of this Plan and the General Plan and evaluation is a key component of any engineering or programmatic investment. It is also a useful way to communicate success with elected officials as well as local residents.

Semi-Annual Citywide Bike Counts

Conducting regular citywide bike counts can be an important source of information on non-commuting bicycle trips. Regular count data can also help the city track annual trends in bicycle travel and measure the impact of newly built parts of the bike network. Counts should be conducted in accordance with the National Bicycle & Pedestrian Documentation Project.

Recommendation

This Plan recommends the City conduct semi-annual bike counts throughout Cupertino. If possible, the City should seek a partnership with SVBC or WalkBikeCupertino when conducting counts to defray costs. Count locations should be determined in collaboration with WalkBikeCupertino and major employers to ensure the likeliest routes for bicycle use are incorporated. Prioritizing count locations where bicycle infrastructure is planned for future implementation can establish a baseline for bicycle travel and allow for accurate measurement of project impacts over time.

Annual Collision Data Review

Reviewing bicycle and pedestrian related collisions and near-misses on an annual basis can help the City identify challenging intersections or corridors. This review should include an assessment of the existing infrastructure to determine whether improvements can be made to reduce the number of collisions in the community.

Recommendation

This Plan recommends the City and Santa Clara County Sheriff's Department review bicycle and pedestrian related collision data on an annual basis to identify needed improvements.

Bike Rack Counts

Bike rack counts at schools over a 4-6 month period are currently planned, and will be used to create a "Data Report Card" for each pilot school detailing site-specific mode split data, trends, and recommendations to improve rates of active transportation amongst school children.

Recommendation

This Plan recommends the City and school districts continue to conduct bike rack counts every 4-6 months. This Plan also recommends Cupertino begin a full citywide bike rack inventory and update when new racks are installed.

Parent Surveys

The National Center for Safe Routes to School provides a standard parent survey, collecting information on modes of travel, interest in walking or biking to school, and challenges to walking and bicycling to school. The information gathered from the parent surveys can help craft programs that are attractive to parents and measure parent attitudes and changes in attitude towards walking and biking to school.

Recommendation

It is recommended that the City of Cupertino and school districts work together to conduct annual or bi-annual parent surveys.

Manual Student Walking and Biking Counts

Student hand tallies are one way to count the number of students who walk, bicycle, take transit or carpool to school. The National Center for Safe Routes to School provides the standard tally form.

Recommendation

It is recommended the Cupertino Union School District and Fremont Union High School District conduct student tallies on an annual basis.

Electronic Student Walking and Biking Counts

The City of Cupertino assists in managing a program that uses a tracking device to count how many students walk and bike to school through a company called "Dero." Students can log into the Dero website with their parents and see data on their trips. Schools use the program to track walking and bicycling by classroom, grade level, or school. More information can be found at www.derozap.com.

Recommendation

It is recommended the City and school district expand the Dero program to all Cupertino schools.

Chapter 6: Implementation Strategy

6.Implementation Strategy

This chapter presents a prioritized list of the individual infrastructure improvements, including the evaluation criteria and scoring method, project cost estimates, and a list of prioritized projects.

Project Evaluation Strategy

All of the proposed infrastructure projects are evaluated against the criteria described in **Table 6-1**, which was developed jointly with City staff and the Bicycle Pedestrian Commission. Projects are sorted into short, mid, and long-term priority tiers based on a logical breakdown of scores and complexities of implementation. Appendix A to this Working Paper provides the full evaluation criteria breakdown.

The intent of evaluating projects is to create a prioritized list of projects for implementation. As projects are implemented, lower ranked projects move up the list. When implementing sections of the Bike Boulevard network, the City should consider the removal of parallel existing bike routes where they prove to be duplicative or potentially confusing to bicyclists. This should also be coordinated with the recommended Citywide Wayfinding Study.

The project list and individual projects to be included in this Plan are flexible concepts that serve as a guideline. The high-priority project list, and perhaps the overall project list, may change over time as a result of changing walking and bicycling patterns, land use patterns, implementation constraints and opportunities, and the development of other transportation improvements.

Table 6-1: Project Evaluation Criteria

Criteria	Description	Max Score
Safety	Addresses a location with a history of bicycle collisions.	20
Stress Test Analysis	Projects identified along a high or medium-high stress route	5
Travel Routes to/near Schools	Connects to a school.	20
Network Connectivity	Projects that closes gaps in the bikeway network.	15
Low-Stress Network Improvements	Projects that add or upgrade an existing bikeway facility to a low-stress facility	20
Trip Generators and Attractors	Connects to employment centers, retail/business centers, transit, community services, parks and recreation facilities and/or City facilities.	10
Feasibility/ Ease of Implementation	The ease of implementing the project within a five year timeframe, taking into consideration outside agency approval.	10
	Total Possible Score	**100**

After scoring, projects were organized into three tiers. Tier 1 is comprised of the projects that received 67 points or more representing projects that should begin implementation within five years. Tier 2 projects scored between 47 and 65 points and are intended to be implemented within five to 15 years. Tier 3 projects scored below 47 points and are intended for implementation within twenty years. It should be noted that projects in Tiers 2 & 3 can be initiated sooner, but that their implementation will likely be delayed.

Table 6-2 shows the scores and cost estimates for all recommended project improvements. Appendix B shows the full breakdown of scores.

Table 6-2: Recommended Projects by Tier

Project	Location	Start	End	Notes	Miles	Total Score	Rounded Cost
Tier 1							
Class IV Protected Bikeway	Stevens Creek Blvd	Foothill Blvd	Tantau Ave	--	3.43	**91**	$4,120,00
Class IV Protected Bikeway	McClellan Rd	Byrne Ave	De Anza Blvd	--	1.43	**80**	$286,000
Configure Intersection	Stevens Creek Blvd	Stelling Rd	--	Study protected intersection in coordination with proposed Class IV	0	**75**	$550,000
Class III Bike Boulevard	Tri School East/West Bike Blvd (#7)	Linda Vista Dr at McClellan Rd	Hyannisport Dr at Bubb Rd	--	0.66	**75**	$33,000
Grade Separated Crossing Study	Highway 85 Crossing	Grand Ave	Mary Ave	--	0	**71**	$300,000
Class I Path	Union Pacific Trail	Prospect Rd	Stevens Creek Blvd	--	2.10	**71**	$1,678,000
Configure Intersection	McClellan Rd	Stelling Rd	--	Study protected intersection in coordination with proposed Class IV	0	**70**	$550,000
Class III Bike Boulevard	Portal Ave Bike Blvd (#5)	Portal Ave at Merritt Dr	Portal Ave at Wintergreen Dr	--	0.69	**70**	$35,000
Class IV Separated Bikeway	Finch Ave	Phil Ln	Stevens Creek Blvd	--	0.45	**69**	$545,000
Class III Bike Boulevard	West Cupertino North/South Bike Blvd (#9)	Orange Ave at Mann Dr	Fort Baker Dr at Hyannisport Dr	--	0.63	**69**	$32,000
Configure Intersection	McClellan Rd	Westacres Dr/Kim St	--	Study peanut roundabout to connect off-set north/south bike routes across McClellan	0	**68**	$200,000
Class I Path	I-280 Channel Bike Path	Mary Ave/Meteor Dr	Tantau Ave/Vallco Pkwy	--	2.87	**61**	$2,293,000
Class III Bike Boulevard	Civic Center to Sterling Barnhart	Rodrigues Ave at Blaney Ave	Sterling Barnhart Park	--	1.41	**67**	$70,000

Project	Location	Start	End	Notes	Miles	Total Score	Rounded Cost
	Park Bike Blvd (#2)						
Tier 2							
Class II Buffered Bike Lane	De Anza Blvd	Homestead Rd	Bollinger Rd	--	1.73	**65**	$242,000
Class IV Separated Bikeway	Stelling Rd	Prospect Rd	250 South of McClellan Rd	--	1.45	**65**	$290,000
Class IV Separated Bikeway	Stelling Rd	250 South of McClellan Rd	Alves Dr	--	0.71	**64**	$857,000
Class IV Separated Bikeway	Blaney Ave	Bollinger Rd	Homestead Rd	--	1.91	**64**	$383,000
Class IV Separated Bikeway	Stevens Creek Blvd	Foothill Blvd	St Joseph Ave	--	0.62	**63**	$124,000
Class IV Separated Bikeway	Stelling Rd	Alves Dr	Homestead Rd	--	0.84	**63**	$124,000
Class I Path	Amelia Ct/Varian Way Connector	Amelia Ct	Varian Way	--	0.05	**63**	$100,000
Grade Separated Crossing Study	Carmen Rd	Stevens Creek Blvd - South Side	Stevens Creek Blvd - North Side	--	0	**62**	$300,000
Configure Intersection	Stevens Creek Blvd	De Anza Blvd	--	Bike lane striping through intersection	0	**62**	$10,000
Class III Bike Boulevard	Mary Ave to Portal Ave Bike Blvd (#4)	Mary Ave at Meteor Dr	Portal Ave at Merritt Dr	--	1.51	**60**	$75,000
Class II Bike Lane	Vista Dr	Forest Ave	Stevens Creek Blvd	--	0.24	**60**	$15,000
Class III Bike Boulevard	Tri-School North/South Bike Blvd (#8)	Santa Teresa Dr at Hyannisport Dr	Terrace Dr at Bubb Rd	--	0.76	**59**	$38,000
Class II Buffered Bike Lane	Bollinger Rd	De Anza Blvd	Lawrence Expy	--	2.00	**56**	$278,000
Configure Intersection	De Anza Blvd	McClellan Rd	--	Rebuild intersection to facilitate safer east/west travel between McClellan and Pacific	0	**56**	$200,000
Configure Intersection	Wolfe Rd	Stevens Creek Blvd	--	Study removal of slip lanes and/or porkchop islands.	0	**55**	$100,000
Class II Buffered Bike Lane	Mary Ave	Stevens Creek Blvd	Meteor Dr	--	0.71	**55**	$100,000

Project	Location	Start	End	Notes	Miles	Total Score	Rounded Cost
Class II Buffered Bike Lane	Miller Ave	Bollinger Rd	Calle de Barcelona	--	0.48	**54**	$67,000
Configure Intersection	Infinite Loop	Merritt Dr	--	Improve signage/striping to delineate bike/ped space in connector	0	**54**	$2,000
Class II Buffered Bike Lane	Homestead Rd	Mary Ave	Wolfe Rd	--	1.97	**52**	$276,000
Reconfigure wall/fence	Greenleaf Dr	Mariani Ave	--	2015 Bike Plan Update, create gap in wall to connect bike routes	0	**52**	$25,000
Class III Bike Boulevards	Civic Center to Jollyman Park Bike Blvd (#1)	Rodrigues Ave at De Anza Blvd	Jollyman Park	--	0.86	**52**	$43,000
Class II Buffered Bike Lane	Prospect Rd	De Anza Blvd	Stelling Rd	--	0.42	**49**	$59,000
Configure Intersection	McClellan Rd	Rose Blossom Dr	--	Facilitate through bike travel to De Anza	0	**49**	$20,000
Trail Crossing	Homestead Rd	Mary Ave	--	Redesign intersection of Homestead at Mary to better facilitate bicycles exiting Mary Ave bridge path	0	**49**	$10,000
Class III Bike Route	Hyde Ave Bike Route (#6)	Hyde Ave at Shadygrove Dr	Hyde Ave at Bollinger Rd	--	0.24	**49**	$500
Configure Intersection	Stelling Rd	Alves Dr	--	Enhance east/west bike route crossing for Alves Dr	0	**48**	$50,000
Class I Path	Regnart Creek Path	Pacifica Dr	Estates Dr	--	0.83	**48**	$664,000
Reconfigure wall/fence	Wheaton Dr	Perimeter Rd	--	Connect bike blvd to proposed bike path on Perimeter road, requires creating gap in existing wall	0	**47**	$10,000
Tier 3							
Class II Bike Lane	Rainbow Dr	Bubb Rd	Stelling Rd	--	0.50	**46**	$33,000
Class I Path	Perimeter Rd	Stevens Creek Blvd	I-280 Channel Bike Path	--	0.59	**44**	$470,000

Project	Location	Start	End	Notes	Miles	Total Score	Rounded Cost
Class III Bike Route	Mary Ave to Vallco Mall Bike Route (#7)	Memorial Park	End of Wheaton Dr	--	1.77	**44**	$4,000
Class III Bike Route	Tantau Ave Bike Route (#9)	Tantau Ave at Bollinger Rd	Tantau Ave at Barnhart Ave	--	0.41	**44**	$500
Class III Bike Route	Rose Blossom/ Huntridge Bike Route (#8)	Rose Blossom Dr at McClellan Rd	Huntridge Ln at De Anza Blvd	--	0.41	**43**	$1,000
Class I Path	Wilson Park	Rodrigues Ave	Wilson Park Path	--	0.03	**42**	$50,000
Class III Bike Boulevard	Stevens Creek Bike Blvd (#6)	San Fernando Ave at Orange Ave	Carmen Rd at Stevens Creek Blvd	--	1.12	**42**	$47,000
Configure Intersection	Blaney Ave	Wheaton Dr	--	Enhance bicycle crossing across Wheaton	0	**41**	$50,000
Class II Buffered Bike Lane	Foothill Blvd	Stevens Creek Blvd	McClellan Rd	--	0.55	**41**	$77,000
Configure Intersection	Stelling Rd	Rainbow Dr	--	Study removal of slip lanes, study potential for protected intersection	0	**40**	$20,000
Class II Buffered Bike Lane	Homestead Rd	Wolfe Rd	Tantau Ave	--	0.49	**40**	$69,000
Class II Buffered Bike Lane	Wolfe Rd	Stevens Creek Blvd	I-280 Channel Bike Path	--	0.40	**39**	$56,000
Class I Path	Jollyman Park	Stelling Rd	Dumas Dr	--	0.15	**39**	$119,000
Reconfigure wall/fence	Imperial Ave	Alcazar Ave	--	Create gap in fence to connect bike routes	0	**39**	$20,000
Class II Buffered Bike Lane	Foothill Blvd	Stevens Creek Blvd	I-280 N Offramp	--	0.96	**39**	$135,000
Class III Bike Boulevard	Foothill to Stevens Creek Bike Blvd (#3)	Foothill Blvd at Starling Dr	Carmen Rd at Stevens Creek Blvd	--	0.99	**38**	$50,000
Class II Buffered Bike Lane	Lazaneo Dr	Bandley Dr	De Anza Blvd	--	0.09	**38**	$13,000
Class II Buffered Bike Lane	Wolfe Rd	Perimeter Rd	Homestead Rd	--	0.62	**38**	$86,000
Class II Buffered Bike Lane	Bubb Rd	McClellan Rd	Stevens Creek Blvd	--	0.53	**37**	$74,000

Project	Location	Start	End	Notes	Miles	Total Score	Rounded Cost
Grade Separated Crossing Study	UPRR West Cupertino Crossing	Hammond Snyder Loop Trail	Stevens Creek Blvd	--	0	**37**	$300,000
Bike/Ped Bridge Enhancement	Mary Ave Ped Bridge	I280	--	Improved signage/striping to delineate bike/ped space on Mary Ave bridge	0	**37**	$20,000
Class I Path	Oaks Development Bike Path	Stevens Creek Blvd	Mary Ave	--	0.13	**35**	$102,000
Class II Buffered Bike Lane	Miller Ave	Calle de Barcelona	Stevens Creek Blvd	--	0.39	**35**	$54,000
Class II Buffered Bike Lane	Tantau Ave	Stevens Creek Blvd	Pruneridge Ave	--	0.65	**35**	$91,000
Trail Crossing	McClellan Rd	Union Pacific Railroad Path	--	Coordinate crossing with signal.	0	**34**	$10,000
Class II Bike Lane	Pacifica Dr	De Anza Blvd	Torre Ave	--	0.17	**33**	$11,000
Freeway interchange enhancement	Wolfe Rd	I-280 Overpass	--	Add green paint to interchange approaches, stripe bike lane through interchange intersection	0	**30**	$40,000
Class I Path	San Tomas-Aquino Creek Trail	Sterling/Barnhart Park	Calvert Dr	--	0.37	**30**	$294,000
Class I Path	San Tomas-Aquino Creek Trail	South of I280	Stevens Creek Blvd	--	0.17	**30**	$138,000
Class II Buffered Bike Lane	Vallco Pkwy	Tantau Ave	Perimeter Rd	--	0.30	**30**	$42,000
Class II Bike Lane	Campus Dr/Stevens Creek Blvd Connector	Campus Dr	Stevens Creek Blvd	--	0.11	**30**	$7,000
Class III Bike Route	Hwy 85 to Stevens Creek Blvd Bike Route (#5)	Grand Ave at Alhambra Ave	Peninsula Ave at Stevens Creek Blvd	--	0.19	**30**	$1,000
Class II Buffered Bike Lane	Rainbow Dr	De Anza Blvd	Stelling Rd	--	0.57	**28**	$79,000
Class III Bike Route	Bollinger Rd to Stevens Creek	Johnson Ave at Bollinger Rd	Stern Ave at Stevens Creek Blvd	--	0.84	**28**	$1,500

Project	Location	Start	End	Notes	Miles	Total Score	Rounded Cost
	Blvd Bike Route (#1)						
Class III Bike Route	Civic Center to Creekside Park Bike Route (#2)	Torre Ave at Rodrigues Ave	Estates Dr at Creekside Park Path	--	1.24	**28**	$3,000
Class III Bike Route	Garden Gate Elementary to Memorial Park Bike Route (#4)	Ann Arbor Dr at Greenleaf Dr	Memorial Park	--	0.42	**26**	$1,500
Freeway interchange enhancement	De Anza Blvd	Hwy 85 Overpass	--	Add green paint to interchange approaches, stripe bike lane through interchange intersection	0	**26**	$40,000
Trail Crossing	Bubb Rd	Union Pacific Railroad Path	--	Coordinate crossing with signal.	0	**25**	$10,000
Freeway interchange enhancement	Stevens Creek Blvd	Hwy 85 Overpass	--	Add green paint to interchange approaches, stripe bike lane through interchange intersection	0	**25**	$40,000
Class II Buffered Bike Lane	Tantau Ave	Pruneridge Ave	Homestead Rd	--	0.37	**25**	$52,000
Freeway interchange enhancement	De Anza Blvd	I-280 Overpass	--	Add green paint to interchange approaches, stripe bike lane through interchange intersection	0	**24**	$40,000
Class II Buffered Bike Lane	Stevens Canyon Rd	McClellan Rd	Rancho Deep Cliff Dr	--	0.23	**24**	$33,000
Class II Buffered Bike Lane	Bollinger Rd	200 feet East of Westlynn Way	De Foe Dr	--	0.18	**24**	$26,000
Class I Path	Linda Vista Park/Deep Cliff Golf Course	Linda Vista Park Parking Lot off Linda Vista Dr	McClellan Rd	--	0.46	**24**	$366,000
Class II Buffered Bike Lane	Pruneridge Ave	Tantau Ave	City Limits - East	--	0.07	**22**	$9,000
Configure Intersection	Portal Ave	Wheaton Dr	--	2015 Bike Plan Update, study roundabout conversion	0	**20**	$150,000
Class II Bike Lane	Cristo Rey Dr	150 feet East of Cristo Rey Pl	Roundabout	--	0.57	**19**	$37,000

Project	Location	Start	End	Notes	Miles	Total Score	Rounded Cost
Class III Bike Route	Westlynn/ Fallenleaf Bike Route (#11)	Bollinger Rd at Westlynn Way	Fallenleaf Ln at De Anza Blvd	--	0.37	18	$1,000
Class III Bike Route	Foothill Blvd Bike Route (#3)	Palm Ave at Scenic Blvd	Lockwood Dr at Stevens Creek Blvd	--	0.81	16	$1,500
Class III Bike Route	Union Pacific to Hwy 85 Bike Route (#10)	September Dr at McClellan Rd	Jamestown Dr at Prospect Rd	--	1.48	13	$5,000

Cost Estimate Assumptions

Table 6-3 presents the 2016 planning level cost assumptions used to determine project cost estimates. Unit costs are typical or average costs informed by Alta Planning + Design's experience working with California communities. While they reflect typical costs, unit costs do not consider project-specific factors such as intensive grading, landscaping, or other location-specific factors that may increase actual costs. For some segments, project costs may be significantly greater.

Table 6-3: Unit Cost Assumptions

Treatment	Unit	Cost
Shared-use path/Class I*	MI	$800,000
Bike/pedestrian bridge	EA	$6,000,000-$10,000,000
Class II bike lanes (two sides)	MI	$65,000
Contra-flow bike lane (one side)	LF	$20
Green paint in existing bicycle lane (one side)	LF	$55
Buffered Bicycle lane (two sides)	MI	$140,000
Bike Boulevard**	MI	$50,000
Shared-lane markings	EA	$250
Bike Route signage/wayfinding	EA	$300
Traffic calming study	EA	$20,000
Protected Intersection***	EA	$400,000-$800,000
Wall cut-through - cut through wall at end of cul-de-sac to allow for bike/pedestrian access	EA	$10,000-$20,000
Convert 4-way stop sign to roundabout	EA	$150,000
Class IV (on street, protected, one-way, both sides of street)♦	MI	$200,000-$2,000,000
Class IV (on street, protected, two-way)☐	MI	$130,000-$1,500,000
Bicycle rack	EA	$300
Studies	EA	Varies
Striping	LF	$4

* does not include easement costs

** assumes 3 new traffic calming devices & 1 new traffic control device per mile

*** cost includes curb extensions and new traffic signal heads

♦ One-way Class 4 bikeway can be $200,000/mile for flex post separation and $1,200,000/mile for raised concrete separation, and up to $2M for landscaped median separation. Assumes both sides of street

☐ Two-way Class 4 bikeway can be $130,000/mile for flex post separation and $650,000/mile for raised concrete separation, and up to $1,500,000 for landscaped median separation.

Projects Summary

Table 6-4 presents a cost summary by tier and project type.

Table 6-4: Priority Projects and Costs

Tier/Project Type	Estimated Cost
Tier 1 Projects	
Class I Path	$3,971,000
Class III Bike Boulevard	$170,000
Class IV Separated Bikeways	$4,701,000
Configure Intersections	$1,300,000
Grade Separation Crossing Study	$300,000
Total for Tier 1	**$10,442,000**
Tier 2 Projects	
Class I Path	$764,000
Class II Bike Lane	$15,000
Class II Buffered Bike Lane	$1,024,000
Class III Bike Boulevard	$156,000
Class III Bike Route	$500
Class IV Separated Bikeways	$1,823,000
Configure Intersections	$382,000
Reconfigure Wall/Fence	$35,000
Trail Crossing	$10,000
Grade Separation Crossing Study	$300,000
Total for Tier 2	**$4,509,500**
Tier 3 Projects	
Bike/Ped Bridge Enhancement	$20,000
Class I Path	$1,539,000
Class II Bike Lane	$88,000
Class II Buffered Bike Lane	$896,000
Class III Bike Boulevard	$97,000
Class III Bike Route	$20,000
Configure Intersections	$220,000
Freeway Interchange Enhancement	$160,000
Reconfigure Wall/Fence	$20,000
Trail Crossing	$20,000
Grade Separation Crossing Study	$300,000
Total for Tier 3	**$3,380,000**
Grand Total	**$18,331,500**

Priority Programs Summary

Recommended programs from Working Paper #3 received a qualitative review based on how well they met the vision and goals of this Plan (from Working Paper #2). The three identified prioritized programs are below.

1. StreetSmarts Campaign

On a citywide scale, the City could start a StreetSmarts media campaign, similar to those in San José, Marin County, Davis, and other California cities. Developed by the City of San José, StreetSmarts uses print media, radio spots, and television spots to educate people about safe driving, bicycling, skateboarding, and walking behavior. More information about StreetSmarts can be found at www.getstreetsmarts.org.

Outreach conducted during this planning effort identified a need to raise public awareness of bicycling and walking as viable forms of transportation, and to combat negative stereotypes about people who choose to walk or bicycle.

Local resources for conducting a StreetSmarts campaign can be maximized by assembling a group of local experts, law enforcement officers, businesspeople, civic leaders, and dedicated community volunteers. These allies could assist with a successful safety campaign based on the local concerns and issues. It may be necessary to develop creative strategies for successful media placement in order to achieve campaign goals. This Plan recommends the City consider implementation of a public awareness program such as StreetSmarts.

2. Weekly Walk & Roll Days

Walk and Bike to School Days are events to encourage students to try walking or bicycling to school. The most popular events of this type are International Walk to School Day (held in early October) and Bike to School Day (held in early May).

Holding weekly Walk & Roll to School Day promotes regular use of active transportation and helps establish good habits. It is recommended the City, school districts, schools, PTAs, and parent champions work together to expand Walk and Bike to School days to be held on a weekly basis.

3. Vision Zero Targeted Enforcement

Cities that adopt Vision Zero policies, such as San Francisco and San José, have adopted enforcement goals targeting the vehicle code infractions most likely to result in injury collisions or fatalities. Law enforcement officers are then tasked with the goal of a certain percentage of their traffic stops be related to these high-risk infractions.

This Plan recommends that, if a Vision Zero policy is adopted, the City work with the Sheriff's Department to implement targeted enforcement within the City of Cupertino. Targeted enforcement goals will be determined following comprehensive study of historical collision data in Cupertino.

Funding Sources

This chapter presents potential funding sources that the City of Cupertino may seek to implement the recommendations in this Plan. It is broken down by Federal, State, Regional, and Local sources.

Federal Sources

The Fixing America's Surface Transportation Act (FAST Act)
The FAST Act, which replaced Moving Ahead for Progress in the 21st Century Act (MAP-21) in 2015, provides long-term funding certainty for surface transportation projects, meaning States and local governments can move forward with critical transportation projects with the confidence that they will have a Federal partner over the long term (at least five years).

The law makes changes and reforms to many Federal transportation programs, including streamlining the approval processes for new transportation projects and providing new safety tools. It also allows local entities that are direct recipients of Federal dollars to use a design publication that is different than one used by their State DOT, such as the *Urban Bikeway Design Guide by the* National Association of City Transportation Officials.

More information: https://www.transportation.gov/fastact

Surface Transportation Block Grant Program (STBGP)
The Surface Transportation Block Grant Program (STBGP) provides states with flexible funds which may be used for a variety of highway, road, bridge, and transit projects. A wide variety of bicycle and pedestrian improvements are eligible, including trails, sidewalks, bike lanes, crosswalks, pedestrian signals, and other ancillary facilities. Modification of sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA) is also an eligible activity. Unlike most highway projects, STBGP-funded pedestrian facilities may be located on local and collector roads which are not part of the Federal-aid Highway System.

Fifty percent of each state's STBGP funds are sub-allocated geographically by population. These funds are funneled through Caltrans to the MPOs in the state. The remaining 50 percent may be spent in any area of the state.

STBGP Set-Aside: Transportation Alternatives Program

Transportation Alternatives Program (TAP) has been folded into the Surface Transportation Block Grant program (STBG) as a set-aside funded at $835 million for 2016 and 2017, and $850 million for 2018, 2019, and 2020. Up to 50 percent of the set-aside is able to be transferred for broader STBGP eligibility.

Improvements eligible for this set-aside fall under three categories: Transportation Enhancements (TE), Safe Routes to School (SR2S), and the Recreational Trails Program (RTP). These funds may be used for a variety of pedestrian and streetscape projects including sidewalks, multi-use paths, and rail-trails. TAP funds may also be used for selected education and encouragement programming such as Safe Routes to School.

Non-profit organizations (NGOs) are now eligible to apply for funding for transportation safety projects and programs, including Safe Routes to School programs and bike share.

Complete eligibilities for TAP include:

1. **Transportation Alternatives**. This category includes the construction, planning, and design of a range of pedestrian infrastructure including "on–road and off–road trail facilities for pedestrians, bicyclists, and other active forms of transportation, including sidewalks, bicycle infrastructure, pedestrian and bicycle signals, traffic calming techniques, lighting and other safety–related infrastructure, and transportation projects to achieve compliance with the Americans with Disabilities Act of 1990." Infrastructure projects and systems that provide "Safe Routes for Non-Drivers" is still an eligible activity.

2. **Recreational Trails.** TAP funds may be used to develop and maintain recreational trails and trail-related facilities for both active and motorized recreational trail uses. Examples of trail uses include hiking, in-line skating, equestrian use, and other active and motorized uses. These funds are available for both paved and unpaved trails, but may not be used to improve roads for general passenger vehicle use or to provide shoulders or sidewalks along roads.

   Recreational Trails Program funds may be used for:

   - Maintenance and restoration of existing trails
   - Purchase and lease of trail construction and maintenance equipment
   - Construction of new trails, including unpaved trails
   - Acquisition or easements of property for trails
   - State administrative costs related to this program (limited to seven percent of a state's funds)
   - Operation of educational programs to promote safety and environmental protection related to trails (limited to five percent of a state's funds)

3. **Safe Routes to School.** There are two separate Safe Routes to School Programs administered by Caltrans. There is the Federal program referred to as SRTS, and the state-legislated program referred to as SR2S. Both programs are intended to achieve the same basic goal of increasing the number of children walking and bicycling to school by making it safer for them to do so. All projects must be within two miles of primary or middle schools (K-8).

   The Safe Routes to School Program funds non-motorized facilities in conjunction with improving access to schools through the Caltrans Safe Routes to School Coordinator.

   Eligible projects may include:

   - Engineering improvements. These physical improvements are designed to reduce potential bicycle and pedestrian conflicts with motor vehicles. Physical improvements may also reduce motor vehicle traffic volumes around schools, establish safer and more accessible crossings, or construct walkways or trails. Eligible improvements include sidewalk improvements, traffic calming/speed reduction, and pedestrian crossing improvements.
   - Education and Encouragement Efforts. These programs are designed to teach children safe walking skills while educating them about the health benefits and environmental impacts. Projects and programs may include creation, distribution and implementation of educational materials; safety based field trips; interactive pedestrian safety video games; and promotional events and activities (e.g., assemblies, walking school buses).
   - Enforcement Efforts. These programs aim to ensure that traffic laws near schools are obeyed. Law enforcement activities apply to cyclists, pedestrians and motor vehicles alike. Projects may include development of a crossing guard program,

enforcement equipment, photo enforcement, and pedestrian sting operations.

4. **Planning, designing, or constructing roadways within the right-of-way of former Interstate routes or divided highways.** At the time of writing, detailed guidance from the Federal Highway Administration on this new eligible activity was not available.

405 National Priority Safety Program

Approximately $14 million annually (5 percent of the $280 million allocated to the program overall) will be awarded to States to decrease bike and pedestrian crashes with motor vehicles. States where bike and pedestrian fatalities exceed 15 percent of their overall traffic fatalities will be eligible for grants that can be used for:

- Training law enforcement officials on bike/pedestrian related traffic laws
- Enforcement campaigns related to bike/pedestrian safety
- Education and awareness programs related to relevant bike/pedestrian traffic laws

Highway Safety Improvement Program (HSIP)

The Highway Safety Improvement Program (HSIP) provides $2.4 billion nationally for projects that help communities achieve significant reductions in traffic fatalities and serious injuries on all public roads, bikeways, and walkways. Non-infrastructure projects are no longer eligible. Eligible projects are no longer required to collect data on all public roads. Pedestrian safety improvements, enforcement activities, traffic calming projects, and crossing treatments for active transportation users in school zones are examples of eligible projects. All HSIP projects must be consistent with the state's Strategic Highway Safety Plan.

The 2015 California SHSP is located here: http://www.dot.ca.gov/hq/traffops/shsp/docs/SHSP15_Update.pdf

Congestion Mitigation and Air Quality Improvement Program (CMAQ)

The Congestion Mitigation and Air Quality Improvement Program (CMAQ) provides funding for projects and programs in air quality nonattainment and maintenance areas for ozone, carbon monoxide, and particulate matter which reduce transportation related emissions. These federal dollars can be used to build pedestrian and bicycle facilities that reduce travel by automobile. Purely recreational facilities generally are not eligible.

To be funded under this program, projects and programs must come from a transportation plan (or State (STIP) or Regional (RTIP) Transportation Improvement Program) that conforms to the SIP and must be consistent with the conformity provisions of Section 176 of the Clean Air Act. States are now given flexibility on whether to undertake CMAQ or STBGP-eligible projects with CMAQ funds to help prevent areas within the state from going into nonattainment.

In the Bay Area, CMAQ funding is administered through the Metropolitan Transportation Commission (MTC) on the local level. These funds are eligible for transportation projects that contribute to the attainment or maintenance of National Ambient Air Quality Standards in non-attainment or air-quality maintenance areas. Examples of eligible projects include enhancements to existing transit services, rideshare and vanpool programs, projects that encourage pedestrian transportation options, traffic light synchronization projects that improve air quality, grade separation projects, and

construction of high-occupancy vehicle (HOV) lanes. Projects that are proven to reduce direct PM2.5 emissions are to be given priority.

Partnership for Sustainable Communities

Founded in 2009, the Partnership for Sustainable Communities is a joint project of the Environmental Protection Agency (EPA), the U.S. Department of Housing and Urban Development (HUD), and the U.S. Department of Transportation (USDOT). The partnership aims to "improve access to affordable housing, more transportation options, and lower transportation costs while protecting the environment in communities nationwide." The Partnership is based on five Livability Principles, one of which explicitly addresses the need for pedestrian infrastructure ("Provide more transportation choices: Develop safe, reliable, and economical transportation choices to decrease household transportation costs, reduce our nation's dependence on foreign oil, improve air quality, reduce greenhouse gas emissions, and promote public health").

The Partnership is not a formal agency with a regular annual grant program. Nevertheless, it is an important effort that has already led to some new grant opportunities (including the TIGER grants).

More information: https://www.sustainablecommunities.gov/

State Sources

Active Transportation Program (ATP)

In 2013, Governor Brown signed legislation creating the Active Transportation Program (ATP). This program is a consolidation of the Federal Transportation Alternatives Program (TAP), California's Bicycle Transportation Account (BTA), and Federal and California Safe Routes to School (SRTS) programs.

The ATP program is administered by Caltrans Division of Local Assistance, Office of Active Transportation and Special Programs.

The ATP program goals include:

- Increase the proportion of trips accomplished by biking and walking,
- Increase safety and mobility for non-motorized users,
- Advance the active transportation efforts of regional agencies to achieve greenhouse gas reduction goals,
- Enhance public health,
- Ensure that disadvantaged communities fully share in the benefits of the program, and
- Provide a broad spectrum of projects to benefit many types of active transportation users.

The California Transportation Commission ATP Guidelines are available here: http://www.catc.ca.gov/meetings/agenda/2014Agenda/2014_03/03_4.12.pdf

Eligible bicycle and Safe Routes to School projects include:

- Infrastructure Projects: Capital improvements that will further program goals. This category typically includes planning, design, and construction.

- Non-Infrastructure Projects: Education, encouragement, enforcement, and planning activities that further program goals. The focus of this category is on pilot and start-up projects that can demonstrate funding for ongoing efforts.
- Infrastructure projects with non-infrastructure components

The minimum request for non-SRTS projects is $250,000. There is no minimum for SRTS projects.

More information:
http://www.dot.ca.gov/hq/LocalPrograms/atp/

Office of Traffic Safety (OTS) Grants

Office of Traffic Safety Grants are supported by Federal funding under the National Highway Safety Act and SAFETEA-LU. In California, the grants are administered by the Office of Traffic Safety.

Grants are used to establish new traffic safety programs, expand ongoing programs or address deficiencies in current programs. Eligible grantees are governmental agencies, state colleges, state universities, local city and county government agencies, school districts, fire departments, and public emergency services providers. Grant funding cannot replace existing program expenditures, nor can traffic safety funds be used for program maintenance, research, rehabilitation, or construction. Grants are awarded on a competitive basis, and priority is given to agencies with the greatest need. Evaluation criteria to assess need include potential traffic safety impact, collision statistics and rankings, seriousness of problems, and performance on previous OTS grants.

The California application deadline is January of each year. There is no maximum cap to the amount requested, but all items in the proposal must be justified to meet the objectives of the proposal.

More information: http://www.ots.ca.gov/

Regional & Local Sources

Metropolitan Transportation Commission OneBayArea Grant (OBAG)

The Bay Area Metropolitan Transportation Commission (MTC) OBAG program is a funding approach that aligns the Commission's investments with support for focused growth. Established in 2012, OBAG taps federal funds to maintain MTC's commitments to regional transportation priorities while also advancing the Bay Area's land-use and housing goals.

OBAG includes both a regional program and a county program that targets project investments in Priority Development Areas and rewards cities and counties that approve new housing construction and accept allocations through the Regional Housing Need Allocation (RHNA) process. Cities and counties can use these OBAG funds to invest in:

- Local street and road maintenance
- Streetscape enhancements
- Bicycle and pedestrian improvements
- Transportation planning
- Safe Routes to School projects
- Priority Conservation Areas

In late 2015, MTC adopted a funding and policy framework for the second round of OBAG grants. Known as OBAG 2 for short, the second round of OBAG funding is projected to total about $800 million to fund projects from 2017-18 through 2021-22.

More information: http://www.mtc.ca.gov/our-work/fund-invest/federal-funding/obag-2

Regional Active Transportation Program

A portion of the statewide ATP program is distributed to local CMAs and MPOs for distribution locally. The Regional ATP targets projects that increase walking, improve safety, and benefit disadvantaged communities. In the Bay Area, regional ATP funding is distributed through MTC.

Regional ATP applications are generally the same as the application for the statewide program, with a few additional questions. Applications not funded in the statewide program are no longer automatically considered for the regional program. Applicants must complete the additional questions and apply separately.

More information: http://mtc.ca.gov/our-work/invest-protect/investment-strategies-commitments/protect-our-climate/active-transportation

Developer Impact Fees

As a condition for development approval, municipalities can require developers to provide certain infrastructure improvements, which can include bikeway projects. These projects have commonly provided Class II facilities for portions of on-street, previously-planned routes. They can also be used to provide bicycle parking or shower and locker facilities. The type of facility that should be required to be built by developers should reflect the greatest need for the particular project and its local area. Legal challenges to these types of fees have resulted in the requirement to illustrate a clear nexus between the particular project and the mandated improvement and cost.

Roadway Construction, Repair and Upgrade

Future road widening and construction projects are one means of providing improved pedestrian and bicycle facilities. To ensure that roadway construction projects provide these facilities where needed, it is important that the review process includes input pertaining to consistency with the proposed system. In addition, California's 2008 Complete Streets Act and Caltrans Deputy Directive 64 require that the needs of all roadway users be considered during "all phases of state highway projects, from planning to construction to maintenance and repair."

More information:
http://www.dot.ca.gov/hq/tpp/offices/ocp/complete_streets.html

Utility Projects

By monitoring the capital improvement plans of local utility companies, it may be possible to coordinate upcoming utility projects with the installation of bicycle and pedestrian infrastructure within the same area or corridor. Often times, the utility companies will mobilize the same type of forces required to construct bikeways and sidewalks, resulting in the potential for a significant cost savings. These types of joint projects require a great deal of coordination, a careful delineation of scope items and some type of agreement or memorandum of understanding, which may need to be approved by multiple governing bodies.

Cable Installation Projects

Cable television and telephone companies sometimes need new cable routes within public right-of-way. Recently, this has most commonly occurred during expansion of fiber optic networks. Since these projects require a significant amount of advance planning and disruption of curb lanes, it may be possible to request reimbursement for affected bicycle facilities to mitigate construction impacts. In cases where cable routes cross undeveloped areas, it may be possible to provide for new bikeway facilities following completion of the cable trenching, such as sharing the use of maintenance roads.

Estimated Bicycle Trips

Bicycle counts from a variety of sources provide a snapshot of bicycling activity in Cupertino. The US Census American Community Survey (ACS) commute data, discussed in Chapter 1, is a consistent source for tracking long-term journey-to-work commute trends. However, the Census only collects data on the primary mode that Cupertino residents use to travel to work, and does not count residents who use a bicycle as *part* of their commute (linking to a longer transit trip, for example); nor does the Census count trips made for recreation, to run errands, or to commute to school. Census data, therefore, only tracks a portion of the total bicycle trips in Cupertino.

To provide a more accurate estimate of total bicycling in Cupertino, a bicycle demand calculation was run using additional Cupertino-specific travel data from the ACS and the Santa Clara County Safe Routes to School Program. The demand model inputs are outlined below, and the results and full list of data sources are shown in Table 6-5.

- Number of bicycle commuters, derived from the ACS
- Work at home bicycle mode share
- Number of those who work from home and likely bicycle (derived from assumption that five percent of those who work at home make at least one bicycle trip daily)
- Bicycle to school mode share:
  - Number of students biking to school, derived from multiplying the K-8 student population by the Santa Clara County bicycle to school average rate of four percent
- Number of those who bicycle to transit:
  - Number of people who bicycle to VTA or Caltrain, assuming that eight percent of transit patrons use bicycles to access the station and/or their destination

Based on this model, there are an estimated **1,361 total daily bicycle transportation trips** made by Cupertino residents. This number includes people who bike for work, errands, personal trips, and school trips. It does not account for purely recreational trips. This analysis can be used to track citywide bicycle use and demand in Cupertino over time.

Table 6-5: Estimated Daily Bicycle Transportation Trips

Variable	Figure	Calculation and Source
Existing number of bike-to-work commuters	178	(Existing employed population) x (Existing bike-to-work mode share)
Existing bike-to-work mode share	*0.70%*	*2014 ACS, 5-Year Estimates*
Existing employed population	*25,380*	*2014 ACS, 5-Year Estimates*
Existing number of work-at-home bike commuters	72	Assumes 5% of population working at home makes at least one daily bicycle trip
Existing work-at-home mode share	*5.70%*	*2014 ACS, 5-Year Estimates*
Existing employed population	*25,380*	*2014 ACS, 5-Year Estimates*
Existing transit bicycle commuters	41	Employed persons multiplied by transit mode share. Assumes 8% of transit riders access transit by bicycle *(Average of VTA and Caltrain bike access volumes)*

Variable	Figure	Calculation and Source
Existing transit-to-work mode share	*2.00%*	*2014 ACS, 5-Year Estimates*
Existing employed population	*25,380*	*2014 ACS, 5-Year Estimates*
Existing school children bike commuters	390	School children population multiplied by school children bike mode share
Existing school children bicycling mode share	*4.0%*	*Santa Clara County SR2S Program*
Existing school children, ages 5-14 (grades K-8th)	*9,745*	*2014 ACS, S0101 5-Year Estimates*
Existing total number of bike commuters	680	Total bike-to-work, school, and utilitarian bike trips. Does not include recreation or college.
Total daily bicycling trips	**1,361**	**Total bicycle commuters x 2 (for round trips)**
This is an order-of-magnitude estimate based on available American Community Survey data and does not include recreational trips, nor does it include trips made by people who live in other cities and work or attend school in Cupertino. It can be used as a secondary analysis method to track bicycle usage estimates over time.		

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Appendix A. Plan and Policy Review

Table A-1 provides a list of existing plans relevant to bicycling in Cupertino. Cupertino is compliant with all state and Federal laws and policies regarding bicycles. A review of these plans is included on the following pages.

Table A-1: Relevant Plans and Policies

Plan	Date Adopted
Local Plans	
Cupertino General Plan	2014
Cupertino Municipal Code	-
Heart of the City Specific Plan	2014
North Vallco Master Plan	2008
South Vallco Master Plan	2008
South Vallco Connectivity Plan	2014
Joint Cities Stevens Creek Trail Feasibility Study	2015
Apple Campus 2 Development Plan	2013
Regional Plans	
Santa Clara County General Plan	1994
Santa Clara Valley Transportation Authority Countywide Bicycle Plan	2008
VTA Valley Transportation Plan 2040	2014
VTA Union Pacific Rail Trail Feasibility Study	2001
MTC Regional Bicycle Plan	2009
PlanBayArea	2013
State Plans and Policies	
Assembly Bill 32: Global Warming Solutions	2006
Assembly Bill 1358: Complete Streets	2008
Senate Bill 375: Sustainable Communities	2009
Assembly Bill 417: Environmental Quality: CEQA: Bicycle Transportation Plan	2013
Assembly Bill 2245: Environmental quality: CEQA: Exemption: Bicycle Lanes	2015
Senate Bill 743: Environmental Quality: Transit Oriented Infill Projects, Judicial Review Streamlining for Environmental Leadership Development Projects, and Entertainment and Sports Center in the City of Sacramento	2013
Assembly Bill 1193: Bikeways	2014

Plan	Date Adopted
Assembly Bill 1371: Vehicles: Bicycles: Passing Distance	2013
Senate Bill 99: Active Transportation Program Act	2013
California Transportation Plan 2025	2006
Caltrans Complete Streets Policy	2001
Deputy Directive 64	2008
Federal Policies	
US DOT Policy Statement on Bicycle and Pedestrian Accommodation Regulations and Recommendations	2001

Local Plans and Policies

Cupertino General Plan (2014)

The Cupertino General Plan Mobility Element provides excellent direction for transportation planning and bicycle access. Figure A-1 shows the 2014 existing and proposed bicycle network. The goals and policies seek to further improve and enhance the bicycling environment through capital improvement projects, development review, and retrofitting existing facilities within older commercial areas and neighborhoods. The mobility element also seeks to reduce reliance on automobile level of service (LOS) by shifting to multi-modal LOS or vehicle miles traveled (VMT) as a measure of impacts to traffic.

Complete Streets

Goal: Promote Improvements to City Streets that Safely Accommodate All Transportation Modes and Persons of All Abilities.

Policies:

1. Street Design. Adopt and maintain street design standards to optimize mobility for all transportation modes including automobiles, walking, bicycling and transit.
2. Connectivity. Promote pedestrian and bicycle improvements that improve connectivity between planning areas, neighborhoods and services, and foster a sense of community
3. Community Impacts. Reduce traffic impacts and support alternative modes of transportation in neighborhoods and around schools, parks and community facilities rather than constructing barriers to mobility. Do not close streets unless there is a demonstrated safety or over-whelming through traffic problem and there are no acceptable alternatives since street closures move the problem from one street to another.

Walkability and Bikeability

Goal: Support a Safe Pedestrian and Bicycle Street Network for People of All Ages and Abilities.

Policies:

1. Bicycle and Pedestrian Master Plan. Adopt and maintain a Bicycle and Pedestrian master plan, which outlines policies and improvements to streets, extension of trails, and pathways to create a safe way for people of all ages to bike and walk on a daily basis.
2. Enhance pedestrian and bicycle crossings and pathways at key locations across physical barriers such as creeks, highways and road barriers.
3. Preserve and enhance citywide pedestrian and bike connectivity by limiting street widening purely for automobiles as a means of improving traffic flow.
4. Plan for improvements to pedestrian and bicycle facilities and eliminate gaps along the network pedestrian and bicycle as part of the City's Capital Improvement Program.
5. Require new development to provide public and private bicycle parking.
6. Actively engage the community in promoting walking and bicycling through education, encouragement and outreach on improvement projects and programs.

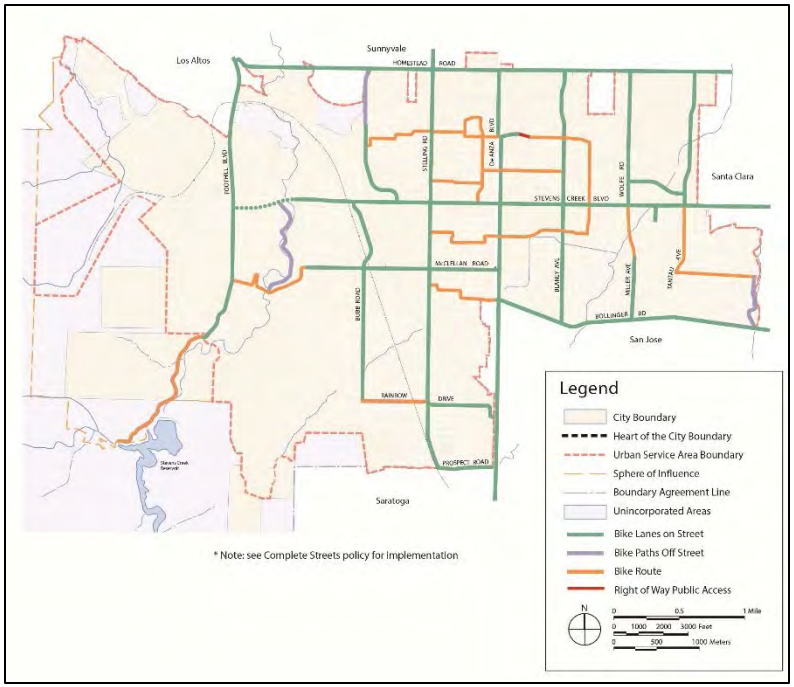


Figure A-1: Current (2014) and Proposed Bicycle Network from General Plan

Safe Routes to Schools

Goal: Ensure Safe and Efficient Pedestrian and Bicycle Access to Schools While Working to Reduce School-Related Congestion.

Policies:

1. Promote Safe Routes to Schools programs for all schools serving the city.
2. Ensure that bicycle and pedestrian safety improvements include projects to enhance safe accessibility to schools.
3. Connect schools to the citywide trail system.
4. Support education programs that promote safe walking and bicycling to schools.

Transportation Impact Analysis

Goal: Review and Update TIA Policies and Guidelines that Allow for Adequate Consideration for All Modes of Transportation Including Automobiles, Walking, Bicycling, and Transit.

Policies:

1. Consider adopting a Protected Intersection policy which would identify intersections where improvements would not be considered which would degrade levels of service for non-vehicular modes of transportation. Potential locations include intersections in Priority Development Areas (PDAs) and other areas where non-vehicular transportation is a key consideration.

Transportation Infrastructure

Goal: Ensure that the City's Transportation Infrastructure is Well-Maintained for All Modes of Transportation and that Projects are Prioritized on Their Ability to Meet the City's Mobility Goals.

Policies:

1. Develop and implement an updated citywide transportation improvement plan necessary to accommodate vehicular, pedestrian and bicycle transportation improvements to meet the City's needs.
2. Integrate the financing, design and construction of pedestrian and bicycle facilities with street projects. Build pedestrian and bicycle improvements at the same time as improvements for vehicular circulation.

Cupertino Municipal Code

The Municipal Code establishes the Cupertino Bicycle Pedestrian Commission (BPC) and states the bylaws for the BPC. It also details the type and sizing of bicycle parking which can be installed for each land use designation. Lastly, it provides details on bicycle registration and how to receive a new bicycle license.

Heart of the City Specific Plan (2014)

The Heart of the City refers to Stevens Creek Boulevard and the areas immediately surrounding Stevens Creek Boulevard. See Figure A-2 for the area map. The purpose of the specific plan is to guide the future development and redevelopment of the corridor in a manner that creates a greater sense of place and community identity in Cupertino.

Policies:

1. Proposed developments shall be expected to continue the implementation of the City's streetscape plan.
2. High quality site planning, architectural design, and on-site landscaping are expected for all developments.
3. Subdivision of commercial and mixed use parcels is strongly discouraged.
4. Plans for the new projects should include pedestrian and bicycle pathways, incorporating the City's existing network.

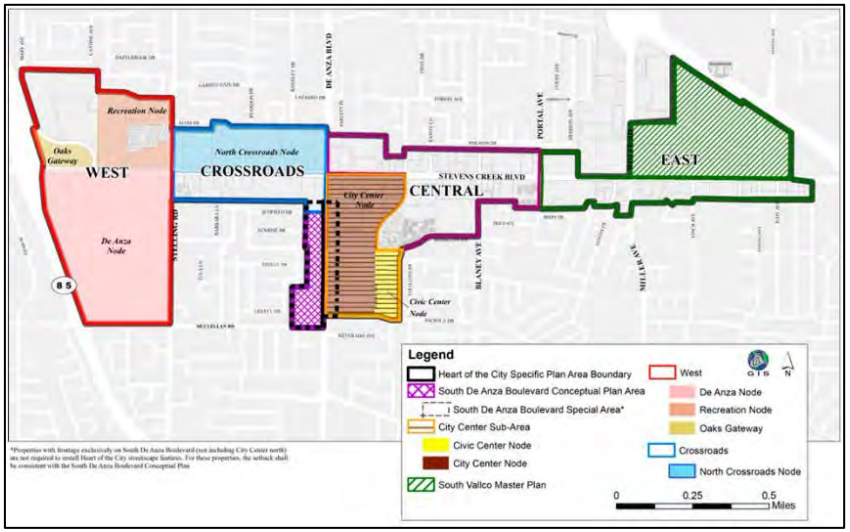


Figure A-2: Heart of the City Area and Special Centers Map

North Vallco Master Plan

The North Vallco Master Plan was built on conversations and partnerships between the North Vallco neighbors and industries as well as the larger community, developing a vision for the study area. Principles were developed to ensure, "that new development contributes to the creation of a beautiful and functional city district." One of the principles calls for better walkability and connectivity and states that any new development in the area will, "Provide connectivity for all modes, pedestrian and vehicular – including automobile, bicycle, shuttle and Segway." The Master Plan also states that, "Future development should consider providing more through-streets to Pruneridge, Wolfe and Tantau to foster walking and bicycling between in-district destinations," as the current street network is composed of superblocks which discourages people to walk or bike. This Plan was never officially adopted by the Cupertino City Council.

South Vallco Master Plan

The South Vallco Master Plan, much like the North Vallco Master Plan, provides a vision for the future of the area by analyzing existing and future land uses, vehicular circulation patterns, and pedestrian circulation patterns. Figure A-3 shows the South Vallco's current land uses. The Plan also recommends the creation of streetscape & crosswalk enhancements, landscaping, lighting, wayfinding, signage, and street furniture. The Plan outlines several objectives and policies in order to improve and enhance the circulation and connections for bicyclists and other active transportation users including implementing traffic calming, develop consistent pedestrian and bicycle friendly streetscape improvements, and establish a network of shared-use paths, especially along the Calabazas Creek. This Plan was never officially adopted by the City Council.

Figure A-3: South Vallco planning area and land uses

South Vallco Conceptual Connectivity Plan

In 2014, Cupertino adopted the South Vallco Conceptual Connectivity Plan, an advisory document that identifies broad goals, objectives, concepts, and design guidelines to help City staff, property owners, developers and the community better understand future desires for improved connectivity, safety, and aesthetics within the South Vallco area. In addition to detailed existing travel conditions, the Plan outlines several connectivity goals and objectives for the area's circulation to ensure improved automobile, truck, bike, pedestrian, and transit connection within South Vallco and to adjacent areas. This Plan was never officially adopted by the Cupertino City Council. Figure A-4 shows improved connectivity for the South Vallco area with a district redesign.

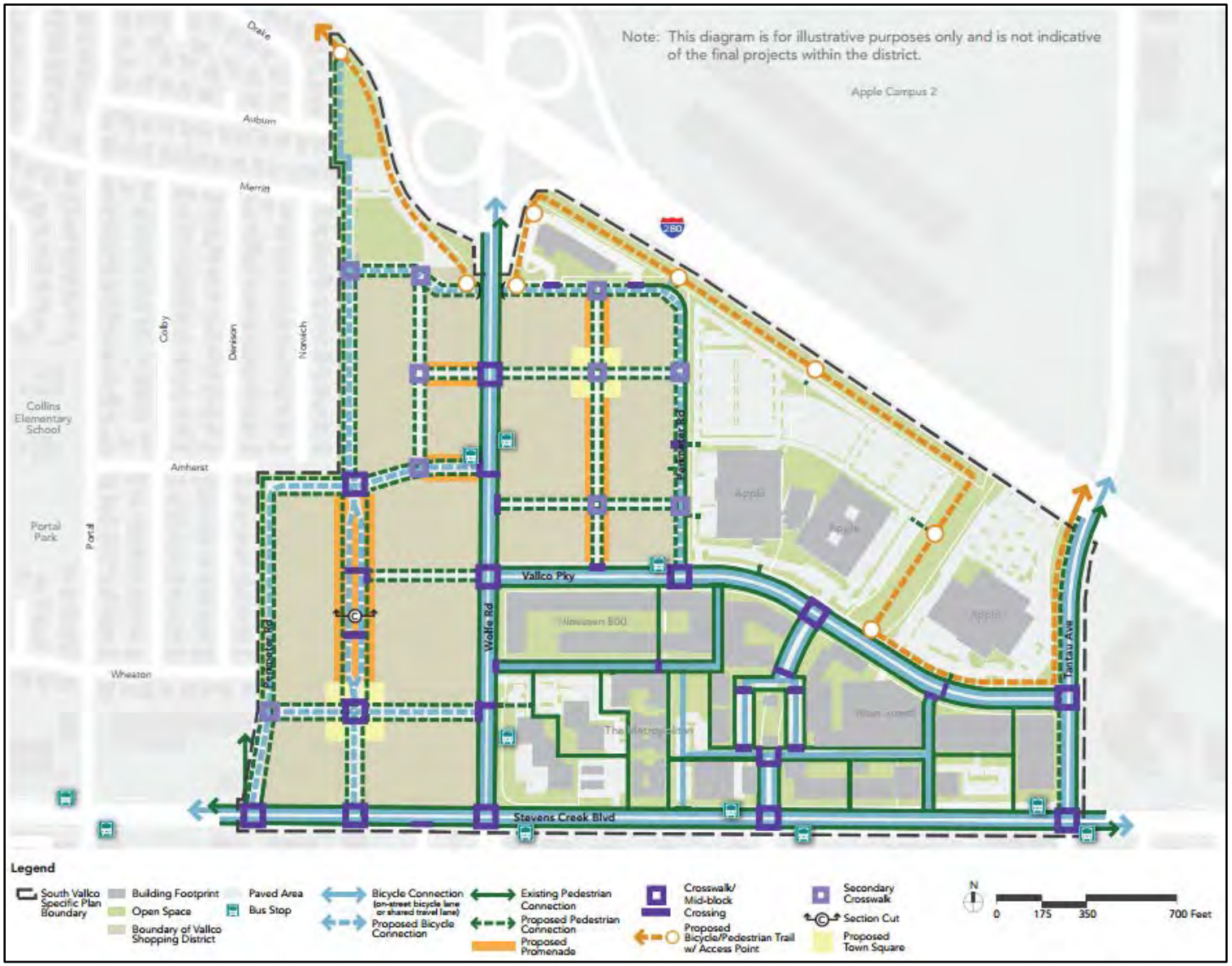


Figure A-4: Improved circulation of the South Vallco area with better bicycle access

Joint Cities Stevens Creek Trail Feasibility Study

In 2015, a Feasibility Study was published for the cities of Sunnyvale, Cupertino, Los Altos, and Mountain View as well as the Santa Clara Valley Water District which explores the potential for extending the Stevens Creek Trail. The study determined that a variety of routes and facility types are feasible through the four cities, but challenges are associated with each alignment. Although the study does not give a final recommended alignment, it does devote an entire chapter to the bicycle and pedestrian paths which minimize roadway crossings and most closely approximate the trail user experience present in the constructed sections of the trail in Mountain View and Cupertino.

Regional Plans and Policies

County of Santa Clara General Plan (1994)

The General Plan includes policies that support bicycling throughout the County and cities in the County. It encourages coordination with local and regional agencies in completing a connected bikeways network. The Santa Clara County General Plan was last adopted in 1994. The most relevant section of the General Plan is the Circulation Element, which is currently being updated.

Transportation Policies

- C-TR 6: Increase the proximity between housing and major employment areas to reduce commute distances and automobile-dependency by encouraging developers to provide pedestrian and bicycle paths that connect housing and employment sites so as to encourage walking and bicycling.
- C-TR 8: Urban design concepts and site development standards which facilitate use of transit and other travel alternatives should be adopted and implemented by local jurisdictions, to provide adequate pedestrian and bicycle pathways and facilities, both on and between individual sites.
- C-TR 22: The use of existing railroad rights-of-way for transit and alternative transportation (i.e., bicyclists and pedestrians) should be encouraged.
- C-TR 34: Bicycling and walking should be encouraged and facilitated as energy conserving, non-polluting alternatives to automobile travel.
- C-TR 35: A bicycle transit system should be provided that is safe and convenient for the user and which will provide for the travel needs of bicyclists.
- C-TR 36: Facilities should be provided to make bicycle and pedestrian travel more safe, direct, convenient and pleasant for commuting and other trips to activity centers and to support the use of other commute alternatives.
- C-TR 37: All available funding options, including ISTEA funds, should be pursued for bicycle and pedestrian facility improvements.

Transportation Implementation Policies

- C-TR(i) 16: Continue to develop convenient and effective transit alternatives, HOV, bicycle, and pedestrian facilities to provide the infrastructure TDM programs require to succeed.
- C-TR(i) 29: Build attractive transit facilities, such as: passenger waiting shelters, major transit transfer stations, park and ride facilities, bicycle storage facilities at major transit stops and expand passenger facilities to support new routes (park-and-ride lots, bus shelters). (Implementers: County Transit District, Employers, Developers)
- C-TR(i) 31: Add bike racks to bus routes where heavy passenger loads prohibit bringing bicycles on board the bus.
- C-TR(i) 45: Continue to accommodate non-collapsible bicycles on Caltrain.
- C-TR(i) 37: Continue to maintain and improve the width and quality of the surface of the right-hand portion of existing roads so that they are suitable for bicycle travel, regardless of whether or not bikeways are designated.

- **C-TR(i) 38:** Provide secure bicycle storage facilities at employment sites, public transit stations and schools. (Implementers: Employers, County, Cities, Peninsula Commute Joint Powers Board, Schools)
- **C-TR(i) 39:** Design all future roads, bridges, and transit vehicles and facilities to accommodate non-motorized travel. Incorporate bicycle and pedestrian facilities into future projects including:
    - Development of new travel corridors such as rail transit and road projects.
    - Development of non-transportation corridors including utilities and river/creek rights of way.
    - Improvements to existing transportation corridors such as expressway, interchange, intersection and Commuter Lane projects.
- **C-TR(i) 40:** Add and improve bicycle facilities on already existing roads, bridges and transit vehicles and within rail rights-of-way to accommodate non-motorized travel. (Implementers: Caltrans, County, Cities).
- **C-TR(i) 42:** Maintain and implement the Santa Clara County Bicycle Plan and subregional bicycle network.
- **C-TR(i) 43:** Provide for foot and bicycle travel across existing barriers, such as creeks, railroad tracks and freeways. (Implementers: Cities, County, State)
- **C-TR(i) 44:** Establish and maintain bicycle advisory committees and confer with representatives of recognized bicycle clubs/associations for a "needs list" of necessary bicycle safety improvements. (Implementers: Cities, County)
- **C-TR(i) 46:** Implement the County policy to maximize bicycle access on expressways.
- **C-TR(i) 47:** Incorporate bicycle and pedestrian facilities (e.g., bicycle and pedestrian access routes, showers, secure bicycle storage facilities) in site designs.

Parks and Recreation Implementation Policies

- **C-PR 7:** Opportunities for access to regional parks and public open space lands via public transit, hiking, bicycling, and equestrian trails should be provided. Until public transit service is available, additional parking should be provided where needed.
- **C-PR 49:** Hiking, bicycling, and horseback riding trails should be provided along scenic roads where they can be provided safely and without significant adverse environmental impacts. Bicycling facilities should be provided by edge marked shoulders and improved surfaces on paths.
- **C-PR(i) 4:** Provide public transit service to major regional parks, and develop hiking, bicycling, and equestrian trails to provide access to regional parks from the urban area to provide alternatives to private automobiles for access to recreation. (Implementers: County, Cities, Midpeninsula Regional Open Space District, State of California, Santa Clara Valley Water District)

Santa Clara Countywide Bicycle Plan (2008)

The purpose of this Bicycle Plan is to assemble in one document all the pertinent elements of past bicycle plans and working papers, identify the final cross-county bicycle corridor network (see Figure A-8 for Cupertino area), including gaps and needed projects, and include other elements to help local agencies responsible for projects to secure funding and plan effectively for the future. Relevant policies are listed below.

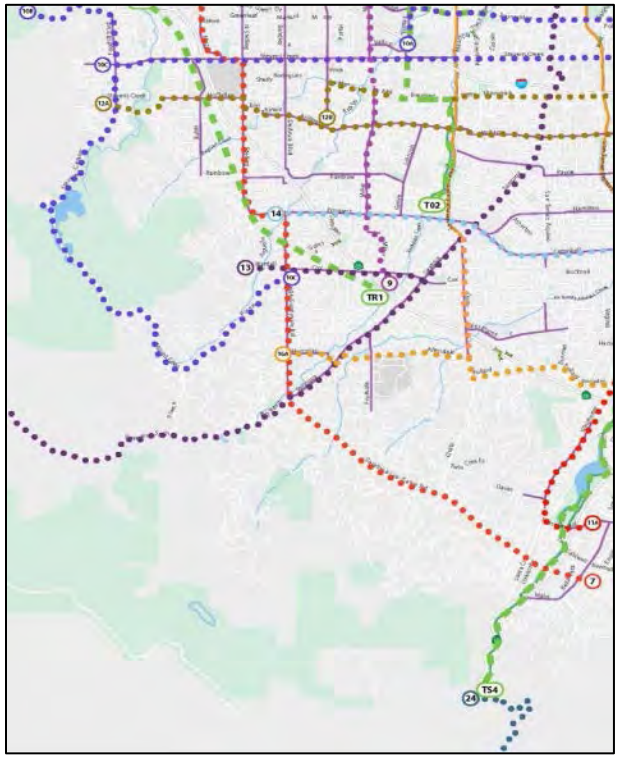


Figure A-5: Cross county bicycle corridors in southeast Santa Clara County

Transportation Planning and Programming

- Plan and implement a seamless bicycle and pedestrian travel network that is continuous across city boundaries and county boundaries.
- Include bicycle and pedestrian facilities in applicable transportation plans, programs, and studies.
- Coordinate with other federal, state, regional, county and local agencies to, fund and implement bicycle projects in Santa Clara County.
- Fully integrate bicycle access to and within the transit system.
- Utilize multi-modal transportation demand models that are based on person-trips and that can forecast bicycle trips, pedestrian trips and transit trips in addition to motor vehicle trips.

Land Use / Transportation Integration

- Encourage existing developments to provide bicycle/pedestrian connections to link neighborhoods and residential areas with schools, commercial services, employment centers, recreational areas and transit centers.
- Encourage new developments to include bicycle and pedestrian facilities such as trails and bicycle lanes.
- Encourage new developments to provide mobility for pedestrians and bicyclists by providing non-motorized connections and access ways such as cul-de-sac connections, pathways and other short-cuts to schools, transit centers and other adjacent destinations.
- Ensure that existing bicycle facilities and access are maintained and preserved.

Local Ordinances and Guidelines

- Provide policy guidance.
- Establish guidelines that encourage:
  - bicycle parking ordinances
  - bicycle parking facilities
  - showers and commuter clothing lockers in new and renovated developments
  - mileage reimbursement when bicycles are used on official business when travel time is equivalent to an automobile trip
- Encourage Transportation Demand Management programs to include bicycle and pedestrian components.

Design and Construction

- Ensure that Member Agency construction or rehabilitation projects incorporate best practice for bicycle and pedestrian facilities when and where applicable
- Implement proactive strategies to identify and remove obstacles and hazards to bicycle travel.
- Consider roadway designs to enhance traffic safety.
- Establish guidelines for and encourage the use of bicycle-safe and friendly roadway design.

Complementary Policies that Encourage Bicycling

- Increase institutional encouragement of non-motorized travel within VTA
- Encourage inter-jurisdictional cooperation in the development and implementation of non-motorized projects.
- Promote bicycle planning and engineering training programs for Member Agency staff.
- Promote Public Awareness through Education & Positive Enforcement Programs.

Valley Transportation Authority: Valley Transportation Plan 2040

The Valley Transportation Plan 2040 is Santa Clara County's long-range planning document that feeds into MTC's Regional Transportation Plan (RTP) 2040 and incorporates specific needs identified by the Valley Transportation Authority (VTA) and individual cities, including Cupertino. The VTP 2040 considers all travel modes and addresses the linkages between transportation and land use planning, air quality, and community livability. Consistent with MTC's RTP, the VTP 2040 includes projects and programs with anticipated funds and provides a framework for investments in transit and maintenance of the existing roadway network, including upgrades to bicycle and pedestrian facilities. VTA regularly updates the plan approximately every four years coinciding with the update of the RTP.

Bicycle Expenditure Program

The Bicycle Expenditure Program (BEP) was first adopted in 2000 by the VTA Board of Directors as the funding mechanism for countywide bicycle projects. Approximately every four years, VTA updates the BEP Project List, which is a list of bicycle projects that can be funded over the next 25 years within the constraints of anticipated bicycle funding. The BEP project list is incorporated into the Valley Transportation Plan 2040, Santa Clara County's Long Range Transportation Plan, as the bicycle element of that plan. The funds programmed towards BEP projects come from a combination of funding programs. As part of VTP 2040, VTA dedicated $808 million for 155 bicycle projects around the County.

VTA Bicycle Technical Guidelines

The Bicycle Technical Guidelines (BTG) was first adopted by the Santa Clara County Valley Transportation Authority (VTA) in 1999. In December 2007, and again in 2012, VTA significantly expanded and re-adopted the BTG. The BTG manual is a set of optimum standards and best practices for roadway and bikeway design. They are intended to help Member Agencies in providing optimal bicycle accommodation and ensuring that bicycle planning as well as roadway planning remains consistent countywide. The BTG is the complementary companion to the Countywide Bicycle Plan (CBP) and the Bicycle Expenditure Program (BEP) and should be used as a resource by both roadway and bikeway planners and designers.

VTA Union Pacific Rail Trail Feasibility Study (2001)

In 2001, VTA published a feasibility study on the conversion of the 8.7 mile Union Pacific Rail corridor to a trail. According to the study, "The trail would link to the Los Gatos Creek Trail, connecting the two most heavily used parks in the Santa Clara County: Rancho San Antonio County Park and Vasona County Park. VTA has committed to funding a substantial portion of the cost of developing the trail."

The purpose of the study was to document existing conditions, identify the future Trail users and their needs, identify constraints and solutions to trail development, develop alternative alignments and design standards, and provide implementation details on liability, safety, landscaping, and other items. The study found that it is ideal to construct the trail in phases due to budgetary and other constraints. In Cupertino, the recommended trail alignment is on-street north of Stevens Creek Boulevard, then runs in the rail right-of-way through Cupertino to the Saratoga border. Figure A-9 shows this alignment.

Figure A-6: Proposed Union Pacific rail trail alignment and vicinity

MTC Regional Bicycle Plan (2009)

The Regional Bicycle Plan, produced by MTC, identifies regional bikeway connections in the San Francisco Bay Area and strategies to fill gaps in the regional bikeway network (RBN). The RBP's principle goal is "to ensure that bicycling is a safe, convenient, and practical means of transportation and healthy recreation throughout the Bay Area, including in Priority Development Areas (PDAs); to reduce traffic congestion and risk of climate change; and to increase opportunities for physical activity to improve public health." The policies of the plan include directing local jurisdictions to collaborate with transit agencies to ensure bicyclists are accommodated within one mile of transit stations, adopt ordinances requiring new developments to include sheltered bicycle parking and end-of-trip accommodations, maintain Bicycle Advisory Committees and conduct bicycle surveys using the National Bicycle and Pedestrian Documentation Project. The most relevant policies are listed below.

- **Policy 1.1:** Ensure that all transportation projects funded by MTC consider enhancement of bicycle transportation, consistent with MTC Resolution 3765, Caltrans Deputy Directive 64 R1, Assembly Concurrent Resolution 211 and the Complete Streets Act of 2008. **Policy 2.1:** Develop a cohesive system of regional bikeways that provide access to and among major activity centers, public transportation and recreation facilities.
- **Policy 2.2:** Ensure that the RBN serves bicyclists with diverse ability levels who are bicycling for a range of transportation and recreational purposes.
- **Policy 2.5:** Encourage coordination of cross jurisdictional bicycle way-finding signage.
- **Policy 3.3:** Encourage local jurisdictions and other agencies and organizations to utilize MTC's online Safety Toolbox.
- **Policy 3.2:** Support local government efforts to improve bicyclist safety by encouraging enforcement of the California Vehicle Code for motorists and cyclists alike. Examples include diversion training programs and reduced fines for errant cyclists so police officers will be more willing to cite them. (Diversion training allows motorists and cyclists who break traffic laws to avoid having citations documented in exchange for attending traffic safety classes.)
- **Policy 5.3:** Foster collaboration between local jurisdictions and regional transit agencies to improve bicycle access to transit stations in the last mile surrounding each station. Improvements to ease, speed, convenience and safety of bicycle access, including by means of signage and bikeways, should be considered.
- **Policy 6.2:** Encourage local jurisdictions to adopt ordinances requiring bicycle parking and storage and to offer incentives to employers that provide enclosed, sheltered bicycle parking for their employees and, when feasible, their customers.

- **Policy 6.3:** Encourage local jurisdictions to provide shower and locker facilities, or to make arrangements for access to local health clubs, for all new developments and major redevelopments.
- **Policy 6.4:** Continue to require cities and counties to form and maintain bicycle advisory committees, and to develop and update comprehensive bicycle plans, as a condition for receiving Transportation Development Act (TDA) funds.
- **Policy 8.7:** Encourage jurisdictions to consider adopting California Environmental Quality Act (CEQA) standards that rigorously analyze project impacts to bicyclists and pedestrians.

PlanBayArea (2013)

Adopted by the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) in 2013, this long-range transportation and land use/housing plan addresses the requirements set forth in Senate Bill 375 (See State Policies and Plans below), including the requirement that each Metropolitan Planning Organization adopt a Sustainable Communities Strategy. The plan identifies regionally significant transportation projects for the next 20 years and directs investment into Priority Development Areas across the Bay Area. Priority Development Areas are areas identified by local communities and ABAG/MTC as targets for sustainable transportation investments and housing development to produce walkable, bikable, and livable communities.

State Plans and Policies

Assembly Bill 32: Global Warming Solutions (2006)

The Global Warming Solutions Act (AB 32) laid out specific actions to reduce emissions, including increasing motor vehicle and ship yard efficiency and other strategies involving refrigerants, landfills and consumer products. The goal of AB 32 is for California to reach 1990 greenhouse gas emission levels by 2020.

Assembly Bill 1358: Complete Streets (2008)

Beginning January 1, 2011, all California Cities and Counties must include accommodation for all street users (pedestrians, bicyclists, transit riders, motorists, children, persons with disabilities, and elderly persons) in circulation element updates, as required by the Complete Streets Act (AB 1358).

Senate Bill 375: Sustainable Communities (2009)

The Sustainable Communities Act (SB 375) links land use planning with greenhouse gas emissions, requiring metropolitan planning organizations to develop land use plans to meet emission reduction goals set by the State Air Resources Board. In the Bay Area, the Metropolitan Transportation Commission has addressed the Sustainable Communities Strategy through various mechanisms within PlanBayArea, the long-range housing/land use and transportation plan for the nine county region.

Assembly Bill 417: Environmental Quality: CEQA: Bicycle Transportation Plan (2013)

Assembly Bill 417 provides a narrow exemption for bicycle transportation plans from CEQA for urbanized areas. Prior to determining that a bicycle plan is exempt, the lead agency shall do both of the following: (1) Hold properly noticed public hearings in areas affected by the bicycle transportation plan to hear and respond to public comments, and (2) Include measures in the bicycle transportation plan to mitigate potential bicycle and pedestrian safety and traffic impacts. This bill would sunset on January 1, 2018.

Assembly Bill 2245: Environmental quality: CEQA: Exemption: Bicycle Lanes (2015)

This law exempts the restriping of roadways in urbanized areas to include bicycle lanes from the CEQA process given that the restriping is consistent with a prepared bicycle transportation plan. A lead agency would be required to take specified actions with regard to making an assessment of traffic and safety impact and holding hearings before determining a project is exempt.

Senate Bill 743: Environmental Quality: Transit Oriented Infill Projects, Judicial Review Streamlining for Environmental Leadership Development Projects, and Entertainment and Sports Center in the City of Sacramento (2013)

In 2013, California Governor Jerry Brown signed SB 743 into law that would eliminate auto delay, level of service (LOS), and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant impacts in many parts of California (if not statewide). Further, parking impacts will not be considered significant impacts on the environment for select development projects within infill areas with nearby frequent transit service. According to the legislative intent contained in SB 743, these changes to current practice were necessary to more appropriately balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas emissions.

Assembly Bill 1193: Bikeways (2014)

Assembly Bill 1193 adds a fourth classification of bikeway to the Caltrans bikeway classifications. This bill categorizes cycle tracks or separated bikeways, as specified, as Class IV bikeways. It requires the Department and local partners, by January 1, 2016, to establish minimum safety design criteria for the planning and construction of each type of bikeway and roadways where bicycle travel is permitted. The Act also allows local agencies to use alternative design criteria such as the National Association of City Transportation Officials (NACTO) "Urban Bikeway Design Guide" for bikeways outside of the state highway right-of-way.

Assembly Bill 1371: Vehicles: Bicycles: Passing Distance (2013)

AB 1371 enacts the Three Feet for Safety Act, which requires the driver of a motor vehicle overtaking and passing a bicycle that is proceeding in the same direction on a highway to pass in compliance with specified requirements applicable to overtaking and passing a vehicle. The bill would prohibit, with specified exceptions, the driver of the motor vehicle that is overtaking or passing a bicycle proceeding in the same direction on a highway from passing at a distance of less than three feet between any part of the motor vehicle and any part of the bicycle or its operator. A violation of these provisions is punishable by a fine.

Senate Bill 99: Active Transportation Program Act (2013)

The Active Transportation Program was established by this legislation in 2013, and serves as the mechanism for distributing federal funds for local and regional efforts to promote walking and bicycling. It specifies goals that the funding will be disbursed to help meet, including increasing the mode shares of biking and walking trips, increasing safety for non-motorized users, and providing support to disadvantaged communities to promote transportation equity.

California Transportation Plan 2025 (2006)

The California Transportation Plan 2025 seeks to provide for mobility and accessibility of people, goods, services, and information throughout California. It encourages consideration of bicycle and pedestrian facilities in capacity improvement projects, and promotes integration of active transportation into modeling and projection efforts.

The Plan also speaks to the public health benefits of active transportation, urging better education of youth on personal health and air quality impacts of making trips by bicycle or on foot.

Caltrans Complete Streets Policy (2001) and Deputy Directive 64 (2008)

In 2001, the California Department of Transportation (Caltrans) adopted Deputy Directive 64, "Accommodating Non-Motorized Travel," which contained a routine accommodation policy. The directive was updated in 2008 as "Complete Streets – Integrating the Transportation System." The new policy includes the following language:

The Department views all transportation improvements as opportunities to improve safety, access, and mobility for all travelers in California and recognizes bicycle, pedestrian, and transit modes as integral elements of the transportation system.

The Department develops integrated multimodal projects in balance with community goals, plans, and values. Addressing the safety and mobility needs of bicyclists, pedestrians, and transit users in all projects, regardless of funding, is implicit in these objectives. Bicycle, pedestrian and transit travel is facilitated by creating "complete streets" beginning early in system planning and continuing through project delivery and maintenance operations.

The directive establishes Caltrans' own responsibilities under this policy. The responsibilities Caltrans assigns to various staff positions under the policy include the following:

- Ensure bicycle, pedestrian, and transit interests are appropriately represented on interdisciplinary planning and project delivery development teams.
- Ensure bicycle, pedestrian, and transit user needs are addressed and deficiencies identifies during system and corridor planning, project initiation, scoping, and programming.
- Ensure incorporation of bicycle, pedestrian, and transit travel elements in all Department transportation plans and studies.
- Promote land uses that encourage bicycle, pedestrian, and transit travel.
- Research, develop, and implement multimodal performance measures.

In part to address these issues, Caltrans adopted the Complete Streets Implementation Action Plan in 2010. The plan sets forth actions under seven categories to be completed by various Caltrans districts and divisions within certain timelines to institutionalize complete streets concepts and considerations within the department. The action categories include updating departmental plans, policies, and manuals; raising awareness; increasing opportunities for training; conducting research projects; and actions related to funding and project selection. As one of its implementation activities, Caltrans updated the Highway Design Manual in large part to incorporate multi-modal design standards.

Federal Plans and Policies

US DOT Policy Statement on Bicycle and Pedestrian Accommodation Regulations and Recommendations (2010)

The United States Department of Transportation (US DOT) issued this Policy Statement to support and encourage transportation agencies at all levels to establish well-connected walking and bicycling networks. The following Policy Statement and actions are relevant to the Marysville Bicycle and Pedestrian Plan.

Policy Statement

The DOT policy is to incorporate safe and convenient walking and bicycling facilities into transportation projects. Every transportation agency, including DOT, has the responsibility to improve conditions and opportunities for walking and bicycling and to integrate walking and bicycling into their transportation systems. Because of the numerous individual and community benefits that walking and bicycling provide – including health, safety, environmental, transportation, and quality of life – transportation agencies are encouraged to go beyond minimum standards to provide safe and convenient facilities for these modes.

Recommended Actions

The DOT encourages States, local governments, professional associations, community organizations, public transportation agencies, and other government agencies, to adopt similar policy statements on bicycle and pedestrian accommodation as an indication of their commitment to accommodating bicyclists and pedestrians as an integral element of the transportation system. In support of this commitment, transportation agencies and local communities should go beyond minimum design standards and requirements to create safe, attractive, sustainable, accessible, and convenient bicycling and walking networks. Such actions should include:

- Considering walking and bicycling as equals with other transportation modes: The primary goal of a transportation system is to safely and efficiently move people and goods. Walking and bicycling are efficient transportation modes for most short trips and, where convenient intermodal systems exist, these nonmotorized trips can easily be linked with transit to significantly increase trip distance. Because of the benefits they provide, transportation agencies should give the same priority to walking and bicycling as is given to other transportation modes. Walking and bicycling should not be an afterthought in roadway design.

- Ensuring that there are transportation choices for people of all ages and abilities, especially children: Pedestrian and bicycle facilities should meet accessibility requirements and provide safe, convenient, and interconnected transportation networks. For example, children should have safe and convenient options for walking or bicycling to school and parks. People who cannot or prefer not to drive should have safe and efficient transportation choices.
- Going beyond minimum design standards: Transportation agencies are encouraged, when possible, to avoid designing walking and bicycling facilities to the minimum standards. For example, shared-use paths that have been designed to minimum width requirements will need retrofits as more people use them. It is more effective to plan for increased usage than to retrofit an older facility. Planning projects for the long-term should anticipate likely future demand for bicycling and walking facilities and not preclude the provision of future improvements.
- Integrating bicycle and pedestrian accommodation on new, rehabilitated, and limited-access bridges: DOT encourages bicycle and pedestrian accommodation on bridge projects including facilities on limited-access bridges with connections to streets or paths.
- Collecting data on walking and biking trips: The best way to improve transportation networks for any mode is to collect and analyze trip data to optimize investments. Walking and bicycling trip data for many communities are lacking. This data gap can be overcome by establishing routine collection of nonmotorized trip information. Communities that routinely collect walking and bicycling data are able to track trends and prioritize investments to ensure the success of new facilities. These data are also valuable in linking walking and bicycling with transit.
- Setting mode share targets for walking and bicycling and tracking them over time: A byproduct of improved data collection is that communities can establish targets for increasing the percentage of trips made by walking and bicycling.
- Improving nonmotorized facilities during maintenance projects: Many transportation agencies spend most of their transportation funding on maintenance rather than on constructing new facilities. Transportation agencies should find ways to make facility improvements for pedestrians and bicyclists during resurfacing and other maintenance projects.

Appendix B. Past Bikeway Improvements

Table B-1 shows the bikeway improvements that have occurred since the 2011 Plan was adopted.

Table B-1: Bicycle Improvements since 2011

Location	Description	Cost	Completion
Anne Arbor Ct. at Christensen Dr.	Reconfigure cul-de-sac to allow for bicycle access. Add curb ramps for bicycle access to Cupertino Memorial Park	$6,500	Spring 2016
Bollinger Rd. between Hyde Ave. and Miller Ave. (westbound)	Green bike lanes	$20,000	Summer 2015
Bollinger Rd. between Westlynn Wy. and De Anza Blvd	Narrow vehicle lanes to add accommodate lanes	$20,000	Winter 2015
Bubb Rd. between McClellan Rd and Rainbow Dr	Green and buffered bike lanes	$81,000	Summer 2015
Byrne Ct.	Remove gate, install bollards and reconstruct end of cul-de-sac	$6,500	Spring 2016
De Anza Blvd. approaching Stevens Creek Blvd., I-280, and Homestead Rd. (northbound)	Green bike lanes	$86,000	Fall 2016
De Anza College vicinity	Green and buffered bike lanes	$95,000	Spring 2016
Finch Ave. between Cupertino High School and Stevens Creek Blvd. (northbound)	Green bike lanes (intermittent)	$24,000	Summer 2015
Foothill Blvd. at Stevens Creek Blvd.	Bike lane extension through intersection	$3,500	Fall 2013
Forest Ave. at Randy Ln.	Reconfigure concrete divider for bicycle throughput	$8,000	Summer 2015
Homestead Rd. between Mary Ave. and Noranda Dr. (eastbound) Near Homestead High School	Green bike lanes and buffered bike lanes	$33,000	Summer 2015
Hyde Ave. between Bollinger Ave. and Shady Grove Dr.	Class III sharrows	$5,000	Summer 2015
McClellan Rd. between Byrne Ave. and 300' east of Stelling Ave.	Green bike lanes (intermittent)	$92,200	Summer 2015

Location	Description	Cost	Completion
McClellan Rd. between Foothill Blvd. and Byrne Ave.	Class III sharrows	$26,000	Winter 2014/Summer 2015
Miller Ave. between Stevens Creek Blvd. and Calle de Barcelona	Class III sharrows	$7,000	Fall 2015
Olive Ave.	Reconfigure cul-de-sac to allow for bicycle access	$6,500	Spring 2016
Orange Ave. at Granada Ave.	Reconfigure cul-de-sac to allow for bicycle access	$6,500	Spring 2016
Rainbow Dr. between Stelling Ave. and Bubb Rd.	Class III sharrows	$8,000	Summer 2015
Rodrigues Ave. between De Anza Blvd. and Blaney Ave.	Class II bike lanes	$16,000	Summer 2012
Stelling Ave. between 85 Fwy. and McClellan Rd.	Green and buffered bike lanes, and crosswalk striping	$45,000	Fall 2015
Stevens Creek Blvd. between Foothill Blvd. to SR-85	Green bike lanes (intermittent)	$92,000	Summer 2014
Stevens Creeks Blvd. between SR-85 and De Anza Blvd.	Green bike lanes	$93,000	Spring 2014
Stevens Creek Blvd. between De Anza Blvd. and Wolfe Ave.	Buffered bike lanes	$17,000	Fall 2015
Stevens Creek Trail Reach 2 between McClellan Rd. and Stevens Creek Blvd.	Class I bike path	$11.4 M*	Summer 2014
Tantau Ave. between Bollinger Rd. and Stevens Creek Blvd.	Class III sharrows	$13,000	Summer 2015
Torre Ave. between Rodrigues Ave. and Stevens Creek Blvd.	Road diet, relocate bike lane to the left of right-turn lane	$5,000	Winter 2013
Vista Dr. approaching Stevens Creek Blvd.	Bike signal and dedicated bike lane	$6,000	Summer 2015
Vista Dr. at Forest Ave.	Reconfigure concrete divider for bicycle throughput	$8,000	Summer 2015

*Cost includes a clear span bridge, fencing, amenities, crosswalk, connections to bus stop, and parking modifications

Appendix C. Community Input

Public Workshop #1

A public workshop was held on December 1, 2015. Workshop attendees were asked to provide their vision for bicycling in Cupertino, then presented with maps of existing conditions and invited to share challenges and opportunities for improving bicycling in in the city. Comments received at this workshop are listed in the tables below.

Vision Comments – Public Workshop #1

Vision Comments
No more cars, more bikes, or bike-like transportation. Streets should feel safe for everybody with different bike skills more of trails, Type I Bike Path.
Bike network should be regional, plan beyond city boundaries.
Like the City of Portland/ Eugene biking & walking should be comfortable. Continuous connections. Widen bike lanes on SCB/other streets.
Use public R.O.W. offered pathways that will provide access around city.
Having bicycle clubs at schools for education to encourage.
More signs/striping to enhance safety.
Increase bikers that commute for errands and day to day tasks.
#1 Bike City in U.S. in 2035
Minimize stops. E.g. @ stop signs
More biking to schools.
Unsafe large intersections/280 interchange- community priorities.
Wow! City (Holland, Portland)
Wider bike lanes

Vision Comments
Educated bikers and motorists
Bikes = more convenient
Bike parties on Stevens Creek Boulevard
Biking is promotion of health
“Bicycle-only” streets (wow!)
East-West cycling connection across county
Open wall around Vallco
Deputies on bikes
Tickets to cars and bike offenders
Better way-finding signage
Where to bike: UPPR
Where to bike: schools
Steven’s creek main artery (East-West cycling connection)
“Take % of asphalt away from cars and given to bikes by 2025”
Stevens Creek Boulevard to be a bicycle corridor! $ boost economy
Side by side bicycling permitted (widened lanes, social time)
Also on school routes so families can bike together
Where to bike: to green spaces
Where to bike: Foothill Blvd. at Stevens Creek Boulevard

Map Community Comments – Public Workshop #1

Topic	Location	Cross St A	Cross St B	Comment
Bike-Friendly Future				Car traffic will always be a reality
Bike-Friendly Future				Wider bike lanes (Rainbow Dr., etc.) Using rail lines
Bike-Friendly Future				Stoplights that recognize bikers
Bike-Friendly Future				Lighted crosswalks
Bike-Friendly Future				Illuminated solar night bikeways
Bike-Friendly Future				Schools and companies provide vests and bike lights
Bike-Friendly Future				Create connection between Foothill and Union Pacific
Bike-Friendly Future				Weatherproof/ covered bike parking
Bike-Friendly Future				Bike lanes in middle of Expressway (City of Sparks, Nevada)
	Blackberry Farm Park			wide pass
	Bubb Rd.			allow route thru De Anza
Challenging Areas				McClellan
Challenging Areas				Rainbow Dr.
Challenging Areas				SCB
Challenging Areas				Foothill
Challenging Areas				Wolfe
Challenging Areas				Freeway interchanges
Challenging Areas				Rainbow Dr.
Challenging Areas				McClellan
Challenging Areas				SCB & 85
Challenging Areas				De Anza & 280
Challenging Areas				Wolfe over freeway

Topic	Location	Cross St A	Cross St B	Comment
Challenging Areas				No trucks on De Anza Blvd. And school areas!
Challenging Areas				Over freeways
Challenging Areas				Wolfe & SCB "pork chop" is dangerous for bikes
Challenging Areas				Lawrence expressway turning route on Bollinger Southbound
Challenging Areas				Cars should not have eminent domain over bikes (mindset)
Community Priorities				Cannot Bike on SCB, Bike lane stops at SJC.
Community Priorities				De Anza Blvd. - from Prospect Ave. to SCB to the main St./Vallco Area.
Community Priorities				Stevens Canyon Road, no bike lanes. Look at speed limit on Foothill Blvd., lower speed. Enforce speeding.
Community Priorities				SCB and De Anza favored routes but unsafe at driveways going into Target and other commercial.
Community Priorities				No right turns @ De Anza and SCB.
Community Priorities				South of Round-a-bout @ Choker Areas @ Portal Ave.
Community Priorities				Intersection of Blaney and Bollinger, unsafe because of signal.
Community Priorities				Bike on McClellan to the library from N. Sterling Rd.
Community Priorities				Blaney Ave. @ Lawson, Create a path along the channel up to the "Apple" wall. Make Blaney Safer for kids going to school.
Community Priorities				Bicycle parking at commercial establishments are missing/bike rack not adequate to lock bikes.
Community Priorities				City should have standards for bicycle racks.
Community Priorities				Section of UPRR between Rainbow and McClellan should be improved for bikes.
Community Priorities				Put bike racks where it is visible and in a location which is secure.

Topic	Location	Cross St A	Cross St B	Comment
Community Priorities				Location of bike push button not convenient at McClellan and De Anza/Sedgwick Elementary @ Tantau Ave. (Ped Crossing)
Community Priorities				IRWL. Make it visible at night.
Community Priorities				Buffer feels safer than green.
	Creekside Park			park bike/ped traffic crowded
	De Anza by Apple			hole in fence
Focus Areas				schools (no cars near schools)
Focus Areas				Covered bike corrals
Focus Areas				Build bike bridge parallel to Wolfe instead of widening lanes
Focus Areas				Closing certain streets for rec. riding on certain days
Focus Areas				Redesign onramps on freeways to 90 degrees (cars have to slow)
Future				Street area closures to cars
Future				Bike clubs Collaboration with bike shops and ride-share services
Future				Less and slower cars, more bikes
Future				Vision zero (no deaths!)
Future				Parking meters for cars
Global				All ages! School children à retirees
Global				Connectivity (safe!) to where community wants to go ▪ Library/community center ▪ shopping/Vallco ▪ Offices
Global				Safer crossings with smart lighting and signal detection
Global				Outreach to the “interested but concerned”

Topic	Location	Cross St A	Cross St B	Comment
Global				Safety improvements to existing infrastructure (SC)
Global				Integrate Mary Ave. Bridge o Complete SCT
Global				Rails to Trails!
Global				School Routes
Global				Bike Share
Global				Education for all roadway users ▪ Schools ▪ Local companies ▪ Delivery drivers ▪ Regular drivers ▪ Bicyclists
Global				Residents making the conscious choice to ride à providing right environment
Global				More shared-use paths
Global				Class IV on major arterials
Global				Better connectivity to community destinations
Global				Bicycle Highways/ super highways N-S E-W
Global				Minimize conflict between bike and peds (esp. trail)
Global				Address challenge @driveways
Global				Bike boulevard
Global				Send kids to school without concern
Global				Cupertino should be a city where you don't need a car
Global				Consider e-bikes
Global				Bike Share
Global				Other device in bike lane (skateboard)
Global				Improve safety
Global				Vision zero traffic fatality

Topic	Location	Cross St A	Cross St B	Comment
Global				Better training and understanding re: collisions- PD Cause- root cause
Global				Lockers @ shopping
Global				Kids- feel good about kids biking
Global				Standard bike lane widths
Global				Trash bins in lanes
Global				More green lanes @intersections
Global				Timed lighting
	I-85	I-85	Homestead Rd.	burnout
	Mary Ave.	Mary Ave.	I-280	bike lane stops
	Mary Ave.	Mary Ave.	I-280	great opportunity to connect to SCT
	Mary Ave.	Mary Ave.	Stevens Creek Blvd.	connect through Oaks a lot
	Mary Ave.	Mary Ave.	Stevens Creek Blvd.	Bad!
	McClellan Ranch bike route			Class II - narrow
	McClellan Ranch Preserve			continue trail
	McClellan Rd.	Sterling Rd.	De Anza Blvd.	can't move bike lanes, big tree in road
	McClellan Rd.	Orange St.		Class IV
	McClellan Rd.	Orange St.		lots of driveways
	McClellan Rd.	Orange St.		chaos during school traffic
	Miller	Miller	Bollinger	Miller is a challenge
	N. Foothill	N. Foothill	Grant Rd.	shopping center driveway
	N. Foothill	N. Foothill	UPPR	needs improvement
	N. Foothill	N. Foothill	I-280	Improve 8B. Caltrans Rail to Trail.
	Salem Ave. west of N Foothill Hwy.			Enhance/improve; especially median.
Serves				All cyclists, skill-levels, age groups
Serves				Visitors to explore the city
Serves				All people should say, “Wow, biking here is incredible”

Topic	Location	Cross St A	Cross St B	Comment
Serves				Visitors
	South of I-280	N Sterling Rd	N De Anza Blvd.	Trail?
	Stevens Creek Blvd at Peninsula/ Bubb			Bad!
	Stevens Creek Blvd.	N Sterling Rd	N De Anza Blvd.	Class IV whole route
	Stevens Creek Blvd.	N Sterling Rd	N De Anza Blvd.	better bike parking
	Stevens Creek Blvd.			folks like the bike lanes on Stevens Creek Boulevard
	Stevens Creek Blvd.			how can folks get to Stevens Creek trail?
	Stevens Creek Blvd.			more signs than sharing
	Stevens Creek Blvd.			vote sharrows
	Stevens Creek Blvd.	Stevens Creek Blvd.	Peninsula/Bubb	Please improve
	The Oaks Shopping Center			bike parking needed
	Torre	Torre	Rodrigues	avoid Torre
	Torre	Torre	Rodrigues by library and City Hall	better access
	UPRR			rail w/trail
	UPRR	UPPR	Heney Creek	CIP project
	UPRR	UPPR	Heney Creek	Bike/ped neighborhood connections at cul de sacs
	UPRR right of way			rails to trails
	UPRR right of way			Railroad and freeway crossing improvements
	UPRR right of way			negotiate with private owners for row for separation
	Varian Park			steep steps
	William Faria Elementary	N Sterling		how to get access?

Public Workshop #2

A public workshop was held on March 16, 2016. Workshop attendees were asked to provide feedback on proposed goals, policies, infrastructure, and programs for the bike plan update. Comments received at this workshop are listed in the tables below.

Map Community Comments – Public Workshop #2

Topic	Location	Cross St A /Intersection	Cross St B	Comment
Infrastructure	Permanente Rd/ Stevens Creek Blvd	Hammond Snyder Loop Trail		high priority
Infrastructure	Starling Dr.	Foothill Blvd.		connect Starling Dr bike blvd to Cristo Rey Dr bike lanes
Infrastructure	Mary Ave.	Homestead Rd.		Tough crossing of Homestead
Infrastructure	Homestead HS			Bike racks needed
Infrastructure	Palm Ave.	Stevens Canyon Rd.		Proposed bike route (Palm) needs a sign on Stevens Canyon Rd (wayfinding)
Infrastructure	Mary Ave.	Bubb Rd. at Stevens Creek Blvd	Mary Ave at The Oaks	Connect (bike route from proposed Hwy 85 bike/ped bridge to Stevens Creek Blvd at Bubb Rd)
Infrastructure	Campus Dr	McClelan Rd.		Show existing connection between Campus Dr and McClellan Rd near Hooshang Ct
Infrastructure	Greenleaf Dr.	N Stelling Rd.		Important to connect students living west of De Anza Blvd to Lawson Middle School (via Greenleaf Dr)
Infrastructure	Union Pacific Trail	Bubb Rd	The Oaks	Access and connectivity important between Union Pacific Trail and east of Highway 85
Infrastructure	McClellan Rd.	N De Anza Blvd.		Improve crossing of DeAnza
Infrastructure	Stevens Creek Blvd.	N De Anza Blvd.		Improve crossing of DeAnza
Infrastructure	N. Portal Ave.	Stevens Creek Blvd.		Dangerous crossing
Infrastructure	I-280	N Wolfe Rd.		Access to Apple Important

Topic	Location	Cross St A /Intersection	Cross St B	Comment
Infrastructure				Love the Cupertino Loop Trail, coolest thing, make it a priority
Infrastructure	Stevens Creek Trail	Scenic Circle		Unsure if gate to Stevens Creek Trail is open or closed to the public
Infrastructure	Stevens Creek Blvd	Foothill Blvd	Tantau Ave	Strong support for Class IV on Stevens Creek Blvd
Infrastructure	Lane on east border of Lincoln Elementary School			Show bikeway through school parking lot, but available only to students and only open during school hours (existing)
Infrastructure	Lane on east border of Lincoln Elementary School			Wolfe over freeway
Infrastructure	I-85	Rainbow Dr.	De Anza Blvd	Very uncomfortable freeway crossing
Infrastructure	McClellan Rd	De Anza Blvd		Bicyclists have to push the pedestrian button to cross De Anza Blvd, needs passive detection
Infrastructure	Mariani Ave.	Infinite Loop		Connect proposed bike blvd to Tantau Ave & Santa Clara
Infrastructure	Vallco Mall	Stevens Creek Blvd.		Needs intersection improvements around Vallco Mall
Infrastructure	N Tantau	Homestead Rd	Stevens Creek Blvd	Connection needed
Infrastructure	Calle de Barcelona	Miller Ave	Finch Ave	Connection needed
Infrastructure	Calle de Barcelona	Miller Ave	Finch Ave	Route is well used today
Infrastructure	Phil Lane	Creekside Park	Tantau Ave	Kids don't use this route
Infrastructure	Phil Lane	Finch Ave		Intersection not controlled
Infrastructure	Global			Streets need more repaving
Infrastructure	Stevens Creek Blvd	De Anza Blvd		Make Stevens Creek and De Anza 2 lanes in each direction for cars, use the third lane for bikes
Infrastructure	Agelant Campus			Coordinate with City of Santa Clara Agelant Campus plan to connect bikeways in northeast Cupertino

Topic	Location	Cross St A /Intersection	Cross St B	Comment
Infrastructure	Sterling Barnhart Park	Lawrence Expressway		Is a bicycle/pedestrian bridge over Lawrence Expressway feasible at this location?
Infrastructure	UPRR ROW	Stevens Creek Blvd		Need to connect trails across blocked fences
Infrastructure	Trail through Canyon Oaks Park			This is a neighborhood bikeway
Infrastructure	Foothill Blvd	I-280		Improve Foothill bike lanes at on ramps and off ramps
Infrastructure	Carmen St bike/ped bridge	Stevens Creek Blvd		This is great!
Infrastructure	Scenic Blvd	Carmen St	Stevens Creek	Add bike blvd signage (wayfinding)
Infrastructure	UPRR			Look at using UPRR ROW to get under I-280
Infrastructure	Scenic Circle	Scenic Blvd	San Fernando Ave	Connect across Stevens Creek Trail
Infrastructure	Jollyman Park			Is a creek trail feasible here?
Infrastructure	Global			I-280 Pathway is a great idea
Infrastructure	Hwy 85 bike/ped bridge	Mary Ave	Grand Ave	Excellent project
Infrastructure	Bubb Rd	Stevens Creek Blvd		Please improve intersection
Infrastructure	UPRR ROW	November Dr		Please add crossing of creek & railroad for bikes
Infrastructure	Greenleaf Dr	Bandley Dr		Curb cut improvement needed
Infrastructure	De Anza Blvd			Class IV needed on De Anza
Infrastructure	McClellan Rd	East of Stelling Rd		Remove pine tree to build bike lanes
Infrastructure	De Anza Blvd	McClellan Rd		Please improve intersection
Infrastructure	Regnart Creek	De Anza Blvd		Can Regnart Creek Trail extend across De Anza?
Infrastructure	Merritt Dr	Larry Way		Make crossing clear for bikes & peds
Infrastructure	Rodrigues Ave	De Anza Blvd	Blaney Ave	Can you make bike lanes buffered?
Infrastructure	Blaney Ave	Stevens Creek Blvd		Left turns are hard here
Infrastructure	N Wolfe Rd	I-280		Can there be a bike path here?
Infrastructure	Perimeter Rd Path	Vallco Mall		Can this path connect to the I-280 path?
Infrastructure	Stevens Creek Blvd	Portal Ave		Fixing this intersection will be great for kids traveling to school
Infrastructure	Miller Ave	Stevens Creek Blvd	Phil Lane	Bike lanes are needed badly here

Topic	Location	Cross St A /Intersection	Cross St B	Comment
Infrastructure	Bollinger Rd	Alderbrook Lane	De Anza Blvd	Current bike lanes are in door zone, can bike lane be separated from parked cars?
Infrastructure	Calle de Barcelona	Miller Ave	Finch Ave	This is the preferred bike route for students
Programs	Global			Please have bike riders in single file in residential areas. Also, don't have headphones in both ears for safety.
Programs	Global			Bicycle ticket diversion programs should not ticket bicyclists for a 1st infraction. 1st time should be a warning, 2nd time should be a ticket or diversion program
Programs	Global			Add E-bikes bike lockers
Global	Global			VTA supposed to support UPRR trail
Global	Global			Desires maps showing implementation of plan in 5, 10, 15, and 20 year increments
Global	Global			Show Connections from Neighborhoods to schools explicitly on maps

Bicycle Pedestrian Commission

November 18, 2015 Meeting

The Cupertino Bicycle Pedestrian Commission (BPC) met on November 18, 2015. The purpose of the November BPC meeting was to gather input on community priorities for the Bicycle Transportation Plan Update. The meeting was attended by the full commission as well as eight members of the public.

The following list are notes taken from the meeting.

- The BPC has already developed a vision statement for bicycling in Cupertino - the vision statement for the bike plan should reflect that
- The top priority for the BPC is focusing on safety and access to schools
- The plan should emphasize an 8-to-80 focus on bicycle networks and access for all residents
- The plan should seek to inspire and/or grab attention of the public and the council - provide something they can tout when supporting more funding for projects
- The plan should provide equal focus on education/encouragement, not just infrastructure
- Providing safe, comfortable routes to Apple locations and to the future Vallco development will be key in increasing rates of bicycling
- In addition to Vallco & Apple, consider also the future impacts of The Oaks development
- Make sure items from the BPC Items Catalog are considered in bike plan recommendations
- Make sure the school commute programs administered by the Public Safety Commission are documented in the plan
- Consider activity generators outside of Cupertino (but still nearby) when crafting recommendations
- Consider schools outside of Cupertino that have enrollment boundaries within the City
- Confirm parameters of the Bike Network Stress Test through City before analysis is run
- Review VTA plans for BRT in Cupertino for compliance with the bike plan recommendations
- Review traffic mitigation plans for Apple & Vallco for incorporation of bicycle network improvements into bike plan
- Review concept plans for bike path on the southern side of I-280 ROW - a proposed transportation investment via Vallco/Apple
- Review the Joint Cities study for the Stevens Creek Trail extension and incorporate review into existing conditions analysis

January 20, 2016 Meeting

The BPC also met on January 20, 2016 and discussed the Cupertino Bicycle Transportation Plan. While no formal action was taken, general agreement was expressed on the following tenets to ensure inclusion in the Plan.

Tenet #1

To achieve the commission's goals for intra-city bike commutes will require a safe, on-street bicycle network. This will be achieved by implementing a Class IV protected bikeway network including the following major arteries:

- Stevens Creek Boulevard from Foothill Boulevard to Wolfe Road (East-West)
- Stelling Road from Rainbow Drive to Stevens Creek Boulevard (North-South)
- Wolfe Road from Homestead Road to Stevens Creek Boulevard (North-South)
- McClellan Road from Byrne Avenue to Stelling Road (East-West)

Tenet #2
More Class I bike/walkways are needed for off-street travel. This must include:

- A path parallel to the Union Pacific RR railroad tracks from Stevens Creek to Saratoga Sunnyvale Road
- The inner-city bikeway (as proposed by Gary Jones)

Tenet #3
We need to provide connectivity to the Stevens Creek Trail. This will require significant improvements to the major feeder routes providing access to the Stevens Creek Trail. They are Foothill Boulevard and Mary Avenue.

Tenet #4
We need to provide better and safer routes to schools. That will include enlarging/improving smaller roads including Rainbow Drive.

March 16, 2016 Meeting

The BPC met on March 16th to consider the draft bicycle plan. At this meeting, commissioners and members of the public provided input on the recommended infrastructure projects, programs, and plan policies in the draft Bicycle Plan Update document.

The following list are notes taken from the meeting.

- Commissioners were very supportive of the plan's general recommendations and approach
- The Mary Avenue bicycle/pedestrian bridge over I-280 should allow electric bicycles
- 4 cul-de-sacs were recently opened for through bicycle access, and should be shown in the plan (Appendix B has subsequently been updated)
- The City is organizing a "Pedal for the Planet" event on Earth Day, April 30th
- Stronger language should be used in the plan for the prioritization of streets for Class IV separated bikeways or for buffered bike lanes
- The intersection of McClellan Rd at De Anza Blvd needs additional focus for improvement & prioritization
- Better access is needed to parks in West Cupertino from neighborhoods in the east
- Include coordination with City of Sunnyvale for Homestead Road
- Include coordination with City of San Jose for Bollinger Rd and De Anza Blvd
- Commissioners asked about the feasibility of a center-running bike lane on De Anza Blvd
- Some commissioners state a preference for Class IV separated bikeways on De Anza Blvd
- Commissioners asked if a grade-separated bicycle/pedestrian crossing of De Anza Blvd was feasible
- There was a request for more detailed or updated costs for Open Streets events in Cupertino
- SVBC was recommended as a partner for ticket diversion safety classes

- Commissioners asked for strong coordination with the Sherriff's Department for a potential Vision Zero policy
- Commissioners expressed interest in a "use case map" of the Bike Network Stress Test, focused on a single school, measuring the impacts of the bike plan recommendations.
- Show schools and libraries on all maps in the plan document
- More detailed written analysis was requested for the Bike Network Stress Test analysis in the Needs Assessment chapter
- Commissioners wanted to know how collision history & analysis impacted project recommendations
- Commissioners asked that collision results be more clearly quantified and compared to collision history in nearby cities
- More detail was requested for the education section of programmatic recommendations
- BPC requested project cost estimates and project prioritization be sent to BPC at their April meeting
- Improvements to freeway interchanges needed to be prioritized

Appendix D. Bicycle Design Guidelines

The sections that follow serve as an inventory of bicycle design treatments and provide guidelines for their development. These treatments and design guidelines are important because they represent the tools for creating a bicycle-friendly, safe, accessible community. The guidelines are not, however, a substitute for a more thorough evaluation by an engineer upon implementation of facility improvements.

The design guidelines presented in this appendix are a combination of minimum standards outlined by the California Highway Design Manual's design guidelines, recommended standards prescribed by the American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities, National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide, and the California Manual on Uniform Traffic Control Devices.

Additional design guidance and details can be found in the following documents:

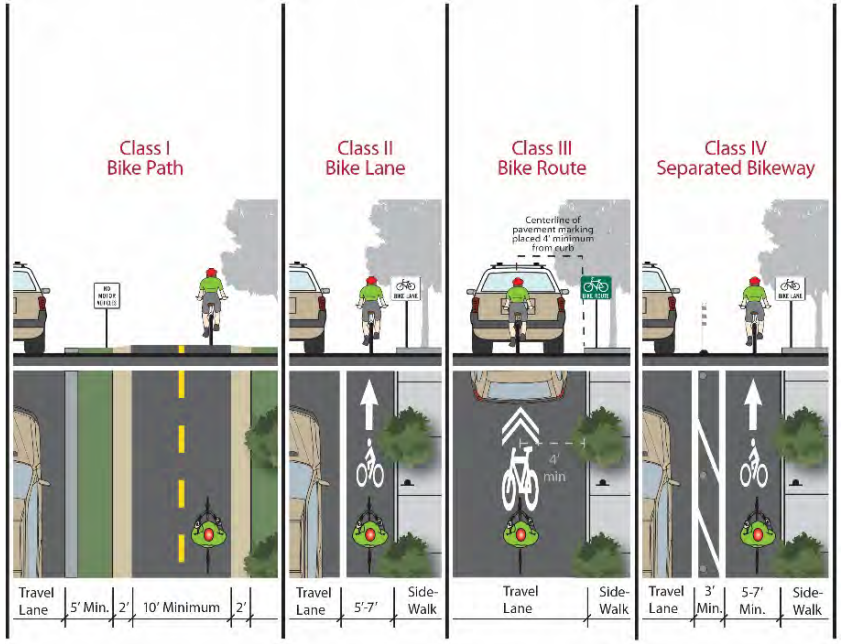
- California MUTCD (2014): http://www.dot.ca.gov/hq/traffops/engineering/mutcd/ca_mutcd2014rev1.htm
- Caltrans Highway Design Manual (2014): http://www.dot.ca.gov/hq/oppd/hdm/hdmtoc.htm
- Caltrans Design Information Bulletins: http://www.dot.ca.gov/hq/oppd/dib/dibprg.htm
- Caltrans Standard Plans: http://www.dot.ca.gov/hq/esc/oe/project_plans/HTM/06_plans_disclaim_US.htm
- NACTO Urban Bikeway Design Guide (endorsed by Caltrans, April 2014): http://nacto.org/publication/urban-bikeway-design-guide/

This appendix is not intended to replace existing state or national mandatory or advisory standards, nor the exercise of engineering judgment by licensed professionals.

This Appendix includes the following guidelines:

Caltrans Bikeway Classification Overview

Caltrans has defined four types of bikeways in Chapter 1000 of the Highway Design Manual and in Design Information Bulletin 89: Class I, Class II, Class III, and Class IV. Minimum standards for each of these bikeway classifications are shown below.



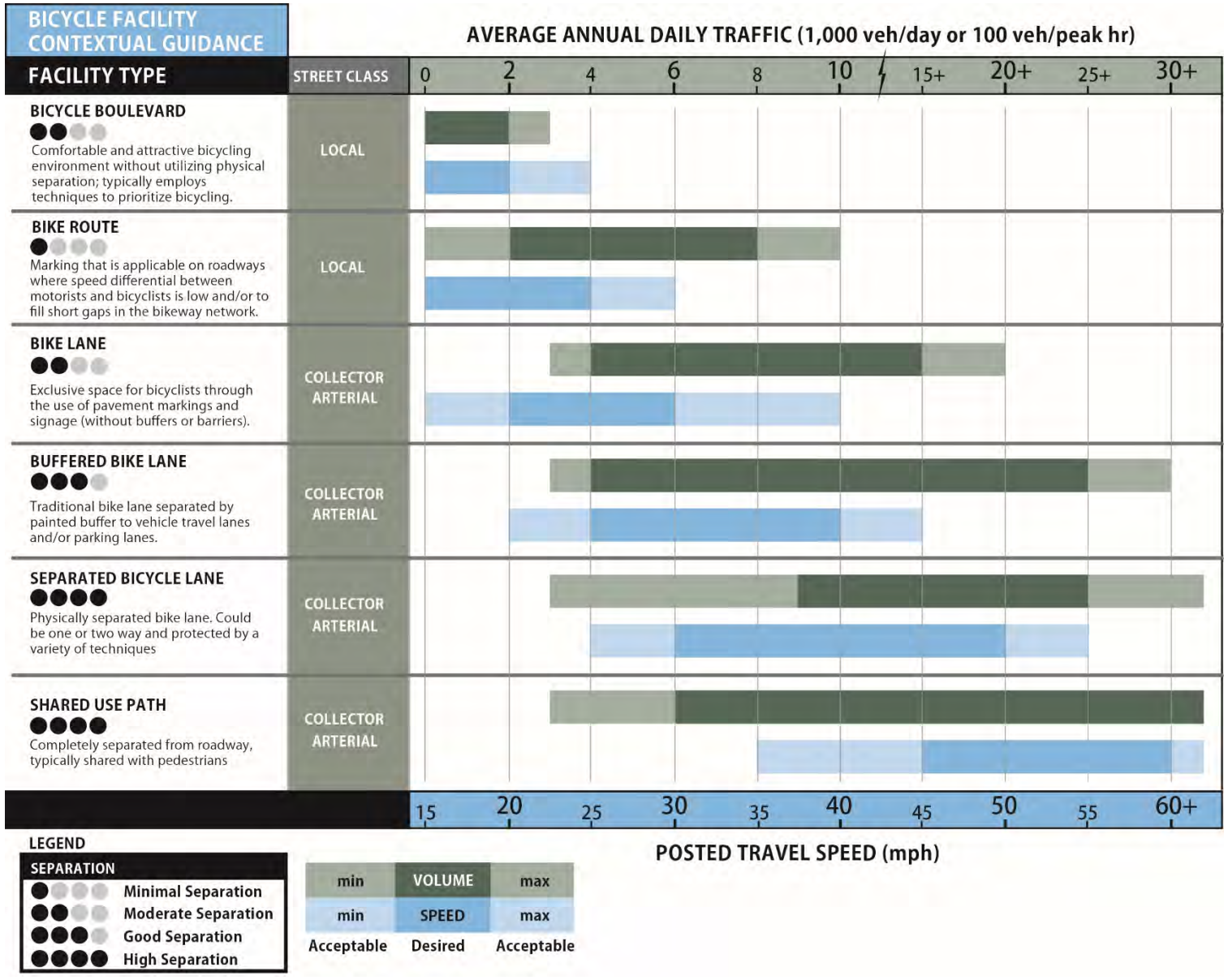
Bicycle Facility Guidance

Selecting the best bikeway facility type for a given roadway can be challenging, due to the range of factors that influence bicycle users' comfort and safety. There is a significant impact on cycling comfort when the speed differential between bicyclists and motor vehicle traffic is high and motor vehicle traffic volumes are high.

Facility Selection Table

As a starting point to identify a preferred facility, the chart below can be used to determine the recommended type of bikeway to be provided in particular roadway speed and volume situations. To use this chart, identify the appropriate daily traffic volume and travel speed on the existing or proposed roadway, and locate the facility types indicated by those key variables.

Other factors beyond speed and volume which affect facility selection include traffic mix of automobiles and heavy vehicles, the presence of on-street parking, intersection density, surrounding land use, and roadway sight distance. These factors are not included in the facility selection chart below, but should always be considered in the facility selection and design process.

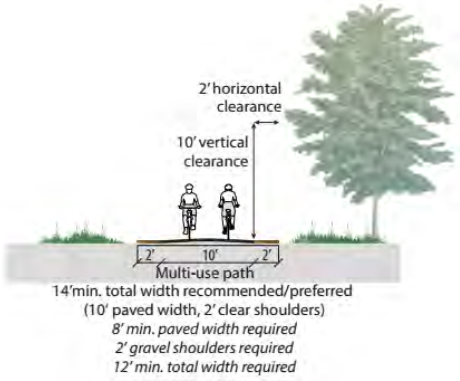

BICYCLE FACILITY CONTEXTUAL GUIDANCE
AVERAGE ANNUAL DAILY TRAFFIC (1,000 veh/day or 100 veh/peak hr)
FACILITY TYPE
STREET CLASS
0
2
4
6
8
10
15+
20+
25+
30+
BICYCLE BOULEVARD
Comfortable and attractive bicycling environment without utilizing physical separation; typically employs techniques to prioritize bicycling.
LOCAL
BIKE ROUTE
Marking that is applicable on roadways where speed differential between motorists and bicyclists is low and/or to fill short gaps in the bikeway network.
LOCAL
BIKE LANE
Exclusive space for bicyclists through the use of pavement markings and signage (without buffers or barriers).
COLLECTOR ARTERIAL
BUFFERED BIKE LANE
Traditional bike lane separated by painted buffer to vehicle travel lanes and/or parking lanes.
COLLECTOR ARTERIAL
SEPARATED BICYCLE LANE
Physically separated bike lane. Could be one or two way and protected by a variety of techniques
COLLECTOR ARTERIAL
SHARED USE PATH
Completely separated from roadway, typically shared with pedestrians
COLLECTOR ARTERIAL
15
20
25
30
35
40
45
50
55
60+
POSTED TRAVEL SPEED (mph)
LEGEND
SEPARATION
Minimal Separation
Moderate Separation
Good Separation
High Separation
min
VOLUME
max
min
SPEED
max
Acceptable
Desired
Acceptable

Class I Bike Path

In order to accommodate both bicyclists and pedestrians, Class I paths should be designed to the minimum Caltrans standards shown below. In locations with high use, or on curves with limited sight distance, a yellow centerline should be used to separate travel in opposite directions. High use areas of the pathway should also provide additional width (up to 12 feet) as recommended below. Lighting should be provided in locations where evening use is anticipated or where paths cross below structures.

CLASS I
Multi-Use Path

Provides a completely separated right of way for the exclusive use of bicycles and pedestrians with crossflow minimized.



14'min. total width recommended/preferred
(10' paved width, 2' clear shoulders)
8' min. paved width required
2' gravel shoulders required
12' min. total width required

Summary of Standards

- Eight feet (2.4 meters) is the minimum width for Class I facilities.
- Eight feet (2.4 meters) may be used for short neighborhood connector paths (generally less than one mile in length) due to low anticipated volumes of use.
- Ten feet (3.0 meters) is the recommended minimum width for a typical two-way bicycle path.
- Twelve feet (3.6 meters) is the preferred minimum width if more than 300 users per peak hour are anticipated, and/or if there is heavy mixed bicycle and pedestrian use.
- A minimum 2-foot (0.6 meter) wide graded area must be provided adjacent to the path to provide clearance from trees, poles, walls, guardrails, etc. A 2% cross slope is optimum. On facilities with expected heavy use, a yellow centerline stripe is recommended to separate travel in opposite directions.
- Paths should be constructed with adequate subgrade compaction to minimize cracking and sinking, and should be designed to accommodate appropriate loadings, including emergency vehicles.
- A 2% cross slope shall be provided to ensure proper drainage.
- Stopping sight distance should conform to the California Highway Design Manual.

Additional Considerations

Multi-use path facilities that serve primarily a recreation rather than a transportation function, and will not be funded with federal transportation dollars, may not be required to be designed to Caltrans standards. However, state and national guidelines have been created with user safety in mind, and should be followed. Wherever any multi-use pathway intersects with a street, roadway, or railway, standard traffic controls should always be used.

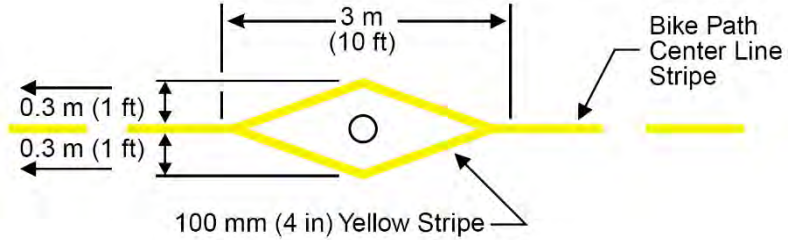
- Class I bike path crossings of roadways require preliminary design review. Generally, bike paths that cross roadways with average daily trips (ADTs) over 20,000 vehicles will require signalization or grade separation. Consider using bicycle signal heads at locations where paths meet signalized intersections.
- Landscaping should generally be low-water-consuming native vegetation and should have minimum debris.
- Lighting should be provided where commuters will use the bike path during hours of darkness. Illumination should be no less than 0.17-foot candle average maintained. Lighting should be spaced at a maximum of every 100 feet.
- Barriers at pathway entrances should be clearly marked with reflectors and be ADA accessible (minimum five feet clearance).
- Bike path construction should take into account impacts of maintenance and emergency vehicles on shoulders, as well as vertical and structural requirements. Paths should be constructed with adequate subgrade compaction to minimize cracking and sinking.
- The width of structures should be the same as the approaching pathway width, plus minimum two-foot wide clear areas.
- Where feasible, provide two-foot wide unpaved shoulders for pedestrians/runners, or a separate treadway.
- Direct pedestrians to the right side of the pathway with signing and/or stenciling.

Class I Bike Path Bollards

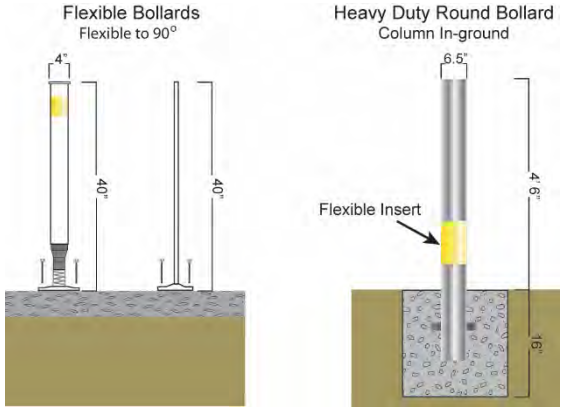
Minimize the use of bollards to avoid creating obstacles for bicyclists. Bollards, particularly solid bollards, have caused serious injury to bicyclists. The California MUTCD explains, "Such devices should be used only where extreme problems are encountered" (Section 9C.101). Instead, design the path entry and use signage to alert drivers that motor vehicles are prohibited.

- Bollards are ether fixed or removable and may be flexible or rigid. Flexible bollards and posts are designed to give way on impact and can be used instead of steel or solid posts. Bollards are typically installed using one of two methods: 1)The bollard is set into concrete footing in the ground; and 2) the bollard is attached to the surface by mechanical means (mechanical anchoring or chemical anchor).
- Where removable bollards are used, the top of the mount point should be flush with the path's surface so as not to create a hazard. Posts shall be permanently reflectorized for nighttime visibility and painted a bright color for improved daytime visibility.
- Striping an envelope around the post is recommended.
- When more than one post is used, an odd number of posts at 1.5m (5-foot) spacing is desirable. Wider spacing can allow entry by adult tricycles, wheelchair users and bicycles with trailers.

Barrier Post Striping

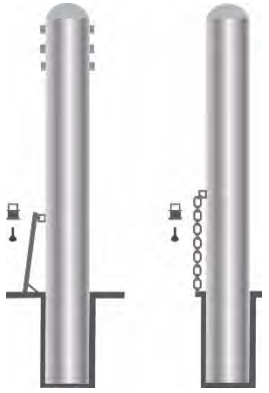


Flexible Bollards



Source: Lighthouse Bollards. *Source: Andian Sales*

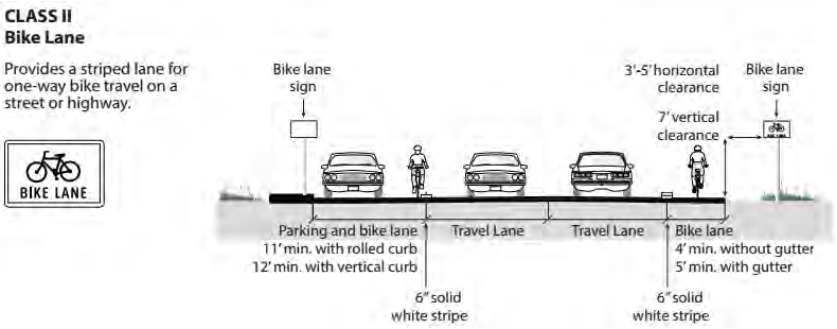
Removable Bollards



Source: Reliance Foundry Co. Ltd

Class II Bike Lane

On-street bike lanes (Class II Bikeways) designate an exclusive space for bicyclists through the use of pavement markings and signage. The bike lane is located directly adjacent to motor vehicle travel lanes and is used in the same direction as motor vehicle traffic. Bike lanes are typically on the right side of the street, between the adjacent travel lane and curb, road edge or parking lane.



Summary of Standards

- Bicycle lanes shall be one-way facilities, running with the direction of traffic. Where on-street parking is allowed, bicycle lanes must be striped between the parking area and the travel lanes.
- Width of bicycle lane:
- Without an existing gutter, bicycle lanes must be a minimum of four feet wide.
- With an existing gutter, bicycle lanes must be a minimum of five feet wide measured from the curb face (within the bike lane, a minimum width of three feet must be provided outside the gutter).
- Where on-street parking stalls are marked and bicycle lanes are striped adjacent to on-street parking, bicycle lanes must be a minimum of five-feet wide.
- Where on-street parking is allowed but stalls are not striped, bicycle lanes must be a minimum of 12-feet wide measured from the curb face. Depending on the type and frequency of traffic, wider bicycle lanes may be recommended.
- Bicycle lane striping standards:
- Bicycle lanes shall be comprised of a six-inch solid white stripe on the outside of the lane, and a four-inch solid white stripe on the inside of the lane.

Class II Bikeway - Additional Design Recommendations:

Intersection and interchange treatment—Caltrans provides recommended intersection treatments in Chapter 1000 including bike lane "pockets" and signal loop detectors. The City should develop a protocol for the application of these recommendations, so that improvements can be funded and made as part of regular improvement projects.

- Bike lane pockets (min. four-feet wide) between right turn lanes and through lanes should be provided wherever available width allows, and right turn volumes exceed 150 motor vehicles/hour.

- Word and symbol pavement stencils should be used to identify bicycle lanes, as per Caltrans and MUTCD specifications.

Buffered Bicycle Lanes

Buffered bike lanes are conventional bicycle lanes paired with a designated buffer space, separating the bicycle lane from the adjacent motor vehicle travel lane and/or parking lane.

Typical Application

- Anywhere a conventional bike lane is being considered.
- On streets with high speeds and high volumes or high truck volumes.
- On streets with extra lanes or lane width.
- Appropriate for skilled adult riders on most streets.

Design Features

- The minimum bicycle travel area (not including buffer) is 5 feet wide.
- Buffers should be at least 2 feet wide. If buffer area is 4 feet or wider, white chevron or diagonal markings should be used. (CAMUTCD 9C-104)
- For clarity at driveways or minor street crossings, consider a dotted line.
- There is no standard for whether the buffer is configured on the parking side, the travel side, or a combination of both.

Colored Bicycle Lanes

Colored pavement within a bicycle lane may be used to increase the visibility of the bicycle facility, raise awareness of the potential to encounter bicyclists, and reinforce priority of bicyclists in conflict areas.

Typical Application

- Within a weaving or conflict area to identify the potential for bicyclist and motorist interactions and assert bicyclist priority.
- Across intersections, driveways and Stop or Yield-controlled cross-streets.

Design Features

- Typical white bike lanes (solid or dotted 6” stripe) are used to outline the green colored pavement.
- In exclusive use areas, color application should be solid green.
- In weaving or turning conflict areas, preferred striping is dashed, to match the bicycle lane line extensions.
- The colored surface should be skid resistant and retro-reflective. (CAMUTCD 9C.02.02).

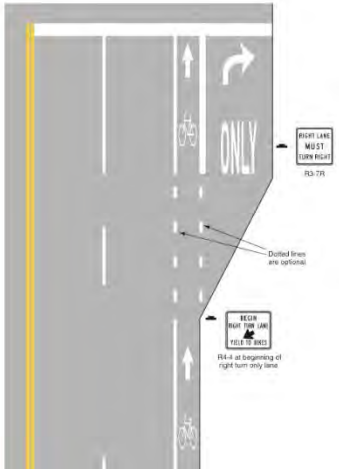
Class II Bike Lane at Intersection with Right Turn Only Lane

A bicyclist continuing straight through an intersection from the right of a right turn lane would be inconsistent with normal traffic behavior and would violate the expectations of right-turning motorists. Specific signage, pavement markings and striping are recommended to improve safety for bicyclists and motorists.

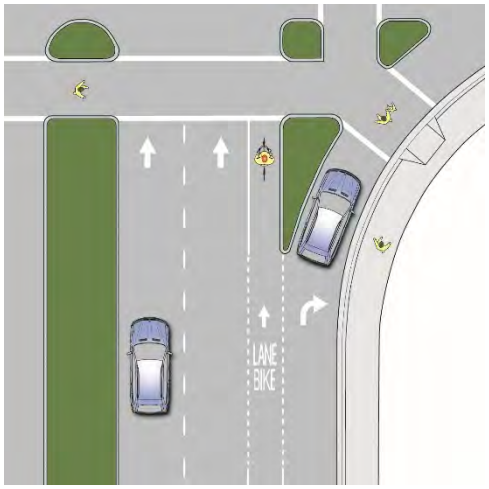
The appropriate treatment for right-turn only lanes is to place a bike lane pocket between the right-turn lane and the right-most through lane or, where right-of-way is insufficient, to drop the bike lane entirely approaching the right-turn lane. The design (right) illustrates a bike lane pocket, with signage indicating that motorists should yield to bicyclists through the merge area.

- Dropping the bike lane is not recommended, and should only be done when a bike lane pocket cannot be accommodated.
- Travel lane reductions may be required to achieve this design.

Some communities use colored bicycle lanes through the conflict zone.



Bike lane next to a right turn only lane



Bike lane next to a right turn only lane separated by a raised island

Colored bike lanes used to designate a conflict zone

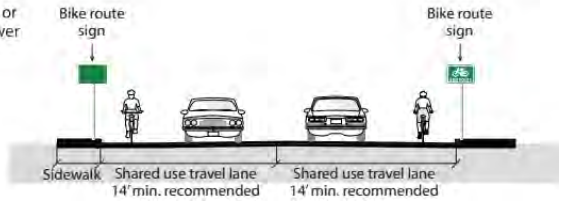
Class III Bike Route

Bike routes, or Class III bicycle facilities—(Caltrans designation) are defined as facilities shared with motor vehicles. They are typically used on roads with low speeds and traffic volumes, however can be used on higher volume roads with wide outside lanes or with shoulders. Bike routes can be established along through routes not served by shared use paths (Class I) or bike lanes (Class II), or to connect discontinuous segments of bikeway. A motor vehicle driver will usually have to cross over into the adjacent travel lane to pass a bicyclist, unless a wide outside lane or shoulder is provided.

Bicycle routes can employ a large variety of treatments from simple signage to complex treatments including various types of traffic calming and/or pavement stenciling. The level of treatment to be provided for a specific location or corridor depends on several factors as shown below.

CLASS III
Bike Route
Signed Shared Roadway

Provides for shared use with pedestrian or motor vehicle traffic, typically on lower volume roadways.

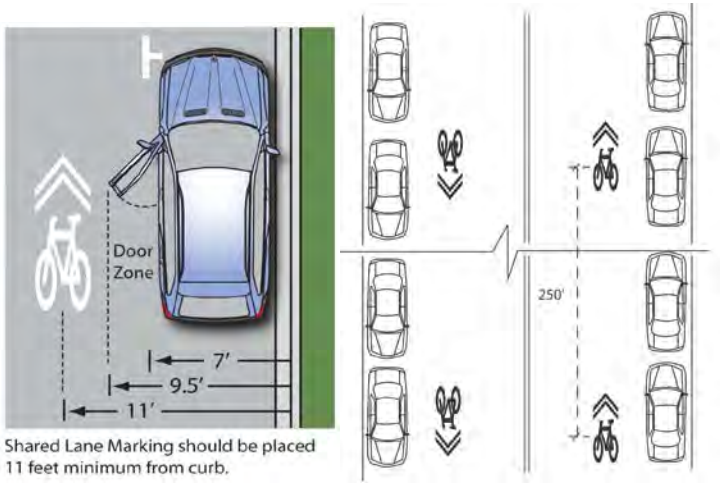


Summary of Standards

- Class III bikeways provide routes through areas not served by Class I or II facilities or provide connections between discontinuous segments of Class I or II bikeways.
- Class III facilities can be shared with either motorists on roadways or pedestrians on a sidewalk (not advisable).
- Bicycle routes on local streets should have vehicle traffic volumes under 1,000 vehicles per day. Traffic calming may be appropriate on streets that exceed this limit.
- Bicycle routes may be placed on streets with outside lane width of less than 15 feet if the vehicle speeds and volumes are low.
- Bicycle route signage standards:
- The D11-1 (CA) bicycle route sign shall be placed along the roadways at decision points, where users can turn onto or off the bikeway.
- Standard signage is shown in Chapter 9 of the 2012 California MUTCD.

Shared Lane Markings

The primary purpose of this shared use arrow is to provide positional guidance to bicyclists on roadways that are too narrow to be striped with bicycle lanes. Markings may be placed on the street to inform motorists about the presence of cyclists and also to inform cyclists how to position themselves relative to parked cars and the travel lane. The 2012 California MUTCD has approved the Shared Lane Marking for use in California jurisdictions on streets with or without on-street parallel parking.



Shared Lane Marking should be placed 11 feet minimum from curb.

Typical Applications

- Bicycle network streets that are too narrow for standard striped bicycle lanes.
- Bicycle network streets that have moderate to high parking turnover.
- Areas that experience a high level of "wrong-way" riding.

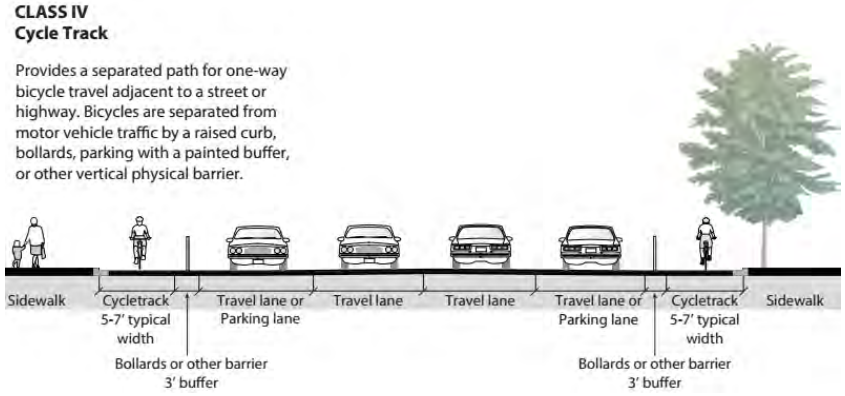
Guidelines

- Shared lane markings should be installed in conjunction with “share the road” signs.
- Shared lane markings should be spaced approximately 250 feet center to center, with the first arrow on each block or roadway segment placed no further than 100 feet from the nearest intersection.

Class IV Separated Bikeway

A separated bikeway (also called protected bike lane or cycle track) is an exclusive facility for bicyclists that is located within or directly adjacent to the roadway and that is physically separated from motor vehicle traffic with a vertical element.

Standards and specifications for this bicycle facility depends on the design (one- or two-way) and can be found at http://www.dot.ca.gov/hq/oppd/dib/dib89.pdf.



Typical Application

- To provide an on-street connection along a bicycle freeway alignment.
- Appropriate for high bicycle volumes and speeds when designed with appropriate dimensions
- Along streets with high motor vehicle volumes (9,000-30,000 ADT) and relatively high speeds (>25 mph).
- Along streets with high truck traffic (10% of total ADT).
- Suitable in areas of high parking turnover.

Guidelines

- Desired width of the bicycle travel area is 10 feet in areas with high bicycle volumes or uphill sections to facilitate safe passing behavior.
- Vertical separation treatments such as parking, movable planters or raised curbs or raised grade separation may be used. Buffer type may impact cost, drainage, bicyclist operating width, and aesthetics of the protected bike lane.
- Minimum buffer area width is 3 feet adjacent to parked cars to accommodate open doors, or 1.5 feet adjacent to travel lanes.
- Channelizing devices should be placed in the buffer area (CAMUTCD 3H.01).
- If painted buffer area is 4 feet or wider, white chevron or diagonal markings should be used.(CAMUTCD 9C.04)

Protected Intersection

A protected intersection uses a collection of intersection design elements designed to maximize user comfort within the intersection and promote a high rate of yielding to through bicyclists. The design is based on a setback bikeway crossing using physical separation within the intersection to define the turning paths of motor vehicles, slow motor-vehicle turning speed, and offer a comfortable refuge for bicyclists waiting within the intersection at a red signal.

Typical Application

- At signalized intersections along streets with protected bicycle lanes.
- Along crossings of minor streets with stop controlled approaches.
- May be compatible with conventional bicycle lanes or neighborhood bikeway facilities by transitioning the bikeway into separated bike lanes just upstream of the intersection.

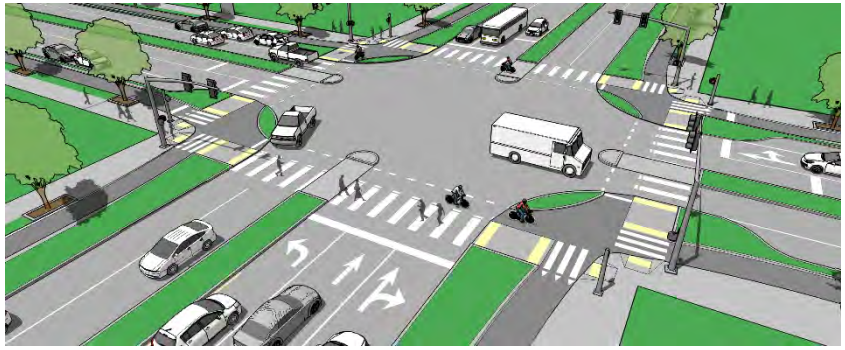
Guidelines

- Setback bicycle crossing of 20 feet allows for one passenger car to queue while yielding. A larger setback desired in high speed areas (> 35 mph). Smaller setback distance possible in slow-speed, space constrained conditions
- Corner safety island with a 15-20 foot corner radius desired to slow motor vehicle speeds. Larger radius designs may be possible when paired with a deeper setback or a protected signal phase.
- A forward stop bar should indicate the area for bicyclists to wait at a red signal
- If a permissive left turn is allowed, a median island extending into the intersection should be used to channelize and direct left turning motor vehicles.
- Intersection crossing markings should be used to identify the bicycle crossing. Consider green pavement to highlight the crossing area.

Further Considerations

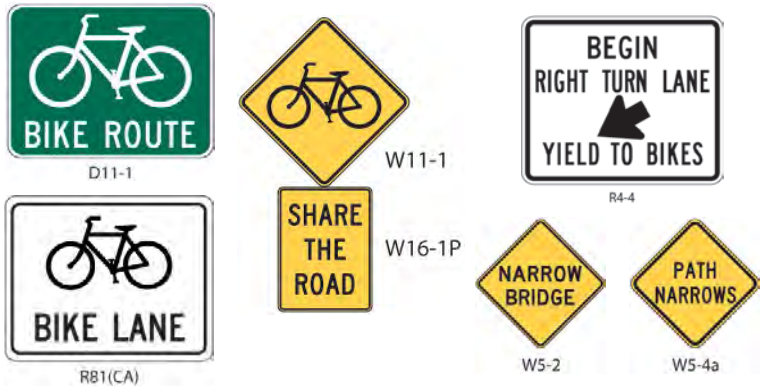
Colored pavement may be used within the corner refuge area to clarify use by bicyclists and discourage use by pedestrians or motorists.

Intersection approaches with high volumes of right turning vehicles should provide dedicated right turn only lane paired with a protected signal phase to separate the right turn movements from through bicycle movements.



On-Street Bikeway Regulatory & Warning Signage

Signage for on-street bikeways includes standard BIKE LANE and BIKE ROUTE signage, as well as supplemental signage such as SHARE THE ROAD, BIKE MAY USE FULL LANE, and warning signage for constrained bike lane conditions. The CA MUTCD provides further guidance on bikeway signage.



Typical Applications

- Various situations, specific to each site.
- The City should install SHARE THE ROAD signs along all Class III Bike Routes in addition to standard BIKE ROUTE signage.
- SHARE THE ROAD signs may be installed at one-half mile intervals along the designated route.

Guidelines

- Signage should be installed on existing signposts if possible, reducing visual clutter along the path or roadway.
- Bike route and bike lane signs should be placed at decision points.
- Where there is significant distance between decision points, bike route and bike lane signs should be repeated at regular intervals to confirm the route.

Wayfinding Signage

Wayfinding signage acts as a "map on the street" for bicyclists and is an important component of a bikeway network. Caltrans D11-1 and D-1 signage should be used on all designated bikeways at decision points, where users can turn onto or off the bikeway such as at an intersection.

Typical Applications

Confirmation Signs

- Placed every ¼ to ½ mile on off-street facilities and every 2 to 3 blocks along on-street bicycle facilities, unless another type of sign is used (e.g., within 150 ft of a turn or decision sign).
- Should be placed soon after turns to confirm destination(s). Pavement markings can also act as confirmation that a bicyclist is on a preferred route.

Turn Signs

- Near-side of intersections where bike routes turn (e.g., where the street ceases to be a bicycle route or does not go through).
- Pavement markings can also indicate the need to turn to the bicyclist.

Decision Signs

- Near-side of intersections in advance of a junction with another bicycle route.
- Along a route to indicate a nearby destination.

Guidelines

- Signage should be installed on existing signposts if possible, reducing visual clutter along the path or roadway.
- Where there is significant distance between decision points, wayfinding signage should be located at intervals of one-mile.
- Each sign should have a maximum of three destinations.
- Signage should be focused on major destinations such as cities and counties; transit stations; and community centers such as parks, schools and recreation centers.

Example Decision Wayfinding Sign

Example Confirmation Wayfinding Sign

Bicycle Detection at Actuated Traffic Signals

Traffic Operations Policy Directive 09-06, issued August 27, 2009 by Caltrans modified CA MUTCD 4D.105 to require bicyclists to be detected at all traffic-actuated signals on public and private roads and driveways. If more than 50 percent of the limit line detectors need to be replaced at a signalized intersection, then the entire intersection should be upgraded so that every line has a limit line detection zone. Bicycle detection must be confirmed when a new detection system has been installed or when the detection system has been modified.

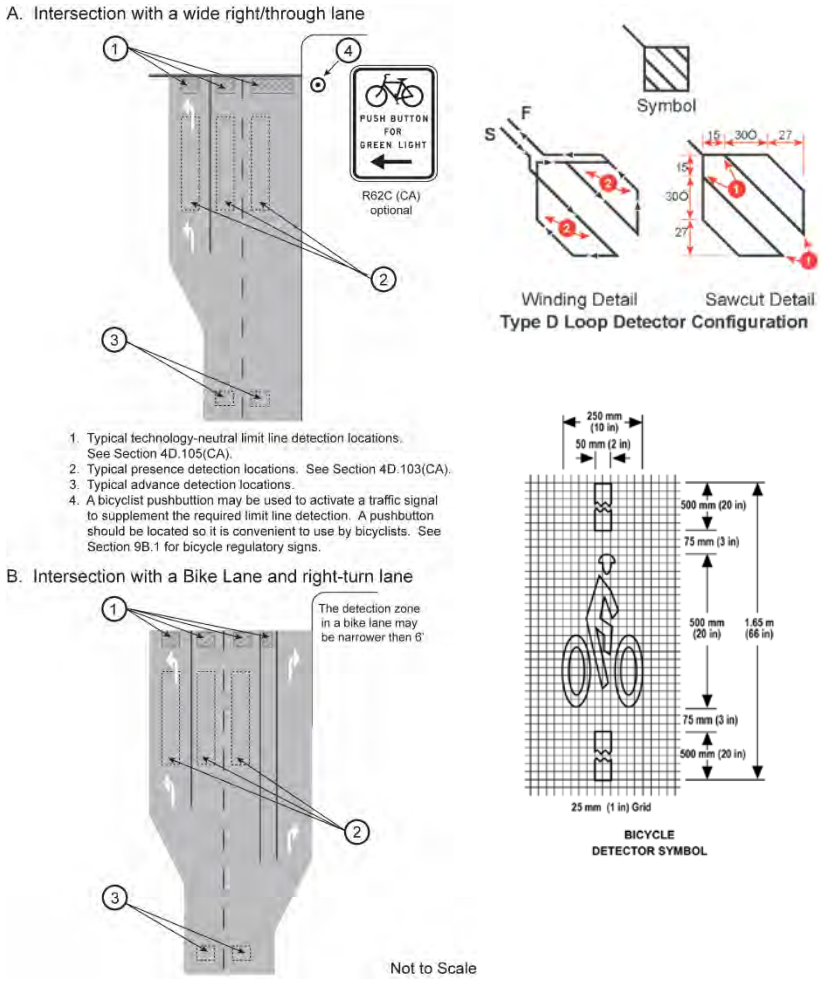
The California Policy Directive does not state which type of bicycle detection technology should be used. Two common types of detection are video and in pavement loop detectors. Push buttons may not be used as a sole method of bicycle detection.

Typical Applications

- At signalized intersections within bicycle lanes or general purpose travel Lanes
- At signalized intersections within left turn lanes used by bicyclists
- At signalized intersections within separated bike lanes.
- In conjunction with active warning beacons and pedestrian hybrid beacons.

Guidelines

- Type A, C, or D loop detectors should be used.
- Pavement markings should identify proper cyclist position above the loop detector.
- Loop detectors should provide adequate time for cyclists to cross the intersection, keeping in mind the slower travel speed (10-15 mph) of bicyclists.
- Bicycles must be detected with 95% accuracy within the 6-foot by 6-foot Limit Line Detection Zone.
- Where Limit Line Detection Zones are provided, minimum bicycle timing shall be 14.7 feet per second, plus a 6-second start-up time.



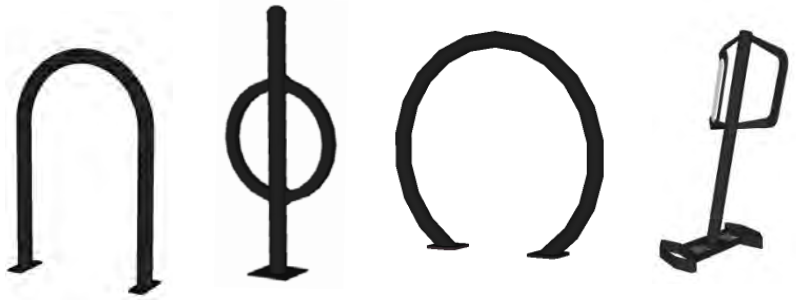
Source: Traffic Operations Policy Directive 09-06

Bicycle Parking

Secure bicycle parking is an essential element of a functional bicycle network. Bicycle racks are a common form of short-term secure bicycle parking and can be installed in various locations, including sites adjacent to retail such as parking lots, as well as in the public right of way in the furnishings zone of the sidewalk. Racks are appropriate for locations where there is demand for short-term bicycle storage. Bicycle lockers provide secure and sheltered bicycle parking and are recommended in locations where long-term bicycle storage is needed, such as transit stations.

Typical Applications

Bicycle parking should be installed throughout Cupertino with priority given to significant destinations such as parks, schools, shopping centers, transit hubs, and job centers.



U-Rack | Post and Loop | Horseshoe | Lightning Bolt™ Or Varsity Rack™

Recommended types of bicycle parking

Guidelines

- Bicycle parking should be a design that is intuitive and easy to use.
- Bicycle parking should be securely anchored to a surface or structure.
- Bicycle parking spaces should be at least six feet long and two-and-a-half feet wide. Overhead clearance should be at least seven feet.
- The rack element (part of the rack that supports the bicycle) should keep the bicycle upright by supporting the frame in two places. The rack should allow one or both wheels to be secured.
- A standard U-Rack is a simple and functional design that takes up minimal space on the sidewalk and is easily understood by users. Avoid use of multiple-capacity "wave" style racks. Users commonly misunderstand how to correctly park at wave racks, placing their bikes parallel to the rack and limiting capacity to one or two bikes.
- Position racks so there is enough room between parked bicycles; if it becomes too difficult for a bicyclist to easily lock their bicycle, they may park it elsewhere. Racks should be situated on 36-inch minimum centers.
- A five-foot aisle for bicycle maneuvering should be provided and maintained beside or between each row of bicycle parking
- Empty racks should not pose a tripping hazard for visually impaired pedestrians. Position racks out of the walkway's clear zone.
- Racks should be located close to a main building entrance, in a lighted, high-visibility, covered area protected from the elements. Long-term parking should always be protected.

Additional Considerations

All bicycle parking should be in a safe, secure area visible to passersby. Commuter locations should provide secure indoor parking, covered bicycle corrals, or bicycle lockers. Short term bicycle parking facilities, such as bicycle racks, are best used to accommodate visitors, customers, messengers and others expected to depart within two hours. They are usually located at schools, commercial locations, and activity centers such as parks, libraries, retail locations, and civic centers. Bicycle parking on sidewalks in commercial areas should be provided according to specific design criteria, reviewed by merchants and the public, and installed as demand warrants. The following table provides recommended guidelines for bicycle parking locations and quantities.

Recommended Guidelines for Bicycle Parking Location and Quantities

Land Use or Location	Physical Location	Quantity
Parks	Adjacent to restrooms, picnic areas, fields, and other attractions	8 bicycle parking spaces per acre
Schools	Near office and main entrance with good visibility	8 bicycle parking spaces per 40 students
Public Facilities (libraries, community centers)	Near main entrance with good visibility	8 bicycle parking spaces per location
Commercial, retail and industrial developments over 10,000 square feet	Near main entrance with good visibility	1 bicycle parking space per 15 employees or 8 bicycles per 10,000 square feet
Shopping Centers over 10,000 square feet	Near main entrance with good visibility	8 bicycle parking spaces per 10,000 square feet
Transit Stations	Near platform, security or ticket booth	1 bicycle parking space or locker per 30

Land Use or Location	Physical Location	Quantity
		automobile parking spaces
Multi-Family Residential	Near main entrance with good visibility	1 short-term bicycle parking space per 10 residential units AND 1 long-term bicycle parking space per 2 residential units

Appendix E. Project Prioritization

This appendix presents the project scoring criteria as well as the full list of projects and their ranking. All of the proposed infrastructure projects were ranked against the criteria described in Table E-1 and then tiered into short, mid, and long-term tiers based on a logical breakdown of scores and complexities of implementation. The intent of evaluating projects is to create a prioritized list of projects for implementation. As projects are implemented, lower ranked projects move up the list. The project list and individual projects to be included in this Plan are flexible concepts that serve as a guideline. The high-priority project list, and perhaps the overall project list, may change over time as a result of changing walking and bicycling patterns, land use patterns, implementation constraints and opportunities and the development of other transportation improvements.

Project Scoring Criteria

Table E-1 gives the scoring criteria each project was ranked against.

Table E-1: Project Scoring Criteria

Prioritization Criteria	Max Score
Safety	**20**
(Max 20 Point) Projects are scored on a scaled ranking from zero to twenty with locations with the most collisions receiving the maximum score.	
Stress Test Analysis	**5**
(5 Points) Routes which were identified as high stress in the Bicycle Network Stress Test.	
(2 Points) Routes which were identified as medium-high stress in the Bicycle Network Stress Test.	
Travel Routes to/near Schools	**20**
(20 Points) Directly connects to school(s) OR within 1/4 mile of the school.	
(10 Points) Connects to a bikeway that directly connects to a school and is located within 1/4 mile of the school.	

Prioritization Criteria	Max Score
(0 Points) Project does not connect to a school.	
Network Connectivity	**15**
(15 Points) Closes gap between two Class I trails OR creates a new connection across a major barrier such as a freeway, creek, arterial, or rail road tracks.	
(7 Points) Closes gap between two on-street bikeways OR extends a Class I trail OR enhances an existing arterial crossing.	
(1 Point) Extends on-street bikeway.	
Low-Stress Network Improvements	**20**
(20 Points) Upgrades an existing bikeway to a low-stress bikeway (Bicycle Boulevard, Class I Multi-Use Path, or Class IV Separated Bike Lane).	
(10 Points) Adds a new bikeway that is defined as a low-stress bikeway (Bicycle Boulevard, Class I Multi-Use Path, or Class IV Separated Bike Lane).	
(5 Points) Upgrades an existing bikeway to a lower-stress bikeway (bike lanes or buffered bike lanes).	
Trip Generators and Attractions	**10**
(10 Points) Directly connects to employment centers, retail/business centers, transit, community services, parks and recreation facilities and/or City facilities.	
(5 Points) Projects that directly connect to an existing facility that connects to an activity generator.	
(O Points) Project does not connect to an activity generator.	
Feasibility/Ease of Implementation	**10**
(10 Points) Projects that can be implemented within a one-to-five-year time frame, that do not require outside agency approval.	
(5 Points) Projects that can be implemented within a one-to-five year time frame, that require outside agency approval.	

Prioritization Criteria	Max Score
(1 Point) Projects that cannot be implemented within a one-to-five year time frame, that do not require outside agency approval.	
(0 Points) Projects that cannot be implemented within a one-to-five year time frame AND that require outside agency approval.	
TOTAL SCORE (Max. = 100 points)	**100**

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Appendix F. Project List

This appendix presents a complete list of recommended infrastructure projects, including project evaluation results and planning-level cost estimates. **Table F-1** shows the bikeway projects and spot improvement projects.

Table F-1: Bikeway Project Scores and Cost Estimates

Project	Location	Start	End	Notes	Miles	Safety	Stress Test	School Travel	Network Connectivity	Low Stress	Trip Generator	Feasibility	Total Score	Cost
Tier 1														
Class IV Separated Bikeway	Stevens Creek Blvd	Foothill Blvd	Tantau Ave	--	3.43	20	5	20	15	20	10	1	**91**	$4,120,000
Class IV Separated Bikeway	McClellan Rd	Byrne Ave	De Anza Blvd	--	1.43	9	5	20	15	20	10	1	**80**	$286,000
Configure Intersection	Stevens Creek Blvd	Stelling Rd	--	Study protected intersection in coordination with proposed Class IV	0	7	2	20	15	20	10	1	**75**	$550,000
Class III Bike Boulevard	Tri School East/West Bike Blvd (#7)	Linda Vista Dr at McClellan Rd	Hyannisport Dr at Bubb Rd	--	0.66	1	5	20	7	20	10	10	**73**	$33,000
Grade Separated Crossing Study	Highway 85 Crossing	Grand Ave	Mary Ave	--	0	20	5	10	15	10	10	1	**71**	$300,000
Class I Path	Union Pacific Trail	Prospect Rd	Stevens Creek Blvd	--	2.10	0	5	20	15	20	10	1	**71**	$1,678,000

Project	Location	Start	End	Notes	Miles	Safety	Stress Test	School Travel	Network Connectivity	Low Stress	Trip Generator	Feasibility	Total Score	Cost
Configure Intersection	McClellan Rd	Stelling Rd	--	Study protected intersection in coordination with proposed Class IV	0	2	2	20	15	20	10	1	**70**	$550,000
Class III Bike Boulevard	Portal Ave Bike Blvd (#5)	Portal Ave at Merritt Dr	Portal Ave at Wintergreen Dr	--	0.69	1	2	20	7	20	10	10	**70**	$35,000
Class IV Separated Bikeway	Finch Ave	Phil Ln	Stevens Creek Blvd	--	0.45	0	2	20	7	20	10	10	**69**	$545,000
Class III Bike Boulevard	West Cupertino North/South Bike Blvd (#9)	Orange Ave at Mann Dr	Fort Baker Dr at Hyannisport Dr	--	0.63	2	2	20	15	10	10	10	**69**	$32,000
Configure Intersection	McClellan Rd	Westacres Dr/Kim St	--	Study peanut roundabout to connect off-set north/south bike routes across McClellan	0	0	2	20	15	20	10	1	**68**	$200,000
Class I Path	I-280 Channel Bike Path	Mary Ave/Meteor Dr	Tantau Ave/Vallco Pkwy	--	2.87	2	5	20	15	10	10	5	**67**	$2,293,000
Class III Bike Boulevard	Civic Center to Sterling Barnhart Park Bike Blvd (#2)	Rodrigues Ave at Blaney Ave	Sterling Barnhart Park	--	1.41	3	2	20	7	20	5	10	**67**	$70,000
Tier 2														
Class II Buffered Bike Lane	De Anza Blvd	Homestead Rd	Bollinger Rd	--	1.73	15	2	20	7	10	10	1	**65**	$242,000

Project	Location	Start	End	Notes	Miles	Safety	Stress Test	School Travel	Network Connectivity	Low Stress	Trip Generator	Feasibility	Total Score	Cost
Class IV Separated Bikeway	Stelling Rd	Prospect Rd	250 South of McClellan Rd	--	1.45	2	2	20	15	20	5	1	**65**	$290,000
Class IV Separated Bikeway	Stelling Rd	250 South of McClellan Rd	Alves Dr	--	0.71	3	5	10	15	20	10	1	**64**	$857,000
Class IV Separated Bikeway	Blaney Ave	Bollinger Rd	Homestead Rd	--	1.91	4	2	20	7	20	10	1	**64**	$383,000
Class IV Separated Bikeway	Stevens Creek Blvd	Foothill Blvd	St Joseph Ave	--	0.62	1	2	10	15	20	5	10	**63**	$124,000
Class IV Separated Bikeway	Stelling Rd	Alves Dr	Homestead Rd	--	0.84	5	5	20	7	20	5	1	**63**	$169,000
Class I Path	Varian Park Path	Amelia Ct	Varian Way	--	0.05	0	2	20	1	20	10	10	**63**	$100,000
Grade Separated Crossing Study	Carmen Rd	Stevens Creek Blvd - South Side	Stevens Creek Blvd - North Side	--	0	6	5	20	15	10	5	1	**62**	$300,000
Configure Intersection	Stevens Creek Blvd	De Anza Blvd	--	Bike lane striping through intersection	0	20	5	0	7	10	10	10	**62**	$10,000
Class III Bike Boulevard	Mary Ave to Portal Ave Bike Blvd (#4)	Mary Ave at Meteor Dr	Portal Ave at Merritt Dr	--	1.51	1	2	20	7	10	10	10	**60**	$75,000
Class II Bike Lane	Vista Dr	Forest Ave	Stevens Creek Blvd	--	0.24	1	2	20	7	0	10	20	**60**	$15,000
Class III Bike Boulevard	Tri-School North/South Bike Blvd (#8)	Santa Teresa Dr at Hyannisport Dr	Terrace Dr at Bubb Rd	--	0.76	0	2	20	7	10	10	10	**59**	$38,000
Class II Buffered Bike Lane	Bollinger Rd	De Anza Blvd	Lawrence Expy	--	2.00	4	0	20	7	5	10	10	**56**	$278,000

Project	Location	Start	End	Notes	Miles	Safety	Stress Test	School Travel	Network Connectivity	Low Stress	Trip Generator	Feasibility	Total Score	Cost
Configure Intersection	De Anza Blvd	McClellan Rd	--	Rebuild intersection to facilitate safer east/west travel between McClellan and Pacific	0	5	5	0	15	20	10	1	**56**	$200,000
Configure Intersection	Wolfe Rd	Stevens Creek Blvd	--	Study removal of slip lanes and/or porkchop islands.	0	5	5	0	15	10	10	10	**55**	$100,000
Class II Buffered Bike Lane	Mary Ave	Stevens Creek Blvd	Meteor Dr	--	0.71	1	2	20	7	5	10	10	**55**	$100,000
Class II Buffered Bike Lane	Miller Ave	Bollinger Rd	Calle de Barcelona	--	0.48	0	2	20	7	5	10	10	**54**	$67,000
Configure Intersection	Infinite Loop	Merritt Dr	--	Improve signage/striping to delineate bike/ped space in connector	0	0	2	20	7	5	10	10	**54**	$2,000
Class II Buffered Bike Lane	Homestead Rd	Mary Ave	Wolfe Rd	--	1.97	9	0	20	7	5	10	1	**52**	$276,000
Reconfigure wall/fence	Greenleaf Dr	Mariani Ave	--	2015 Bike Plan Update, create gap in wall to connect bike routes	0	0	5	0	7	20	10	10	**52**	$25,000
Class III Bike Boulevards	Civic Center to Jollyman Park Bike Blvd (#1)	Rodrigues Ave at De Anza Blvd	Jollyman Park	--	0.86	0	5	5	7	20	5	10	**52**	$43,000

Project	Location	Start	End	Notes	Miles	Safety	Stress Test	School Travel	Network Connectivity	Low Stress	Trip Generator	Feasibility	Total Score	Cost
Class II Buffered Bike Lane	Prospect Rd	De Anza Blvd	Stelling Rd	--	0.42	0	2	10	7	5	5	20	**49**	$59,000
Configure Intersection	McClellan Rd	Rose Blossom Dr	--	Facilitate through bike travel to De Anza	0	5	2	20	7	5	0	10	**49**	$20,000
Trail Crossing	Homestead Rd	Mary Ave	--	Redesign intersection of Homestead at Mary to better facilitate bicycles exiting Mary Ave bridge path	0	5	2	20	7	5	0	10	**49**	$10,000
Class III Bike Route	Hyde Ave Bike Route (#6)	Hyde Ave at Shadygrove Dr	Hyde Ave at Bollinger Rd	--	0.24	1	2	20	1	5	10	10	**49**	$500
Configure Intersection	Stelling Rd	Alves Dr	--	Enhance east/west bike route crossing for Alves Dr	0	1	2	0	15	10	10	10	**48**	$50,000
Class I Path	Regnart Creek Path	Pacifica Dr	Estates Dr	--	0.83	1	2	10	15	10	5	5	**48**	$664,000
Reconfigure wall/fence	Wheaton Dr	Perimeter Rd	--	Connect bike blvd to proposed bike path on Perimeter road, requires creating gap in existing wall	0	0	2	0	15	10	10	10	**47**	$10,000
Tier 3														
Class II Bike Lane	Rainbow Dr	Upland Way	Stelling Rd	--	0.50	2	2	20	7	5	5	5	**46**	$33,000

Project	Location	Start	End	Notes	Miles	Safety	Stress Test	School Travel	Network Connectivity	Low Stress	Trip Generator	Feasibility	Total Score	Cost
Class I Path	Perimeter Rd	Stevens Creek Blvd	I-280 Channel Bike Path	--	0.59	0	2	10	7	20	5	0	**44**	$470,000
Class III Bike Route	Mary Ave to Vallco Mall Bike Route (#7)	Memorial Park	End of Wheaton Dr	--	1.77	1	2	20	1	0	10	10	**44**	$4,000
Class III Bike Route	Tantau Ave Bike Route (#9)	Tantau Ave at Bollinger Rd	Tantau Ave at Barnhart Ave	--	0.41	1	2	20	1	0	10	10	**44**	$500
Class III Bike Route	Rose Blossom/ Huntridge Bike Route (#8)	Rose Blossom Dr at McClellan Rd	Huntridge Ln at De Anza Blvd	--	0.41	0	2	20	1	0	10	10	**43**	$1,000
Class I Path	Wilson Park	Rodrigues Ave	Wilson Park Path	--	0.03	0	0	10	7	10	5	10	**42**	$50,000
Class III Bike Boulevard	Stevens Creek Bike Blvd (#6)	San Fernando Ave at Orange Ave	Carmen Rd at Stevens Creek Blvd	--	1.12	0	0	10	7	10	5	10	**42**	$47,000
Configure Intersection	Blaney Ave	Wheaton Dr	--	Enhance bicycle crossing across Wheaton	0	1	5	0	15	10	0	10	**41**	$50,000
Class II Buffered Bike Lane	Foothill Blvd	Stevens Creek Blvd	McClellan Rd	--	0.55	2	2	10	7	5	5	10	**41**	$77,000
Configure Intersection	Stelling Rd	Rainbow Dr	--	Study removal of slip lanes, study potential for protected intersection	0	2	2	0	15	20	0	1	**40**	$20,000
Class II Buffered Bike Lane	Homestead Rd	Wolfe Rd	Tantau Ave	--	0.49	1	2	10	7	5	5	10	**40**	$69,000
Class II Buffered Bike Lane	Wolfe Rd	Stevens Creek Blvd	I-280 Channel Bike Path	--	0.40	0	2	10	7	5	5	10	**39**	$56,000

Project	Location	Start	End	Notes	Miles	Safety	Stress Test	School Travel	Network Connectivity	Low Stress	Trip Generator	Feasibility	Total Score	Cost
Class I Path	Jollyman Park	Stelling Rd	Dumas Dr	--	0.15	0	2	0	7	20	0	10	**39**	$119,000
Reconfigure wall/fence	Imperial Ave	Alcazar Ave	--	Create gap in fence to connect bike routes	0	0	2	0	7	10	10	10	**39**	$20,000
Class II Buffered Bike Lane	Foothill Blvd	Stevens Creek Blvd	I-280 N Offramp	--	0.96	2	5	10	7	5	5	5	**39**	$135,000
Class III Bike Boulevard	Foothill to Stevens Creek Bike Blvd (#3)	Foothill Blvd at Starling Dr	Carmen Rd at Stevens Creek Blvd	--	0.99	0	2	10	1	10	5	10	**38**	$50,000
Class II Buffered Bike Lane	Lazaneo Dr	Bandley Dr	De Anza Blvd	--	0.09	1	0	10	7	5	5	10	**38**	$13,000
Class II Buffered Bike Lane	Wolfe Rd	Perimeter Rd	Homestead Rd	--	0.62	4	2	10	7	5	5	5	**38**	$86,000
Class II Buffered Bike Lane	Bubb Rd	McClellan Rd	Stevens Creek Blvd	--	0.53	3	2	10	7	5	5	5	**37**	$74,000
Grade Separated Crossing Study	UPRR West Cupertino Crossing	Hammond Snyder Loop Trail	Stevens Creek Blvd	--	0	1	5	0	15	10	5	1	**37**	$300,000
Bike/Ped Bridge Enhancement	Mary Ave Ped Bridge	I280	--	Improved signage/striping to delineate bike/ped space on Mary Ave bridge	0	0	2	20	0	5	0	10	**37**	$20,000
Class I Path	Oaks Development Bike Path	Stevens Creek Blvd	Mary Ave	--	0.13	0	2	10	7	10	5	1	**35**	$102,000

Project	Location	Start	End	Notes	Miles	Safety	Stress Test	School Travel	Network Connectivity	Low Stress	Trip Generator	Feasibility	Total Score	Cost
Class II Buffered Bike Lane	Miller Ave	Calle de Barcelona	Stevens Creek Blvd	--	0.39	0	2	10	7	10	5	1	**35**	$54,000
Class II Buffered Bike Lane	Tantau Ave	Stevens Creek Blvd	Pruneridge Ave	--	0.65	1	2	10	7	5	5	5	**35**	$91,000
Trail Crossing	McClellan Rd	Union Pacific Railroad Path	--	Coordinate crossing with signal.	0	11	2	0	1	5	10	5	**34**	$10,000
Class II Bike Lane	Pacifica Dr	De Anza Blvd	Torre Ave	--	0.17	1	0	10	7	0	5	10	**33**	$11,000
Freeway interchange enhancement	Wolfe Rd	I-280 Overpass	--	Add green paint to interchange approaches, stripe bike lane through interchange intersection	0	8	5	0	7	5	0	5	**30**	$40,000
Class I Path	San Tomas-Aquino Creek Trail	Sterling/Barnhart Park	Calvert Dr	--	0.37	0	5	0	15	10	0	0	**30**	$294,000
Class I Path	San Tomas-Aquino Creek Trail	South of I280	Stevens Creek Blvd	--	0.17	0	5	0	15	10	0	0	**30**	$138,000
Class II Buffered Bike Lane	Vallco Pkwy	Tantau Ave	Perimeter Rd	--	0.30	0	2	10	7	5	5	1	**30**	$42,000
Class II Bike Lane	Campus Dr/Stevens Creek Blvd Connector	Campus Dr	Stevens Creek Blvd	--	0.11	1	2	10	7	0	5	5	**30**	$7,000
Class III Bike Route	Hwy 85 to Stevens Creek Blvd Bike Route (#5)	Grand Ave at Alhambra Ave	Peninsula Ave at Stevens Creek Blvd	--	0.19	1	2	10	7	0	0	10	**30**	$1,000

Project	Location	Start	End	Notes	Miles	Safety	Stress Test	School Travel	Network Connectivity	Low Stress	Trip Generator	Feasibility	Total Score	Cost
Class II Buffered Bike Lane	Rainbow Dr	De Anza Blvd	Stelling Rd	--	0.57	1	0	0	7	10	0	10	**28**	$79,000
Class III Bike Route	Bollinger Rd to Stevens Creek Blvd Bike Route (#1)	Johnson Ave at Bollinger Rd	Stern Ave at Stevens Creek Blvd	--	0.84	0	2	10	1	0	5	10	**28**	$1,500
Class III Bike Route	Civic Center to Creekside Park Bike Route (#2)	Torre Ave at Rodrigues Ave	Estates Dr at Creekside Park Path	--	1.24	0	2	10	1	0	5	10	**28**	$3,000
Class III Bike Route	Garden Gate Elementary to Memorial Park Bike Route (#4)	Ann Arbor Dr at Greenleaf Dr	Memorial Park	--	0.42	0	0	10	1	0	5	10	**26**	$1,500
Freeway interchange enhancement	De Anza Blvd	Hwy 85 Overpass	--	Add green paint to interchange approaches, stripe bike lane through interchange intersection	0	4	5	0	7	5	0	5	**26**	$40,000
Trail Crossing	Bubb Rd	Union Pacific Railroad Path	--	Coordinate crossing with signal.	0	2	2	0	1	5	10	5	**25**	$10,000
Freeway interchange enhancement	Stevens Creek Blvd	Hwy 85 Overpass	--	Add green paint to interchange approaches, stripe bike lane through interchange intersection	0	6	2	0	7	5	0	5	**25**	$40,000
Class II Buffered Bike Lane	Tantau Ave	Pruneridge Ave	Homestead Rd	--	0.37	1	2	0	7	5	0	10	**25**	$52,000

Project	Location	Start	End	Notes	Miles	Safety	Stress Test	School Travel	Network Connectivity	Low Stress	Trip Generator	Feasibility	Total Score	Cost
Freeway interchange enhancement	De Anza Blvd	I-280 Overpass	--	Add green paint to interchange approaches, stripe bike lane through interchange intersection	0	2	5	0	7	5	0	5	**24**	$40,000
Class II Buffered Bike Lane	Stevens Canyon Rd	McClellan Rd	Rancho Deep Cliff Dr	--	0.23	0	2	0	7	5	0	10	**24**	$33,000
Class II Buffered Bike Lane	Bollinger Rd	200 feet East of Westlynn Way	De Foe Dr	--	0.18	0	2	0	7	5	0	10	**24**	$26,000
Class I Path	Linda Vista Park/Deep Cliff Golf Course	Linda Vista Park Parking Lot off Linda Vista Dr	McClellan Rd	--	0.46	2	5	0	7	10	0	0	**24**	$366,000
Class II Buffered Bike Lane	Pruneridge Ave	Tantau Ave	City Limits - East	--	0.07	0	0	0	7	5	0	10	**22**	$9,000
Configure Intersection	Portal Ave	Wheaton Dr	--	2015 Bike Plan Update, study roundabout conversion	0	0	2	0	7	10	0	1	**20**	$150,000
Class II Bike Lane	Cristo Rey Dr	150 feet East of Cristo Rey Pl	Roundabout	--	0.57	0	2	0	7	0	0	10	**19**	$37,000
Class III Bike Route	Westlynn/ Fallenleaf Bike Route (#11)	Bollinger Rd at Westlynn Way	Fallenleaf Ln at De Anza Blvd	--	0.37	0	2	0	1	5	0	10	**18**	$1,000
Class III Bike Route	Foothill Blvd Bike Route (#3)	Palm Ave at Scenic Blvd	Lockwood Dr at Stevens Creek Blvd	--	0.81	0	5	0	1	0	0	10	**16**	$1,500
Class III Bike Route	Union Pacific to Hwy 85 Bike Route (#10)	September Dr at McClellan Rd	Jamestown Dr at Prospect Rd	--	1.48	0	2	0	1	0	0	10	**13**	$5,000

Appendix G. ATP Compliance Table

Subject	Requirement	Page(s)
Bicycle Trips	The estimated number of existing bicycle trips in the plan area and the estimated increase in the number of bicycle trips resulting from implementation of the Plan.	6-20 to 6-21
Safety	The number and location of collisions, serious injuries, and fatalities suffered by bicycle riders in the Plan area, both in absolute numbers and as a percentage of all collisions and injuries, and a goal for collision, serious injury, and fatality reduction after implementation of the Plan.	2-1 to 2-7
Land Use	A map and description of existing and proposed land use and settlement patterns which must include, but not be limited to, locations of residential neighborhoods, schools, shopping centers, public buildings, major employment centers, and other major destinations.	1-1 to 1-2 and Figure 1-4
Bikeways	A map and description of existing and potential bicycle transportation facilities.	3-7 to 4-12
Bicycle Parking	A map and description of existing and potential end-of-trip bicycle parking facilities.	1-6, 1-8, and 3-2 to 3-4
Policies	A description of existing and proposed policies related to bicycle parking in public locations, private parking garages and parking lots, and in new commercial and residential developments.	2-20
Multi-Modal Connections	A map and description of existing and proposed bicycle transportation and parking facilities for connections with and use of other transportation modes. These shall include, but not be limited to, parking facilities at transit stops, rail and transit terminals, ferry docks and landings, park and ride lots, and provisions for transporting bicycle riders and bicycles on transit or rail vehicles or ferry vessels.	1-6, 1-8, and 3-2 to 3-4
Wayfinding	A description of proposed signage providing wayfinding along the bicycle transportation network to designated destinations.	3-1 to 3-2
Maintenance	A description of the policies and procedures for maintaining existing and proposed bicycle facilities, including, but not limited to, the maintenance of smooth pavement, freedom from encroaching vegetation, maintenance of traffic control devices including striping and other pavement markings, and lighting.	2-20

Subject	Requirement	Page(s)
Programs	A description of bicycle safety and education programs conducted in the area included within the Plan, efforts by the law enforcement agency having primary traffic law enforcement responsibility in the area to enforce provisions of the law impacting bicycle rider safety, and the resulting effect on collisions involving bicycle riders.	Chapter 5
Public Involvement	A description of the extent of community involvement in development of the Plan, including disadvantaged and underserved communities.	2-7 to 2-10 and Appendix C
Regional Coordination	A description of how the active transportation plan has been coordinated with neighboring jurisdictions, including school districts within the Plan area, and is consistent with other local or regional transportation, air quality, or energy conservation plans, including, but not limited to, general plans and a Sustainable Community Strategy in a Regional Transportation Plan.	Appendix A
Prioritization	A description of the projects and programs proposed in the Plan and a listing of their priorities for implementation, including the methodology for project prioritization and a proposed timeline for implementation.	Appendix E
Funding	A description of past expenditures for bicycle facilities and programs, and future financial needs for projects and programs that improve safety and convenience for bicycle riders in the Plan area. Include anticipated revenue sources and potential grant funding for bicycle uses.	Appendix F
Implementation	A description of steps necessary to implement the Plan and the reporting process that will be used to keep the adopting agency and community informed of the progress being made in implementing the Plan.	Chapter 6
Plan Adoption	A resolution showing adoption of the Plan by the Council of Governments.	Appendix H

RESOLUTION NO. 16-070

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CUPERTINO APPROVING THE 2016 CUPERTINO BICYCLE TRANSPORTATION PLAN

WHEREAS, the Active Transportation Program and Transportation Development Act provide funding for projects that improve safety and convenience for bicycling; and

WHEREAS, a local agency must have a current Bicycle Transportation Plan to be eligible for Active Transportation Program and Transportation Development Act funds; and

WHEREAS, the 2016 Cupertino Bicycle Transportation Plan has been prepared by Alta Planning + Design in conjunction with the Cupertino Bicycle Pedestrian Commission and City staff; and

WHEREAS, the Cupertino Bicycle Transportation Plan complies with California Streets and Highways Code Section 2380 and the San Francisco Bay Area Regional Transportation Plan; and

WHEREAS, the Cupertino Bicycle Pedestrian Commission recommends City Council approval of the 2016 Cupertino Bicycle Transportation Plan.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Cupertino hereby approves the 2016 Cupertino Bicycle Transportation Plan.

PASSED AND ADOPTED at a regular meeting of the City Council of the City of Cupertino this 21st day of June, 2016 by the following vote:

Vote	Members of the City Council
AYES:	Vaidhyanathan, Paul, Sinks
NOES:	None
ABSENT:	Chang
ABSTAIN:	Wong

ATTEST:

Grace Schmidt, City Clerk

APPROVED:

Savita Vaidhyanathan, Vice Mayor,
City of Cupertino