BIKE MOUNTAIN VIEW

MOUNTAIN VIEW

BICYCLE TRANSPORTATION PLAN UPDATE

ADOPTED
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Prepared for The City of Mountain View | Prepared by Alta Planning + Design | November 17, 2015

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EXECUTIVE SUMMARY

The objective of the Mountain View Bicycle Transportation Plan is to implement the City's 2030 General Plan mobility goals by more specifically addressing bicycle-related needs of the community.

The Mountain View Bicycle Transportation Plan Update provides for a recommended citywide network of bicycle paths, lanes and routes along with bicycle-related programs and support facilities, intended to ensure bicycling continues to be a viable transportation option for people of all ages and abilities who live, work and play in Mountain View.

Bicycling offers residents a number of benefits, including improved health, reduced air pollution and reduced traffic congestion. These benefits, combined with Mountain View's generally flat terrain and mild year-round climate, make biking a truly viable form of transportation and an enjoyable recreational activity. The Mountain View Bicycle Transportation Plan (Plan) was developed with one primary objective in mind:

> **To provide a safe and efficient bicycle network that improves access, eliminates barriers to bicycle travel, encourages automobile trip reduction and promotes cycling as a recreational activity and a transportation option.**

In 2012, the City Council adopted the 2030 General Plan, which contains mobility goals and policies to make it easier and safer for people to travel by bicycle. This Plan will expand on the General Plan's mobility goals, listed below, by more specifically addressing bicycle-related needs of the community.

- GOAL MOB-1: Streets that safely accommodate all transportation modes and persons of all abilities.
- GOAL MOB-4: A comprehensive and well-used bicycle network that comfortably accommodates bicyclists of all ages and skill levels
- GOAL MOB-6: Safe and convenient pedestrian and bicycling access to schools for all children.
- GOAL MOB-11: Well-maintained transportation infrastructure.

The Bicycle Transportation Plan Update is a comprehensive policy document to plan all cycling related projects. This Plan addresses the current condition of the bikeway system, planned improvements, bicycle parking and wayfinding signage, bike-related policies, and bike-related education, promotion and enforcement efforts. The purpose of this Plan is to improve the bicycling environment in Mountain View by providing direction for future bicycle planning and meeting the guidelines of the California Active Transportation Program, the requirements of which are contained in Senate Bill 99 (Chapter 359, Statutes of 2013) and listed in Appendix F.

The City of Mountain View Public Works Department, in concert with the Mountain View Bicycle/Pedestrian Advisory Committee, the Technical Advisory Committee, and Alta Planning + Design, developed the Mountain View Bicycle Transportation Plan Update. This Plan was developed to work within the guidelines of applicable local and regional plans as well as with Caltrans Active Transportation Program guidelines.

Each chapter in the Plan describes a different facet of the bikeway network. Chapter 1 gives an overview of the existing bicycling conditions in Mountain View,

including the existing bikeway network and bicycling-related policies and programs. Chapter 2 describes how the Plan relates to existing and planned policies and plans. Chapter 3 describes the results of the bicycling needs analysis. Chapter 4 details the recommended bicycle improvements, including spot and network improvements, and policy and program improvements. Chapter 5 describes the implementation and funding for the recommended projects described within this Plan.

Together, these elements present a comprehensive overview of the entire bikeway system. This Plan will also serve as a guide for the development of the planned improvements described within.

The process of becoming a bicycle-friendly city is an incremental one; small, intentional improvements over many years will help produce a citywide bicycle network that serves the bicycling needs for people of all ages and abilities. This Plan identifies projects that can be completed in the short-term, and those that can be done in years down the road. This Plan also creates a benchmark of bicycling data that future studies can reference to measure progress and growth. This Plan represents the enthusiasm and dedication of a community that is committed to supporting Mountain View's continued growth as a bicycle friendly city.

Figure 0-1 People use the Steven's Creek Trail to bike to work, school and for recreation

1 EXISTING CONDITIONS

As of 2015, there are approximately 58 miles of bikeways in the City of Mountain View.

1.1. SETTING AND LAND USE

The City of Mountain View has a population of 77,800.[1] It is located in the heart of Silicon Valley, adjacent to the cities of Palo Alto, Los Altos, and Sunnyvale.

The City is comprised of residential neighborhoods, commercial corridors, industrial/office areas, mixed-use areas and nearly 1,000 acres of parkland. As stated in the Mountain View 2030 General Plan (2012);

- Single- and multi-family residential homes account for approximately 42 percent of the City's land area;
- Commercial designations account for approximately 7 percent of the City;
- Industrial and office properties make up about 18 percent of the City's land;
- Sixteen percent of the City is public, institutional land uses;
- Sixteen percent is open space, and
- Two percent is vacant or agricultural.[2]

Mountain View is a place where people can live, work and play, and establishes the City as an important employment center in Silicon Valley. The land use maps can be seen in Appendix B.

The population of Mountain View has grown an estimated 5 percent since the 2010 Census. The Mountain View 2030 General Plan estimates the City will grow to nearly 90,000 residents by 2030.[3]

The City of Mountain View is accessible by highways and both regional and local transit. U.S. Route 101 runs through northern Mountain View and connects to San Francisco to the north, and south to San Jose and eventually to Los Angeles. California State Route 85, also called the Norman Y. Mineta Highway or Stevens Creek Freeway, connects Mountain View to southern San Jose. State Route 82, better known as El Camino Real, runs through southern Mountain View in an east-west direction. State Route 237, travels from El Camino in Mountain View to Milpitas.

1.2. THE FIVE Es AND BIKEWAY CLASSIFICATIONS

As defined by the League of American Bicyclists, bicycle-friendly cities demonstrate achievements in each of five categories, often referred to as the Five Es of bicycle planning, which are described below:

- **Engineering** encompasses all forms of bicycle infrastructure from on-street bicycle facilities, to shared-use trails, to bicycle parking as well as signage and maintenance.
- **Encouragement** tools such as bike maps, programs and events, such as Bike to Work Day, reward existing bicyclists and motivate more people to ride bicycles.
- **Education** programs improve safety and awareness. These may be delivered in schools as bicycle skills programs, or provided at low or no cost to adults through non-profit organizations.
- **Enforcement** programs reinforce legal and respectful driving and bicycling.
- **Evaluation** programs provide a method for monitoring improvements and informing future investments.

This chapter presents a review of Mountain View's

1 *Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2013, Census 2013 Population Estimates.*

2 *These percentages are taken directly from the Mountain View 2030 General Plan (2012). These percentages may not add up to 100 percent due to rounding.*

3 *Mountain View 2030 General Plan, 2012.*

existing bicycle facilities and programs within the framework of the Five Es. The review of existing conditions will help identify where new facilities are needed and what programs will better support bicycling in Mountain View.

1.3. ENGINEERING

1.3.1. EXISTING BIKEWAYS

The California Department of Transportation (Caltrans) designates four facility design types for bicyclists: Class I, II III and IV Bikeways. **Figure 1-4**, **Figure 1-6**, **Figure 1-15 and Figure 1-16** show the general design standards for the four classifications. The recent passage of Assembly Bill (AB) 1193, requires Caltrans to establish engineering standards for Class IV bikeways, which are called protected bike lanes or cycletracks. These street classifications and characteristics are discussed below.[4,5]

As of 2014, there are approximately 58 miles of bikeways in the City of Mountain View, including 15 miles of separated paths, 26.5 miles of on-street bike lanes, 10.7 miles of bicycle routes and 5.9 miles of Bicycle Boulevards (**Figure 1-1**).

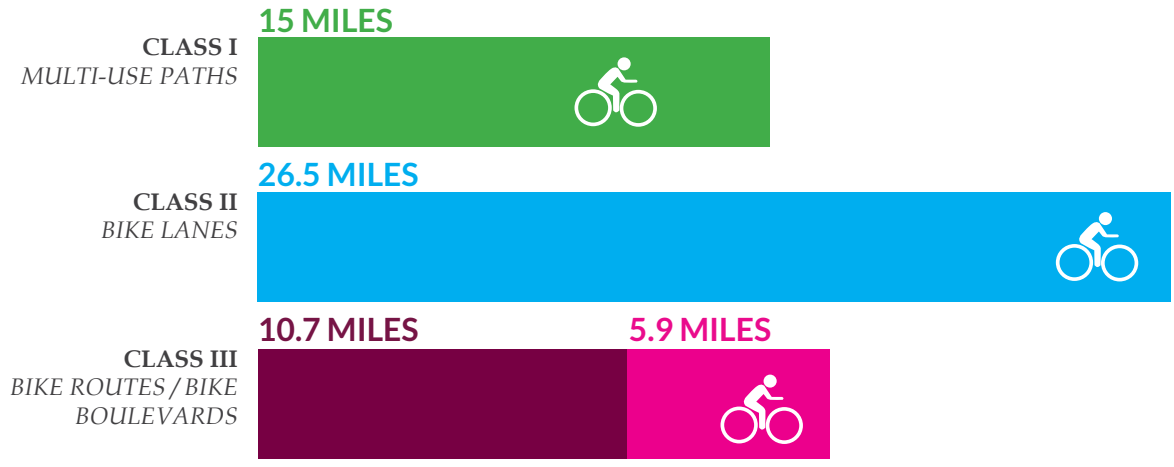
Figure 1-18 shows a map of the existing bikeways in the City of Mountain View and in adjacent cities.

4 *Caltrans Highway Design Manual (2012)*

5 *Assembly Bill 1193 (2014)*

Figure 1-2 A wayfinding sign in Mountain View directs bicyclists to destinations and other bikeway facilities

Figure 1-1 Total Miles of Bikeways in Mountain View



California Department of Transportation (Caltrans) designates four facility design types for bicyclists: Class I, II, III and IV Bikeways.

Figure 1-3 The Stevens Creek Trail path is a Class I facility that is popular for people of all ages

CLASS I BIKEWAYS / MULTI-USE PATHS

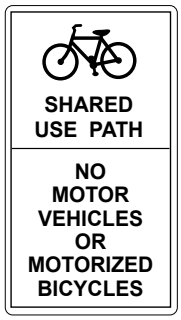
15 MILES
of CLASS I EXISTING BIKEWAYS in MOUNTAIN VIEW

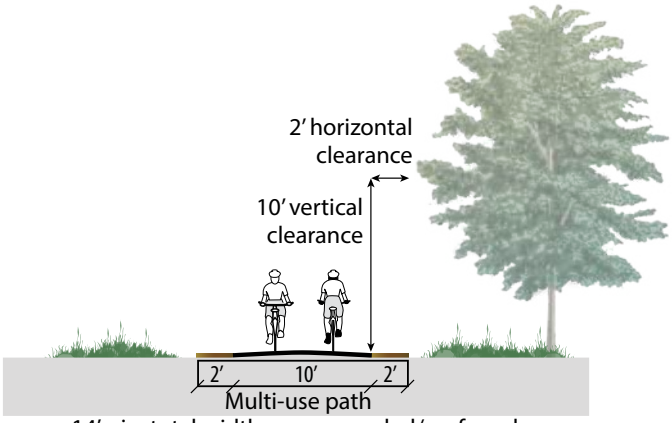
Class I bikeways are also referred to as multi-use or shared-use paths. They provide completely separated, exclusive right of way for people to walk and bike. There are 15 miles of Class I bikeways in Mountain View, which include the Stevens Creek Trail, Permanente Creek Trail, Hetch Hetchy Trail and 2.2 miles of the San Francisco Bay Trail. The longest Class I bike path is the Stevens Creek Trail, an approximately five mile long shared-use path that extends north to south from the Bay Trail in Shoreline at Mountain View Park south to Heatherstone Way. The existing trails are popular for all types of users. **Figure 1-4** shows the Caltrans classification and design guidance for a Class I multi-use path.

Figure 1-4 Class I Caltrans Bikeway Classification

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

Figure 1-5 A typical on-street bike lane in Mountain View

CLASS II BIKEWAYS / ON-STREET BIKE LANES

26.5 MILES
of CLASS II EXISTING BIKEWAYS in MOUNTAIN VIEW

Class II bikeways are striped lanes on roadways for one-way bicycle travel. The Valley Transportation Authority's (VTA's) Bicycle Technical Guidelines have adopted wider optimum minimum width standards than Caltrans to reduce potential conflict with the "door zone" and to encourage a wider range of bicyclists. VTA suggests an optimum width of five feet for bikeways located on roadways with posted speed limits less than or equal to 30 miles per hour, 6 feet for bikeways located on roadways with posted speed limits between 35 and 40 miles per hour, and 8 feet for bikeways located on roadways with posted speed limits equal to or greater than 45 miles per hour. VTA also suggests an additional eight feet be added to each of these optimum bike lane widths to accommodate on-street parking. Some Class II bikeways can also have painted buffers that add a few feet of separation between the bike lane and the traffic lane. **Figure 1-6** shows the Caltrans classification and design guidance for a Class II bike lane

Figure 1-6 Class II Caltrans Bikeway Classification

CLASS II
Bike Lane

Provides a striped lane for one-way bike travel on a street or highway.

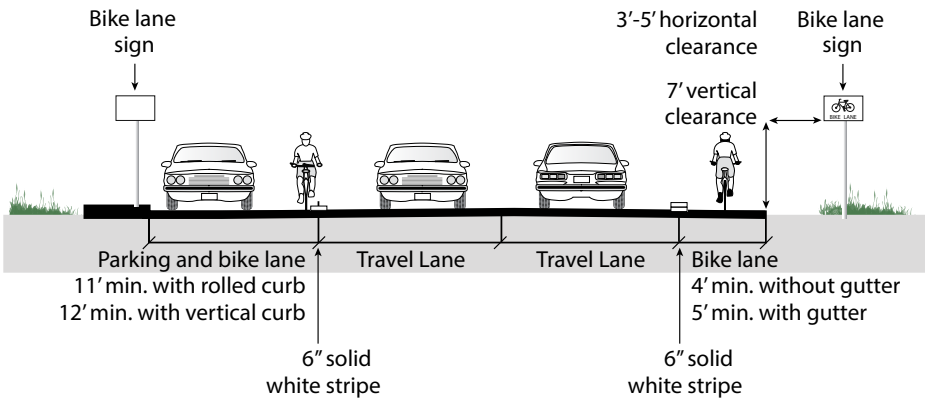


Figure 1-7 A standard bike lane on Cuesta Drive includes painted edges lines, delineating the bike lane from the parking lane

Figure 1-8 On North Whisman Road, the bicycle lane and parking lane share the same road space

Figure 1-9 On Middlefield Road, the bike lane becomes a parking lane on weekends and after 7pm on weekdays

Figure 1-10 A buffered bike lane on Moffett Boulevard separates bikes from adjacent traffic

The majority of the bikeways in Mountain View are Class II on-street bike lanes. There are 26.5 miles of Class II bikeways in Mountain View. The design of the Class II facilities in Mountain View varies, and can be defined into four categories:

1. Standard bike lane (**Figure 1-7**)
2. Bike lane that shares space with a parking lane (**Figure 1-8**)
3. Bike lane that becomes a parking lane (**Figure 1-9**)
4. Buffered bike lane (**Figure 1-10**)

Although all of the facilities shown are Class II bicycle lanes, their feeling of safety and bicycle-friendliness is not the same for all users.

CLASS III BIKEWAYS / BIKE ROUTES

10.7 MILES
of CLASS III EXISTING BIKEWAYS in MOUNTAIN VIEW

Class III bikeways are signed bike routes where bicyclists share a travel lane with motorists. Class III bike routes are appropriate for low-volume streets with slow travel speeds, especially those on which motorist volumes are low enough that passing maneuvers can use the full street width, on roadways with bicycle demand but without adequate space for Class II striped bike lanes, and as "gap fillers" where there are short breaks in Class II lanes due to right-of-way constraints. There are 10.7 miles of Class III bikeways in Mountain View.

CLASS III BIKEWAYS / BICYCLE BOULEVARDS

5.9 MILES
of CLASS III EXISTING BIKE BOULEVARDS in MOUNTAIN VIEW

Bicycle Boulevards are a type of Class III bikeway with additional treatments that prioritize bicycle use. Bike Boulevards are signed, shared roadways with low motor vehicle volume, such that motorists passing bicyclists can use the full width of the roadway. Bicycle Boulevards prioritize convenient and safe bicycle travel through traffic calming strategies, wayfinding signage, and other measures. One key feature is that stop signs are "flipped" - removed from the boulevard and placed on cross streets - to favor the bicycle direction of travel. This change improves bicyclists' average speed by minimizing unneeded stops. Bicycle Boulevard improvements are coupled with traffic calming features to discourage speeding. There are 5.9 miles of Bicycle Boulevards in Mountain View.

Figure 1-11 A Class III bike route in Mountain View

Figure 1-12 An example of a Bicycle Boulevard

Figure 1-13 Bicycle Boulevard pavement markings on Dale Avenue

Two of the Bicycle Boulevards proposed in the City's current bicycle plan have been implemented since the plan was approved in 2008: 1) the east-west route that travels along Montecito Avenue and Central Avenue and, 2) the north-south route along Evelyn Avenue, Alice Avenue and Dale Avenue. Currently, Mountain View Bike Boulevards include signage, pavement markings and, in some cases, traffic circles instead of stop signs at the smaller intersections. Each route has green Bike Boulevard signs with directional arrows. The small sharrow symbols painted on the roadway provide additional direction for cyclists, but are not MUTCD compliant and can be hard to see against weathered pavement. The Bike Boulevard signs near approaching major street crossings have additional wayfinding signs added.

Although these routes are identified as Bicycle Boulevards in the City's current bicycle map, they have some operational shortcomings - their designs are inconsistent with each other and with the criteria defined in this section. A Bicycle Boulevard is a low-stress facility[1] because it generally has four types of treatment that prioritize bicycle travel over motor vehicle travel:

1. Signs and pavement markings
2. Wayfinding signs and directional pavement markings
3. Traffic calming and/or diversion to keep traffic volume and speeds low
4. Intersection crossing treatments

The current Bicycle Boulevards as a whole do not meet the low-stress criteria and present an opportunity for improvements.

1 Stress level is based on tolerance for traffic stress. A low-stress facility is considered suitable for children. "Low-Stress Bicycling and Network Connectivity," Maaza C. Mekuria, Ph.D., P.E., PTOE, Peter G. Furth, Ph.D., Hilary Nixon, Ph.D, MTI Report 11-19 (2012)

Figure 1-14 Class III Caltrans Bikeway Classification

CLASS III
Bike Route
Signed Shared Roadway

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

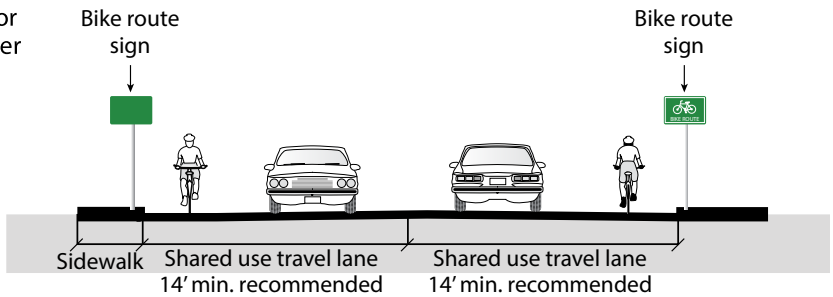


Figure 1-15 A Class IV separated bike lane in Boulder, Colorado

CLASS IV BIKEWAYS / PROTECTED ON-STREET BIKE LANES / CYCLETRACKS

0 MILES
of CLASS IV EXISTING BIKE BOULEVARDS in MOUNTAIN VIEW

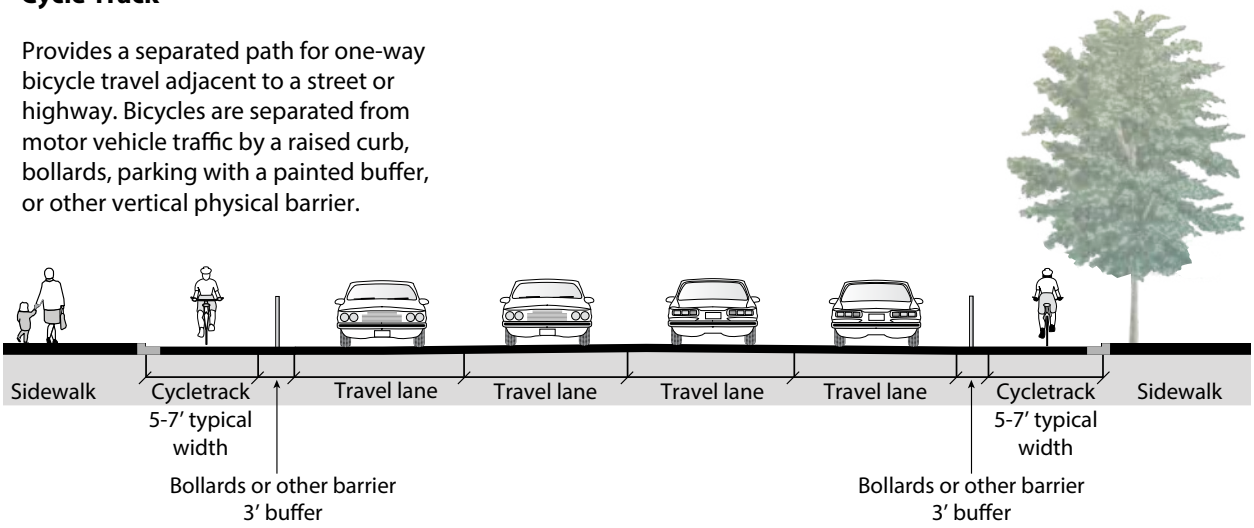
A Class IV bikeway, known as a cycletrack or protected bike lane, is an on-street bike lane that is physically separated from motor-vehicle traffic by a vertical separation, such as a curb, bollards, or car parking. A protected bikeway is similar to a Class II buffered bike lane, but provides the vertical physical barrier, separation and associated comfort a user can experience on a Class I path. Per Assembly Bill 1193, Caltrans is currently developing state level guidelines for Class IV protected bike lanes. In the interim, agencies may use the NACTO Urban Bikeway Design Guide to inform their designs so long as the City Council adopts or officially endorses the NACTO Guide and the project documentation references NACTO as the source of the design decisions.[1] Currently, there are no Class IV bikeways/ cycle tracks in Mountain View.

1 *Assembly Bill 1193 (2014)*

Figure 1-16 Class IV Cycle Track Classification

CLASS IV
Cycle Track

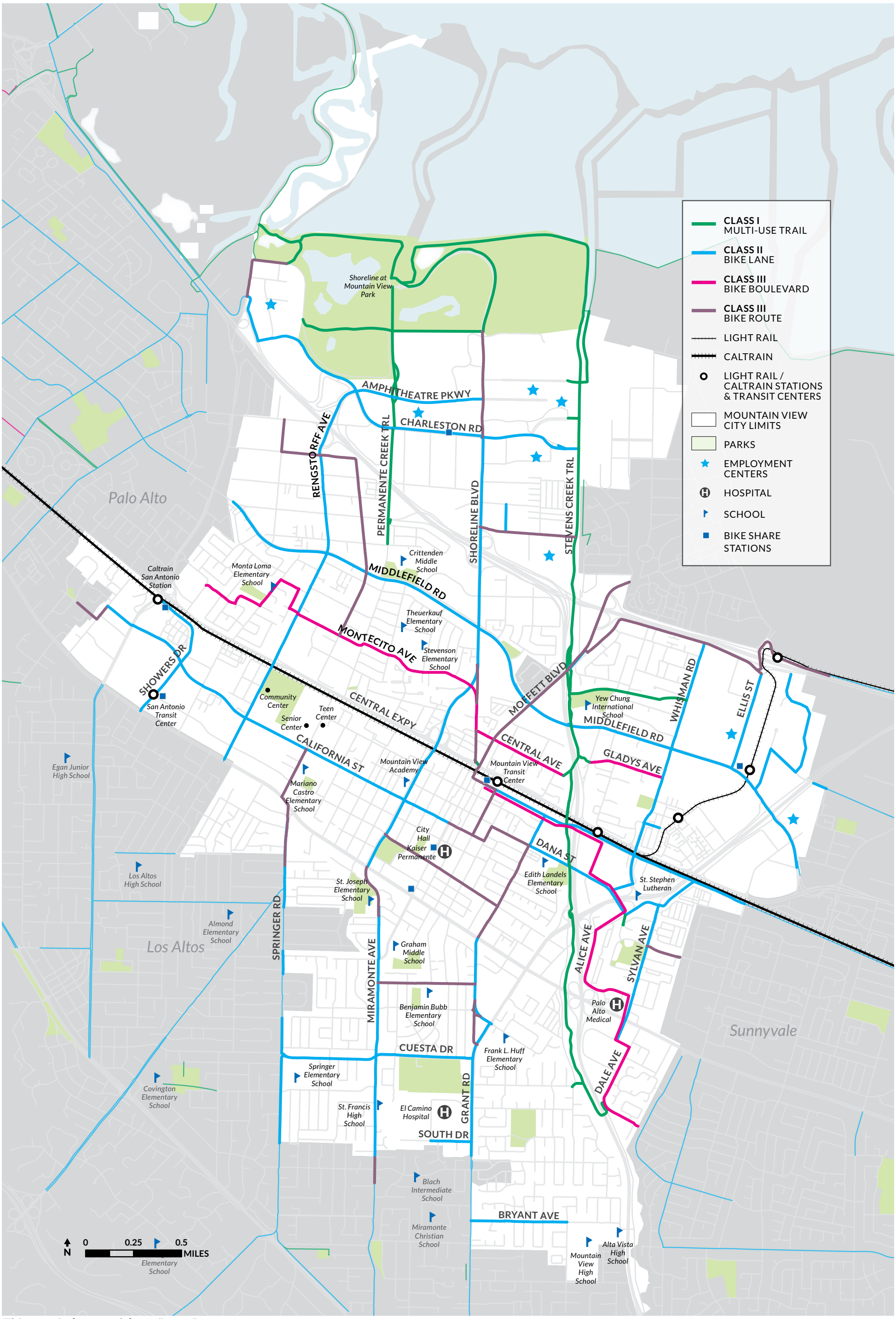
Provides a separated path for one-way bicycle travel adjacent to a street or highway. Bicycles are separated from motor vehicle traffic by a raised curb, bollards, parking with a painted buffer, or other vertical physical barrier.



NACTO Urban Bikeway Design Guide (2014)

Figure 1-17 Residents bike on Castro Street during a parade

Figure 1-18 Existing Bikeways Map



This map is formatted for 11" x 17"

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1.3.2. SIGNING

The California Manual on Uniform Traffic Control Devices (CA MUTCD) outlines the requirements for bikeway signage.

The Bike Lane Sign (R81) is required at the beginning of each designated Class II bike lane and at each major decision point. The Bike Route Sign (D11-1) is required on Class III facilities. Class I shared-use paths require additional standardized signs to help manage different user groups. The City has installed CA MUTCD standard signs along its bikeways.

The existing local trail systems (Hetch Hetchy Trail, Permanente Creek Trail and Stevens Creek Trail) do not have consistent wayfinding signs or sign standards. A set of wayfinding guidelines would help unify and brand directional signage for trail users.

1.3.3. BICYCLE SIGNAL DETECTION

Bicycle signal detection is important for traffic signals that use vehicle detection for signal phasing. Bicycle signal detection is similar to automobile detection; it alerts the signal to the presence of a bicyclist and gives the bicyclist a designated green phase (or appropriate length) when needed. Without bicycle detection, people on bikes may have to wait for an automobile to arrive to trigger the green phase, which can lead to bicyclists delay and encourage red light running. Many of the City's traffic signals on collector and arterial streets have bicycle detection. Typically, at intersections with bike lanes, a loop detector is located in the bike lane to detect bicycles and alert the traffic signal to provide additional time for people bicycling to cross the intersection. If an intersection does not have a bike lane, typically a bicycle symbol alerts people where to position their bicycle to trigger the signal. Loop detectors and pavement markings are installed according to Caltrans standards. Signal timing policies follow accepted traffic engineering standards developed by the Institute for Transportation Engineers (ITE) and CA MUTCD.

1.3.4. FIRST AND LAST MILE TRIPS

Many residents and commuters who take transit may also use a bicycle for the first or last leg of their journey. These bicycle trips are called first and last mile trips. They enable people to reach destinations from transit stops that may be too far to walk. Mountain View has multiple transit lines and stops, including two Caltrain stations (Mountain View and San Antonio Stations), VTA light rail stations and bus stops, a commute-oriented shuttle service operated by the Mountain View Transportation Management Association (TMA), and a new free community shuttle pilot that is being offered to supplement current public transportation service. Bicycle access to and from transit stops supports bicycle and transit linked trips. People who do not bring their bicycles on-board transit, will want to use designated bicycle parking, which is described in the following section.

D11-1

R81(CA)

Figure 1-19 Caltrans Bikeway Signs

Figure 1-20 Bicycle Detection Pavement Marking

1.3.5. BICYCLE PARKING AND END OF TRIP FACILITIES

Providing bicycle parking at convenient locations is an important part of a comprehensive bikeway system. Bicycle parking is located throughout the City at community parks, shopping areas and major housing developments. Bicycle parking is concentrated in downtown Mountain View and provided at schools and City parks. The City provides rent-free bicycle storage at the Downtown Transit Center bicycle shelter and other bicycle lockers in downtown. Bicyclists can rent a bicycle locker by contacting the Public Works Department and paying a one-time $25 refundable deposit.

Figure 1-21 Class I Bicycle Lockers Behind Mountain View City Hall

TYPES OF BICYCLE PARKING

Bicycle parking can range from a simple and convenient bicycle rack to storage in a bicycle locker or room that protects against weather, vandalism and theft. The City of Mountain View City Code defines three types of bicycle parking:[1]

- Class I: overnight (one night or more);
- Class II: long-term (two hours to a full day); and
- Class III: short-term (one to two hours).

CLASS I

Class I bicycle parking is the most secure form of parking and is ideal for both the long-term and overnight user. Class I parking can consist of:

- Bike Lockers. Fully enclosed and weather-resistant space only accessible to the owner/operator of the bicycle. Lockers can be pre-manufactured or designed for individual sites (**Figure 1-21**).
- Restricted Access. Bicycle racks located within an interior locked room or a locked enclosure accessible only by the owners/operators of the bicycles contained within.
- Enclosed Cages. An exterior enclosure, with a roof, where the contents are clearly visible from the exterior. The cage can be

1 *Mountain View City Code Section 36.37.100*

Figure 1-22 Class II "Crankcase" Bicycle Racks

Figure 1-23 Class III Inverted U Bicycle Rack

Figure 1-24 The Class III bike parking as defined by the BTG only allows users to lock the wheel of their bike, not the frame. This makes bikes more vulnerable to theft.

secured with an owner/operator supplied lock. These types of units are typically used at a retail business or a multifamily development.

CLASS II

Class II parking is designed for both short- and long-term users. Class II parking facilities are designed so the lock is protected from physical assault, however, the bicycle is still exposed and therefore, should be in visual range. An example of this type of parking is seen in **Figure 1-22**.

CLASS III

Class III parking is designed for short-term bicycle parking and is less secure than either Class I or Class II parking facilities. This type of parking should be within constant visual range of persons within the adjacent structure or located in well-traveled pedestrian areas. **Figure 1-23** is an example of the Class III City standard Inverted U bike rack.

SANTA CLARA VALLEY TRANSPORTATION AUTHORITY BICYCLE TECHNICAL GUIDELINES

The Santa Clara Valley Transportation Authority (VTA) Bicycle Technical Guidelines (BTG) provides a set of optimum standards and best practices bikeway design, including bicycle parking, which are intended to help member agencies provide consistent bicycle accommodations.

The BTG's bike parking definitions are slightly different than the definitions within Mountain View's City Code. The BTG defines Class II bike parking as a rack to which the bicycle frame and at least one wheel can be secured with a user-provided lock. Class III bike parking is defined as a bicycle rack to which only the bicycle wheel and not the bicycle frame can be locked **Figure 1-24**.

The City may consider adopting the VTA's bicycle parking definitions to maintain consistency in bicycle parking planning practices in Santa Clara County.

CURRENT DOWNTOWN BICYCLE PARKING

Mountain View has a vibrant downtown with a mix of restaurants and retail situated primarily along Castro Street, and the Downtown Mountain View Transit Center, a multi-modal transit hub.

Class III bike racks have been incorporated on each block of Castro Street and 20 two-bike Class I bike lockers have been placed in many of the adjacent public parking areas (**Figure 1-25**). These lockers are owned by and can be rented from the City. Class III bike racks are available on a first-come, first-served basis.

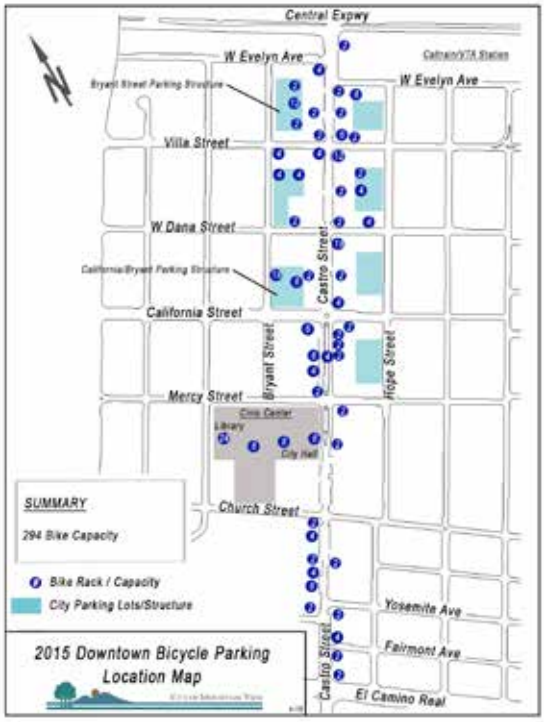

Figure 1-25 Downtown Bicycle Rack Parking Location Map

FUTURE DOWNTOWN AREA BICYCLE PARKING

Any additions to downtown area bicycle parking will be dependent on future usage patterns and the demand for spaces. When future additions are considered, the installation of bike parking will be regulated by guidelines developed by this Plan and approved by the City Council.

BIKE PARKING AT MULTI-MODAL ACCESS POINTS

A Class I bike shelter is located in the Mountain View Train Station Building, adjacent to the Downtown Mountain View Transit Center. This bike shelter holds more than 40 bikes on lockable vertical bike racks within a secured room, which can be accessed only by authorized renters and City staff. These spaces can be rented through the City.

The Transit Center is also home to several types of Class III bike racks and more than 100 Class I bicycle lockers owned by Caltrain. A photo of a decorative Class III bike rack at the Transit Center is shown in **Figure 1-26**. The bicycle racks at the Transit Center are often full. Bicycle parking is also located at the San Antonio Caltrain Station. Several Class III bike racks and Class I lockers are available in the platform area.

Figure 1-26 Bicyclists lock their bikes to a decorative Class III bike rack at the Transit Center

PARKING ORDINANCE

The City of Mountain View has standards and guidelines for bicycle parking at new developments and redevelopment sites. These standards and guidelines also apply to building expansions and changes-in-use.

The type and amount of bicycle parking required depends on the development and is typically tied to the amount of automobile parking provided. For example, most developments, such as retail stores, corporate offices, shopping centers and restaurants, are required to provide bike parking in an amount equal to 5 percent

of vehicle parking spaces. Medical service offices and hotels must set aside 2 percent of vehicle parking spaces while others, such as plant nurseries, require a parking study to determine the amount of spaces needed. These standards ensure bicycle parking will be a part of new developments, however its dependence on vehicle parking means that the amount of bike parking could fluctuate depending on the space available for cars. Bicycle parking standards are detailed in Appendix C.

BICYCLE SUPPORT FACILITIES

Bicycle support facilities are defined as shower and equipment storage facilities located near bicycle parking. These facilities can be found in City buildings, such as City Hall, and at large employers and have been designed for the exclusive use of employees and not for the general public.

Figure 1-27 The bike repair station in front of the City Library

The City has a bike repair station located outside the Mountain View Public Library. The "fix-it" station allows cyclists to use various common bike tools that are permanently fixed to the station. The City also has four hydration stations. The hydration stations are located at the Mercy Street Family Resource Center, Landels Elementary School, Castro Elementary School and Theuerkauf Elementary School. The Mountain View hydration stations are four of 25 stations installed in Santa Clara County where people can fill their water bottles. The stations are designed to accommodate the shape and size of re-usable water bottles and fill them with tap water from Hetch Hetchy Reservoir.

Although the number of known support facilities in the City is currently limited, new private non-residential developments, with more than 200 employee parking spaces, must incorporate a minimum of two employee showers and changing facilities into the design. This requirement is applicable to industrial, research and development, corporate offices and similar high employment businesses. These guidelines can be found in Section 36.32.85 of the Mountain View City Code included in Appendix C.

1.3.6. MAINTENANCE

STREET AND BIKE PATH SWEEPING

Street sweeping clears the road of debris that could otherwise make bicycling difficult. Public streets are the primary focus of the City's street sweeping program. The Mountain View Public Works Department provides street-cleaning services twice a month on a rotating street sweeping schedule. The City operates and maintains all public roads except El Camino Real and Central Expressway which are in the jurisdictions of Caltrans and Santa Clara County, respectively. Mountain View maintains approximately 200 miles of streets for safe travel of motorists, bicyclists and pedestrians.

ROADWAY MAINTENANCE

Potholes are a hazard to bicyclists that can cause crashes and/or damage to bicycles. Residents may report non-urgent street maintenance problems to the City using the Ask Mountain View function on the City's website and/or the Ask Mountain View application for mobile devices.

NEIGHBORHOOD TRAFFIC MANAGEMENT PROGRAM

Adopted in 1996, the Mountain View Neighborhood Traffic Management Program (NTMP) established a mechanism for residents and property owners to obtain relief from traffic-related concerns, namely speeding

and excessive traffic volumes. The NTMP receives funding each fiscal year to apply towards projects that primarily reduce traffic speeding on local residential streets. Residents petition the City for traffic relief, and the City reviews the request vis-à-vis a traffic survey and neighborhood meetings. If a street qualifies for the NTMP, the neighborhood and City staff identify preferred traffic calming measures, staff strives to implement the traffic management strategy within nine to twelve months.

The NTMP has a variety of tools to manage traffic on residential streets, generally involving speed and warning signs, turn restriction signs, speed humps, narrow median islands, chokers and bulb-outs, landscaping, traffic circles, forced channelization, one-way entrances/exits, one-way chicanes (or weaving streets which decrease vehicle speeds and dissuade through traffic) and woonerfs (or all-purpose streets without formal spatial delineations for autos, bicycles and pedestrians).

1.4. ENCOURAGEMENT PROGRAMS

Encouragement is the second of the five Es reviewed as part of this Plan. Encouragement programs promote and celebrate bicycling. The section describes some of the encouragement-related programs hosted by the City of Mountain View and regional bicycle-related organizations.

1.4.1. BIKE MONTH

The City has been acknowledging Bike Month with a proclamation since 2009. The 2015 proclamation emphasized the importance of bicycling for fitness, recreation, transportation, education, and encouragement. The Mountain View Library celebrated Bike Month 2015 by hosting bike skills classes, a theft prevention seminar, and a book bag giveaway.

1.4.2. BIKE TO WORK DAY

Bike to Work Day is an annual regional event typically held on the third Thursday in May, to encourage residents and employees to bike to work. The City's Bike to Work Day activities include the Mayor's Bike Month proclamation, bike skills classes sponsored by the Mountain View Public Library, a City Manager/City Council-led bike ride, and hosting energizer stations throughout the City to hand out water and literature educating bicyclists about local bikeways. The City's B/PAC annually hosts the energizer station at the Mountain View Transit Center.

1.4.3. BAY AREA BIKE SHARE PROGRAM

Mountain View was selected as one of five Bay Area cities (along with San Francisco, Redwood City, Palo Alto and San Jose) to participate in the regional Bay Area Bike Share Program launched in August 2013. However, the Metropolitan Transportation Commission (MTC) recently announced its plans to privatize and expand the Program, but without the continued participation of Mountain View, Palo Alto or Redwood City. Discussions between the cities and the MTC to explore options for the cities' continued participation in the Program are currently underway, but at the time this draft document was being prepared, decisions regarding if/how Mountain View, Palo Alto and/or Redwood City would continue participating in the Program had not been made.

1.4.4. SILICON VALLEY BICYCLE COALITION

The Silicon Valley Bicycle Coalition (SVBC) is an advocacy organization dedicated to increasing bicycling in Santa Clara and San Mateo Counties through education, encouragement, and community. SVBC hosts a number of events to promote bicycling, including Bike to Work Day, Bike to Shop Day, Bicycle Friendly Workplace, and Valet Bike Parking at local events. SVBC is not affiliated with the City of Mountain View, however, the organization's programs and events help bolster bicycling education and encouragement in the Mountain View and other Silicon Valley cities.

1.5. EDUCATION PROGRAMS

Education is the third of the five Es. Educational programs help inform the public on safe and responsible bicycling. This section describes the bicycle-related education programs in Mountain View.

1.5.1. LIBRARY DROP-IN BIKE CLINIC

The Mountain View Public Library hosts a monthly drop-in bike clinic. People of all ages are welcome to use tools to work on their bikes, learn about bike maintenance, and get assistance and advice with general bike mechanical issues.

1.5.2. SAFE ROUTES TO SCHOOL (SRTS) PROGRAM

In 2007, the City was awarded a three-year, $300,000 SRTS non-infrastructure State grant, with particular emphasis on education and encouragement. The program sponsored workshops, bike rodeos (bicycle safety clinic), walking school buses, and other programs to incentivize walking and bicycling to school. Over the years, both the absolute number and the proportion of students walking and bicycling to school have risen. The program has created "Suggested Safe Routes to School" maps, created a database chronicling the transportation habits of students and parents based on on-site surveillance, instituted "Walkin' Wednesdays" and "Bikin' Fridays," established a website promoting program goals, continued existing parent workshops, and other age-appropriate promotions.

1.5.3. SUGGESTED ROUTES TO SCHOOLS/ VEHICLE EMISSIONS REDUCTIONS BASED AT SCHOOLS (VERBS)

Vehicle Emissions Reductions Based at Schools (VERBS) is a federally funded grant program administered by MTC and VTA for Santa Clara County. The VERBS Program is unique in that it recognizes the importance of developing performance metrics to gauge the environmental and air quality impacts of increased walking, bicycling, and carpooling to school. The VERBS Program has the following main objectives:

- To facilitate the planning, development, and implementation of a project and/or activity that will reduce traffic, fuel consumption, and air pollution in the vicinity of schools
- To reduce traffic related injuries and fatalities to school children
- To enable and encourage children, including those with disabilities, to walk and bicycle to school
- To make bicycling and walking to school a safer and more appealing transportation alternative, thereby encouraging a healthy and active lifestyle from an early age

The City was awarded two VERBS grants totaling $1,000,000 ($500,000 in 2011 and $500,000 in 2014) from the MTC/VTA to partner with local schools to develop and implement non-infrastructure projects to promote walking, bicycling and carpooling to school. The current VERBS Program provides age-appropriate educational programs for grades K-12 students in all public and private schools in the City, as well as Los Altos High School. Between 2011-2014, the VERBS Program completed 800 educational workshops/events serving 13,000 students and 3,200 parents.

1.5.4. TRAIL SAFETY DAYS

The City's Community Services Department sponsors Trail Safety Days to educate the public about Stevens Creek Trail etiquette. Stevens Creek Trail is a shared-use trail enjoyed by people biking, walking, jogging, and in-line skating. The Trail is popular and can become crowded. Bike bells and informational cards reminding trail users of common safety practices are distributed twice each year.

1.5.5. POLICE DEPARTMENT EDUCATION PROGRAMS

The Mountain View Police Department periodically holds general information workshops at all schools in Mountain View to educate children about different safety-related topics. Part of the program includes discussion of bicycle safety, including:

- How to safely operate a bicycle
- Rules of the road
- The importance of a proper fitting bike helmet

This program reaches approximately 600 children per year and is expected to continue.

1.5.6. CITY WEBSITE

The Mountain View website posts information about bicycling and pedestrians in the Getting Around Mountain View webpage to educate the community about existing facilities and programs. The webpage includes information regarding:

- Local bike lanes/trails
- Bike lockers/storage
- B/PAC
- The Bicycle Transportation Plan Update
- Web links to Bay Area Bike Share Program
- Other bicycling resources and maps

1.6. ENFORCEMENT PROGRAMS

Enforcement is the fourth E evaluated for this Plan. Enforcement programs help implement and oversee rules of the road to ensure that people on all modes of transportation are traveling in a safe and responsible way.

1.6.1. POLICE DEPARTMENT BICYCLE UNIT

The City of Mountain View Police Department enforces bicycle-related moving and parking violations. The Mountain View Police Department has a unit that patrols the community and the City's special events and festivals on Police Department-issued bicycles. Each team member receives specialized training in advanced bike riding and in conducting law enforcement duties from a bicycle. According to the Police Department, the unit is an effective education and enforcement tool. All Mountain View Police Officers, whether they are on the bicycle enforcement team or not, are trained to enforce bicycle-related Vehicle Code violations. The Mountain View Police have an active social media presence, where they post podcasts and articles about bicycle safety, theft prevention, and more.

1.7. EVALUATION PROGRAMS

Evaluation is the fifth E evaluated as part of this Plan. Evaluation programs measure and evaluate the impact of projects, policies and programs. Typical evaluation programs range from a simple annual comparison of US Census Journey to Work data to bicycle counts and community surveys.

1.7.1. DATA COLLECTION

Bicycle counts and community surveys are methods to evaluate the effects of specific bicycle improvement projects; they also function as way to measure progress towards reaching a City's sustainability goals. The data collected from the efforts listed below was used to inform data collection methods for this Plan.

The Mountain View Pedestrian Master Plan (2012) conducted pedestrian and bicycle counts at 17 intersections throughout the City. The counts gathered data on volume and gender. The Plan recommends that future surveys include categories to distinguish between adults and children, identifying pedestrian/bicycle direction of travel, and improved volunteer training for conducting in-person counts. The purpose of the survey was to establish a baseline measurement of pedestrian volumes against which to compare future counts.

The VERBS Program, described above, conducts quarterly counts on the number of students walking and biking to local schools, including elementary, middle, and high schools. This information is posted/updated on the City's website. This data is used to measure student bicycle use in the City of Mountain View.

The Community Service Department conducted user counts on the Stevens Creek Trail and Permanente Creek Trail in 2012 and 2013. The counts tallied the number and gender of bicyclists, pedestrians, and other users in 15 minute intervals at different points along the trails. The counts were conducted from 8:30 AM to 10:30 AM and 3:30 PM to 5:30 PM.

Bicycle counts were conducted as part of this Plan's update, and are summarized in Chapter 3. This

count effort is intended to serve as the baseline of a benchmarking efforts. Bike counts of the benchmark locations should be conducted three years after the Plan is adopted to measure and evaluate projects, policies, and programs

1.7.2. BICYCLE FRIENDLY COMMUNITY

The Bicycle Friendly Community program is administered by the League of American Bicyclists as a tool for identifying cities that are making efforts to improve their bicycle network and programs. Mountain View was designated a Silver-Level Bicycle Friendly Community in 2012 by the League of American Bicyclists as an upgrade from the Bronze-Level award the City held since 2004. The Silver-Level award recognizes the City's commitment to improving conditions for bicycling through investment in bicycling promotion, education programs, infrastructure and pro-bicycling policies. Mountain View is one of only 340 communities across the country to be designated as a Bicycle Friendly Community. The Recommendations chapter of this Plan will identify steps to advance towards the Gold-Level award.

Figure 1-28 Mountain View is currently a Silver Level Bicycle Friendly Community

Figure 1-29 Mountain View's trail network helped establish the City as a Bicycle Friendly Community

2 POLICY AND PLAN REVIEW

The Bicycle Transportation Plan Update builds on and translates existing plans and initiatives into recommendations for future bicycle-related improvements.

The City's Bicycle Transportation Plan Update is influenced by a number of existing plans, policies and programs that support safe, high quality bicycle environments and encourage greater bicycle mode shares for all types of trips. The Bicycle Transportation Plan Update builds on and translates these documents and initiatives into recommendations for future bicycle-related improvements.

City of Mountain View land use and transportation development are guided by a variety of plans with varying scopes. The General Plan guides future development and sets a foundation for sustainable growth. Plans, such as this Bicycle Transportation Plan Update, emphasize a particular planning initiative that influences the City's growth. Mountain View has many (30+) Precise Plans establishing land use and design standards for focused geographic areas of the City. Recently, the City approved Precise Plans (El Camino Real, San Antonio and North Bayshore) for three of the five Change Areas identified in the 2030 General Plan– parts of the City where the most significant changes are planned through 2030. **Table 2-1** lists the plans and policy resources that were considered in the updating of this Plan. **Figure 2-2** shows proposed bikeways identified in recently completed studies and/or precise plans.

Appendix C reviews relevant goals policies, programs and standards from each of these documents that will effect implementation of the BTP update. The review is organized by City, County, Regional and State documents and policies. A clear understanding of the planning and policy context enables Mountain View to create an actionable Bicycle Transportation Plan Update that fulfills the plans and policies adopted by Council and partner funding agencies.

One of the main objectives of this Plan process is to coordinate and refine the City's bikeways that are being proposed as part of the development of various Precise Plans, corridor studies, as well as one's identified in the City's Capital Improvement Project list. **Figure 2-2** overlays the map of the existing bikeway network with proposed bikeways that are currently under study. This composite map allows the BTP Update to examine improvements to the City's bikeway network in a holistic and strategic way.

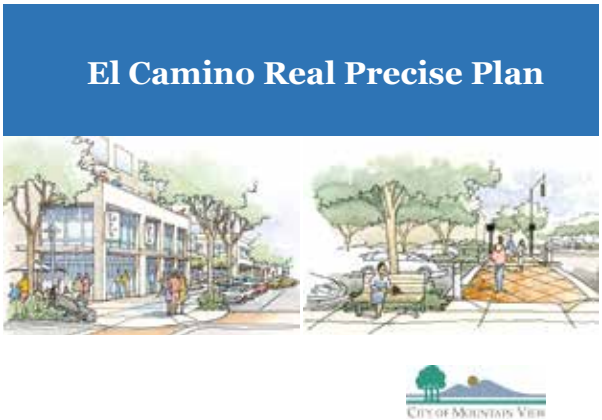

Figure 2-1 The El Camino Real Precise Plan is one of several City plans that establish land use and design standards for focused areas of the City

TABLE 2-1 PLANS AND POLICIES
Local
Mountain View 2030 General Plan
Mountain View City Code
Mountain View Capital Improvement Program
San Antonio Precise Plan (2014)
El Camino Real Precise Plan (2014)
North Bayshore Precise Plan (2014)
East Whisman Precise Plan (underway)
Pedestrian Master Plan (2014)
Parks and Open Space Place (2014)
Environmental Sustainability Report (2008)
County
Santa Clara County General Plan (1994)
Valley Transportation Authority: Valley Transportation Plan 2040
Countywide Bicycle Plan (2008)
VTA Bicycle Expenditure Program
VTA Bicycle Technical Guidelines
Regional
MTC Regional Bicycle Plan (2009)
San Francisco Bay Trail Gap Analysis (2005)
Caltrain Bicycle Access and Parking Plan (2008)
Grand Boulevard Initiative
State
State Assembly Bill 32: Global Warming Solutions (2006)
State Assembly Bill 1581: Signal Bike Detection (2007)
State Assembly Bill 1358: Complete Streets (2008)
State Senate Bill 375: Sustainable Communities (2009)
State Assembly Bill 1193: Bikeways (2014)
State Assembly Bill 1371: Vehicles: bicycles: Passing Distance (2013)
California Manual on Uniform Traffic Control Devices (2014)
California Highway Design Manual (2012)
Caltrans Design Flexibility in Multimodal Design
California Vehicle Code
California Government Code §65302 (Complete Streets)
California Green Building Standards Code (2013)
California Active Transportation Program
Federal
US Department of Transportation Policy on Bicycle and Pedestrian Accommodation Regulations and Recommendation
American Association of State Highway and Transportation Officials – Guide of the Development of Bicycle Facilities

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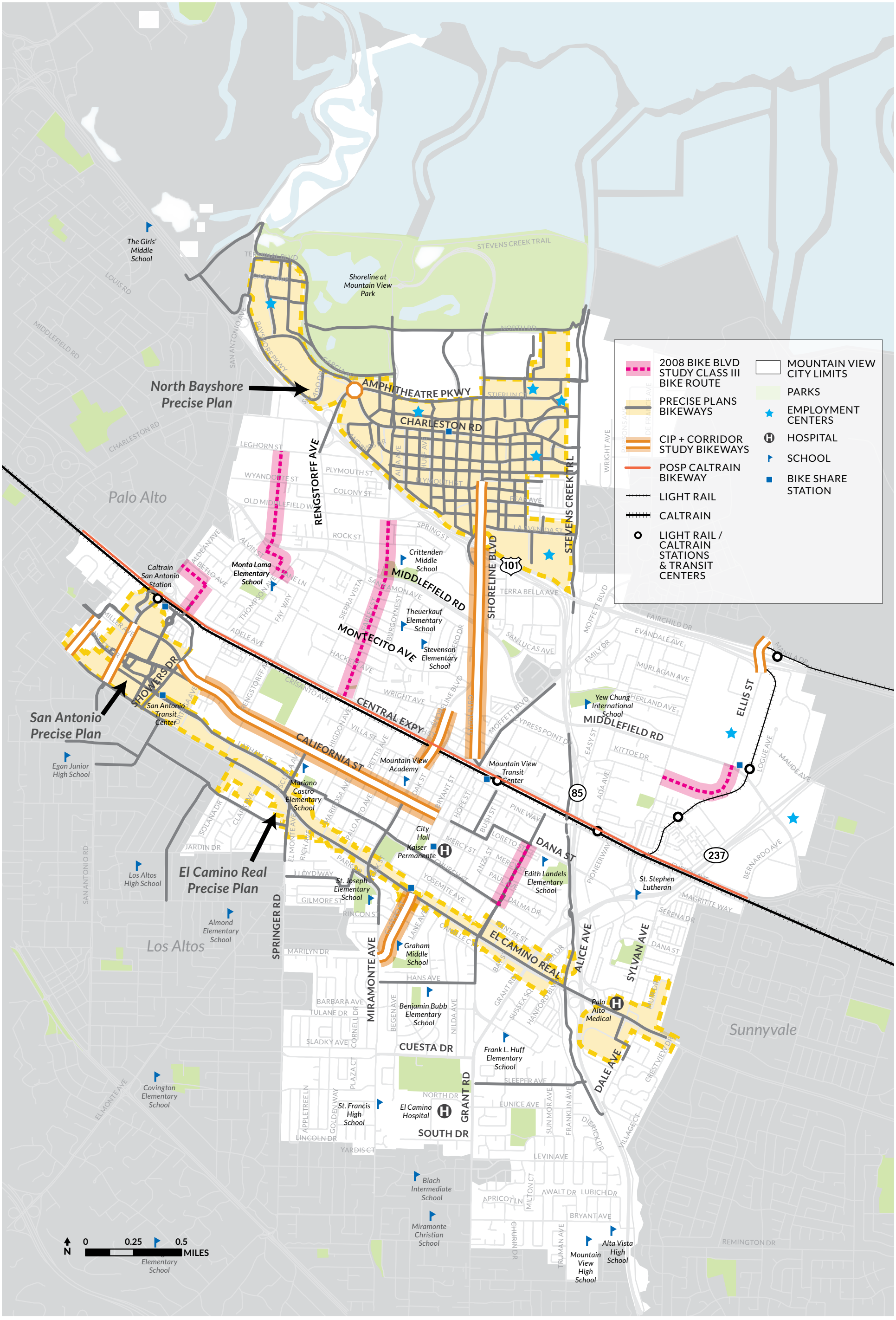
Figure 2-2 Bikeways Proposed and Under Study



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3 NEEDS ASSESSMENT

People of all ages and abilities bike every day in Mountain View.

The needs of Mountain View bicyclists are diverse; they depend on individual level of experience, confidence, age, trip type and many other factors. To understand the City of Mountain View's bicycle needs, this chapter examines the following:

- Types of people who bike and typical trip purposes;
- Trip attractors and generators to identify potential bicycle trip origins and destinations.
- Travel mode choice and typical travel time to understand the current and potential rates of bicycling;
- Bicycle-related collisions to understand locations potentially in need of bicycle related improvements;
- Existing gaps in the bicycle network to inform potential future network development; and
- Summarizes community input gathered from community surveys and a workshop.

3.1. TYPES OF PEOPLE BIKING

This Plan seeks to address the needs of all the different types of people who currently bike and who may bike in the future; therefore it is important to understand the different needs and preferences, which vary between skill levels and trip types. In addition, the propensity to bicycle varies from person to person, providing insight into potential increases in bicycling rates. The public can generally be classified into four categories related to bicycling.[1] These categories are shown in **Figure 3-1**.

The needs of people biking vary between trip purposes. For example, people who go on recreational bike rides may prefer long and unsignalized roadways, while

1 *Dill, Jennifer. "Understanding and measuring bicycling behavior: Implications for urban planning, health, and research." Active Living Research – Robert Wood Johnson Foundation (RWJF), Principal Investigator, 2004-2006.*

WHAT TYPE OF BICYCLIST ARE YOU?

A survey conducted in Portland, OR classified four types of cyclists and discerned that approximately 60% of any given population is "interested but concerned" about bicycling. In other words, this population would like to bicycle and are able to bicycle, but their safety concerns, specifically bicycling in close proximity to automobile traffic, prevents them from bicycling more often or at all.

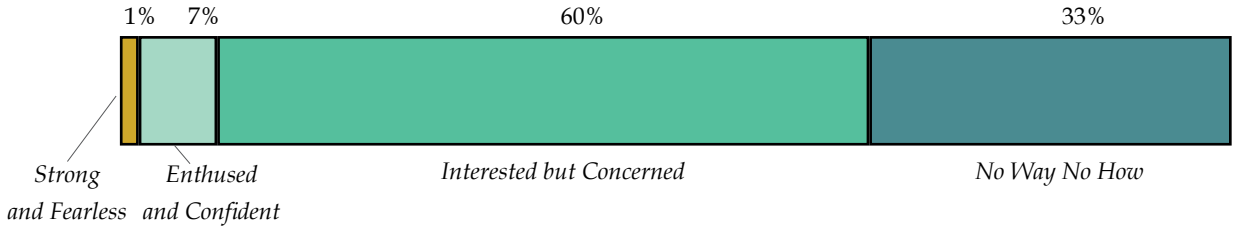
Strong & Fearless: *I will bike wherever, whenever.*

Enthused and Confident: *I feel comfortable biking, especially on bike paths and streets with bike lanes.*

Interested but Concerned: *I'd like to bike, but my safety concerns prevent me from biking more often.*

No Way No How: *I'm not interested in bicycling because of topography, inability, or lack of interest.*

Figure 3-1 Four Types of Bicyclists



people who bike with their children to school may prefer direct roadways with lower vehicular volumes and speeds.

People of all bicycle abilities and purposes ride every day in Mountain View. Parents bicycle with their children to school, people bicycle to work and to run errands, community members bicycle to transit stations, and people ride recreationally on extended bicycle trips. An effective bicycle network accommodates people of all bicycling abilities. This Plan considers these differences and presents a set of recommended bikeway network improvements to serve all user types.

3.2. BICYCLE ATTRACTORS AND GENERATORS

Where do people in Mountain View bike? This Plan identifies the key locations that people bike to and from in Mountain View. Understanding where people travel informs which streets and routes are important for getting people safely to and from their destinations.

3.2.1. PARKS AND CITY FACILITIES

The City of Mountain View has 39 parks within its borders that offer a wide range of both passive and active recreation. The two largest parks are Shoreline at Mountain View Park and Stevens Creek Trail. Chapter 38 of the Mountain View City Code considers Class I trails as part of the City's park system. The City's collection of parks are key destinations for people of all ages and bicycling abilities.

Class I bike paths in Mountain View include a section of the Bay Trail, Stevens Creek Trail, Permanente Creek Trail, and the Hetch Hetchy Trail. The Mountain View Community Services Department is responsible for the operations and maintenance of the City's trails network. The Stevens Creek Trail and portions of the Permanente Creek Trail are considered to be environmentally sensitive habitat and therefore are unilluminated. Per City Code 38.13, all trails, like all City Park facilities, are closed between one-half hour after sunset to 6:00AM the following day. In the past, the City trails have not had a designated speed limit. Rather, users have been required to travel no faster than is reasonable and prudent under existing conditions. Trail users have also been prohibited from using motorized bicycles and skateboards. In August 2015, the City implemented a one-year pilot program to:

- Permit the use of electric assistive mobility devices (e.g., electric bicycles and scooters) on City trails
- Allow the use of non-motorized skateboards on City trails
- Permit the use of motorized skateboards on City bike paths and trails, but not until the California Vehicle Code has been modified to allow use of electric skateboards on bike paths and trails
- Implement a continuous 15-mile per hour speed limit throughout the City trail system in conjunction with an educational outreach program regarding trail etiquette, additional signage along trails, and enforcement

SHORELINE AT MOUNTAIN VIEW

Shoreline at Mountain View Park is located in the northern part of the City and includes a golf course, bike rentals at the boathouse, a 50-acre lake and the Rengstorff House, a historic Victorian mansion. The park includes 10 miles of trails, both paved and unpaved, including portions of the San Francisco Bay Trail. Visitors can rent bicycles from the Shoreline Lake Aquatic Center.

STEVENS CREEK TRAIL

Stevens Creek Trail is a linear park that stretches from Shoreline at Mountain View to Dale Avenue and Heatherstone Way. The Trail is approximately five miles long and includes a paved shared-use path for people to walk and bike. Due to the nature of Stevens Creek Trail being a wildlife corridor with sensitive habitat, the trail is not built as a main commute corridor. Rather, it is intended to support more passive recreation.

PERMANENTE CREEK TRAIL

The Permanente Creek Trail is a multi-use trail that extends from Shoreline at Mountain View over Highway 101, under Old Middlefield Road and currently ends at Rock Street. The Permanente Creek Trail is anticipated

to extend to Middlefield Road in the future and the City continues to work with the Santa Clara Valley Water District and Mountain View Whisman School District to review design and site plans.

HETCH HETCHY TRAIL

The Hetch-Hetchy Trail creates a neighborhood bicycle/pedestrian connection from the Middlefield Light Rail Station to the Stevens Creek Trail. The Hetch-Hetchy Trail also provides off-street bicycle and pedestrian commuter access to the Ellis-Middlefield business area and off-street recreation access to the Stevens Creek Trail and open-space facilities connected to the trail, including Whisman Park, Creekside Park, Landels School and Park and Shoreline At Mountain View. The trail is built along the Hetch Hetchy Right of Way.

3.2.2. SCHOOLS

Children younger than driving age are a large segment of people who currently bike and may bike in the future. Mountain View students attend schools governed by the Mountain View-Whisman School District, Los Altos School District, and/or the Mountain View-Los Altos Union High School District. Mountain View is also home to a number of private schools. **Table 3-1** lists the schools within Mountain View, or in adjacent communities as noted, where Mountain View residents attend.

3.2.3. RETAIL CENTERS

The City of Mountain View has three major retail shopping areas. Additional shopping areas are located throughout the City, including those on Grant and Charleston Roads and on Rengstorff Avenue and Shoreline Boulevard.

SAN ANTONIO SHOPPING CENTER

The San Antonio Shopping Center is an outdoor shopping mall located on El Camino Real and San Antonio Road. The Shopping Center includes large and small retail shops and food. The Center is also home to the San Antonio Transit Center, which provides transit connections to VTA bus lines and Stanford's Marguerite shuttle. The San Antonio Caltrain station is within a five minute walk.

DOWNTOWN CASTRO STREET

Castro Street is Mountain View's commercial downtown core and includes a range of retail, dining and commercial services. Mountain View's Civic Center is also located on Castro Street, and includes the Mountain View Public Library, City Hall, and Center for Performing Arts. The Downtown Transit Center is located at the northern end of Castro Street at Evelyn Avenue. Refer to Chapter 1 for more information about Downtown bicycle parking and bike accommodations at transit facilities.

EL CAMINO REAL

El Camino Real is a mixed-use corridor that runs through Mountain View and connects to Palo Alto, Los Altos and Sunnyvale. In addition to being a major regional transportation corridor, it is home to a wide variety of shopping and commercial uses. In 2014, the City approved the El Camino Real Precise Plan, which identifies future land uses and transportation plans along the busy corridor.

Figure 3-2 Permanente Creek Trail is a north-south Class I shared-use path in Mountain View (Flickr User JarrettM)

TABLE 3-1 SCHOOLS IN/SERVING MOUNTAIN VIEW	
School	**Location**
Elementary School	
Almond Elementary School (located in City of Los Altos)	550 Almond Avenue, Los Altos
Benjamin Bubb Elementary School	525 Hans Avenue
Bullis Charter School K-8 (located in City of Los Altos)	102 W Portola Avenue, Los Altos
Covington Elementary School (located in City of Los Altos)	201 Covington Road, Los Altos
Edith Landels Elementary School	115 West Dana Street
Frank L. Huff Elementary School	253 Martens Avenue
German International School of Silicon Valley (Private Pre K-Grade 12)	310 Easy Street
Mariano Castro Elementary School	505 Escuela Avenue
Miramonte Elementary School K-8 (located in City of Los Altos)	1175 Altamead Drive, Los Altos
Monta Loma Elementary School	460 Thompson Avenue
Oak Avenue School (located in City of Los Altos)	1501 Oak Avenue, Los Altos
Springer Elementary	1120 Rose Avenue
Santa Rita Elementary School (located in City of Los Altos)	700 Los Altos Ave, Los Altos
St. Joseph's Elementary School (Private)	1120 Miramonte Ave
Stevenson Elementary School	750-B San Pierre Way
Theuerkauf Elementary School	1625 San Luis Avenue
Yew Chung International School of Silicon Valley (Private)	310 Easy Street
Middle School	
Blach Intermediate School (located in City of Los Altos)	1120 Covington Road, Los Altos
Crittenden Middle School	1701 Rock Street
Egan Junior High School (located in City of Los Altos)	100 West Portola Avenue, Los Altos
Graham Middle School	1175 Castro Street
Waldorf School of the Peninsula Middle and High School (Private)	180 North Rengstorff Avenue
High School	
Alta Vista High School	1325 Bryant Avenue
Mountain View High School	3535 Truman Avenue
Los Altos High School (located in City of Los Altos)	201 Almond Ave, Los Altos
Saint Francis High School (Private)	1885 Miramonte Avenue
Mountain View Academy (Private)	360 S. Shoreline Blvd
College	
Carnegie Mellon University, Silicon Valley Campus (Private)	Moffett Field

3.2.4. MAJOR EMPLOYERS

As of 2014, approximately 27,000 people are employed by Mountain View's major ten employers. The total City daytime population is 117,000, 17,000 more than 2003-2004 estimates. **Table 3-2** lists the City's major employers, their location and estimated number of employees. This Plan's recommendations consider large employer locations.

3.2.5. TRANSIT

Public transit riders often face the "first mile, last mile" dilemma of how to connect their home and destination to their transit stop. For instance, a transit bus may take a passenger to within a mile of their employment site, but that might be outside the range of their walking capability or tolerance. Providing bicycle racks on buses, allowing bikes on/in rail cars, and providing bicycle parking at transit stops ensure that bicycling is a complementary solution to the transit connectivity issue.

Approximately 4.4 percent of Mountain View's working population reports taking transit to work daily. Two public transit agencies operate within the City: Caltrain, a commuter rail system that runs from San Francisco to Gilroy, and the Santa Clara Valley Transportation Authority (VTA).

Caltrain operates two stations in Mountain View: Downtown Mountain View Station and the San Antonio Station. Out of Caltrain's 29 stations, the Downtown Mountain View Station has the third highest number of average weekday riders (4,274), or 8.2% of total average weekday ridership. The Downtown Mountain View Station is also the third highest station for average weekday bicycle ridership, behind Palo Alto and San Francisco. The average weekday passengers with bicycles at the Mountain View Station is 520, or 12% of the total number of Mountain View Caltrain station riders.

The City has two primary transit hubs, the Downtown Transit Center and the San Antonio Transit Center. The Downtown Transit Center provides connections to VTA light rail, bus lines, Caltrain, Caltrain shuttles, several private employer shuttles, the Mountain View Transportation Management Association's MVgo Commuter Shuttle service, and the Mountain View

TABLE 3-2 MAJOR EMPLOYERS IN MOUNTAIN VIEW

Employer	Address	Number of Employees *(Estimate)*
Google, Inc.	1600 Amphitheatre Pkwy Mountain View, CA 94043	11,332
Symantec/Verisign	350 Ellis St Mountain View, CA 94043	3,444
LinkedIn	2029 Stierlin Ct Mountain View, CA 94043	3,000
El Camino Hospital	2500 Grant Rd Mountain View, CA 94040	2,630
Intuit Corporation	2632 Marine Way Mountain View, CA 94043	1,707
Microsoft Corporation	1065 La Avenida St Mountain View, CA 94043	1,700
Palo Alto Medical Foundation	701 E. El Camino Real Mountain View, CA 94040	1,034
Synopsys, Inc.	700 E. Middlefield Rd Mountain View, CA 94043	1,031
City of Mountain View	500 Castro St Mountain View, CA 9404	568
Omnicell	590 E. Middlefield Rd Mountain View, CA 94043	500
Total		26,946

Source: City of Mountain View Comprehensive Annual Financial Report (June 30, 2014)

Community Shuttle service. The Downtown Transit Center has 23 bicycle racks, 116 bicycle lockers, a shared access bike storage shed, and a Bay Area Bike Share Station. The San Antonio Transit Center on Showers Drive at Latham Street is the transfer station for six regional bus routes serving Santa Clara County. These bus services are located near shopping and employment destinations in the western edge of Mountain View, near the City's boundaries with Los Altos and Palo Alto.

3.2.6. ADDITIONAL ATTRACTORS AND GENERATORS

Other City facilities that serve as bicycle trip attractors and/or generators and that were reviewed as part of this Plan include:

- Mountain View Public Library
- Mountain View Center for Performing Arts
- Senior Center
- Child Care Center
- Teen Center
- City Hall
- Community Center

3.3. COMMUTER TRAVEL

Monitoring the number of people in the City biking to work provides a way to track the use of bicycle facilities. As bikeways are built and education and encouragement programs are implemented, commuter travel data can be revisited to monitor changes in bicycling rates. The proportion of Mountain View residents that bicycle to work is about 6.5%, which is higher than Santa Clara County, the State of California, and the United States as a whole (**Table 3-3**).

Review of travel time to work is important to estimate the number of potential bicycle commuters. Generally, a vehicle commute time of 15 minutes or less is equivalent to a 30 minute bicycle commute, assuming flat topography and light to moderate traffic. In Mountain View, approximately 28 percent of the workforce that drives or takes transit has a commute of 15 minutes or less. Examples from communities nationwide have demonstrated that it is possible for Mountain View to shift a portion of the 28 percent of the 15 minute or less commuters to bicycling. **Table 3-4** compares average Mountain View commute times with Santa Clara County, California, and the United States.

TABLE 3-3 WORK COMMUTE MODE SHARE BY GEOGRAPHY

Mode	Mountain View	Los Altos	Palo Alto	San Francisco	Santa Clara County	California	United States
Drove Alone	72.70%	78.50%	64.80%	36.70%	76.30%	73.30%	76.40%
Carpooled	8.80%	5.30%	6.30%	7.30%	10.30%	11.00%	9.60%
Public Transportation	5.10%	2.00%	6.10%	32.50%	3.80%	5.20%	5.10%
Walked	2.30%	3.10%	5.10%	10.20%	2.00%	2.70%	2.80%
Bicycled	**6.50%**	**3.20%**	**9.10%**	**3.70%**	**1.90%**	**1.10%**	**0.60%**
Taxi, Motorcycle, Other	1.60%	0.20%	0.50%	2.50%	1.30%	1.30%	1.20%
Worked from Home	3.10%	7.60%	8.10%	7.10%	4.50%	5.30%	4.30%

Source: U.S. Census Bureau, 2011-2013 (3-year estimates) American Community Survey

TABLE 3-4 TRAVEL TIME TO WORK				
Travel Time to Work	**Mountain View**	**Santa Clara County**	**California**	**United States**
Less than 15 minutes	**28%**	25%	22%	29%
15 to 29 minutes	36%	36%	43%	47%
30 to 44 minutes	20%	21%	22%	17%
45 to 59 minutes	8%	8%	7%	4%
60 minutes or more	8%	10%	6%	3%
Source: U.S. Census Bureau, 2010-2012 (3-year estimates) American Community Survey				

Figure 3-3 The Downtown Transit Center serves Caltrain and VTA passengers.

3.4. ESTIMATED COMMUTER AND UTILITARIAN BICYCLISTS

The US Census only collects data on the primary mode of travel to work; it does not consider those who use a bicycle as part of their commute, for recreation, or to run errands. Alta Planning + Design has developed a bicycle model that estimates bicycle usage based on available empirical data to encapsulate general bicycle demand.

For the purposes of this Plan, the model uses Mountain View specific data from the US Census American Community Survey (ACS) and National Safe Routes to School survey. The calculation steps are outlined below:

- 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 5 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 national bike to school average rate of 2 percent
- Number of those who bike to transit
- Number of people who bicycle to Caltrain or VTA Stations, assuming that 5 percent[1] of transit patrons use bicycles to access the station and/or their destination

As shown in **Table 3-5**, there are an estimated 4,900 existing daily bicycle commuters who live in Mountain View, who make a total of 9,800 bicycle trips. This is an order-of-magnitude estimate based on available ACS data and does not include recreational trips, nor does it include trips made by people who live in other cities and work in Mountain View.

1 Five percent is an estimate based on national trends of transit patrons using a bicycle to access the station and/or their destination and VTA and Caltrain patrons who use a bicycle to access the station and/or their destination.

Figure 3-4 People bike to work, school, for shopping and errands, and for recreation

TABLE 3-5 EXISTING BICYCLING DEMAND (ESTIMATED)		
Variable	**Figure**	**Source**
Existing study area population	76,478	2013 ACS, B01003 3-Year Estimates
Existing employed population	41,802	2013 ACS, B08301 3-Year Estimates
Existing bike-to-work mode share	6.50%	2013 ACS, B08301 3-Year Estimates
Existing number of bike-to-work commuters	2,717	Employed persons by bike-to-work mode share
Existing work-at-home mode share	3.10%	2013 ACS, B08301 3-Year Estimates
Existing number of work-at-home bike commuters	65	Assumes 5 percent of population working at home makes at least one daily bicycle trip
Existing transit-to-work mode share	5.10%	2013 ACS, B08301 3-Year Estimates
Existing transit bicycle commuters	107	Employed persons multiplied by transit mode share. Assumes 5% of transit riders access transit by bicycle
Existing school children, ages 5-18 (grades K-12th)	10,759	2013 ACS, S0101 3-Year Estimates
Existing school children bicycling mode share	14.0%	Mountain View VERBS Bike to School Counts (Elementary, Middle and High School average)
Existing school children bike commuters	1,506	School children population multiplied by school children bike mode share
Existing number of college students in study area	4,983	2013 ACS, S1401 3-Year Estimates
Existing estimated college bicycling mode share	10.0%	Review of bicycle commute share in seven university communities (source: National Bicycling & Walking Study, FHWA, Case Study No. 1, 1995).
Existing college bike commuters	498	College student population multiplied by college student bicycling mode share
Existing total number of bike commuters	4,893	Total bike-to-work, school, college and utilitarian bike trips. Does not include recreation.
Total daily bicycling trips	**9,786**	**Total bicycle commuters x 2 (for round trips)**

3.5. BICYCLE COUNTS

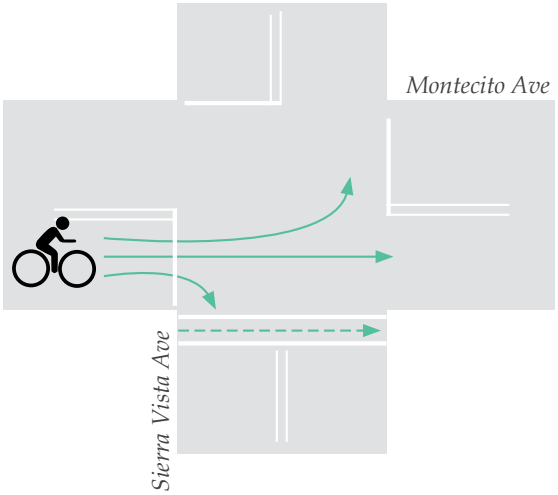
For the purpose of this Plan, bicycle turning movement counts were conducted at 17 intersections throughout the City during the peak AM (7:00 - 9:00 AM) and PM (4:00 - 6:00 PM) periods in May 2014, when most people commute to school or work. Simultaneously, tube counts were conducted at three additional locations during a seven-day period to observe the fluctuation in activity over the course of the day and throughout the week.

Figure 3-5 shows the count locations and the total number of people biking through the intersections during the AM and PM peak periods.

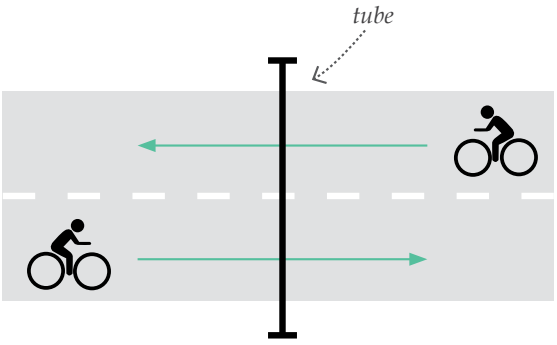
This count data was used to identify the intersections that experience the highest volume of people biking in today's existing conditions. The North Shoreline Boulevard and Charleston Road intersection (Intersection #2) had the highest number of people biking; 209 in the AM peak and 420 in the PM peak for a total of 629 people biking during the commute periods. Heatherstone Way and the entrance to the Stevens Creek Trail (Intersection #19) had the second highest number of people biking, 547 between the AM and PM commute periods. These baseline counts can be used to measure future bicycle volume trends.

HOW DO WE COUNT BICYCLISTS?

During the peak commute hours on a typical weekday, bicyclists are tallied by the direction of travel and subsequent turning movement at an intersection. In most cases, a bicyclist can travel straight, turn left, or turn right. Any bicyclists crossing in the sidewalk were also counted.

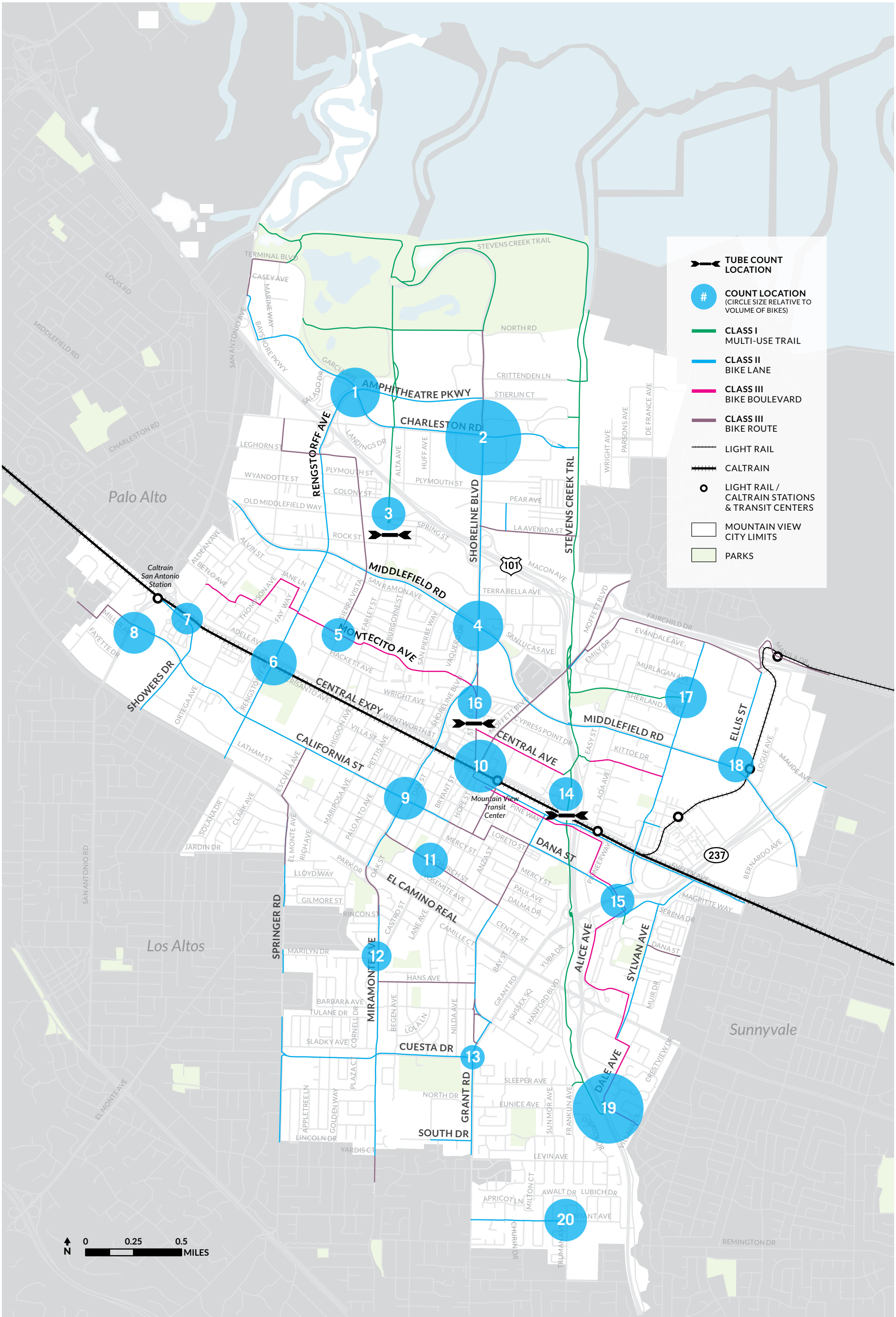


The bicyclist turning movements are summed to get the total number of bicyclists traveling through an intersection during the AM and PM periods.



On a trail or roadway, a tube placed across the path tallies the number of bicyclists by their direction of travel. The tube counts bicyclists for 24 hours over a period of seven days.

Figure 3-5 Bicycle Counts Map (2014)



The size of the circle is relative to the bicycle volumes traveling through the intersection. This map is formatted for 11" x 17"

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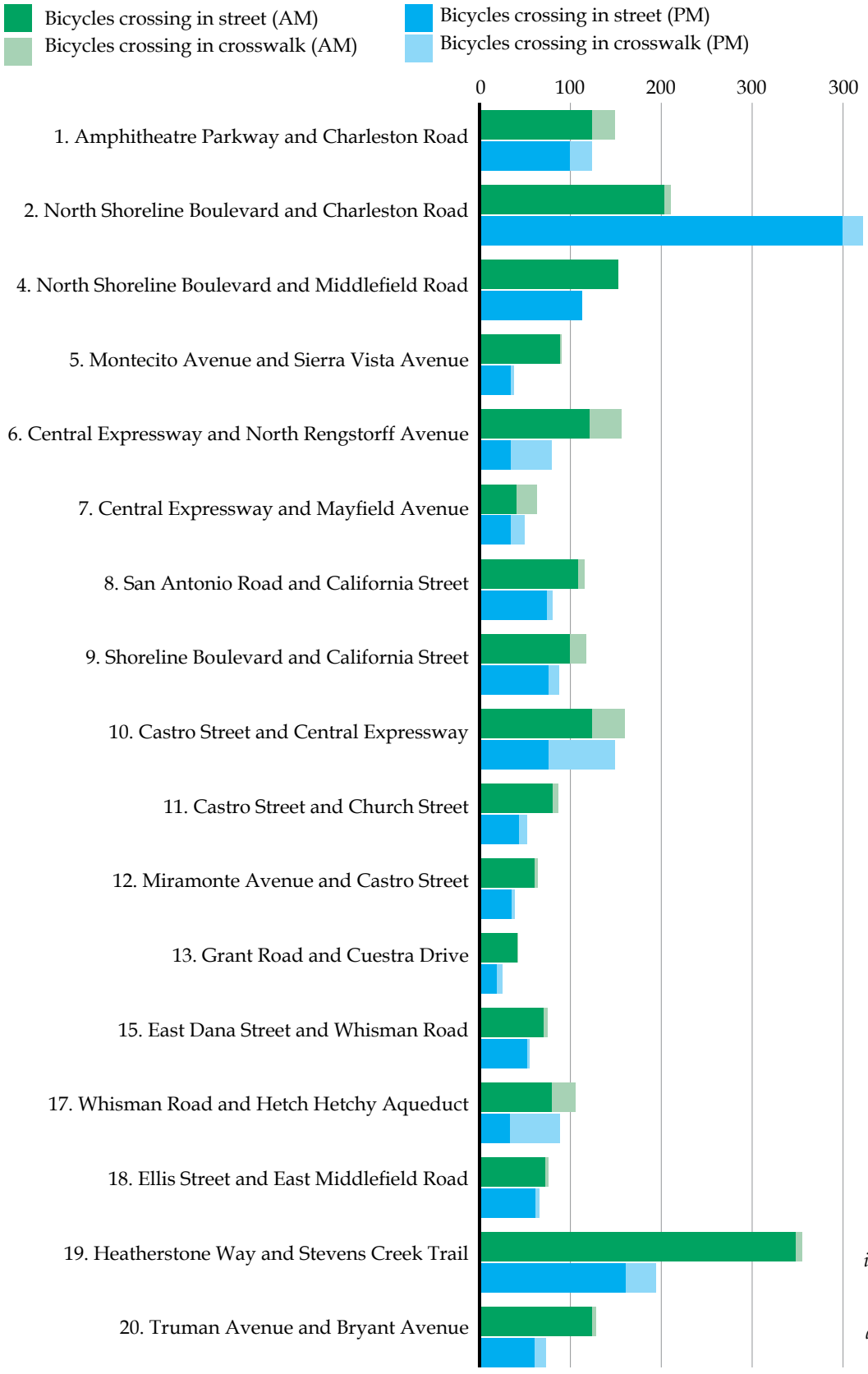
Figure 3-6 Bicycle Intersection Counts



**Locations #3, 14 and 16 were tube counts (not intersection counts). The results of locations #3, 14 and 16 are shown in Figure 3-8.*

3.5.1. BICYCLE COUNTS AT INTERSECTIONS

The charts on the following page show the number of people biking through the intersections on the street and the number of people who use the crosswalk to bike across an intersection. In all cases, the majority of people use the roadway to bike across an intersection. However, there are a few intersections with particularly higher proportions of people who bike across within the crosswalk, including the three intersections that cross Central Expressway: North Rengstorff Avenue (#6), Mayfield Avenue (#7), and Castro Street (#10). The intersection at Amphitheatre Parkway and Charleston Road (#1) and the intersection at Whisman Road and the Hetch Hetchy Trail (#17) also have a higher number of people biking within the crosswalk. The Mountain View City Code states that "no person shall ride a bicycle upon any sidewalk in the business district" (Sec. 19.51). Unless the sidewalk is classified as a multi-use path, people are required to bike on the roadway in a business district. When people bike on the sidewalk or the crosswalk, their behavior may be a response to roadway conditions they perceive as uncomfortable. The crosswalk crossing data can be considered a proxy for intersections that require additional observation and analysis.

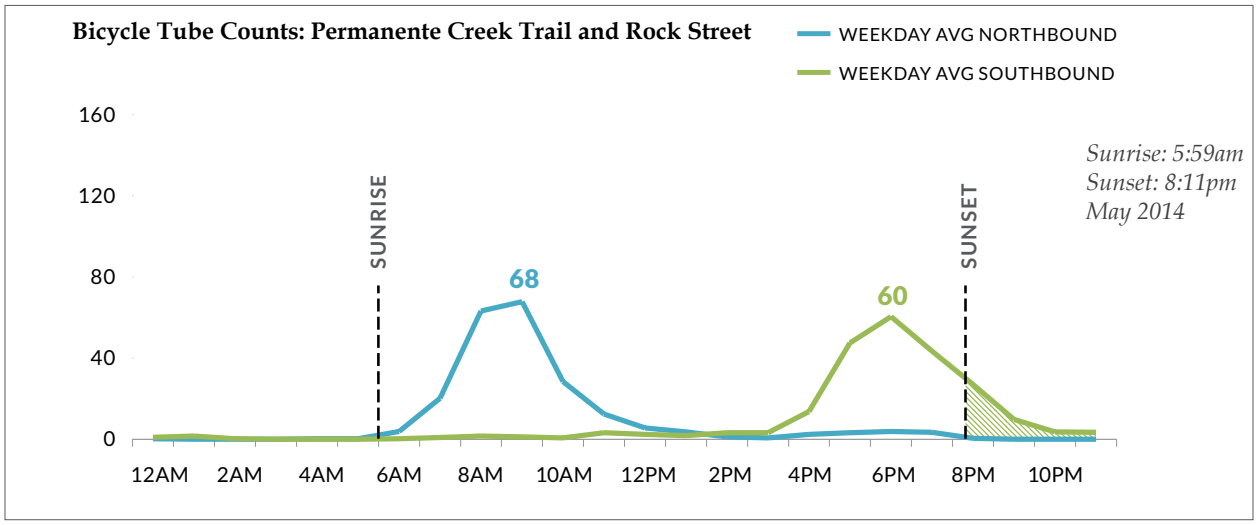
Part of understanding the need for bikeway improvements is examining the current use of Mountain View's trails system as well as low-volume automobile streets. Bicycle tube counts were taken in May 2014 at trailheads to Stevens Creek Trail and Permanente Creek Trail as well as on Stierlin Road near the intersection of Central Avenue. These tube counts establish a baseline of existing use and will allow the City to measure the increase of bicycle use over time through the implementation of the Bike Plan's projects, programs, and policy changes.

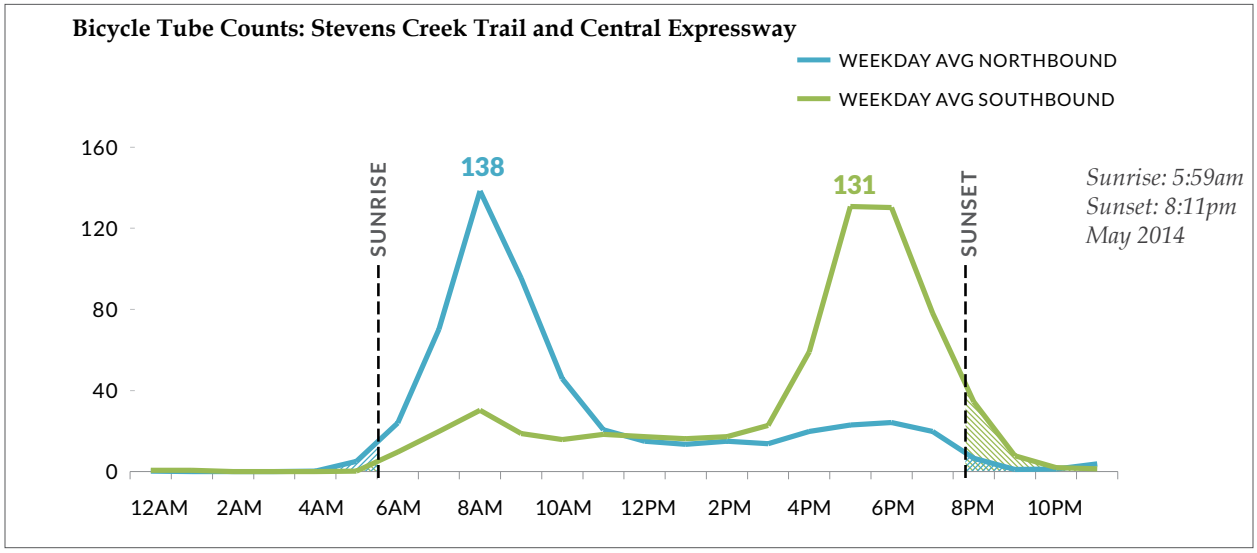
A tube count on Stierlin Road near the intersection of Central Avenue was selected to obtain bicycle counts because there is currently an informal pedestrian/ bicycle connection between Stierlin Road and Central Avenue. This area may experience a significant increase in bicycle and pedestrian activity in the future as the planned improvements associated with a private development project at 100 Moffett Boulevard and the Shoreline Boulevard Transportation Corridor Study are implemented. Once the improvements have been implemented, the City can measure the change in bicycle use along Stierlin Road.

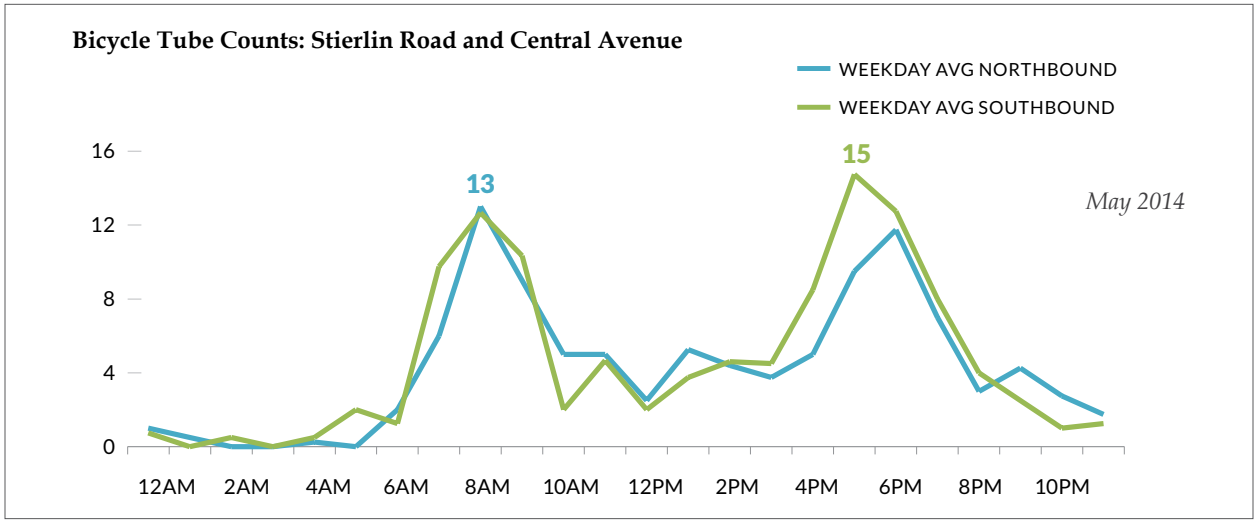
Figure 3-8 shows the number of people biking northbound and southbound on the Stevens Creek Trail, the Permanente Creek Trail and Stierlin Road. All three locations have AM and PM commute peaks. The Trails are officially closed a half-hour after sunset and re-open at 6:00AM, however the tube counts taken in May 2014 show people biking on the Trail after dark and, in the case of Stevens Creek Trail, before dawn. Sunrise and sunset times change throughout the year. During winter months, which has the shortest days of the year, the Trail is closed during some peak AM and PM commute periods.

Figure 3-7 The trail system in Mountain View provides a comfortable place to bike.

Figure 3-8 Bicycle Tube Counts







3.6. BICYCLE COLLISIONS

Bicycle collision records are maintained by the City of Mountain View Police Department and posted on the City's website. Police Department data from 2009 to 2013 was analyzed and mapped to identify bicycle-related collision locations and the nature of the collisions. The location of the 2009-2013 bicycle collisions can be seen in **Figure 3-10**.

Preliminary analysis of bicycle-related collisions reveals that bicycle collisions have decreased from 45 bicycle-related collisions in 2009 to 27 collisions in 2013 (**Figure 3-9**). Of the 193 bicycle-related collisions that occurred from 2009 to 2013, 165 (85 percent) were collisions between a bicycle and a car. Of those collisions, 75 (45 percent) were determined to be the fault of the motorist, 69 (42 percent) were determined to be the fault of the cyclist, and the fault of the remaining 21 (13 percent) collisions was undetermined. Out of the 27 collisions in 2013, one resulted in a severe injury.

The intersections with the most reported bicycle-related collisions between 2009 and 2013 included the following intersections:

- Central Expressway and Rengstorff Avenue
- El Camino Real and Sylvan Avenue
- Shoreline Boulevard and Villa Street
- California Street and San Antonio Road
- California Street and Oak Street

Two of the five locations are intersections along Central Expressway and El Camino Real. Central Expressway is in Santa Clara County's jurisdiction and El Camino Real is in California State's jurisdiction, however the City has jurisdiction of the side street approaches at these intersections.

The available collision data is incomplete because not all collisions are reported and the reported cases may not provide information regarding all circumstances relevant to this analysis, including collision causation. However, analyzing the bicycle collision data helps inform the City of possible engineering and/or education needs and establishes potential areas that can be considered for recommended improvements in this Plan (see Chapter 4 Recommendations). The City has also begun pursuing bicycle-related improvements and policies in the above listed areas through the City's El Camino Real Precise Plan, San Antonio Precise Plan, California Street Complete Streets Study and Shoreline Corridor Study.

Figure 3-9 Bicycle Collisions and Parties at Fault (2009-2013)

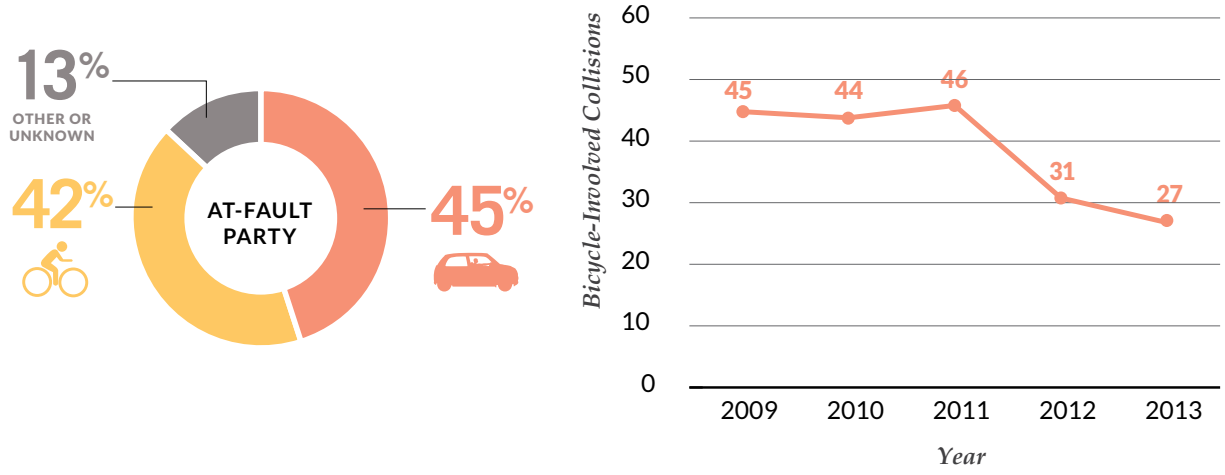
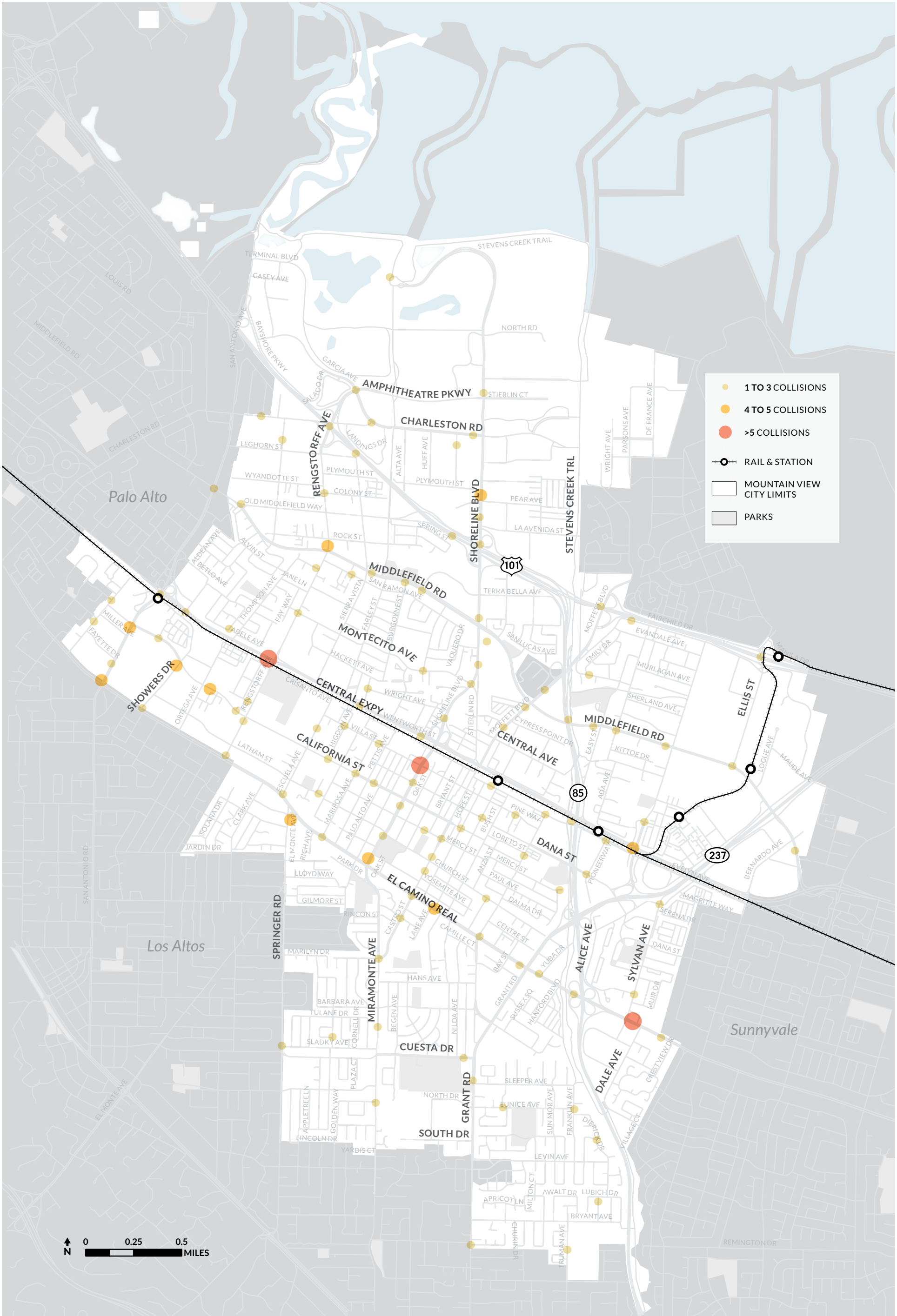


Figure 3-10 Bicycle Collision Map (2009-2013)



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3.7. CONNECTIVITY GAPS

A focus of this Plan has been to create a bicycle network that supports bicyclists of all ages, abilities, and comfort levels. Chapter 1 identified the existing bikeway network. This section identifies the gaps in the network, the places where a bikeway ends or drops-off.

3.7.1. GAP TYPES

There are several different types of gaps in a bikeway network.

SPOT GAPS

Spot gaps refer to point-specific locations lacking dedicated bicycle facilities or other treatments to accommodate safe and comfortable bicycle travel. Spot gaps primarily include intersections and other vehicle/bicycle conflict areas posing challenges for riders. Examples include bike lanes on a major street "dropping" to make way for right turn lanes at intersection, or a lack of intersection crossing treatments for bicyclists on a bikeway as they cross a major street.

CONNECTION GAPS

Connection gaps are missing segments on a clearly-defined and otherwise well-connected bikeway. Major barriers standing between bicycle destinations and clearly defined routes also represent connection gaps. Examples include bike lanes on a major street "dropping" for several blocks to make way for on-street parking; a discontinuous off-street path; or a freeway standing between a major bikeway and a school.

CORRIDOR GAPS

On clearly-defined and otherwise well-connected bikeways, corridor gaps are missing links longer than one mile. These gaps will sometimes encompass an entire street corridor where bicycle facilities are desired but do not currently exist.

SYSTEM GAPS

Larger geographic areas (e.g., a neighborhood or business district) where few or no bikeways exist are identified as system gaps. System gaps exist in areas where a minimum of two intersecting bikeways would be required to achieve the target network density. Gaps typically exist where physical or other constraints impede bicycle network development.

QUALITY GAPS

Quality gaps are links of an existing bikeway that are deficient or have operational shortcomings. For example a quality gap on an existing Class II bike lane may be a link where the bike lane shares space with parked cars, and/or does not meet Caltrans standards.

3.7.2. GAP ANALYSIS FINDINGS

Identification of network gaps within the Mountain View bicycle system is a two-step process that utilizes both objective, quantifiable data contained in the City GIS data files and real world qualitative data based on team field visits and feedback from public comment. By conducting a two-pronged analysis using complementary processes

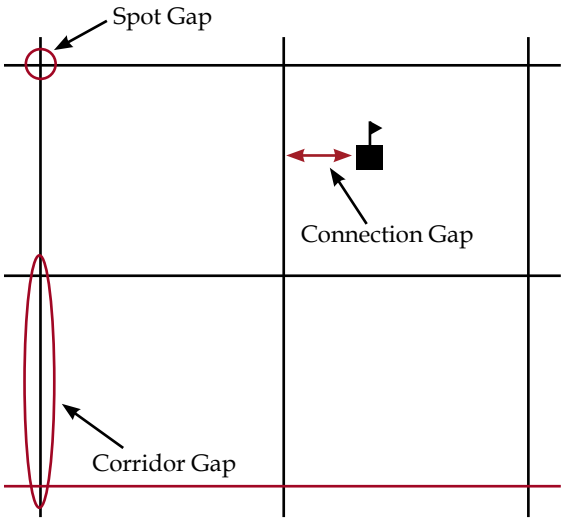

Figure 3-11 Bicycle Network Gap Types

the team developed a more robust picture of existing conditions and reduced potential weaknesses of both qualitative and quantitative analysis methods described below:

- Quantitative analysis conducted with GIS is objective, systematic and considered the whole city without bias. This analysis can identify gaps including geographic areas without network coverage and Class III routes that cross arterial without a traffic signal. This analysis is only as detailed as the

available data inputs and will not capture details such as narrow bike lanes or intersections where the bike lane drops and then resumes.

- Qualitative analysis is based on individual experiences of the bike network and is best used to identify detailed on-the-ground conditions that are not represented within the GIS data. Robust qualitative analysis is dependent on vast project participation from a diverse cross section of the community and detailed personal knowledge of the city from the participants and for this reason may not provide equal geographic coverage across the entire area.

The Network Gap Analysis findings are shown in **Figure 3-13**. Latham Street, Castro Street, Truman Avenue, Bryant Avenue and the southern extension of Stevens Creek Trail are identified as corridor gaps. Connection gaps include Rock Street, Farley Street and other streets that connect existing bikeways.

3.7.3. LOW STRESS GAPS

Gaps are particularly important when we think about a low stress bicycle network. Low stress segments include Class I separated paths and streets with low traffic volumes, low traffic speeds, and bike facilities such as a protected bike lane or a Bike Boulevard. These are facilities where people feel most comfortable biking because they typically have the least interaction with motor-vehicles. In Mountain View, Class I and designated Bicycle Boulevard segments of its Class III bicycle facilities can be viewed as generally low stress. The City's low stress bicycle network is shown in **Figure 3-14**.

One of the most significant barriers to bicycling is when the network, or segments of the network, exceed a bicyclist's tolerance for traffic stress. In other words, a person who feels comfortable biking on the Stevens Creek Trail may not feel comfortable bicycling on street where they interact frequently with traffic, which can induce a higher-stress environment. As such, someone who bikes on Stevens Creek Trail may not bike to other destinations, such school, work, or the grocery store, if it requires them to bike along higher-stress routes.

Field observations revealed that the City's existing two Class III Bicycle Boulevard segments lack the traffic calming and consistent way finding and markings that define Bicycle Boulevards as low-stress facilities. Furthermore, the existing Bicycle Boulevards can become high stress when they intersect with high volume streets. Similarly, the Class I paths are popular routes for both recreational and commuter bicycling, but sometimes become crowded when bikes and pedestrians share the path, thus increasing the stress of an otherwise low-stress environment.

What this analysis tells us is that Mountain View has a good start on a low stress network, particularly with its many miles of Class I trails. However, there is room for improvement. Chapter 4 will identify the opportunities where the low stress network can be improved and expanded throughout the City.

Figure 3-12 There are opportunities for improving the existing Bicycle Boulevard on Montecito Avenue.

Figure 3-13 Bicycle Network Gap Analysis Map

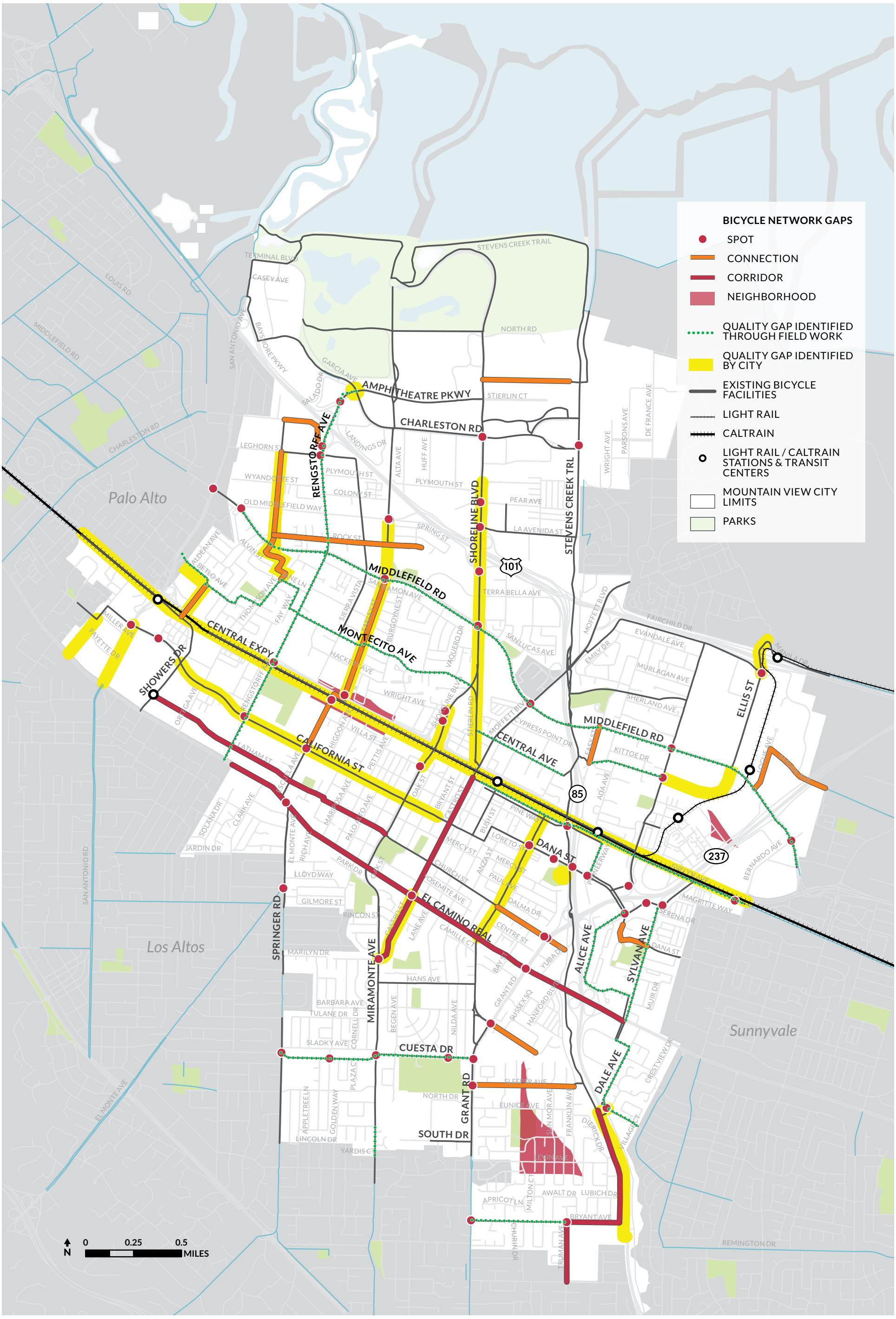

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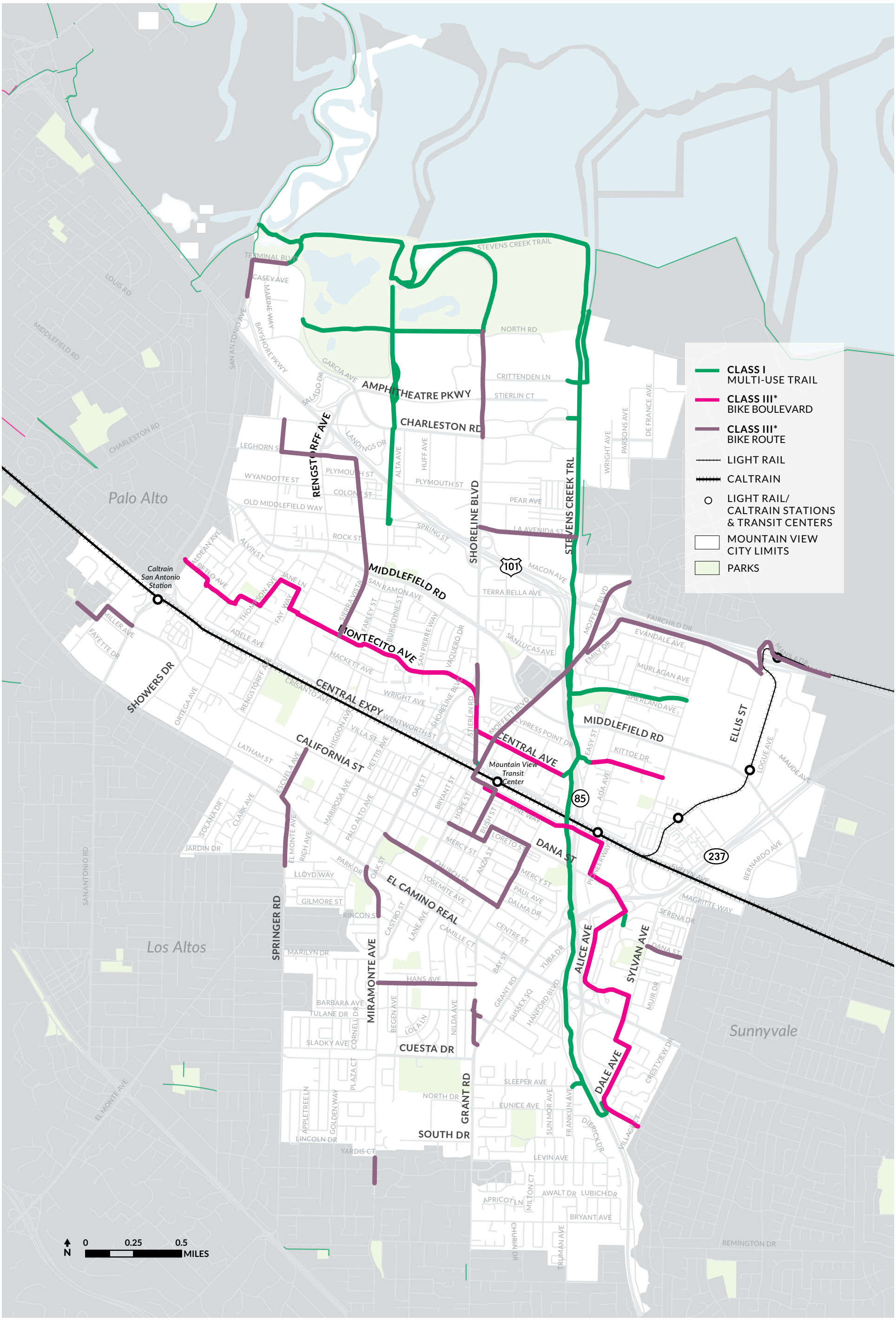
Figure 3-14 Low Stress Bicycle Connectivity Gap Map



** The Class III bike routes identified on this map do not necessarily meet all of the criteria for low-stress bicycle facilities.*
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3.8. COMMUNITY IDENTIFIED NEEDS

The development of this Plan included a robust outreach strategy to engage the community and offer input opportunities at key points throughout the process through multiple methods, including community workshops, a public project website and user/business surveys. The following section summarizes the public outreach program.

3.8.1. ONLINE USER SURVEY

An online user survey was developed to solicit feedback from residents and employees who live, work, commute or visit in the City. The survey was open from August 15, 2014 to October 15, 2014 and was advertised to community members using online and print media. The survey received 732 unique responses. Below is a summary of findings from the survey.

BICYCLE RIDERSHIP

At least one day per week, 57 percent of survey participants bike to work, 23 percent bike to/from transit, 52 percent bike to go shopping or run errands, and 70 percent bike recreationally.

BARRIERS TO BICYCLING

The survey asked participants to identify top three obstacles or concerns that prevent from bicycling. By far, the largest obstacle to bicycling in Mountain View is a perception that the roads do not feel safe.

TYPES OF BICYCLISTS

More than 20 percent of survey respondents identified themselves as Strong and Fearless bicyclists. More than 50 percent identified themselves as Enthused and Confident bicyclists. Approximately 25 percent identified themselves as Interested, but Concerned bicyclists, and a small percentage identified themselves as No Way, No How. The percentage who identified themselves as Strong and Fearless and Enthused and Confident is higher than the Portland survey (**Figure 3-1**) because the Mountain View survey respondents self-selected to take the survey. As such, the survey results are biased towards bicyclist respondents than non-bicyclists.

THE APPEAL OF BICYCLING

The survey asked participants to provide the top three reasons why bicycling is appealing to them. Health and fitness was chosen more than 80 percent of the time; reducing environmental impacts was chosen 40 percent of the time; both pleasure and spending more time outdoors were selected 30 percent of the time; and both reducing traffic congestion and saving money on fuel were chosen 25 percent of the time.

CURRENT BICYCLE FACILITY CONDITIONS

Nearly 90 percent of survey respondents rate the bicycle conditions around Mountain View between "fair" and "good" (on a four-part scale). Only 4 percent of the respondents rate the conditions as "excellent" which means that nearly all survey participants believe there is room for improvement.

> Survey participants said they would bike more often if Mountain View had more buffered bike lanes and cycle tracks.

SUGGESTED IMPROVEMENTS

Input from the community was used to guide the development of the more than 180 recommendations included in this Plan. Ninety percent of survey respondents said they would likely or very likely feel safer if Mountain View installed buffered bike lanes or off-street paths, or if the intersections were improved. Eighty-eight percent of survey respondents agree that cycle tracks are likely or very likely to encourage more bicycling. Although the numbers are lower, it is important to note that 50 percent of the respondents believe that adding better access to transit, such as providing better bicycle parking at transit stations, would encourage them to ride their bikes more.

PREFERRED BICYCLE FACILITIES

Survey participants were asked to identify the bicycle facility that may influence them to bike more often. The most frequently mentioned facilities are listed below.

- Buffered bike lanes
- Cycletracks
- Intersection improvements
- Off-street paths

BICYCLE DESTINATIONS

The survey asked respondents to give a few destinations they would like to get to on their bicycle but can't currently due to barriers or lack of facilities. The list below includes the most frequently listed destinations.

- Downtown Mountain View
- El Camino Real
- San Antonio Shopping Center
- Mountain View Schools (Mountain View High School in particular)
- Mountain View Caltrain Stations
- Mountain View Light Rail Stations
- Farmer's Market (Caltrain Station)

ROADWAY IMPROVEMENTS

After desirable destinations, respondents were asked to give suggestions on roadways in Mountain View that need bicycle improvements. The list below includes the most listed roadways for improvements.

- El Camino Real
- Shoreline Boulevard
- San Antonio Road
- Grant Road
- Rengstorff Avenue
- California Avenue
- Middlefield Road
- Moffett Boulevard
- Charleston Road

INTERSECTION IMPROVEMENTS

When asked which intersections need improvements, participants tended to identify the largest intersections in Mountain View. The reasoning behind many of the recommended improvements is listed below.

- Safety
- Cars changing lanes or turning without looking (or "not turning safely")
- Bike lanes ending
- High vehicle speeds
- Heavy traffic
- Poor visibility
- Signals not detecting bicycles
- Roadway debris

STREETS IN MOST NEED OF IMPROVEMENTS

Survey respondents were asked to list the three roadway corridors in most need of bicycle improvements in Mountain View. The most frequently mentioned streets are listed below.

- Castro Street
- El Camino Real
- Shoreline Boulevard
- San Antonio Boulevard

BICYCLE PARKING

Along with roadway and intersection improvements, respondents were asked to suggest locations where more bicycle parking is needed. Many of the same bicycle destinations listed previously are again listed here.

- Downtown Mountain View/Castro Street
- Caltrain/Sunday Farmer's Market
- Schools
- Libraries
- Shopping centers
- Parks

3.8.2. ONLINE BUSINESS SURVEY

Individuals who own or manage a business in Mountain View had the option of taking the Online Business Survey. The purpose of the Business Survey was to solicit feedback on how businesses in Mountain View support bicycling. Thirteen individuals participated in the Business Survey. Below is a summary of the responses.

- Five of the respondents manage or own a Community/Retail Business

- Five of the respondents manage or own a Professional Service
- One of the respondents manages or owns an Internet/ Software Business
- One of the respondents manages or owns a Non-Profit
- One of the respondents did not indicate their type of business

HOW DOES YOUR BUSINESS SUPPORT EMPLOYEES WHO BIKE TO WORK?

Half of the businesses participate in Bike to Work Month/ Day, 30 percent offer incentive programs to employees who bike to work, but 40 percent of businesses do not provide any incentive.

HOW DOES YOUR BUSINESS SUPPORT CUSTOMERS OR CLIENTS WHO BIKE TO YOUR BUSINESS?

Half of the businesses do not provide any support for customers or clients who bike to their business. Twenty percent of the respondents provide short-term bike parking and engage in community planning processes, and 10 percent offer promotions.

CUSTOMER AND CLIENT FEEDBACK

The business owners/managers wrote that they have heard from clients and/or customers about the need for more bike racks and bike parking in Mountain View, particularly on El Camino Real. Customers also requested the option to lock their bike in close proximity to the business in question. Customers also noted being uncomfortable with riding on some bike routes and the need for more bike lanes.

BUSINESS OWNER/MANAGER FEEDBACK

The business owners/managers noted that they'd also like more secure bike parking, particularly in commercial areas. They are concerned with bike theft.

3.8.3. TEXT SURVEY

Members of the public were invited to take a text survey to provide input on bicycling conditions in Mountain View. The text survey was advertised at the Downtown Transit Center and on social media. Individuals could participate in the text survey by texting a local number, then answering five questions. The purpose of the text survey was to solicit input from individuals who commute into or through Mountain View. The text survey received responses from 177 participants. Below is a brief summary of the responses.

The most common bike-friendly facility listed [in the text survey] was Stevens Creek Trail. Participants liked Stevens Creek Trail for its separation from traffic and continuous path.

Members of the public were asked to identify the most bike-friendly facilities and the least bike-friendly in Mountain View. The most common bike-friendly facility listed was Stevens Creek Trail. Participants liked Stevens Creek Trail for its separation from traffic and continuous path. Participants liked other streets with clearly marked bike lanes separated from traffic and without obstruction from parked cars. Low-volume residential streets were also identified as preferred routes. The most frequently mentioned bike-friendly facilities included:

- Stevens Creek Trail
- Middlefield Road
- California Street
- Shoreline Boulevard
- Miramonte Avenue
- Residential Streets
- Cuesta Drive
- Evelyn Avenue

The most common least bike-friendly facility listed was El Camino Real, due to its lack of bike lanes, heavy traffic, and high traffic speeds. Other arterial roadways, such as Central Expressway, Shoreline Boulevard, and San Antonio Road were identified as the least bike-friendly streets for heavy traffic, high speeds, and unfriendly intersections. The most frequently mentioned

least-friendly bicycle facilities included:

- El Camino Real
- Castro Street
- San Antonio Boulevard
- Central Expressway
- Shoreline Boulevard
- California Street

BIGGEST CONCERNS

Participants were asked to identify their biggest concerns with bicycling in Mountain View. Safety was the most common concern. Below is a summary of the common concerns.

- Safety/Getting hit by a car
- Lack of bike parking
- Traffic
- Right-turning cars (right hooks)
- Getting "doored" (when a person opens their vehicle door into the path of a passing bicyclist)
- Lack of bicycle-detection at signals
- Driver behavior/Distracted driving
- Speeding cars
- Difficult to see bikes
- Lack of education about rules of the road
- Lack of continuous bike lanes

BICYCLE IMPROVEMENTS

When asked what bicycle improvements they'd like to see in Mountain View, a few common themes emerged from the participant responses.

- More bike lanes
- Clearly marked bike lanes
- Separated/protected bike lanes (either buffered or cycletracks)
- Improved Bicycle Boulevards
- Wider bike lanes
- Green painted bike lanes
- Safer intersection crossings

3.8.4. ONLINE MAPPING SURVEY

An online mapping survey allowed individuals to provide location-specific feedback for bicycling issues and opportunities in Mountain View. Approximately 200 comments were submitted to the online mapping survey. Participants identified locations with bikeway gaps, intersection concerns, traffic concerns, signal concerns, maintenance concerns, and more. These locations and comments were reviewed thoroughly and informed the recommendations in this Plan.

3.8.5. PUBLIC MEETINGS AND WORKSHOPS

The purpose of the public meetings was to introduce the Plan's process to the public and solicit feedback on existing issues and opportunities. This information was used to inform potential bikeway projects and priorities in Mountain View. Two workshops were held during this process.

COMMUNITY WORKSHOP #1, SEPTEMBER 15, 2014

Approximately 45 people attended the first Community Workshop. Workshop attendees provided input on the following to improve the bicycling environment in the city:

- Policies
- Projects
- Programs
- Vision and Goals

COMMUNITY WORKSHOP #2, FEBRUARY 9, 2015

The draft set of Plan recommendations was presented at the second community workshop. Participants gave their feedback on the proposed bikeway facilities as well as potential bicycle-related programs and policies. The feedback from the second workshop was incorporated into the revised recommendations.

NORTH SANTA CLARA COUNTY JOINT CITIES MEETING

On August 5, 2014, the City of Mountain View hosted a meeting with staff from the cities of Palo Alto, Sunnyvale,

and Los Altos to identify existing bicycle infrastructure and network; barriers, proposed projects, and regional connection opportunities.

MOUNTAIN VIEW YOUTH ADVISORY COMMITTEE

A presentation was given to the Mountain View Youth Advisory Committee (YAC) on October 6, 2014. The purpose of the presentation was to introduce the Bike Plan to the YAC and solicit input on issues and opportunities. The YAC was asked to provide suggestions on how the Bike Plan could support the bike mobility needs of Mountain View's youth. Below is a list that summarizes some of the major concerns that emerged from the discussion.

- Students expressed concerns about feeling safe while biking with traffic. They bike on the sidewalk if a bike lane ends or doesn't exist.
- Students enjoy riding in packs because it is social and makes them feel safer.
- The streets near the Mountain View High School can feel chaotic and students expressed desire for improved bike lanes and safer driving.

MOUNTAIN VIEW SENIOR ADVISORY COMMITTEE

The Mountain View Senior Advisory Committee (SAC) received a presentation on October 15, 2014. The purpose of the presentation was to introduce the Bike Plan to the SAC and solicit input regarding how the Plan could support the bike mobility needs of Mountain View's senior citizens. Below is a list that summarizes some of the major concerns that emerged from the discussion.

- Concern with width of bike lanes to accommodate wider bicycles (such as adult tricycles) and slower riders.
- Concern with distracted roadways users (drivers, bicyclists and pedestrians).
- Desire for more continuous, low-stress bikeway network, particularly to Shoreline at Mountain View Park.

MOUNTAIN VIEW PARKS AND RECREATION COMMISSION

A presentation was provided to the Mountain View Parks and Recreation Commission (PRC) on October 8, 2014. The purpose of the presentation was to introduce the Bike Plan to the PRC and solicit input on issues and opportunities. The PRC was asked to provide input on bicycle issues and opportunities specific to the parks and recreation needs in Mountain View. Below is a list that summarizes some of the major needs/concerns that emerged from the discussion.

- Pedestrians and cyclists compete for space on the trails throughout the City. Provide low-stress bicycle facilities as alternate routes to trails.
- Provide safe routes to parks and community centers.
- Coordinate Plan recommendations with the 2014 Parks and Open Space Plan.
- Address intercity gaps in the regional bicycle network.
- Improve bicycle signage.

MOUNTAIN VIEW WHISMAN SCHOOL DISTRICT ADVISORY COMMITTEE

A presentation was given to the Mountain View Whisman School District Advisory Committee (DAC) meeting on December 2, 2014. The purpose of the presentation was to introduce the Bike Plan to the DAC and solicit input on issues and opportunities. The DAC was asked to provide input regarding how the BTP Update could address the bike mobility needs of students. Below is a list that summarizes some of the major needs/concerns that emerged from the discussion.

- Desire for more separation between automobiles and bicycles.
- Concern about potential circulation conflicts between fast commuter cyclists and slower-paced student cyclists on Stevens Creek Trail. Request for signage to increase awareness of speed limit in school zones.
- Expand encouragement programs with bicycle donations to students, free bicycle repairs, and Carbon Fewer Fridays.
- Enforce maintenance of adjacent landscaping so vegetation doesn't obscure visibility at intersections, driveways, and trail crossings.
- Enforce 15 mph speed limit in school zones.

MOUNTAIN VIEW BICYCLE/PEDESTRIAN ADVISORY COMMITTEE

Five presentations were provided to the Mountain View Bicycle/Pedestrian Advisory Committee (B/PAC) during the development of this Plan. The meetings were an opportunity to solicit input and review on the draft content of the Plan from the B/PAC.

- On June 4, 2014, the B/PAC received a presentation on the existing conditions of bicycling in Mountain View and the overall process for updating the Plan. The B/PAC gave input on specific issues and opportunities to review as part of the on-going process.
- On August 27, 2014, the B/PAC received a presentation on a summary of the existing conditions presented in a Strengths, Weaknesses, Opportunities and Constraints (SWOC) format. The B/PAC provided comments on the City's existing environment for bicycling and key opportunities for improvements.
- On November 19, 2014, the B/PAC received a presentation and provided comments on the draft prioritization criteria for the Plan's proposed projects.
- On January 28, 2015, the B/PAC received a presentation and provided comments on the updated existing conditions, needs analysis, and initial draft recommendations.
- On April 29, 2015, the B/PAC received a presentation and provided input on the updated draft recommendations and implementation and funding chapters.

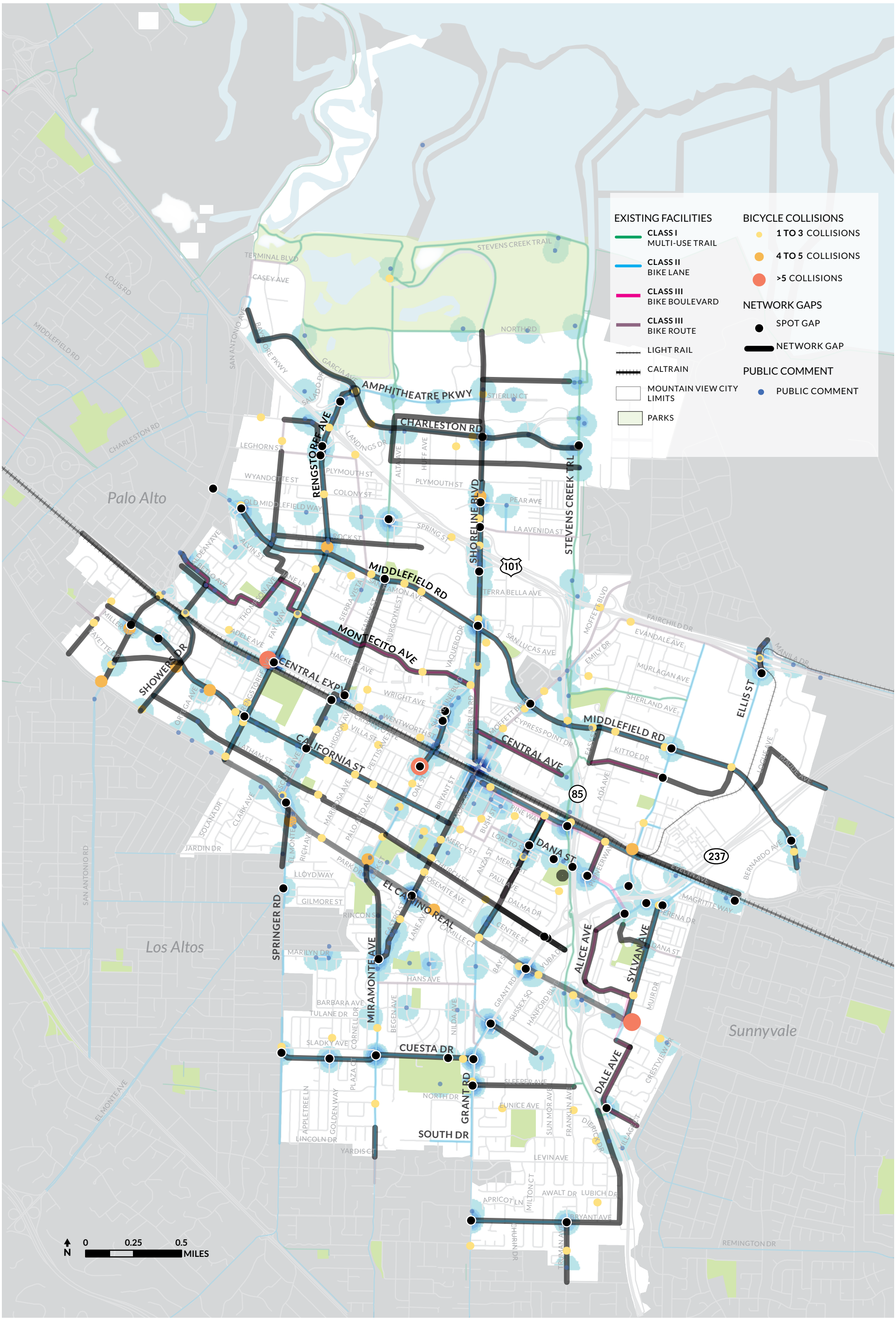
3.8.6. SUMMARY OF BICYCLING NEEDS

When layered together, the results of the existing conditions analysis show the areas of greatest need for bicycle improvements in Mountain View. The heat map shown in **Figure 3-15** is a summation of the bicycle-related collisions from 2009-2013, the location-specific community input, and the gap analysis. Together, these three pieces create a needs assessment map that highlights the locations in Mountain View with the greatest need for attention.

Based on the needs assessment conducted for the BTP Update, the following have been identified as opportunities for improvements to Mountain View's bicycle network:

- Complete spot and corridor gaps in the on-street network
- Identify opportunities for buffered or protected bikeways
- Enhance intersection crossings for cyclists
- Improve existing on-street bikeways that are currently too narrow or share road space with parked cars
- Consider alternative, parallel routes to trail facilities
- Explore alternative treatments and/or routes for on-street bikeways that currently cross over or under highways
- Expand bicycle wayfinding signage, especially for directions to trailheads, Downtown Mountain View, and transit stops
- Improve and add to existing Bicycle Boulevard network
- Increase short- and long-term bicycle parking
- Identify continuous and complete low-stress bikeway network
- Enhance bicycle education

Figure 3-15 Heat Map of Bicycling Needs in Mountain View



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4 RECOMMENDED IMPROVEMENTS

Recommendations include bicycle paths, lanes, buffered bike lanes, routes, boulevards, and protected bike lanes.

This chapter presents proposed bikeways and bicycle support facility improvements identified through input from the community, B/PAC, City staff and the needs analysis in Chapter 3 Needs Assessment. Recommended improvements include infrastructure projects, policies, and programs. The proposed improvements are intended to make bicycling more comfortable and accessible for people of all skill levels and trip purposes. This chapter presents the following improvement types:

- Bikeway Network Improvements
- Bike-Related Policy Improvements
- Bike-Related Programmatic Improvements

Ten priority bikeway projects have been identified out of the list of draft recommended improvements based on their priority ranking, relationship to funding and planning needs, and City staff input. More in-depth descriptions, project backgrounds, and planning-level cost estimates have been developed for each of the priority projects. The priority projects, not in priority order, are described more fully in Section 5.2. Ten Priority Projects. Additionally, a limited number of low-cost improvement projects that can be implemented in the near-term ("Fast Five") are identified in **Table 5-3** and **Table 5-4.** Implementation of these projects will build momentum and interest towards implementing other recommendations included in this Plan.

4.1. RECOMMENDED BIKEWAY NETWORK IMPROVEMENTS

The proposed bikeway network improvement map is the result of a collaborative planning process involving extensive community and committee outreach as well as technical analysis. The proposed network improvement map contained in the Plan identifies recommended bicycle facility improvements by location in order to plan, design, and ultimately build a bicycle network that implements the objectives of this Plan.

The proposed bikeway network improvement map was developed in two phases. For the development of the first draft network improvement map, the City of Mountain View considered community and committee comments received in the summer and fall of 2014 (See Chapter 3 for public outreach summaries). A common theme was the desire for a bikeway network that supports bicycle travel for all ages and abilities. The refinement phase of the draft network map took place in winter 2015 with input from the B/PAC, the community, City staff and the City Council. **Figure 4-3** shows the draft recommended bikeway improvement network map.

Recommendation

This Plan recommends implementation of the bikeway network improvements listed in the following tables. **Table 5-7,** in Chapter 5, shows the prioritized list of projects and cost estimates for each recommended improvement.

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Figure 4-1 Recommended Bikeway Improvements (North View)

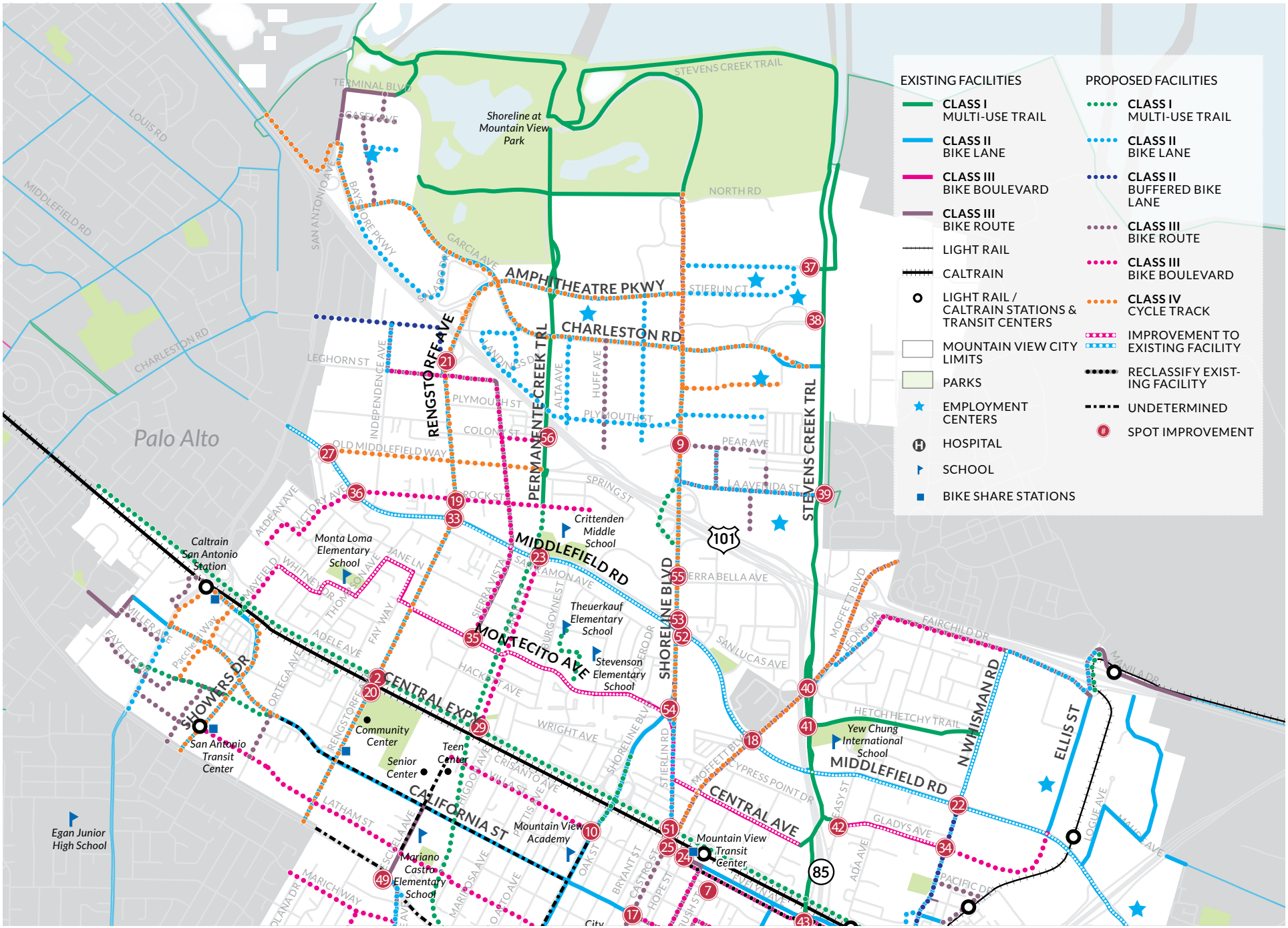


Figure 4-2 Recommended Bikeway Improvements (South View)

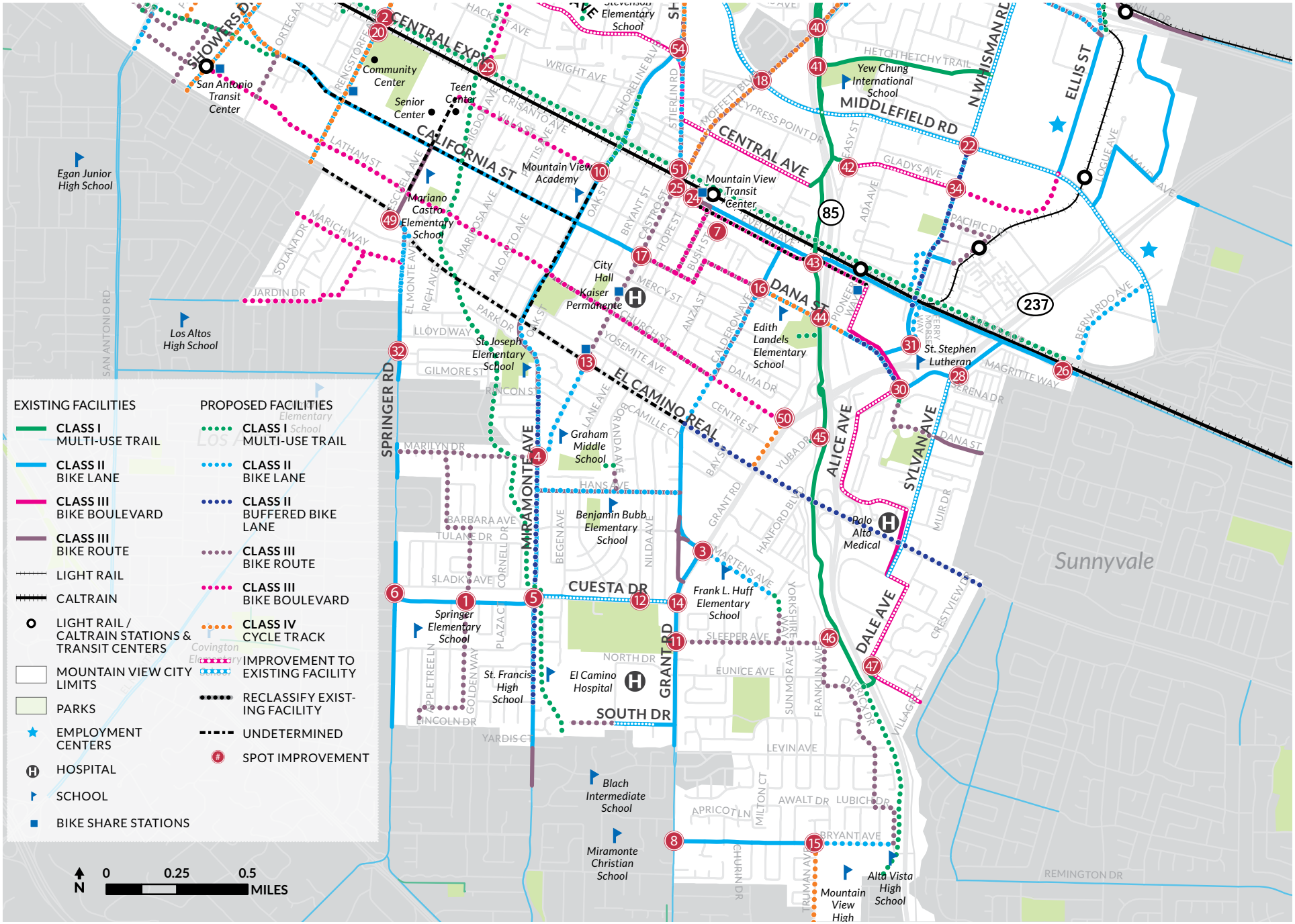
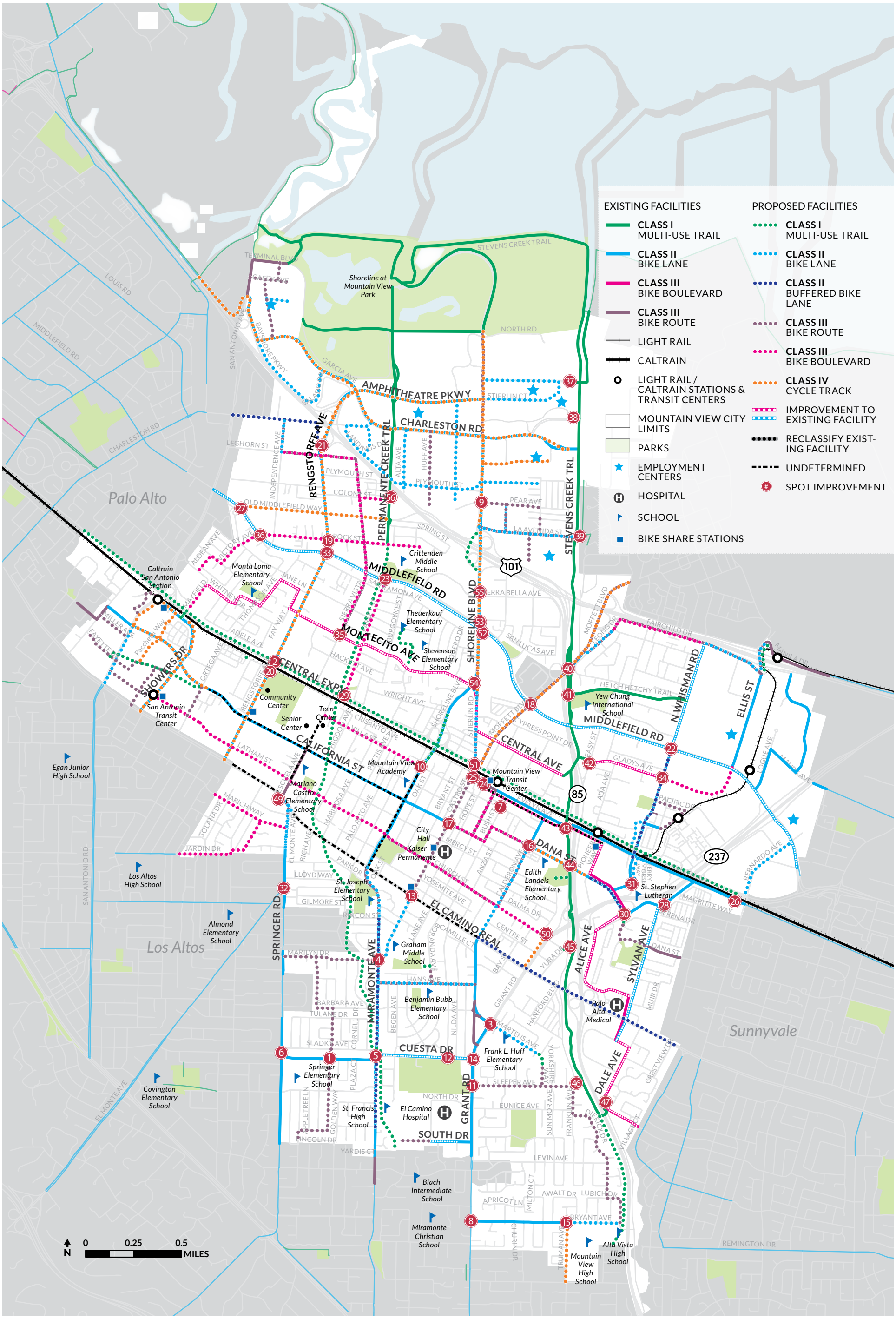


Figure 4-3 Recommended Bikeway Improvements (City-Wide View)



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4.1.1. RECOMMENDED CLASS I TRAILS / SHARED-USE PATHS

Class I Bicycle Paths provide for bicycle and pedestrian travel on a paved right-of way completely separated from streets or highways. Mountain View's existing Class I facilities, Stevens Creek Trail, Permanente Creek Trail and Hetch Hetchy Trail, are popular and attract people of all ages and biking abilities.

Recommendation

This Plan recommends implementation of the Class I trails/shared-use path improvements listed in **Table 4-1.**

Figure 4-4 The Stevens Creek Trail path is a Class I facility that is popular for people of all ages

TABLE 4-1 RECOMMENDED CLASS I TRAILS / SHARED-USE PATH IMPROVEMENTS

Reference Number (Network)	Location	Street	End	Length (miles)
N-2	Shoreline Boulevard	Villa Street	Wright Avenue	0.33
N-3	Permanente Creek Trail	Crisanto Avenue/ Escuela Avenue	Los Altos border	2.64
N-12	Permanente Creek Trail	Rock Street	Crisanto Avenue/Escuela Avenue	0.81
N-18	Landels Trail Pathway+	Landels School	Stevens Creek Trail	0.05
N-33	Graham Middle School	Boranda Avenue	Graham Middle School	0.16
N-56	Caltrain ROW	Palo Alto border	Sunnyvale border	3.95
N-60	Stevenson/Theuerkauf School Path	Montecito Avenue	San Luis Avenue	0.27
N-85	Martens-Yorkshire Path	Martens Avenue	Yorkshire Way	0.05
N-86	Stevens Creek Trail	Heatherstone Way	Mountain View High School	0.58
N-113	Towne Circle Sidewalk	Towne Circle	Leland Avenue	0.02
N-124	Ellis Street	Fairchild Drive	Manila Drive	0.19
N-15*	Amphitheatre Parkway	US Route 101	North Shoreline Boulevard	0.85
N-31*	Garcia Road/Charleston Road	San Antonio Road	Shorebird Way	2.54
N-32*	Shoreline Boulevard	Shorebird Way	Terra Bella	0.66
N-55*	Shoreline Boulevard/Shorebird Way	North Road	Shorebird Way/Charleston	1.14

** Identified in the North Bayshore Precise Plan as either a Class I or Class IV facility*
+ Improve the existing pathway between Landels School and the Stevens Creek Trail.

4.1.2. RECOMMENDED CLASS II BIKE LANES

Bicycle lanes provide a signed, striped and stenciled lane for one-way travel on both sides of a roadway. Bicycle lanes are often recommended on roadways with moderate traffic volumes and speeds.

Recommendation

This Plan recommends implementation of the Class II bikeway improvements listed in **Table 4-2.**

Figure 4-5 A standard bike lane on Cuesta Drive includes painted edges lines, delineating the bike lane from the parking lane

TABLE 4-2 RECOMMENDED CLASS II BIKE LANE IMPROVEMENTS

Reference Number (Network)	Location	Street	End	Length (miles)
N-10	El Camino Real/El Monte Avenue	Escuela Avenue	Pilgrim Avenue	0.33
N-19	Middlefield Road	San Antonio Avenue	Bernardo Avenue	3.55
N-30	Miramonte Avenue	El Camino Real	Harpster Drive	0.28
N-34	Sylvan Avenue	El Camino Real	Rainbow Drive	0.14
N-35	The Americana	Continental Circle	El Camino Real	0.11
N-52*	Shoreline Boulevard	Stierlin Road	Amphitheatre Parkway	1.43
N-61	Evelyn Avenue	Castro Street	Hope Street	0.05
N-62	Ferry Morse Way	Evelyn Avenue	South Whisman Road	0.15
N-63	Martens Avenue	Grant Road	Yorkshire Way	0.29
N-64	Whisman Station Drive	North Whisman Road	Central Expressway	0.16
N-74	San Antonio Road	El Camino Real	California Street	0.35
N-76	Ellis Street	Fairchild Drive	Manila Drive	0.19
N-77	Calderon Avenue	Dana Street	El Camino Real	0.19
N-79	Joaquin Road	Amphitheatre Parkway	Pear Avenue	0.53
N-84*	Stierlin Road	Central Expressway	Shoreline Boulevard	0.39
N-87	Bryant Avenue	Grant Road	Stevens Creek Trail	0.78
N-88	Cuesta Drive	Miramonte Avenue	Grant Road	0.51
N-89	Hans Avenue	Miramonte Avenue	Phyllis Avenue	0.51
N-105	Castro Street	El Camino Real	Miramonte Road	0.38
N-108	Coast Avenue	Marine Way	N/A	0.11
N-111	Plymouth Street/Space Park Way	Landings Drive	Armand Avenue	0.99
N-112	Stierlin Court/Crittenden Lane Loop	North Shoreline Boulevard	North Shoreline Boulevard	0.86
N-114	Fairchild Drive	North Whisman Road	Ellis Street	0.33
N-115	North Whisman Road	Fairchild Drive	East Middlefield Road	0.57
N-116	South Drive	Solace Place	Hospital Drive	0.14

(continued)

TABLE 4-2 RECOMMENDED CLASS II BIKE LANE IMPROVEMENTS				
Reference Number (Network)	**Location**	**Street**	**End**	**Length (miles)**
N-122	Bernardo Avenue	Central Expressway	Middlefield Road	0.38
N-125	Alta Avenue	Charleston Road	US Route 101	0.32
N-126	Bayshore Parkway	Garcia Avenue	Salvador Drive	0.62
N-127	La Avenida Street	Shoreline Boulevard	Stevens Creek Trail	0.52
N-128	Landings Drive Loop	Charleston Road	Charleston Road	0.48
N-129	Independence Avenue	Leghorn Street	Charleston Road	0.17
N-130	Leong Drive	Moffett Boulevard	Evandale Avenue	0.13
N-131	Sylvan Avenue	Rainbow Drive	Moorpark Way	0.63
** Identified in the Shoreline Corridor Study as a Class II buffered or Class IV facility*				

4.1.3. RECOMMENDED CLASS II BUFFERED BIKE LANES

Buffered bicycle lanes provide a signed, striped and stenciled lane for one-way travel on both sides of a roadway. In addition to the typical width of a bicycle lane, buffered bike lanes also have a striped buffer that provides additional separation between the motor-vehicle travel lane and the bike lane. Buffered bicycle lanes are often recommended on roadways with heavier traffic volumes and speeds.

Figure 4-6 A buffered bike lane on Moffett Boulevard

Recommendation

This Plan recommends implementation of the Class II buffered bikeway improvements listed in **Table 4-3.**

TABLE 4-3 RECOMMENDED CLASS II BUFFERED BIKE LANE IMPROVEMENTS*				
Reference Number	**Location**	**Street**	**End**	**Length (miles)**
N-29	El Camino Real	Calderon Avenue	Dale Avenue	0.99
N-65	Castro Street	Marilyn Drive	Sonia Way	1.15
N-90	Charleston Road	San Antonio Road	North Rengstorff Avenue	0.57
N-91	East Dana Street	Moorpark Way	West Dana Street	0.3
N-117	North Whisman Road	East Middlefield Road	East Evelyn Avenue	0.6
**Proposed classification based on preliminary planning-level evaluation of field conditions. Pursuant to the policy recommendation regarding bikeway facilities on City streets (Section 4.5.6, page 88), as the City plans new or improved bicycle facilities on, or major improvements to, City streets with vehicle speeds at or above 30 mph, priority consideration should be given to the installation of Class IV protected/separated bike lanes/cycle tracks. If Class IV facilities are determined to be infeasible, the City may consider Class II buffered bikeways or other alternatives.*				

4.1.4. RECOMMENDED CLASS III BIKE ROUTES

Class III bike routes are signed bike routes where bicyclists share a travel lane with motorists. They are appropriate for low-volume streets with slow travel speeds, especially those on which motorist volumes are low enough that passing maneuvers can use the full street width, on roadways with bicycle demand but without adequate space for Class II striped bike lanes.

Recommendation

This Plan recommends implementation of the Class III bike route improvements listed in **Table 4-4.**

Figure 4-7 A bike route on Dana Street

TABLE 4-4 RECOMMENDED CLASS III BIKE ROUTE IMPROVEMENTS

Reference Number	Location	Street	End	Length (miles)
N-5	Casey Avenue	San Antonio Road	Broderick Way	0.19
N-6	Latham Street	Showers Drive	Baywood Court	0.28
N-11	Fayette Drive	Miller Avenue	Pacchetti Way	0.49
N-20	Castro Street	California Street	El Camino Real	0.41
N-37	Sleeper Avenue	Grant Road	Stevens Creek Trail	0.52
N-57	Miller Avenue	Del Medio Avenue	San Antonio Road	0.18
N-58	Ortega Avenue	California Street	Latham Street	0.17
N-66	Boranda Avenue	Hans Avenue	Graham Middle School	0.08
N-67	Marilyn Drive	Miramonte Avenue	Springer Road	0.49
N-78	Huff Avenue	Charleston Road	Alta Avenue	0.4
N-80	Macon Avenue	La Avenida Street	US Route 101	0.14
N-81	Marine Way	Casey Avenue	Garcia Avenue	0.31
N-82	New Street	El Camino Real	Showers Drive	0.34
N-83	San Antonio Circle	San Antonio Road	Showers Drive	0.23
N-92	Franklin Avenue/Diericx Drive/ Lubich Drive	Sleeper Avenue	Bryant Avenue	0.89
N-93	Glenborough Drive	Foxborough Drive	Sylvan Avenue	0.14
N-94	Meadow Lane/Barbara Avenue/ Fordham Way/Spencer Way	Marilyn Drive	Lincoln Drive	1.19
N-95	Pacific Drive	Whisman Station Drive	North Whisman Road	0.3
N-96	South Drive	Hospital Drive	Permanente Creek Trail	0.16
N-106	Armand Avenue	Villa Drive	La Avenida Street	0.08
N-107	Broderick Way	Terminal Boulevard	Casey Avenue	0.09
N-109	Inigo Way	Pear Avenue	La Avenida Street	0.14
N-110	Pear Avenue	North Shoreline Boulevard	Armand Avenue	0.31
N-118	Foxborough Drive	Path (connecting Foxborough Drive to Moorpark Way)	Glenborough Drive	0.11
N-132	Yorkshire Way	Sleeper Avenue	Martens Avenue	0.12

4.1.5. RECOMMENDED CLASS III BIKE BOULEVARDS

Bike boulevards are signed, shared roadways with low motor vehicle volume, such that motorists passing bicyclists can use the full width of the roadway. Bicycle Boulevards prioritize convenient and safe bicycle travel through traffic calming strategies, wayfinding, and other measures.

Recommendation

This Plan recommends implementation of the Class III Bicycle Boulevard improvements listed in **Table 4-5.**

Figure 4-8 A Bike Boulevard on Dale Avenue

TABLE 4-5 RECOMMENDED CLASS III BICYCLE BOULEVARD IMPROVEMENTS

Reference Number	Location	Street	End	Length (miles)
N-1	Church Street	State Route 237	Shoreline Boulevard	1
N-7	Montecito Avenue	Shoreline Boulevard	Rengstorff Avenue	0.99
N-21	Evelyn Avenue	Hope Street	Pioneer Way	0.7
N-22	Farley Street	West Middlefield Road	Central Expressway	0.63
N-23	Latham Street	Showers Drive	Escuela Avenue	0.69
N-24	Latham Street	South Shoreline Boulevard	Escuela Avenue	0.57
N-25	Nita Avenue/Dell Avenue/Victory Avenue	Nita Avenue	Middlefield Road	0.4
N-26	Sierra Vista Avenue	Montecito Avenue	Leghorn Street	0.94
N-38	Central Avenue	Stierlin Road	Stevens Creek Trail	0.51
N-39	Marich Way	Karen Way	El Monte Avenue	0.34
N-40	Mayfield Avenue	Whitney Drive	Central Expressway	0.17
N-41	Moorpark Way	Alice Avenue	East Dana Street	0.18
N-42	Pioneer Way	East Dana Street	East Evelyn Avenue	0.19
N-43	Rock Street	North Rengstorff Avenue	Camp Avenue	0.47
N-44	Rock Street	West Middlefield Road	North Rengstorff Avenue	0.82
N-45	View Street	California Street	Evelyn Avenue	0.27
N-46	Villa Street	Escuela Avenue	Shoreline Boulevard	0.55
N-47	West Dana Street	Bush Street	Calderon Avenue	0.21
N-51	Colony Street	Sierra Vista	Permanente Creek Trail	0.14
N-68	Alice Avenue	Alice Avenue	Moorpark Way	0.27
N-69	Bush Street	California Street	West Dana Street	0.09
0.09	Inigo Way	Pear Avenue	La Avenida Street	0.14
N-70	California Street	Castro Street	Bush Street	0.21
N-71	Gladys Avenue	North Whisman Road	Easy Street	0.39
N-72	Nita Avenue/Whitney Drive/Thompson Avenue/Jane Lane	Rengstorff Avenue	San Antonio Road	1.01
N-73	Rainbow Drive	Sylvan Avenue	Alice Avenue	0.27
N-97	Dale Avenue	Heatherstone Way	Continental Circle	0.33
N-98	Fairchild Drive	Leong Drive	North Whisman Road	0.56
N-99	Jardin Drive	Los Altos High School *(where bike lanes start)*	Blackfield Way	0.29
N-100	Leghorn Street	Sierra Vista	Independence Avenue	0.38

TABLE 4-5 RECOMMENDED CLASS III BICYCLE BOULEVARD IMPROVEMENTS				
Reference Number	**Location**	**Street**	**End**	**Length (miles)**
N-101	Mayfield Avenue-Whisman Road Bike Boulevard Extension	Gladys Avenue	Ellis Street	0.42
N-119	Blackfield Way	Jardin Drive	Marich Way	0.24
N-120	Continental Circle	Dale Avenue	The Americana	0.08
N-121	Heatherstone Way	South Knickerbocker Drive	Dale Avenue	0.24

4.1.6. RECOMMENDED CLASS IV CYCLE TRACK / PROTECTED BIKE LANES

A Class IV bikeway, known as a cycletrack or protected bikeway, is an on-street bike lane that is physically separated from motor-vehicle traffic by a vertical separation, such as a curb, bollards, or car parking. A protected bikeway is similar to a Class II buffered bike lane, but provides the vertical physical barrier, separation and associated comfort a user can experience on a Class I path.

Recommendation

This Plan recommends implementation of the Class IV bikeway improvements listed in **Table 4-6.**

Figure 4-9 A protected bike lane in San Francisco (Flickr User Nick Falbo)

TABLE 4-6 RECOMMENDED CLASS IV CYCLE TRACK IMPROVEMENTS*				
Reference Number	**Location**	**Street**	**End**	**Length (miles)**
N-8	Rengstorff Avenue	El Camino Real	Amphitheatre Parkway	2.01
N-13	Moffett Boulevard	Central Expressway	Clark Road	1.26
N-16	Shoreline Boulevard	La Avenida Street	Space Park Way	0.24
N-27	Old Middlefield Way	Middlefield Road	Permanente Creek Trail	0.77
N-28	Stierlin Road	Central Expressway	Shoreline Boulevard	0.11
N-48	West Dana Street	Calderon Avenue	Pioneer Way	0.34
N-49**	California Street	San Antonio Road	Ortega Avenue	0.52
N-50**	Showers Drive	El Camino Real	California Street	0.85
N-59	Shoreline Boulevard	Stierlin Road	Terra Bella Avenue	0.4
N-102	Truman Avenue	Oak Avenue	Bryant Avenue	0.31
N-103	Pacchetti Way	Showers Drive	San Antonio Shopping Center	0.34
N-104	Yuba Drive	El Camino Real	Church Street	0.18
N-15***	Amphitheatre Parkway	US Route 101	North Shoreline Boulevard	0.85
N-31***	Charleston Road/Garcia Avenue	San Antonio Road	Shorebird Way	2.54
N-32***	Shoreline Boulevard	Shorebird Way	Terra Bella	0.66
N-55***	Shorebird Way	Shoreline Boulevard	Charleston Road	1.14

**Proposed classification based on preliminary planning-level evaluation of field conditions. Pursuant to the policy recommendation regarding bikeway facilities on City streets (Section 4.5.6, page 88), as the City plans new or improved bicycle facilities on, or major improvements to, City streets with vehicle speeds at or above 30 mph, priority consideration should be given to the installation of Class IV protected/separated bike lanes/cycle tracks. If Class IV facilities are determined to be infeasible, the City may consider Class II buffered bikeways or other alternatives.*

***Identified in the San Antonio Precise Plan as either a Class II buffered or Class IV facility*

****Identified in the North Bayshore Precise Plan as either a Class I or Class IV facility*

4.2. RECOMMENDED BIKEWAY SPOT IMPROVEMENTS

Spot improvements include location specific engineering improvements. These engineering improvements are designed to address specific locations where the community reported a network barrier, a location with a high number of bicycle related collisions, or a location with a number of points of conflict. There are five categories of spot improvements to improve bicycle access throughout the City. Each spot improvement type is described below and identified in **Table 4-7**.

4.2.1. BICYCLE CROSSING AND TURNING IMPROVEMENTS

Bicycle crossing and turning improvements may include, but are not limited to: adding two-stage left-turn queue boxes to facilitate left turns without using the left-turn lane, bicycle signal phase, advanced warning signs, and a HAWK signal. A HAWK, a **H**igh-Intensity **A**ctivated cross**W**al**K** beacon, functions like to a conventional signal in providing a protected pedestrian and bicycle street crossing, but is typically located in mid-block or un-signalized intersections.

BICYCLE BOX AND TWO-STAGE LEFT-TURNS

A bike box is a priority bicycle zone at the head of a signalized intersection. The bike box allows bicyclists to position themselves in front of the traffic queue on a red light and proceed first when that signal turns green. On a two-lane roadway, the bike box can facilitate left turning movements for bicyclists. Motor vehicles must stop behind the white stop line at the rear of the bike box. Bike boxes are also appropriate at signalized intersections along Class III (shared) bikeways where a lead-in bike lane can be provided (often accomplished by removing one or more parking spaces).

A two-stage left-turn enables bicyclists to make a left-turn without using the designated left-turn lane for motor-vehicles. A two-stage left-turn functions like a pedestrian would make a left turn. This system formalizes how many bicyclists make left turns today. It also reduces conflicts between bicyclists and motorists. Design guidance for two-stage left-turns is provided in the National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide. NACTO is a coalition of cities working to standardize innovative bicycle treatments not yet approved by the Federal Manual Uniform Traffic Control Devices (MUTCD) and American Association of State Highway and Transportation Officials (AASHTO), including intersection crossing markings.

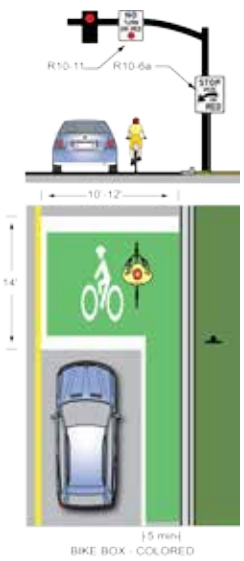

Figure 4-10 A bike box gives bicyclists priority at an intersection.*

4.2.2. BICYCLE MARKING IMPROVEMENTS

Bicycle marking improvements may include a number of paint treatments to improve an intersection; extending the bike facility to the intersection, adding intersection crossing markings, or green striping in conflict and merge zones.

INTERSECTION CROSSING MARKINGS

Bicycle pavement markings delineate bicyclists' path of travel through intersections. Cities throughout the United States and Canada have used a variety of intersection crossing markings. NACTO developed design guidelines based on international best practices. In California, approvals are not required to use these markings on local roadways. Intersection markings increase awareness for both bicyclists and motorists of potential conflicts and reinforce that bicyclists have priority over turning vehicles. They can facilitate the

**A bike box is not an approved traffic control device yet. The applicant (City) would need to submit a request to experiment with Green Bike Box to Federal Highways Administration (FHWA) and to the California Traffic Control Devices Committee (CTCDC) and get experimental approval prior to installing bike boxes.*

Figure 4-11 The NACTO Urban Bikeway Design Guide provides design guidance for intersection crossing markings.

use of complicated intersections and delineate where and how bicyclists should cross. Indicating intersection crossings with dashed lines results in lower maintenance costs then colored markings.

GREEN BIKE LANES THROUGH CONFLICT AREAS

People bicycling are especially vulnerable at complex intersections that do not dedicate space or identify a recommended travel path. Intersections typically account for the majority of reported bicycle-auto crashes. Dedicated right-turn lanes often leave bicyclists unsure of where to position themselves. Additionally, at complex intersections bicyclists may not know the recommended path of travel and motorists may not know where to expect someone biking. Color applied to bike lanes helps alert roadway users to the presence of bicyclists and clearly assigns right-of-way to cyclists. Motorists are expected to yield to cyclists in these areas.

Many communities have colored bike lanes through conflict areas including San Francisco, Portland, Cambridge, MA and Austin, Texas. References for design can be found in the NACTO Urban Bikeway Design Guide and Federal Highway Administration (FHA) April 2011 Memorandum – MUTCD Interim Approval for Optional Use of Green Colored Pavement for Bike Lane (1A-14).

Recommendation

This Plan recommends the City consider identifying one of the priority spot treatments and apply for interim approval to use green treatment markings in a conflict or merge zone. The spot recommendations are prioritized in Chapter 5.

4.2.3. BICYCLE SIGNAL DETECTION

Traffic signals control traffic by either using timers or actuation (detection). Bicycle detection at actuated traffic signals can provide a substantial improvement for bicycle access and mobility. California Assembly Bill 1581 requires all new and replacement actuated traffic signals to detect bicyclists. Caltrans Policy Directive 09-06 clarifies the requirements and permits loop and video detection. Where loop detection is used, a pavement stencil of the bicycle detection marking should be used to show bicyclists where to position themselves.

4.2.4. TRAIL ACCESS POINT IMPROVEMENTS

The City of Mountain View has 15 miles of Class I multi-use trails, which attract people of all ages and bicycling abilities. Trail access point improvements are locations that could benefit from wayfinding and/or engineering improvements that make the trail heads easier to find and the connection between the trail and the street intuitive and safe.

4.2.5. PROTECTED INTERSECTION IMPROVEMENTS

Protected intersections, also called Dutch Intersections, are intersections that provide continuous physical separation between bicyclists and motor-vehicle traffic. Protected intersections typically have four components:

- A Corner Refuge Island
- A Forward Stop Bar for Bicyclists
- A Setback bike and pedestrian crossing
- Bicycle Friendly Signal phasing

Protected intersection improvements are identified in the Shoreline Boulevard Transportation Corridor Study and the North Bayshore Precise Plan.

TABLE 4-7 RECOMMENDED BIKEWAY SPOT IMPROVEMENTS

Reference Number *(Spots)*	Spot Intersection	Crossing and Turning Improvements	Bicycle Marking	Signal Detection	Access Point	Protected Intersection
S-1	Fordham Way and Cuesta Drive	X				
S-2	Rengstorff Avenue and Central Expressway		X			
S-3	Phyllis Avenue and Grant Road	X				
S-4	Castro Street and Miramonte Avenue			X		
S-5	Cuesta Drive and Miramonte Avenue		X			
S-6	Springer Road and Cuesta Drive		X			
S-7	Villa Street and Bush Street			X		
S-8	Grant Road and Bryant Avenue	X				
S-9	Shoreline Boulevard and Pear Avenue	X				
S-10	Shoreline Boulevard and Villa Street		X			
S-11	Sleeper Avenue and Grant Road	X				
S-12	Bonita Avenue and Cuesta Drive	X				
S-13	Castro Street and El Camino Real	X				
S-14	Grant Road and Cuesta Drive	X	X			
S-15	Bryant Avenue and Truman Avenue	X	X			
S-16	Dana Street and Calderon Avenue			X		
S-17	California Street and Castro Street			X		
S-18	Moffett Boulevard and Middlefield Road	X		X		
S-19	Rengstorff Avenue and Rock Street		X			
S-20	Rengstorff Avenue and Crisanto Avenue		X			
S-21	Rengstorff Avenue and 101 ramps (all)	X	X			
S-22	Whisman Road and Middlefield Road	X		X		
S-23	Farley Street and Middlefield Road	X				
S-24	Evelyn Avenue and Hope Street		X	X		
S-25	Evelyn Avenue and Castro Street	X				
S-26	Evelyn Avenue and Bernardo Avenue		X			
S-27	Middlefield Road and Old Middlefield Way	X				
S-28	Moorpark Way and Sylvan Avenue		X			
S-29	Farley Street and Central Expressway			X		
S-30	East Dana Street and Moorpark Way	X				
S-31	South Whisman Road and Ferry Morse Way	X	X			
S-32	El Monte Avenue and Springer Road	X				
S-33	Rengstorff Avenue and Middlefield Road	X	X			

TABLE 4-7 RECOMMENDED BIKEWAY SPOT IMPROVEMENTS						
Reference Number *(Spots)*	**Spot Intersection**	**Crossing and Turning Improvements**	**Bicycle Marking**	**Signal Detection**	**Access Point**	**Protected Intersection**
S-34	North Whisman Road and Gladys Avenue	X				
S-35	Montecito Avenue and Sierra Vista Avenue	X				
S-36	West Middlefield Road and Victory Avenue	X				
S-37	Stevens Creek Trail and Crittenden Lane				X	
S-38	Stevens Creek Trail and Google Fitness Trail				X	
S-39	Stevens Creek Trail and La Avenida Street				X	
S-40	Stevens Creek Trail and Moffett Blvd				X	
S-41	Stevens Creek Trail and Hetch Hetchy Trail				X	
S-42	Stevens Creek Trail and Gladys Avenue				X	
S-43	Stevens Creek Trail and Evelyn Avenue				X	
S-44	Stevens Creek Trail and Dana Street				X	
S-45	Stevens Creek Trail and Yuba Drive				X	
S-46	Stevens Creek Trail and Sleeper Avenue				X	
S-47	Stevens Creek Trail and Dale Avenue				X	
S-48	Stevens Creek Trail and Middlefield Road				X	
S-49	El Camino Real and Escuela Avenue /El Monte Avenue	X	X			
S-50	State Route 237 and Church Street	X				
S-51	Castro Street/Moffett Boulevard/ Central Expressway Intersection	X	X			
S-52	Middlefield Road and Shoreline Boulevard		X			
S-53	Middlefield Road and Shoreline Boulevard					X
S-54	Shoreline Boulevard and Stierlin Road/Montecito Avenue					X
S-55	Shoreline Boulevard and Terra Bella Avenue					X
S-56	Permanente Creek Trail and Colony Street				X	

4.3. RECOMMENDED WAYFINDING SIGNAGE IMPROVEMENTS

Wayfinding signs direct people along the bicycle network and to community destinations and may also include "distance to" information. There are two types of wayfinding signage.

Confirmation signs (**Figure 4-12**) confirm that a person is using a designated bikeway. Each confirmation sign includes a Bicycle Route Guide Sign (D11-1) and a Destination Supplemental Sign (D1-1b). Confirmation signs include destinations and their associated distances, but not directional arrows. Confirmation signs are located mid-block or on the far-side of intersections.

Figure 4-12 Example Confirmation Wayfinding Sign

Decision signs mark the junction of two or more bikeways and include Bicycle Route Guide Sign (D11-1) with an optional Destination Supplemental Sign (D1-1b). They display destinations and their associated directional arrows, but not distances. Decision signs are located on the near-side of intersections.

Wayfinding signs should follow CAMUTCD standards, which use additional plaques that display destinations and mileage. Alternatively, the City may also design signs that exhibit a unique symbol of Mountain View, such as the City's logo. Branded wayfinding signs reinforce the community's support of bicycling.

SIGN PLACEMENT PRINCIPLES

The following principles inform the placement of individual signs:

1. A confirmation sign will be located at the beginning of each bikeway.
2. When a bikeway turns, a turn sign will be located in advance of the turn (e.g., near-side of the intersection).
3. When bikeways intersect, a decision sign will be located on the near-side of each intersection approach.
4. To allow adequate notification of left turns, the decision or turn sign should be placed a distance before the intersection based on the number of lanes the a person bicycling must merge across in order to make a legal left turn:
   - Zero lane merge: 25'
   - One lane merge: 100'
   - Two lane merge: 200'
5. The decision or turn sign should always be located in the block immediately preceding the junction or turn.
6. Confirmation signs will be located at intervals of one-half mile to one mile, based on the density of streets and intersecting bikeways (e.g., Downtown versus the southern residential neighborhoods). It is desirable for confirmation signs to be located following decision signs on the far-side of intersections at the first convenient installation location.
7. Confirmation signs should be located immediately following bikeway junctions on streets that do not have bicycle lanes or shared lane markings.
8. The City should not place any bike-related signage where it might impede sidewalk traffic.

SIGN FREQUENCY

In general, there should be four to five wayfinding, two decision, and two confirmation signs for each directional mile of bikeway. The actual number of signs should be determined by the number of decision points along the signed route.

Recommendation

This Plan recommends installing CAMUTCD

wayfinding signs at decision points and, along the network, confirmation signs that display destinations and mileage. The City would mount these signs under existing bike route and lane signs.

SUPPORTED DESTINATIONS

Bikeway wayfinding signage can be organized into three categories based on regional significance and travel distance:

1. Primary destinations include adjoining and/or en route jurisdictions, downtowns and transit stations that are located at distances up to five miles.
2. Secondary destinations consist of local shopping or residential districts that are located at distances up to two miles.
3. Tertiary destinations include parks, landmarks, high schools, hospitals, and bikeways/trails.

The following tables list potential primary, secondary and tertiary destinations within and near Mountain View that could be included as part of a City wayfinding signage program for designated bikeways. Each sign would contain destination, direction, and distance information.

Recommendation

The City should consider implementing a wayfinding signage program for designated bikeways based on the methodology described above.

TABLE 4-8 PRIMARY DESTINATIONS: DISTANCE UP TO FIVE MILES

Destination	Sign Content	Distance Measured From
Palo Alto		
Los Altos		
Sunnyvale		
Downtown Mountain View		
Mountain View Transit Center		
San Antonio Caltrain Station		
San Antonio Transit Center		

TABLE 4-9 SECONDARY DESTINATIONS: DISTANCES UP TO TWO MILES

Destination	Sign Content	Distance Measured From
Districts		
San Antonio Shopping Center		
Blossom Valley Shopping Center		
Grant Road Shopping Center		
El Camino Real Shopping District		

TABLE 4-10 TERTIARY DESTINATIONS: DISTANCES UP TO ONE MILE		
Destination	**Sign Content**	**Distance Measured From**
Other Destinations		
City Hall		
Mountain View Library		
Senior/Teen/Community Centers		
El Camino YMCA		
Shoreline Amphitheatre		
Hospitals		
El Camino Hospital		
Palo Alto Medical		
High Schools		
Mountain View High School		
Alta Vista High School		
Parks		
Stevenson Park		
Slater School Park		
Landels School Park		
Shoreline Park		
Eagle Park/Pool		
McKelvey Ball Park		
Graham School/Park		
Bubb School/Park		
Cuesta Park		
Castro School/Park		
Monta Loma School/Park		
Rengstorff Park/Pool		
Charleston Park		
Shoreline Park		
Trails		
Stevens Creek Trail		
Permanente Creek Trail		
Hetch Hetchy Trail		
Bay Trail		

4.4. BIKE PARKING IMPROVEMENTS

4.4.1. BICYCLE PARKING RECOMMENDATIONS

Bicycle parking facilities can range, depending on their primary use, from a simple bicycle rack for short-term parking, to a bicycle locker that protects against weather, vandalism and theft for long-term parking. The majority of Mountain View's bicycle parking facilities are located at large retail businesses and the two Caltrain stations. In many locations across the City, people biking to community retail districts, places of employment and schools do not find adequate bicycle parking and instead lock their bikes to street fixtures such as trees, light poles, and sign poles. Use of these street fixtures is problematic for a variety of reasons: it impedes pedestrian accessibility, may damage the street fixture, and can put the bicycle at risk of being vandalized or stolen. Visible and convenient bicycle parking will dissuade people from locking their bikes to street fixtures. Plus, bicycle parking can also encourage more people to bike to their destination.

Bicycle parking is an essential element of any bikeway network and this section presents recommended types of bicycle parking, citywide bicycle parking recommendations and recommended rates of bicycle parking for new development projects.

RECOMMENDED TYPES OF BICYCLE PARKING FACILITIES

There are three general classifications (Class I, II and III) of bicycle parking facilities and there are also standards regarding the acceptable types of bike parking. Class I facilities are for long-term parking and Classes II and III are intended for short-term parking. Bicycle racks are the preferred device for short-term bike parking. These racks serve people who leave their bicycles for relatively short periods of time, typically for shopping or errands, eating or recreation. Bicycle racks provide a high level of convenience and moderate level of security. Long-term bike parking includes bike lockers and bike stations and serve people who intend to leave their bicycles for longer periods of time and are typically found at transit stations, multifamily residential buildings and commercial buildings. These facilities provide a high level of security but may be less convenient than bicycle racks because of the additional time it takes to access the secured facility.

Recommendations

This Plan recommends the City adopt the definitions of Class I and II bicycle parking as defined in the Valley Transportation Authority (VTA) Bicycle Technical Guidelines (BTG). The BTG defines two types of bike parking, while the City defines three types. The full definitions are provided on the VTA's website.

This Plan also recommends the City and private developers/property owners install bicycle parking facilities that meet the following criteria:

- Short-term parking facilities should support the bicycle at two points and have a design that is intuitive to use. A "U-rack" is an example of a standard and accepted bicycle rack and is the recommended standard for the City of Mountain View. The installment of "wave racks" and "wheelbender" are not recommended because they do not provide two points of contact and their designs are not intuitive to users.
- Long-term bike parking should provide some weather protection and greater security than provided by bicycle racks. Bicycle lockers (electronic) and bike cages are examples of recommended types of long-term bicycle parking.

Figure 4-13 Commuters use existing Class II bike parking at the Downtown Transit Center

CITYWIDE BICYCLE PARKING RECOMMENDATIONS

Through the public workshop and input from the online bikeway user survey, community members expressed desire for additional bicycle parking facilities at shopping centers and retail districts, City/community facilities, regional transportation facilities and other destinations throughout the City. Specific locations identified during the development of this Plan as potentially needing additional bicycle parking facilities are listed below in **Table 4-11.**

Recommendations

- The City should encourage existing private and other property owners to assess the need for additional bicycle parking facilities to serve their employees and customers.
- It is also recommended that the City assess bicycle parking at all its facilities and determine if/where additional parking facilities are needed.
- This Plan recommends new development/redevelopment projects continue to install parking facilities as required by City ordinance.

BICYCLE PARKING REQUIREMENTS FOR PRIVATE DEVELOPMENT

Bicycle parking requirements for new private development or redevelopment ensure people have somewhere secure and convenient to park their bicycles at the beginning and end of bicycle commute trips. The current ordinance applies to new developments and redevelopments, as well as building expansions and changes in use.

Recommendation

This Plan recommends the City revise its current bicycle parking requirements to ensure the type and rate of required bicycle parking meets the City's needs and to provide developers a clear understanding of requirements at project initiation.

Appendix D presents recommended rates of required bicycle parking. The recommended rates are based on the Association of Pedestrian and Bicycle Professional's (APBP's) "Bicycle Parking Guidelines" (2nd Edition), successful bicycle parking requirements in other Bay Area cities, and best practices.

TABLE 4-11 RECOMMENDED CITYWIDE BICYCLE PARKING LOCATIONS

Location	
Retail Districts	
Castro Street/Downtown	North Rengstorff Avenue
Shoreline Boulevard	Evelyn Avenue
El Monte Avenue	California Street
El Camino Real	
Shopping Centers	
San Antonio Center	Grant Road Shopping Center
Blossom Valley Shopping Center	Mountain View Shopping Center
Downtown Transit Center/ Caltrain Station	San Antonio Caltrain Station
City Facilities	
City Hall	Shoreline at Mountain View
Mountain View Library	Cuesta Park
Community Center	Eagle Park
Senior Center	Rengstorff Park/Pool
Other Community Destinations	
El Camino YMCA	US Post Office
El Camino Hospital	
All Schools	

Many of these locations already have existing bike parking. These recommendations would be for additional bicycle parking.

4.5. BIKE-RELATED POLICY IMPROVEMENTS

The policies in this Plan are bicycle-specific, but do not preclude the opportunity for afuture multi-modal policies, such as Vision Zero, from being pursued in Mountain View.

4.5.1. BICYCLE DETECTION AT TRAFFIC SIGNALS

Traffic signals control traffic by either using timers or actuation (detection). Bicycle detection at actuated traffic signals can provide a substantial improvement for bicycle access and mobility. California Assembly Bill 1581 requires all new and replacement actuated traffic signals to detect bicycles. Caltrans Policy Directive 09-06 clarifies the requirements and permits loop and video detection. Many of the City's traffic signals on collector and arterial streets have bicycle detection but not all do.

Recommendations

- This Plan recommends that the City install bicycle detection at all actuated intersections along existing and proposed bikeways as new signals are installed or existing signals are replaced.
- Additionally, the City should consider installing bicycle detection at all actuated intersections. Where loop detection is used, a pavement stencil of the bicycle detection marking should be used to show people where to position their bicycle.
- While detector loops and video detection facilitate faster and more convenient motorist trips, if they aren't calibrated properly or stop functioning, they can frustrate cyclists waiting for signals to change, unaware that their bicycle is not being detected. The City should provide adequate funding through its operating or capital annual budgeting process to ensure sufficient funds to keep all existing loops and video detection devices calibrated and operable for bicycle users.
- The City should develop a policy of installing bicycle-calibrated loop detectors at intersections along designated bicycle routes as they are repaved. For new installations it is recommended that the City use Type D for lead loops in all regular travel lanes shared with bicycles. Within bicycle lanes it is recommended that the City install bicycle loop detectors (BLDs) using narrow Type C loops.

4.5.2. MAINTENANCE PROGRAM FOR EXISTING PUBLIC ACCESS FACILITIES ON PRIVATE PROPERTY

The City of Mountain View does not have a program in place for addressing maintenance on existing public access bikeway facilities on private property.

Recommendation

This Plan recommends the City ensure public access bicycle facilities on private property are maintained by the property owner or developer through private development agreements, permits and/or other regulatory process.

4.5.3. BICYCLE FACILITY MAINTENANCE

The Public Works Department's Street Resurfacing Program prioritizes roadways for repaving and surfacing. Uneven pavement can present both physical hazards and distractions to cyclists.

Recommendation

This Plan recommends the City continue to include the presence of bikeways in the criteria used to determine repaving.

4.5.4. MOUNTAIN VIEW MOTOR VEHICLES AND TRAFFIC CODE SECTIONS 19.51 & 19.52

Current Mountain View Motor Vehicles and Traffic Code 19.51 and 19.52 do not conform with California Vehicle Code. The Codes state:

> **SEC. 19.52. Method of riding upon roadways.** The rider of any bicycle on the roadway shall ride as nearly as practicable to the right-hand curb or edge of the roadway. (Ord. No. 175.587, 1/25/60.)

Recommendation

The Plan recommends the City revise or repeal the Mountain View Vehicles and Traffic Code Sections 19.51 and 19.52 to conform with California Vehicle Code Section 21202 as follows:

(a) Any person operating a bicycle upon a roadway at a speed less than the normal speed of traffic moving in the same direction at that time shall ride as close as practicable to the right-hand curb or edge of the roadway except under any of the following situations:

(1) When overtaking and passing a vehicle proceeding in the same direction.

(2) When preparing for a left turn at an intersection or into a private road or driveway.

(3) When reasonably necessary to avoid conditions (including, but not limited to, fixed or moving objects, vehicles, bicycles, pedestrians, animals, surface hazards, or substandard width lanes) that make it unsafe to continue along the right-hand curb or edge, subject to the provisions of Section 21656. For purposes of this section, a "substandard width lane" is a lane that is too narrow for a bicycle and a vehicle to travel safely side by side within the lane.

(4) When approaching a place where a right turn is authorized.

(b) Any person operating a bicycle upon a roadway of a highway, which highway carries traffic in one direction only and has two or more marked traffic lanes, may ride as near the left-hand curb or edge of that roadway as practicable.

4.5.5. REGULATING THE USE OF CITY PARKS AND OTHER CITY FACILITIES CODE SECTION 38.9

Chapter 38 of the Mountain View City Code regulates the use of City parks, including Class I trails, which are considered to be part of the City's park system. Section 38.9 prohibits the use of electric bicycles on any path or walkway in a park or facility. In addition, the Code does not refer to any specific speed limit for trails/parks.

SEC. 38.9. Prohibited activities in parks or facilities. The following activities are prohibited in any park or recreational facility:

f. Operating or riding a motorcycle, moped, motorbike, motorized bicycle, motorized scooter or any other vehicle on any path or walkway in a park or facility. This section does not apply to wheelchairs and other devices for the disabled or vehicles in the service of the city parks or facility. This section shall not apply to the use of an electric personal assistive mobility device (EPAMD) on any city trail or walkway within a city park or facility.

g. Stopping, parking, riding or driving any horse or other animal, or propelling or parking any bicycle, unicycle, skateboard, roller skates, roller blades or other wheeled apparatus elsewhere than on the areas designated for those uses or upon the lawn or landscaped areas of a park or facility. This section does not apply to wheelchairs and other devices for the disabled or vehicles in the service of the city parks or facilities.

The City has been considering modifications to these regulations and implemented a one-year pilot program in August 2015 to:

- Permit the use of electric assistive mobility devices (e.g., electric bicycles and scooters) on City trails.
- Allow the use of non-motorized skateboards on City trails.
- Permit the use of motorized skateboards on City bike paths and trails, but not until the California Vehicle Code has been modified to allow use of electric skateboards on bike paths and trails.
- Implement a continuous 15 mile per hour speed limit throughout the City trail system in conjunction with an educational outreach program regarding trail etiquette, additional signage along trails, and enforcement.

Recommendation

This Plan recommends the City evaluate the results of the pilot once it has been completed and make permanent any changes that are determined to improve mobility in the community.

4.5.6. BIKEWAY FACILITIES ON CITY STREETS

Bicyclists' level of stress traveling on streets can depend on a wide variety of factors including, but not limited to:

- A bicyclist's age and skill level
- Street type/configuration (e.g., arterial, residential, commercial, etc.)
- Existing bicycle facilities, if any
- Vehicle travel speeds

- Traffic volume
- Surrounding land uses
- On-street parking demand
- Existing Complete Streets accommodations at intersections

Generally, bicycle facilities on City streets that provide some level of physical separation from vehicle traffic (e.g., Class II buffered bike lanes or Class IV protected/ separated bike lanes or cycle tracks), provide bicyclists with a less-stressful environment in which to bike. The availability of these types of bicycle facilities on streets throughout the City will likely encourage more people to bike in Mountain View.

Recommendation

As the City plans new or improved bicycle facilities on, or major improvements to, City streets with vehicle speeds at or above 30 MPH, the City should give priority consideration to the installation of Class IV protected/ separated bike lanes/cycle tracks.

The City Traffic Engineer should be responsible for determining the applicability, design and implementation of Class II buffered bike lanes and/or Class IV bikeways on these streets. Special attention may be given to locations where the installation of Class IV bikeways will extend the network of less-stressful bikeways by connecting to existing or planned Class I or Class IV facilities. The City Traffic Engineer may consider any or all of the following in making their determination:

- Actual or perceived safety concerns at intersections within the bikeway network
- Availability of additional right-of-way
- Community input
- Location and number of driveways (a high density of driveways may lead to a more expensive and less effective Class IV facility)
- Existing and future bicycle traffic volume and capacity
- Existing and future motor vehicle traffic volume and capacity
- Other physical characteristics of the existing roadway
- Potential connections to other Class I and Class IV facilities
- Presence and occupancy of on-street parking
- Proximity to trip generators with large numbers of youth, seniors and/or families (i.e. playgrounds, schools, senior centers, etc.)
- Surrounding land uses

Per Assembly Bill 1193, Caltrans is currently developing State-level guidelines to establish minimum safety design criteria for the planning and construction of Class IV protected bike lanes by January 1, 2016. In the interim, agencies may use the NACTO Urban Bikeway Design Guide and/or the FHWA Separated Bike Lane Planning and Design Guide to inform their designs so long as the project documentation references either document as the source of the design decisions and justifies their use.

If right-of-way constraints and/or the high density of driveways make a Class IV bikeway infeasible, the City may consider a Class II buffered bikeway, a Class II bike lane, or an alternative route.

4.5.7. BIKEWAY NETWORK REGIONAL CONNECTIVITY

As evidenced by the significant number of bikeway network improvements recommended throughout the City identified in this Plan, the City places a priority on improving the connectivity of the City's bikeway network. Equally important is the need to improve existing and create new connections to bikeways in the neighboring cities of Los Altos, Sunnyvale and Palo Alto.

This Plan recommends that it should be the City's policy to improve regional bikeway connections as a strategy to increase bicycle ridership of all ages and skills in Mountain View and throughout the region. Establishing such a policy emphasizes the importance of these connections, and also supports similar policies listed in County, Regional and State Plans identified in Appendix C.

Recommendation

This Plan recommends that it should be the City of Mountain View's policy to coordinate the planning and implementation of the improvements to the City's bicycle network with neighboring jurisdictions to

maintain, improve and/or create regional bikeway network connectivity.

4.6. BIKE-RELATED PROGRAM IMPROVEMENTS

Of the Five Es of bicycle planning, four are related to programs: encouragement, education, enforcement and evaluation. Programs will complement engineering improvements such as bike paths, lanes, routes and boulevards by giving Mountain View residents the tools they need to safely and confidently use the bikeway network. All of the Five Es work together to enhance the bicycling experience in Mountain View. The following section presents recommended program improvements to support the vision and objectives of this Plan. The recommendations include continuation of those the City currently administers and those identified by the community, as well additional programs that have proven to be popular and effective in other bicycle-friendly cities.

4.6.1. ENCOURAGEMENT PROGRAMS

The following programs are designed to encourage community members to ride bicycles. Through the public outreach process, community members identified encouragement programs as a way to increase bicycling mode share and reach the goals outlined in this Plan as well as in the 2030 General Plan. Community recommended programs include car-free streets and employer-based programs. The City's various advisory bodies, including the B/PAC, Senior Advisory Committee (SAC) and Youth Advisory Committee (YAC) can serve as useful resources in developing, refining, promoting and supporting encouragement programs such as those described below.

BIKE MONTH

The City of Mountain View has conducted programs/events over the years in support of Bike Month. The City Council declares May to be Bike Month emphasizing the importance of bicycling fitness, recreation, transportation, education, and encouragement. The Mountain View Library celebrates Bike Month by hosting bike skills/education classes.

Recommendation

This Plan recommends the City continue May Bike Month activities annually.

BIKE TO WORK DAY

Bike to Work Day is an annual nation wide event typically held on the third Thursday in May. The City encourages residents and employees to bicycle by participating in Bike to Work Day and supporting the school district programs. The City's Bike to Work Day activities include

Figure 4-14 Bicyclists gather at Mountain View City Hall

the Mayor's Bike Month proclamation, bike skills classes sponsored by the City Library, City Manager/City Council-led bike ride, and hosting energizer stations throughout the City handing out snacks, water and literature educating people about local bikeways. The City B/PAC annually hosts the energizer station at the Mountain View Transit Center.

Recommendation

This Plan recommends the City continue Bike to Work Day activities annually in May. The City may also wish to consider expanding its efforts to include other monthly Bike to Work Days or a Winter Bike to Work Day that includes bicycle education classes focused on riding in winter.

BAY AREA BIKE SHARE PROGRAM

Mountain View was selected as one of five Bay Area cities (along with San Francisco, Redwood City, Palo

Alto and San Jose) to participate in the regional Bay Area Bike Share Program launched in August 2013. However, the Metropolitan Transportation Commission (MTC) recently announced plans to privatize and expand the Program, without the continued participation of Mountain View, Palo Alto or Redwood City. Discussions between the cities and the MTC to explore options for the cities' continued participation in the Program are currently underway, but at the time this document was being prepared, decisions regarding if/how Mountain View, Palo Alto and/or Redwood City would continue participating in the Program had not been made.

Recommendation

The City of Mountain View should continue its participation in/support of bicycle sharing programs, such as Bay Area Bike Share or other similar programs, to encourage bicycling in Mountain View.

EMPLOYER-BASED ENCOURAGEMENT PROGRAMS

Community members participating in the development of the BTP identified the need for more employer-based programs to encourage bicycling to and from work. Such programs not only contribute to greenhouse gas emission reductions, improved air quality and employee wellness, but can also help businesses meet their transportation demand management (TDM) goals/ requirements.

Recommendation

Employer-based encouragement programs do not require City funding or management. However, the City should collaborate with local businesses to support their efforts to promote bicycling to and from work. These efforts may include the distribution of educational materials, connecting employers with bicycle safety/ education resources, and/or encouraging businesses to participate in Bike to Work Day and other events promoting bicycling.

LAUNCH PARTY FOR NEW BIKE FACILITIES

When a new bike facility is built, some residents will become aware of it and use it, while others may not realize that they have improved bikeway options available. A launch party/campaign is a good way to inform residents about a new bikeway and can also be an opportunity to share other bicycling materials (such as maps and brochures) and answer resident questions about bicycling. It can also be a media-friendly event, with elected official appearances, ribbon cuttings, and a press release that includes information about the new facility, other existing and future facilities, and any timely information about bicycling.

Sample Program: In 2012, the City of Mountain View invited the community to the opening event of two trail extension projects (Stevens Creek Trail and Permanente Creek Trail), including a new pedestrian/bicycle bridge over U.S. Route 101. More than 5,000 people participated in the event.

Recommendation

This Plan recommends the City continue to host appropriate launch parties for all high priority projects recommended in this Plan and inform the public of all new bike facilities through its Getting Around Mountain View webpage and/or other sections of the City's website.

CAR-FREE STREET EVENTS

Car-free street events have many names: Sunday Parkways, Cyclovias, Summer Streets, and Sunday Streets. Sunday Parkways are periodic street closures (usually on Sundays) that create a temporary park that is open to the public for walking, bicycling, dancing, hula hooping, roller-skating, etc. They have been very successful internationally and are rapidly becoming popular in the United States. Car-free street events promote health by creating a safe and attractive space for physical activity and social contact, and are cost-effective compared to the cost of building new parks for the same purpose. Events can be weekly events or one-time occasions, and are generally very popular and well attended.

The community identified interest in a Mountain View car-free street and/or other bike-related events.

Recommendation

This Plan recommends the City and/or B/PAC consider participation in a car-free street and/or other bike-related events. Specific locations for this and other events can be developed through community outreach and support.

Sample Programs:

- **San Francisco Sunday Streets:** http://sundaystreetssf.com/
- **Oakland's Oaklavia:** http://oaklavia.org/media
- **New York City Summer Streets:** http://www.nyc.gov/html/dot/summerstreets/html/home/home.shtml
- **Portland Sunday Parkways:** http://portlandsundayparkways.org/

4.7. BIKE-RELATED EDUCATION PROGRAM IMPROVEMENTS

Education programs are designed to improve safety and awareness. The needs analysis including community input and collision analysis for this Plan identified a need for education programs. Community members identified education classes as a way to reduce conflict and encourage more bicycling. Bicycle-related collision data shows that education about riding on the right side of the road and how to comfortably ride in traffic may enhance safety. The following outlines recommended education programs.

Figure 4-15 Car-free street events are fun for all ages

Similar to the encouragement programs discussed above, the City's various advisory bodies, along with community members, can assist with the development, refinement and promotion of these and other education programs.

LIBRARY DROP-IN BIKE CLINIC

The Mountain View Public Library hosts a monthly drop-in bike clinic. People of all ages are welcome to use tools to work on their bikes, learn about bike maintenance, and get assistance and advice with general bike mechanical issues.

Recommendation

This Plan recommends continuing the drop-in bike clinic at the Mountain View Public Library. If/when additional staffing and funding resources are identified/obtained, the City should consider expanding the program to other City facilities/locations.

SUGGESTED ROUTES TO SCHOOL PROGRAM

Helping children walk and bicycle to school is good for children's health and can reduce congestion, traffic dangers and air pollution caused by parents driving children to school. Suggested Routes to School programs use a Five Es approach using Engineering, Education, Enforcement, Encouragement, and Evaluation strategies to improve safety and encourage children walking and biking to school. The programs are usually run by a coalition of city government, school and school district officials, and teachers, parents, students, and neighbors.

The City has been awarded $1,000,000 in grant funding ($500,000 in 2011 and $500,000 in 2014) to partner with local schools to develop and implement non-infrastructure projects to promote walking, bicycling and carpooling to school. The two grants are part of the Vehicle Emissions Reductions Based at Schools (VERBS) program with the following objectives:

- Facilitate the planning, development, and implementation of a project and/or activity that will reduce traffic, fuel consumption, and air pollution in the vicinity of schools
- Reduce traffic related injuries and fatalities to school

children

- Enable and encourage children, including those with disabilities, to walk and bicycle to school

Recommendation

This Plan recommends the City continue to provide Suggested Routes to School non-infrastructure programming at all schools in Mountain View, coordinate with the Youth Advisory Committee on programming efforts, and pursue future funding for both infrastructure and non-infrastructure Suggested Routes to School projects.

TRAIL SAFETY DAYS

The Community Services Department sponsors Trail Safety Days to help educate the public about Stevens Creek Trail etiquette. Stevens Creek Trail is a multi-use trail enjoyed by people who bike, walk, jog and in-line skate. Bike bells and informational cards reminding trail users of common safety practices are distributed twice each year.

Recommendation

This Plan recommends the City continue to sponsor Trail Safety Days twice each year.

Figure 4-16 Students in Mountain View participate in bicycle education program through VERBS

CITY WEBSITE

The Mountain View website posts information about bicycling and walking in the Getting Around Mountain View webpage to educate the community about existing facilities and programs. The webpage includes information regarding local bike lanes/trails, bike lockers/storage, B/PAC and Bicycle Transportation Plan, and web links to Bay Area Bike Share Program and other bicycling resources and maps.

Recommendation

This Plan recommends the following improvements to the website:

- Updated bikeway map
- Advertise all bike facilities after implementation
- Expand safety tips to include other types of bicycling tips, including carrying items using baskets and panniers and how to ride in the rain.
- Bicycle events calendar

BICYCLE SAFETY CAMPAIGN

High-profile campaigns that highlight bicycling and walking safety can be effective in reaching the public, highlighting and encouraging bicycling and walking as viable forms of transportation, and reinforcing safety for all road users in Mountain View.

Figure 4-17 Bicycle safety campaigns increase the general public's awareness of bicycling and can be used to promote safe roads by and for all users

A well-produced safety campaign can be memorable and effective. Campaigns can be particularly effective when kicked off in conjunction with other bicycling/walking events or back to school in the fall. The safety and awareness messages should be displayed near high-traffic corridors, printed in local publications, posted on

the City website and be available in Spanish and other languages.

Recommendation

This Plan recommends the City pursue grant funding to implement one or more bicycle safety campaigns.

EMPLOYER HOSTED BICYCLING SKILLS CLASSES

Most cyclists do not receive any training on safe cycling practices, the rules of the road and bicycle handling skills. Bicycling skills classes can address this education gap. The Silicon Valley Bicycle Coalition offers free educational workshops to businesses and other community organizations.

Recommendation

This Plan recommends the City highlight these free courses on its Getting Around Mountain View webpage and/or other sections of the City's website. The City may also wish to encourage local businesses by working with the Chamber of Commerce to host a class and/or provide information regarding the classes to their employees.

ADULT BICYCLING SKILLS CLASSES

In addition to employer hosted classes, community members can also particpate in private bicycling skills classes. The most common program is the League of American Bicyclists courses (including Road I, Road II, and Commuting), taught by League Certified Instructors. Courses cover bicycle safety checks, fixing a flat, on-bike skills, crash avoidance techniques, and traffic negotiation. Courses are already available in Mountain View and are often hosted by the Silicon Valley Bicycle Coalition.

Recommendation

This Plan recommends Mountain View invite the Silicon Valley Bicycle Coalition or a similar group to host adult bicycling skills classes in the City on a bi-annual basis, at minimum. The City may also highlight local or nearby courses on its Getting Around Mountain View webpage and/or other sections of the City's website. The City should advertise the courses in multiple languages and use responses to the advertisement to determine the need for multi-lingual instruction.

SENIOR BICYCLE EDUCATION CLASSES

Senior bicycle education programs help older adults either re-learn bicycling or learn how to bicycle with less agility. Seniors who are no longer able to drive may still be able to bicycle shorter distances on either a regular two wheeled bicycle or an adult tricycle. Bicycle and tricycle programs for seniors through the Senior Center were suggested during community workshops.

Figure 4-18 Adult bicycle skills classes can help people learn (or relearn) bicycle safety skills and rules of the road

Recommendation

This Plan recommends the City expand its bicycle safety activities to include senior bicycle education classes.

EDUCATIONAL OUTREACH ACTIVITIES

Share the Road outreach is a way for the City to actively disseminate the rules of the road in person to residents. One way to conduct outreach is for the City to work with volunteers from a local advocacy group could offer brochures on the rules of the road to people who are walking, driving and bicycling.

Educational outreach efforts through programs such as "Share the Road" and "StreetSmarts" educate motorists, bicyclists and pedestrians on issues related to traffic safety.

Recommendation

This Plan recommends the City Staff and the B/PAC continue to attend and conduct outreach activities at the Farmer's Market, Council Neighborhood Committee meetings, festivals and other community events to promote and distribute bicycle and pedestrian safety educational materials.

4.7.1. ENFORCEMENT

Enforcement programs ensure the legal and respectful use of the transportation network. The bicycle related collision analysis and community input received during the development of this Plan indicate enforcement programs are needed to educate all road users about the rules and responsibilities of the road. This will be of greater importance as more people choose bicycling as their preferred mode of transportation.

The following outlines recommended enforcement programs.

BICYCLE PATROL

Police bicycle patrols not only increase the mobility of officers in dense areas but also provide law enforcement officers with an opportunity display safe and legal bicycle skills. The Police Department has a unit that patrols the community and the City's special events and festivals on Police Department-issued bicycles.

Recommendation

This Plan recommends the City continue its bicycle patrol throughout the community and recommends the Police Department continue its active social media presence, including podcasts and articles about bicycle safety, theft prevention, and more.

SPEED FEEDBACK SIGNS

Speed feedback signs display vehicle speed as motorists approach the sign. The purpose of speed feedback signs is to slow vehicles down by making drivers aware they are driving faster than the posted speed limit. A motorist's vehicle speed affects the amount of time the driver has to react to events on the road, the vehicle's stopping distance, and the severity of a collision with another car, bicycle or pedestrian. Enforcing speed limits will help foster a safer bicycling environment.

Recommendation

This Plan recommends the City include information on how to request the installation of a speed feedback sign (either mobile or fixed) on its website.

TARGETED ENFORCEMENT

Targeted enforcement is focused efforts of Police Officers at locations known for noncompliance with traffic laws or at high conflict areas.

Recommendation

This Plan recommends the Police Department conduct, as resources permit, targeted enforcement stings at locations known for noncompliance with traffic laws and at high conflict or high bicycle-related collision areas.

4.7.2. EVALUATION PROGRAMS

Evaluation programs help the City measure how well it is meeting the goals of this Plan and the General Plan and is a key component of any engineering or programmatic investment.

COUNT AND SURVEY PROGRAM

Evaluation programs measure and evaluate the impact of projects, policies and programs. Typical evaluation programs range from a simple year-over-year comparison of US Census Journey to Work data to bicycle counts and community surveys. Bicycle counts and community surveys act as methods to evaluate not only the impacts of specific bicycle improvement projects but can also function as way to measure progress towards reaching City goals such as increased bicycle travel for trips one mile or less.

Recommendations

- This Plan recommends the City ensure funding and staffing resources, at minimum, to conduct and report on the following:
    - Before and after bicycle, pedestrian and vehicle counts on all roadway projects to assess changes in traffic volumes as a result of the project

- Bicycle counts at the twenty locations counted as part of this Plan effort (see Chapter 5), three years after the Plan is adopted. The counts will measure changes in bicycling volumes
- A community survey to evaluate bicycling activity, impacts of bicycle programs and facilities and to measure the City's progress towards reaching its goals, three years after the Plan is adopted. The community survey will be used to assess public input and awareness of the City's bicycling improvement efforts
- Quarterly counts of the number of students walking and biking to local schools, including elementary, middle, and high schools

- The City should consider the implementation and use of automatic count technologies for bicycle count efforts. Automatic counters will provide continuous counts of bicycle activity, which can complement the recommended counts listed above.
- The City should also consider producing report or 'report card' on bicycling activity. Reports developed from count and survey efforts can help the City measure its success towards the objectives of this Plan as well as the Mobility Goals of the 2030 General Plan.

Figure 4-19 An automatic bike counter in Boulder, Colorado

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5 IMPLEMENTATION AND FUNDING

In the near-term, it is important to focus on a group of achievable, high priority bicycle projects.

This chapter provides a strategy for implementing the capital project recommendations in this Plan. This implementation strategy and sequence is guided by a criteria-based ranking based on a prioritization process developed with the Mountain View B/PAC. Phased implementation of the recommended projects and programs presented in Chapter 4 will take a significant amount of time, subject to a large number of variables. The most important of these variables include availability of funding for non-motorized transportation, City of Mountain View's success in obtaining competitive grant funding, and local community and political support.

In the near-term, it is important to focus on a group of achievable, high priority projects. The high priority projects identified in **Table 5-2** of this chapter represent roughly $8 million in capital improvements and site-specific technical traffic studies to support near-term project refinement and development. These high priority projects are drawn directly from the results of the prioritization process presented in **Table 5-1** and supplemented with additional spot improvements and priorities.

These projects are intended for near-term implementation (within five years of this Plan's adoption). The City's commitment to implementing the Mobility Goals of the General Plan and commitment to the preparation of the Bicycle Transportation Plan Update will attract the wide variety of transportation funding and generate other financing required to complete this high priority project list.

5.1. BIKEWAY PROJECT RANKING

The intent of ranking projects is to create a prioritized list of bicycle projects for implementation. As projects are implemented, lower ranked projects can move up on the list. The project list and individual projects outlined in this Plan are flexible concepts that serve as a guideline. The high-priority project list, and perhaps the overall system and segments themselves, may change over time as a result of changing bicycling patterns, land use patterns, implementation constraints and opportunities and the development of other transportation system facilities. The City of Mountain View should review the project list and project ranking at regular intervals to ensure it reflects the most current priorities, needs, and opportunities for implementing the bicycle network in a logical and efficient manner.

This Plan used the draft prioritization criteria from the Mountain View 2008 Bicycle Plan as a starting point and made refinements to the criteria based on feedback from the B/PAC. **Table 5-1** shows the draft prioritization criteria. All of the recommendations were filtered through the prioritization criteria and evaluated using a geographic information system (GIS) spatial analysis. Each recommendation received points based on network connectivity closure, low-stress network upgrade, connection to trip generators and attractions, connections to schools, historical bicycle crash location proximity, and city and community support.

Projects were then placed into three phasing groups: High, Medium, and Low.

- 9-13 points: High projects have the highest potential for addressing the City's bicycle transportation needs

and are intended for near-term implementation within one to five years.

- 5-8 points: Medium projects address the City's bicycling needs, but should be considered for development within one to ten years, or as other opportunities arise.
- 1-4 points: Low projects are the lowest priority projects. They meet some of the City's bicycling needs, and should be considered over the next six to ten years or as other opportunities arise.

The full list of projects, their priority rankings, and cost estimates is shown in **Table 5-7 and Table 5-8**.

TABLE 5-1 PRIORITIZATION CRITERIA

Criterion	Maximum Points
Network Connectivity (Max. = 3 points)	**3**
(3 Points) Closes gap between two Class I trails OR creates a new significant connection across a major barrier such as a freeway, creek, arterial or rail road tracks.	
(2 Points) Closes gap between two on-street bikeways OR extends a Class I trail OR enhances an existing arterial crossing.	
(1 Point) Improves circulation within an existing bicycle network OR extends on-street bikeway.	
Low-Stress Network Improvements (Max. = 2 points)	**2**
(2 Points) Upgrades an existing bikeway to a low-stress bikeway (Bicycle Boulevard, Class I Multi-Use Path, or Class IV Separated Bike Lane).	
(1 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).	
Trip Generators and Attractions (Max. = 2 points)	**2**
(2 Points) Directly connects to employment centers, retail/business centers, transit, community services, parks and recreation facilities and/or City facilities.	
(1 Point) Connects to a bikeway that directly connects to employment centers, retail/business centers, transit, community services, parks and recreation facilities and/or City facilities AND is located within one mile of these destinations	
Travel Routes to/near Schools (Max. = 2 points)	**2**
(2 Points) Directly connects to school(s) OR is on the school's suggested routes to schools map within a half mile of the school.	
(1 Point) Connects to a bikeway that directly connects to a school and is located within half a mile of the school OR is on the school's suggested routes to school map AND is more than a half-mile from the school.	
Safety* (Max. = 2 points)	**2**
(2 Points) Location has a bicycle crash history (at least three collisions) within a quarter mile of improvement AND is located on a designated bicycle school route	
(1 Point) Location has a bicycle crash history (at least three collisions) within a quarter mile of improvement.	
City/Community Support (Max. = 2 points)	**2**
(2 Points) Identified by the community in the BTP Update process AND from existing City plans.	
(1 Point) Identified by the community in the BTP Update process OR from existing City plans.	
TOTAL SCORE (Max. = 13 points)	**13**

**Collision data is sometimes incomplete and does not capture a complete picture of the circumstances, including collision causation but the data helps inform possible education or engineering needs.*

5.2. TEN PRIORITY PROJECTS

Ten priority projects have been identified out of the list of recommended improvements in the Plan. The ten priority projects were identified based on multiple factors including a project's prioritization criteria rating, its relationship to funding and planning needs and input from Alta staff, City staff and the community. The ten priority projects prioritize bikeway improvements that expand the City's low-stress bicycle network, serve major destinations including downtown and major employment centers and major well-used roadways. Each priority project has a more in-depth description, project background, and planning level cost estimate. The costs are planning-level estimates and do not include right of way acquisition; major environmental impacts; major changes to curb, gutter, utilities, existing pavement, landscaping; or other amenities. Intersection costs assume use of existing controllers and arms.

The priority projects, ***not in priority order***, are shown in **Figure 5-4,** summarized in **Table 5-2** and described in the following pages.

Figure 5-1 Priority Project C recommends installing Class IV protected bike lanes on Moffett Boulevard

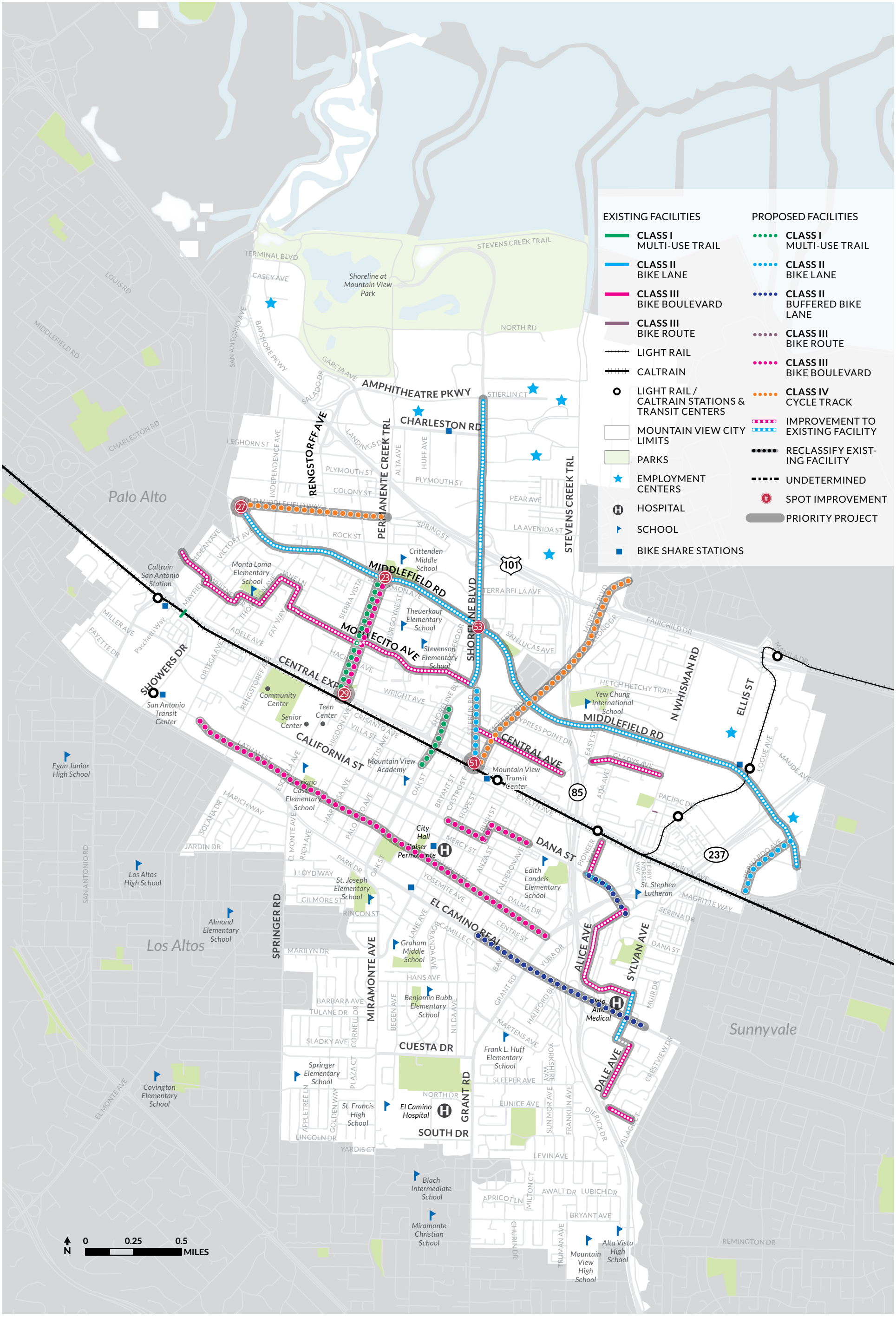
Figure 5-2 Priority Project F recommends a Citywide Bicycle Boulevard Feasibility Study to identify improvements for existing and potential future Bicycle Boulevards. Dale Avenue, pictured here, is an existing Bicycle Boulevard.

Figure 5-3 Priority Project G recommends creating full-time bike lanes on Middlefield Road

TABLE 5-2 LIST OF PRIORITY PROJECTS AND COST ESTIMATES		
	Project	**Cost Estimate***
(a)	Shoreline Boulevard Pathway	To be determined by current study underway.
(b)	Castro Street / Moffett Boulevard / Central Expressway Intersection Improvement	$1,630,000
(c)	Moffett Boulevard Bike Lanes	$350,000 - $450,000
(d)	Old Middlefield Way Bike Lanes	$250,000 - $350,000
(e)	Permanente Creek Trail Extension Feasibility Study	$150,000
(f)	Bicycle Boulevard Feasibility Study	$150,000 - $240,000
(g)	Palo Alto-Sunnyvale Regional Connections	$950,000
(h)	El Camino Real Bike Lanes	$250,000 - $350,000
(i)	Shoreline Boulevard Transportation Corridor Improvements	$3,080,000
(j)	Citywide On-Street Parking Modification Guidelines for the Installation of Bike Lanes	$80,000 - $110,000
	Total	**$6,890,000 - $7,310,000**

**Costs are planning-level estimates and do not include right of way acquisition; major environmental impacts; major changes to curb, gutter, utilities, existing pavement, landscaping; or other amenities. Intersection costs assume use of existing controllers and arms.*

Figure 5-4 Recommended Priority Projects Map



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PRIORITY PROJECT A – SHORELINE BOULEVARD PATHWAY

(CONSTRUCTION)

PROJECT LOCATION AND REFERENCE NUMBER

Pathway along the east side of Shoreline Boulevard, from Villa Street to Wright Avenue. Project reference number: N-2.

PROJECT PURPOSE

The existing pathway along the east side of Shoreline Boulevard that runs from Villa Street to Wright Avenue is in poor condition with tree roots, aging asphalt and steep inclines. A new Class I pathway is proposed.

PROJECT BACKGROUND

The City has already approved funding for the design of this project in the Adopted FY 2014-15 and Planned FY 2015-16 through FY 2018-19 Capital Improvement Program (CIP). The preliminary pathway improvement design includes reconstructing the pathway from Wright Avenue to Villa Street to meet ADA requirements, installing new pathway connections to Jackson Street and installing a new sidewalk on Central Expressway. The proposed project improvements, including a Class I, two-way shared bike/pedestrian path will achieve the following:

- Provide a shared bike/pedestrian path that meets ADA accessibility requirements (longitudinal slope not to exceed 5 percent and cross slopes not to exceed 2 percent)
- Provide a minimum 10′ wide path (excluding Shoreline Boulevard Bridge and where feasible) with adequate head clearance at bridge underpasses
- Connect Shoreline Boulevard pathway to the newly constructed sidewalk on Central Expressway
- Provide a shorter path by stairway
- Improve safety by adding lighting and brightening underpasses
- Minimize impacts to trees; and enhance planting

PROJECT SCOPE

The project design phase is anticipated to be complete by summer 2015. Funding for construction of the project will be considered as part of the development and approval of the 2016-17 Capital Improvement Program. This Plan recommends construction of the proposed pathway improvements.

The project does not include any improvements along the Shoreline Boulevard overpass above Central Expressway and the Caltrain railroad tracks. The potential of these improvements is being studied as part of the California Escuela/Shoreline Complete Streets Project (Project 14-41) currently underway. The results of these two studies will be coordinated prior to the final design and construction of the Shoreline Pathway improvements.

PROJECT SOURCE

City Adopted FY 2014-15 and Planned FY 2015-16 through 2018-19 Capital Improvement Program (Project 15-32).

PROJECT COST ESTIMATE

Costs will be determined as part of the current project design underway.

PRIORITY PROJECT B – CASTRO STREET / MOFFETT BOULEVARD / CENTRAL EXPRESSWAY INTERSECTION IMPROVEMENTS

(DESIGN AND CONSTRUCTION)

PROJECT LOCATION AND REFERENCE NUMBER

The intersection of Central Expressway, Castro Street and Moffett Boulevard. Project reference number: S-51.

PROJECT PURPOSE

This Plan recommends design and construction of the intersection improvements as proposed in the Shoreline Boulevard Transportation Corridor Study (Corridor Study), including travel lane modifications, signal modifications, and bicycle and pedestrian striping improvements. These recommendations will improve pedestrian and bicycle travel through the intersection and integrate improvements with the 100 Moffett Boulevard Development Project.

PROJECT BACKGROUND

The intersection of Central Expressway/Castro Street/Moffett Boulevard is a key connection for local and regional travel in Mountain View, yet it also a busy and complicated intersection. Improvements to the Central Expressway/Castro Street/Moffett Boulevard intersection were included in the Shoreline Boulevard Transportation Corridor Study (2014) as a short-term priority improvement to be completed within the next three years. Additionally, a planned bicycle and pedestrian connection to Stierlin Road as part of the 100 Moffett Boulevard Development project will provide access to Shoreline Boulevard and North Bayshore. More about the Stierlin Road Project can be found in the description of Priority Project I, Shoreline Boulevard Transportation Corridor Improvements.

PROJECT SCOPE

The proposed project includes design and construction of the following recommendations as stated in the Shoreline Boulevard Transportation Corridor Study:

- Reconfigure Northbound Castro Street— eliminate the left-turn lanes onto westbound Central Expressway. This reconfiguration would create a designated bike lane on Castro Street North of Evelyn Avenue; provide additional time for pedestrians crossing at Central Expressway; and help clear the intersection more quickly during the approach of Caltrain trains.
- Additional study and coordination with the Santa Clara County/other stakeholders will be required to implement the proposed improvements at the intersection including impacts to intersection operations; closure of free-running right-turn lane; signal phasing to accommodate more pedestrians/bicyclists crossing Central Expressway; high-visibility crosswalks and bicycle pavement markings; and a potential new transit stop on the north side of Central Expressway, just west of Moffett Boulevard for additional shuttle/bus service to/from North Bayshore.

This Plan recommends the design and construction of improvements to the Castro Street/Moffett Boulevard/Central Expressway intersection (along with other improvements identified in the Shoreline Boulevard Transportation Corridor Improvements Priority Project. These improvements would be timed to coincide with the completion of the 100 Moffett Boulevard private development project, which will add a cycletrack to connect the intersection to Stierlin Road.

PROJECT SOURCE

Shoreline Boulevard Transportation Corridor Study (2014).

PROJECT COST ESTIMATE

$1,630,000 (Shoreline Boulevard Transportation Corridor Study (2014)).

PRIORITY PROJECT (C) – MOFFETT BOULEVARD BIKE LANES

(DESIGN AND CONSTRUCTION)

PROJECT LOCATION AND REFERENCE NUMBER

Moffett Boulevard, between Central Expressway and Clark Road (Moffett Field). Project reference number: N-13.

PROJECT PURPOSE

This Plan recommends the design and construction of on-street buffered bike lanes or Class IV protected bike lanes (if width permits) to separate bicyclists from fast, high volume traffic to provide a diagonal connection to Moffett Field and Stevens Creek Trail.

PROJECT BACKGROUND

Moffett Boulevard provides an important northwest connection to and from downtown Mountain View. Currently, Moffett Boulevard is a Class III bike route between Central Expressway and State Route 85 on- and off-ramps, with a Class II southbound bike lane and a northbound buffered bike lane from State Route 85 on- and off-ramps to Leong Drive, and intermittent Class II bike lanes with gaps between Leong Drive and Clark Road. With high volumes and speeds, Moffett Boulevard is not a comfortable street for bicycling without a designated lane, as is required on a Class III bike route, where bicyclists are expected to share the roadway with vehicles. This project aims to create continuous buffered or protected bike lanes on Moffett Boulevard.

PROJECT SCOPE

This project will design and construct continuous buffered Class II bike lanes or Class IV protected bike lanes where the street width permits between Central Expressway and Clark Road (Moffett Field). The project scope will include design plans and construction for travel lane/parking modifications; intersection improvements to eliminate gaps; modeling the buffered bike lane after the existing buffered bike lane on Moffett Boulevard between SR 85 and Leong Drive; and new signage. The ultimate design will be based on City and public input. Further CEQA review may be required.

PROJECT SOURCE

Mountain View Bicycle Transportation Plan Update.

PROJECT COST ESTIMATE

$350,000 - $450,000

1.26 miles Class II buffered bike lanes or Class IV protected bike lanes and up to seven intersection improvements.

PRIORITY PROJECT (D) – OLD MIDDLEFIELD WAY BIKE LANES

(DESIGN AND CONSTRUCTION)

PROJECT LOCATION AND REFERENCE NUMBER

Old Middlefield Way, between West Middlefield Road and Permanente Creek Trail. Project reference numbers: N-27, S-27.

PROJECT PURPOSE

This Plan recommends constructing on-street buffered bike lanes or Class IV protected bike lanes (if sufficient width permits) to separate bicyclists from fast, high volume traffic, and to provide a connection between the City of Palo Alto and Permanente Creek Trail and North Bayshore.

PROJECT BACKGROUND

Old Middlefield Way is a four-lane roadway with a center turning lane, on-street parking and a 35 MPH speed limit. The street eventually merges into U.S. Route 101 on- and off-ramps. Old Middlefield Way is a key service commercial area with light manufacturing and auto-repair services. The Mountain View General Plan 2030 calls for protecting these service commercial uses.

PROJECT SCOPE

The proposed project will design and construct Class II buffered bike lanes or Class IV protected bike lanes on Old Middlefield Way between West Middlefield Road and the Permanente Creek Trail. As a key commercial corridor, many of the land uses have their own parking lots, which suggest an opportunity for on-street parking modification. However, the project will need to consider how to balance the bicycle facilities with the high number of commercial driveways to avoid bicycle and motor-vehicle conflicts. This project will also consider intersection improvements at the following four key locations:

- Old Middlefield Way and West Middlefield Road
- Old Middlefield Way and Independence Avenue
- Old Middlefield Way and North Rengstorff Avenue
- Old Middlefield Way and access to the Permanente Creek Trail

The ultimate design will be based on City Council and public input. Further CEQA review may be required.

PROJECT SOURCE

Mountain View Bicycle Transportation Plan Update.

PROJECT COST ESTIMATE

$250,000 - $350,000

0.78 miles of Class II buffered bike lanes and up to four intersection improvements.

PRIORITY PROJECT (E) – PERMANENTE CREEK TRAIL EXTENSION FEASIBILITY STUDY

PROJECT LOCATION AND REFERENCE NUMBER

Permanente Creek Corridor and nearby street network, between Middlefield Road and the Teen Center. Project reference numbers: N-12, S-23, S-29.

PROJECT PURPOSE

The Permanente Creek Trail Feasibility Study will seek to determine the feasibility of extending the multi-use trail along the Permanente Creek corridor from West Middlefield Road to the Teen Center, including connections across Central Expressway to Crisanto Avenue and Escuela Avenue, plus on-street alternative routes, access opportunities, and intersection improvements.

PROJECT BACKGROUND

The Permanente Creek Trail is a multi-use trail that extends from Shoreline At Mountain View and currently ends at Rock Street. The Mountain View Parks and Open Space Plan (2014) identifies extending the Permanente Creek Trail as a prioritized recommendation.

The most recent extension of the trail, from Old Middlefield Way to Rock Street, opened in June 2012. In 2013, a feasibility study of extending the Permanente Creek Trail from Rock Street to West Middlefield Road was completed, including the approval of a preferred alignment by the Mountain View-Whisman School District and the Santa Clara Valley Water District through the Crittenden Middle School property. The design of this extension is part of the City's 2014-2015 Capital Improvement Program.

PROJECT SCOPE

The proposed Permanente Creek Trail (PTC) Feasibility Study will seek to determine the feasibility of extending the multi-use trail along the Permanente Creek corridor from West Middlefield Road to the Teen Center. The Study will identify a broad range of on-street trail alternatives; document geographic, physical and biological conditions; conduct engineering feasibility analysis and environmental assessment; solicit community input; and conclude with a recommended alignment, associated improvements, cost estimates and funding opportunities. The project will also consider, but not be limited to, on-street alternatives at Farley Street, Sierra Vista Avenue, North Rengstorff Avenue and Burgoyne Street and intersection/connection opportunities at PCT/West Middlefield Road and PCT/Central Expressway.

PROJECT SOURCES

- City of Mountain View Capital Improvement Program
- City of Mountain View Parks and Open Space Plan (2014)
- City of Mountain View Bicycle Transportation Plan Update

PROJECT COST ESTIMATE

$150,000

PRIORITY PROJECT (F) – BICYCLE BOULEVARD FEASIBILITY STUDY

PROJECT LOCATION AND REFERENCE NUMBER

Citywide

Montecito Avenue Bicycle Boulevard project reference numbers: N-7, N-23, N-24, N-25, N-38, N-71, N-101.

Evelyn-Dana-Alice-Dale Bicycle Boulevard project reference numbers: N-41, N-45, N-47, N-48, N-69, N-70, N-97, N-120, N-121.

Church Street and Latham Street Bicycle Boulevard project reference numbers: N-1, N-23, N-24.

PROJECT PURPOSE

The Plan identifies a citywide network of proposed Bicycle Boulevards to increase the network of low-stress bicycle facilities. This project proposes conducting a feasibility study to identify improvements to three routes (two existing Bicycle Boulevards and Church Street/Latham Street). Additional routes can be studied as funding and resources become available.

PROJECT BACKGROUND

The City of Mountain View B/PAC completed a Report on Bicycle Boulevards in 2004. The Report presented the possible installation of Bicycle Boulevards in Mountain View and resulted in the implementation of the Montecito Bicycle Boulevard (from San Antonio Road to North Whisman Road) and the Evelyn-Dana-Alice-Dale Bicycle Boulevard. Additional Bicycle Boulevard opportunities were identified in the Report, but were not implemented because they were determined to be impractical and/or infeasible to implement (i.e. required acquisition of private property, required construction of grade-separating facilities, required new traffic signal construction, and concerns regarding traffic congestion and bicycle safety). Public feedback from this planning process indicated an interest in more Bicycle Boulevards within the City and elevating the existing Bicycle Boulevards with additional design elements.

PROJECT SCOPE

This proposed project will produce a list of recommended designs, cost estimates and implementation phases for the proposed Bike Boulevards. This Plan recommends including the following existing and proposed Bike Boulevard in the feasibility study. Other routes can be studied depending on available resources and funding.

- Montecito Avenue Bicycle Boulevard (existing Bicycle Boulevard which includes Nita Avenue, Whitney Drive, Thompson Avenue, Montecito Avenue, Central Avenue and Gladys Avenue)
- Evelyn-Dana-Alice-Dale Bicycle Boulevard (existing Bicycle Boulevard)
- Church Street and Latham Street (proposed Bicycle Boulevard)

The Bicycle Boulevard Feasibility Study will review include motor vehicle, bicycle and pedestrian data collection; community outreach; conceptual plans including proposed stripping, traffic calming, signal design, and intersection treatments; proposed Bicycle Boulevard wayfinding and signage program; and cost estimates.

PROJECT SOURCE

Mountain View Bicycle Transportation Plan Update.

PROJECT COST ESTIMATE

$150,000 to $240,000 to study the Montecito Avenue, Evelyn-Dana-Alice-Dale, and Church-Latham Bike Boulevards.

$50,000 to $80,000 per additional corridor added to the Study.

PRIORITY PROJECT (G) – PALO ALTO-SUNNYVALE REGIONAL CONNECTIONS

(DESIGN AND CONSTRUCTION)

PROJECT LOCATION AND REFERENCE NUMBER

Middlefield Road between San Antonio Road to Bernardo Avenue, and Bernardo Avenue from Middlefield Road to Central Expressway.

Project reference numbers: N-19, N-122, S-36, S-33, S-23, S-18, S-52, S-22.

PROJECT PURPOSE

This project proposes the design and construction of full-time on-street buffered bike lanes on Middlefield Road and Bernardo Avenue, creating a continuous, regional bicycle connection between Palo Alto and Sunnyvale.

PROJECT BACKGROUND

Middlefield Road is a regional connection between Palo Alto and Sunnyvale. Current bike lanes on Middlefield Road are only open part-time; the bike lane becomes a parking lane on weekends and after 7PM on weekdays. As one of the few continuous east-west streets through the three cities, Middlefield Road is an important bicycling route. At Bernardo Avenue, Middlefield Road merges into Central Expressway. This project would continue the bike lanes onto Bernardo Avenue to Central Expressway, where the City of Sunnyvale has proposed a bicycle undercrossing of the Caltrain tracks. This crossing would connect Central Expressway to Evelyn Avenue, where people could continue on the South Bernardo Avenue bike lanes. This project would also connect the bike lanes west of San Antonio Road where the City of Palo Alto proposed bicycle routes on Middlefield Road.

PROJECT SCOPE

This project proposes to design and construct full-time on-street buffered bike lanes. The project scope would include consideration of a number of conceptual alternatives, including expanded parking restrictions; motor vehicle, bicycle and pedestrian data collection (only during the planning phase); and community outreach. As part of this project, the City would work with the Cities of Palo Alto and Sunnyvale to establish connections at jurisdictional boundaries. The ultimate design will be based on City and public input. Further CEQA review may be required.

PROJECT SOURCE

Mountain View Bicycle Transportation Plan Update.

PROJECT COST ESTIMATE

$950,000

3.8 miles of Class II Buffered Bike Lanes, and up to ten intersection treatments.

PRIORITY PROJECT (H) - EL CAMINO REAL BIKE LANES

(DESIGN AND CONSTRUCTION)

PROJECT LOCATION AND REFERENCE NUMBER

El Camino Real between Calderon Avenue and the City of Sunnyvale border. Project reference number: N-29.

PROJECT PURPOSE

This project would implement the recommendation of the El Camino Real Precise Plan (2014) to design and install Class II buffered bike lanes or Class IV protected bike lanes (if width permits) on El Camino Real to separate bicyclists from fast moving, high volume traffic and provide a regional connection Sunnyvale.

PROJECT BACKGROUND

El Camino Real is a key transportation corridor, connecting Mountain View to Sunnyvale to the southeast and Palo Alto and Los Altos in the northwest. Currently, El Camino does not have any bicycle facilities. The El Camino Precise Plan (2014) identifies key changes and investment to the corridor, including land use and transportation recommendations. The Precise Plan recommends Class II buffered bicycle facilities, cycle tracks, or other facilities on El Camino Real between Calderon Avenue and the Sunnyvale/ Mountain View border. As part of this effort, the Precise Plan recommends that the City work with VTA and Caltrans to redesign the State Route 85/El Camino Real interchange to improve bicycle travel in this segment.

PROJECT SCOPE

This proposed project seeks to develop design plans and construct one mile of Class II buffered bike lanes and/ or Class IV protected bike lanes on El Camino Real. The project scope would include consideration of a number of conceptual alternatives; motor vehicle, bicycle and pedestrian data collection; community outreach; cost estimates; and proposed parking modifications and intersection improvements. As part of the project, the City would also need to collaborate with Caltrans to ensure compliance with the California MUTCD design requirements and work with the City of Sunnyvale to establish a connection at the jurisdictional boundary. The ultimate design will be based on City and public input. Further CEQA review may be required.

PROJECT SOURCE

El Camino Real Precise Plan (2014).

PROJECT COST ESTIMATE

$250,000 to $350,000

0.99 miles of Class II buffered bike lanes or Class IV protected bike lanes.

PRIORITY PROJECT (I) – SHORELINE BOULEVARD TRANSPORTATION CORRIDOR IMPROVEMENTS

(DESIGN AND CONSTRUCTION)

PROJECT LOCATION AND REFERENCE NUMBER

Shoreline Boulevard, from Stierlin Road to Amphitheatre Parkway; Stierlin Road, from Central Expressway to Shoreline Boulevard. Project reference numbers: N-52, N-84, S-53, S-16, S-52.

PROJECT PURPOSE

This project would design and construct the following improvements identified in the Shoreline Boulevard Transportation Corridor Study to improve bicycle connections between downtown Mountain View and North Bayshore: Shoreline Boulevard Bicycle Lanes; Stierlin Road Bicycle Lanes and Traffic Calming Measures; Shoreline Boulevard/Middlefield Road Protected Intersection.

PROJECT BACKGROUND

The Shoreline Boulevard Transportation Corridor Study (Corridor Study) developed conceptual designs for integrated transit, bicycle, and pedestrian facilities in the Shoreline Boulevard Corridor from the Downtown Transit Center to North Bayshore. These designs will help the City achieve the North Bayshore commute mode-share targets endorsed by City Council in March 2013, including a 10 percent active transportation mode share target, in anticipation of the increased employment and development in the North Bayshore Area. The Corridor Study was approved by City Council in 2014.

PROJECT SCOPE

Proposed Shoreline Boulevard Bicycle Lanes – Study and install short-term bike lane improvements to Shoreline Boulevard between Stierlin Road and Amphitheatre Parkway; restripe to widen bike lanes, add green pavement markings at intersections/in conflict zones at the U.S. Route 101 on- and off-ramps, install wayfinding signage at key locations and opportunities for flexible bollards.

Proposed Stierlin Road Bicycle Lanes and Traffic Calming Measures – Traffic calming elements would be included on Stierlin Road to reduce vehicle speeds and improve safety for bicyclists. Towards downtown, the Stierlin Road bicycle lanes would transition to the Central Expressway/Moffett Boulevard/Castro Street intersection via the bicycle and pedestrian paseo to be built as part of the 100 Moffett Boulevard development. Further north, the existing Stierlin Road slip lane to Shoreline would be redesigned and reconfigured to provide northbound bicyclists a connection from Stierlin Road to Shoreline Boulevard via a one-way protected bicycle lane.

Proposed Shoreline Boulevard/Middlefield Road Protected Intersection – Design and install physical barrier all the way up to, and partially into the intersection creating a protected environment to separate bicyclists from vehicles. Key components of the protected intersection design include distinct crossing zones for bicyclists and pedestrians, high-visibility crosswalks and pavement markings to clearly define the route that should be taken through the intersection, advance stop lines for bicyclists waiting to go straight and a separate signal phase for bicyclists and pedestrians which allow them to get ahead of right-turning vehicles.

PROJECT SOURCE

Shoreline Boulevard Transportation Corridor Study (2014).

PROJECT COST ESTIMATE

Cost estimates from Shoreline Boulevard Transportation Corridor Study (2014):

- Shoreline Boulevard Bicycle lanes (1.43 miles)- $150,000
- Stierlin Road Bicycle Lanes and Traffic Calming– $1,200,000
- Shoreline Boulevard/Middlefield Road Protected Intersection - $1,730,000

PRIORITY PROJECT (J) – CITYWIDE ON-STREET PARKING MODIFICATION GUIDELINES FOR THE INSTALLATION OF BIKE LANES

PROJECT LOCATION

Citywide

PROJECT PURPOSE

This project would develop recommended guidelines for the selection and installation criteria for on-street parking modifications related to bicycle facility installation. The recommended guidelines would be presented to the Mountain View City Council for review and approval.

PROJECT BACKGROUND

Many of the bikeways recommended in this Plan may require the modification or removal of on-street parking. This project seeks to establish a process for reviewing parking modifications such that each project receives consistent review on a case-by-case basis and decisions are based on quantitative and qualitative analysis.

PROJECT SCOPE

The project will include the following tasks:

1. Review existing parking policies in Mountain View.
2. Conduct a peer city review of on-street parking modification guidelines or policies.
3. Identify data collection and evaluation methodology.
4. Review on-street and off-street parking capacities.
5. Recommended a radius of data collection.
6. Provide a menu of on-street parking modification options.
7. Develop a decision-tree process that includes public notification and outreach.

PROJECT SOURCE

Mountain View Bicycle Transportation Plan Update.

PROJECT COST ESTIMATE

$80,000-$110,000

5.3. NEAR-TERM, LOW-COST "FAST FIVE" PROJECTS

The following tables present projects the City can complete within a year, assuming the availability of funding and staffing resources. The recommended projects include network and spot improvements. Getting off to a fast start on implementing a few bicycle improvement projects such as these as soon possible after the Plan's adoption will build momentum and interest towards implementing other recommendations included in the Plan.

TABLE 5-3 NEAR-TERM SPOT IMPROVEMENTS

Rank	Reference Number *(spot)*	Location	Recommended Improvement	Short-Term Improvement	Cost Estimate*
High	S-2	Rengstorff Avenue and Central Expressway	Bicycle marking improvements	Extend bike lanes to intersection, add intersection crossing markings to carry bicyclists across Central Expressway. Improve pavement condition on southern leg. Add green striping where bike lane crosses northbound yielding traffic coming from westbound Central Expressway.	$75,000
High	S-20	Rengstorff Avenue and Crisanto Avenue	Bicycle marking improvements	Extend bike lanes to tracks, with dashed markings across the Crisanto Avenue intersection to prevent vehicles from encroachment.	$75,000
Medium	S-5	Cuesta Drive and Miramonte Avenue	Bicycle marking improvements	Extend the westbound Cuesta Drive bike lane to intersection and add green paint to eastbound and westbound Cuesta Drive bike lanes to highlight conflict area with right-turn lane.	$75,000

TABLE 5-4 NEAR-TERM NETWORK IMPROVEMENTS

Rank	Reference Number *(network)*	Location	Start	End	Mileage	Recommended Improvement	Short-Term Improvement	Cost Estimate*
Medium	N-63	Whisman Station Drive	North Whisman Road	Central Expressway	0.16	Class II	Paint bike lane edge line to separate bicycle lane from parking lane	$8,000
Low	N-132	Sylvan Avenue	Rainbow Drive	Moorpark Way	0.63	Class II	Paint bike lane edge line to separate bicycle lane from parking lane	$33,000

**Costs are planning-level estimates and do not include right of way acquisition; major environmental impacts; major changes to curb, gutter, utilities existing pavement, landscaping and other amenities*

5.4. COST ESTIMATES

This section presents typical planning level unit costs for constructing bikeways in the San Francisco Bay Area, which are shown in **Table 5-5**. Unit costs presented here are planning-level cost estimates based on typical or average costs experienced by California cities and counties when constructing similar projects. While these costs also reflect the urban nature of the City of Mountain View, they do not consider project-specific factors such as intensive grading, landscaping, intersection modifications, and right-of-way acquisition that may increase actual construction costs. For some segments project costs may be significantly greater.

The full list of projects and their cost estimates is shown in Section **5.6**.

The construction of recommended facilities will also require additional field work to verify conditions. These include but are not limited to: roadway width, travel lanes, actual motor vehicle speeds, motor vehicle volumes, bicycle and motor vehicle travel patterns and conflicts, and pavement conditions. Final bikeway treatments should be selected based on verified conditions.

TABLE 5-5 ESTIMATED BIKEWAY UNIT COSTS

Facility Type	Unit Cost	Cost	Notes
Class I Shared-Use Path	Per Mile	$ 775,000	Class I bikeways do not include right-of-way, retaining walls, bridge, lighting, costs.
Class II Bike Lane	Per Mile	$ 52,000	Class II and III bikeways do not include right-of-way, re-striping, changes to curb, gutter, or medians. Assumes current street sweeping program
Class II Buffered Bike Lane	Per Mile	$ 140,000	
Class III Bike Route	Per Mile	$10,000	
Class III Bike Boulevard	Per Mile	$42,000	
Class IV Protected Bike Lane	Per Mile	$200,000	Class IV bikeways do not include right-of-way, re-striping, changes to curb, gutter, or medians. Class IV bikeway assumes use of plastic bollards.
Bicycle marking improvements	Intersection	$10,000 - $25,000	Assumes two approaches modified. May include, but are not limited to: extending the bike facility to the intersection, adding intersection crossing markings, and green striping in conflict/merge zones.
Bicycle crossing and turning improvements	Intersection	$10,000 - $75,000	Assumes two approaches modified. May include, but are not limited to: adding two-stage left-turn queue boxes to facilitate left turns without using the left-turn lane, bicycle signal phase, median refuge, advanced warning signs, HAWK signal.
Bicycle Signal Detection	Intersection	$10,000 - $15,000	Assumes two approaches modified. Assumes existing controller can accommodate new detection.
Protected Intersection	Intersection	$100,000-$300,000	Cost depends on signal modification, if new medians/islands are needed, etc.

5.5. BIKEWAY COST ESTIMATE BY IMPLEMENTATION PHASE

Table 5-6 presents a summary of bikeway miles and cost estimates by priority level. The total estimate for all the bikeway projects in this Plan is $48 million. The total cost does not include many of the undercrossings and studies that will require future study.

TABLE 5-6 SUMMARY OF COST ESTIMATES BY PRIORITY LEVEL

Priority Level	Cost Estimate	Miles
High	$4,113,000	11.66
Medium	$42,887,000	47.88
Low	$1,029,000	9.23
Total	**$48,029,000**	**68.77**

5.6. RECOMMENDED BIKEWAY PROJECT COST ESTIMATES

Each bikeway project is listed in tables below, organized by priority level. Some cost estimates are yet to be determined by future studies. Costs are planning level estimates and do not include right of way acquisition; major environmental impacts; major changes to curb gutter, utilities, existing pavement, landscaping and other amenities. Intersection costs assume use of existing controllers and arms.

TABLE 5-7 NETWORK RECOMMENDATIONS PRIORITIZED WITH COST ESTIMATES

Priority	Reference Number	Location	Start	End	Project	Miles	Notes	Cost Estimate
High	N-1	Church Street	State Route 237	Shoreline Boulevard	Class III Bike Boulevard	1.00	Priority Project F: Citywide Bike Boulevard Feasibility Study	$42,000
High	N-2	Shoreline Boulevard	Villa Street	Wright Avenue	Class I	0.33	Priority Project A: Shoreline Boulevard Pathway	$256,000
High	N-3	Permanente Creek Trail	Rock Street	Los Altos border	Class I	2.64	Priority Project E: Permanente Creek Trail Extension Feasibility Study	$2,046,000
High	N-4	Central Expressway Undercrossing	Mayfield Avenue	Showers Drive	Class I	0.08		Requires further study
High	N-5	Casey Avenue	San Antonio Road	Broderick Way	Class III	0.19		$2,000
High	N-6	Latham Street	Showers Drive	San Antonio Road	Class III	0.28	Identified in the San Antonio Precise Plan (2014)	$3,000
High	N-7	Montecito Avenue	Shoreline Boulevard	Rengstorff Avenue	Class III Bike Boulevard	0.99	Priority Project F: Citywide Bike Boulevard Feasibility Study	$42,000
High	N-8	Rengstorff Avenue	El Camino Real	Amphitheatre Parkway	Class IV	2.10		$420,000
High	N-9	El Camino Real	El Monte Avenue	Calderon Avenue	To be determined	1.16	Identified in the El Camino Real Precise Plan (2014)	Requires further study
High	N-10	El Camino Real/El Monte Avenue	Escuela Avenue	Pilgrim Avenue	Class II	0.33	Identified in the El Camino Real Precise Plan (2014)	$17,000
High	N-11	Fayette Drive	Del Medio Avenue	Pacchetti Way	Class III	0.49	Identified in the San Antonio Precise Plan (2014)	$5,000
High	N-12	Permanente Creek Trail	Rock Street	Crisanto Avenue/ Escuela Avenue	Class I	0.81	Priority Project E: Permanente Creek Trail Extension Feasibility Study	$628,000
High	N-13	Moffett Boulevard	Central Expressway	Clark Road	Class IV	1.26	Priority Project C: Moffett Boulevard Bike Lanes	$252,000
Medium	N-14	Shoreline Boulevard	El Camino Real	Montecito Avenue	To be determined	1.09	Under study: California Street/ Escuela Avenue Project	Requires further study
Medium	N-15	Amphitheatre Parkway	US Route 101	North Shoreline Boulevard	Class I or IV	0.85	Identified in the North Bayshore Precise Plan (2014)	$659,000
Medium	N-16	Shoreline Boulevard	La Avenida Avenue	Space Park Way	Class IV	0.24	Identified in the Identified in the Shoreline Boulevard Transportation Corridor Study (2014) (2014)	$2,610,000
Medium	N-17	Shoreline Boulevard	South of US Route 101	North of US Route 101	Bicycle/ Pedestrian Bridge	TBD	Identified in the Shoreline Boulevard Transportation Corridor Study (2014)	$13,530,000
Medium	N-18	Landels Trail Pathway	Landels School	Stevens Creek Trail	Class I	0.05		$39,000

TABLE 5-7 NETWORK RECOMMENDATIONS PRIORITIZED WITH COST ESTIMATES								
Priority	**Reference Number**	**Location**	**Start**	**End**	**Project**	**Miles**	**Notes**	**Cost Estimate**
Medium	N-19	Middlefield Road	San Antonio Road	Bernardo Avenue	Class II	3.55	Priority Project G: Palo Alto-Sunnyvale Regional Connection	$185,000
Medium	N-20	Castro Street	Central Expressway	El Camino Real	Class III	0.70		$7,000
Medium	N-21	Evelyn Avenue	Hope Street	Pioneer Way	Class III Bike Boulevard	0.70	Priority Project F: Citywide Bike Boulevard Feasibility Study	$29,000
Medium	N-22	Farley Street	West Middlefield Road	Central Expressway	Class III Bike Boulevard	0.63	Priority Project F: Citywide Bike Boulevard Feasibility Study	$26,000
Medium	N-23	Latham Street	Showers Drive	Escuela Avenue	Class III Bike Boulevard	0.69	Priority Project F: Citywide Bike Boulevard Feasibility Study	$29,000
Medium	N-24	Latham Street	South Shoreline Boulevard	Escuela Avenue	Class III Bike Boulevard	0.57	Priority Project F: Citywide Bike Boulevard Feasibility Study	$24,000
Medium	N-25	Nita Avenue/Dell Avenue/Victory Avenue	Nita Avenue	Middlefield Road	Class III Bike Boulevard	0.40	Priority Project F: Citywide Bike Boulevard Feasibility Study	$17,000
Medium	N-26	Sierra Vista Avenue	Montecito Avenue	Leghorn Street	Class III Bike Boulevard	0.94	Priority Project F: Citywide Bike Boulevard Feasibility Study	$39,000
Medium	N-27	Old Middlefield Way	Middlefield Road	Permanente Creek Trail	Class II or IV	0.77	Priority Project D: Old Middlefield Way Bike Lanes	$154,000
Medium	N-28	Stierlin Road	Stierlin Road	Shoreline Boulevard	Class IV	0.11	Priority Project I: Shoreline Boulevard Transportation Corridor Study Improvements	$1,200,000
Medium	N-29	El Camino Real	Calderon Avenue	City Limit/ Crestview Drive	Class II Buffered	1.20	Priority Project H: El Camino Real Regional Connection	$168,000
Medium	N-30	Miramonte Avenue	El Camino Real	Harpster Drive	Class II	0.28	Identified in the El Camino Real Precise Plan (2014)	$15,000
Medium	N-31	Garcia Road / Charleston Road	San Antonio Road	Shorebird Way	Class I or IV	2.54	Identified in the North Bayshore Precise Plan (2014)	$1,969,000
Medium	N-32	Shoreline Boulevard	Shorebird Way	Terra Bella Avenue	Class I or IV	0.66	Identified in the North Bayshore Precise Plan (2014)	$512,000
Medium	N-33	Graham Middle School	Boranda Avenue	Graham Middle School	Class I	0.16		$124,000
Medium	N-34	Sylvan Avenue	El Camino Real	Rainbow Drive	Class II	0.14	Priority Project F: Citywide Bike Boulevard Feasibility Study	$7,000
Medium	N-35	The Americana	Continental Circle	El Camino Real	Class II	0.11	Priority Project F: Citywide Bike Boulevard Feasibility Study	$6,000
Medium	N-37	Sleeper Avenue	Grant Road	Stevens Creek Trail	Class III	0.52		$5,000
Medium	N-38	Central Avenue	Stierlin Road	Stevens Creek Trail	Class III Bike Boulevard	0.51	Priority Project F: Citywide Bike Boulevard Feasibility Study	$21,000
Medium	N-39	Marich Way	Karen Way	El Monte Avenue	Class III Bike Boulevard	0.34	Priority Project F: Citywide Bike Boulevard Feasibility Study	$14,000

TABLE 5-7 NETWORK RECOMMENDATIONS PRIORITIZED WITH COST ESTIMATES

Priority	Reference Number	Location	Start	End	Project	Miles	Notes	Cost Estimate
Medium	N-40	Mayfield Avenue	Whitney Drive	Central Expressway	Class III Bike Boulevard	0.17	Priority Project F: Citywide Bike Boulevard Feasibility Study	$7,000
Medium	N-41	Moorpark Way	Alice Avenue	East Dana Street	Class III Bike Boulevard	0.18	Priority Project F: Citywide Bike Boulevard Feasibility Study	$8,000
Medium	N-42	Pioneer Way	East Dana Street	East Evelyn Avenue	Class III Bike Boulevard	0.19	Priority Project F: Citywide Bike Boulevard Feasibility Study	$8,000
Medium	N-43	Rock Street	North Rengstorff Avenue	West Middlefield Road	Class III Bike Boulevard	0.30	Priority Project F: Citywide Bike Boulevard Feasibility Study	$13,000
Medium	N-44	Rock Street	North Rengstorff Avenue	Camp Avenue	Class III Bike Boulevard	0.50	Priority Project F: Citywide Bike Boulevard Feasibility Study	$21,000
Medium	N-45	View Street	California Street	Evelyn Avenue	Class III Bike Boulevard	0.27	Priority Project F: Citywide Bike Boulevard Feasibility Study	$11,000
Medium	N-46	Villa Street	Escuela Avenue	Shoreline Boulevard	Class III Bike Boulevard	0.55	Priority Project F: Citywide Bike Boulevard Feasibility Study	$23,000
Medium	N-47	West Dana Street	Bush Street	Calderon Avenue	Class III Bike Boulevard	0.21	Priority Project F: Citywide Bike Boulevard Feasibility Study	$9,000
Medium	N-48	West Dana Street	Calderon Avenue	Pioneer Way	Class IV	0.34		$68,000
Medium	N-49	California Street	San Antonio Road	Ortega Avenue	Class IV	0.52	Identified in the San Antonio Precise Plan (2014)	$104,000
Medium	N-50	Showers Drive	Latham Street	California Street	Class IV	0.85	Identified in the San Antonio Precise Plan (2014)	$170,000
Medium	N-51	Colony Street	Sierra Vista	Permanente Creek Trail	Class III Bike Boulevard	0.14	Priority Project F: Citywide Bike Boulevard Feasibility Study	$6,000
Medium	N-52	Shoreline Boulevard	Stierlin Road	Amphitheatre Parkway	Class II	1.43	Priority Project I: Shoreline Boulevard Transportation Corridor Study Improvements (short-term). Shown on Figure 5-4.	$12,560,000
Medium	N-53	Permanente Creek Trail	Amphitheatre Parkway	N/A	Crossing	0.06	Identified in the North Bayshore Precise Plan (2014)	Requires further study
Medium	N-54	El Camino Real	City limit	Escuela Avenue	To be determined	0.31	Identified in the El Camino Real Precise Plan (2014)	Requires further study
Medium	N-55	Shoreline Boulevard/ Shorebird Way	North Road	Shorebird Way/ Charleston	Class I or IV	1.14	Identified in the North Bayshore Precise Plan (2014)	$884,000
Medium	N-56	Caltrain ROW	Palo Alto border	Sunnyvale border	Class I	3.95	Identified in the Parks and Open Space Plan (2014)	$3,061,000
Medium	N-57	Miller Avenue	Del Medio Avenue	San Antonio Road	Class III	0.18	Identified in the San Antonio Precise Plan (2014)	$2,000

TABLE 5-7 NETWORK RECOMMENDATIONS PRIORITIZED WITH COST ESTIMATES								
Priority	**Reference Number**	**Location**	**Start**	**End**	**Project**	**Miles**	**Notes**	**Cost Estimate**
Medium	N-58	Ortega Avenue	California Street	Latham Street	Class III	0.17	Identified in the San Antonio Precise Plan (2014)	$2,000
Medium	N-59	Shoreline Boulevard	Stierlin Road	Terra Bella Avenue	Class IV	0.40	Identified in the Shoreline Boulevard Transportation Corridor Study (2014)	$74,000
Medium	N-60	Stevenson/ Theuerkauf School Path	Montecito Avenue	San Luis Avenue	Class I	0.27		$209,000
Medium	N-61	Evelyn Avenue	Castro Street	Hope Street	Class II	0.05		$3,000
Medium	N-62	Ferry Morse Way	Evelyn Avenue	South Whisman Road	Class II	0.15		$8,000
Medium	N-63	Martens Avenue	Grant Road	Yorkshire Way	Class II	0.29		$15,000
Medium	N-64	Whisman Station Drive	North Whisman Road	Central Expressway	Class II	0.16		$8,000
Medium	N-65	Miramonte Avenue	Gest Drive	Harpster Drive	Class II Buffered	1.15		$161,000
Medium	N-66	Boranda Avenue	Hans Avenue	Graham Middle School	Class III	0.08		$1,000
Medium	N-67	Marilyn Drive	Miramonte Avenue	Springer Road	Class III	0.49		$5,000
Medium	N-68	Alice Avenue	Alice Avenue	Moorpark Way	Class III Bike Boulevard	0.27	Priority Project F: Citywide Bike Boulevard Feasibility Study	$11,000
Medium	N-69	Bush Street	California Street	West Dana Street	Class III Bike Boulevard	0.09	Priority Project F: Citywide Bike Boulevard Feasibility Study	$4,000
Medium	N-70	California Street	Castro Street	Bush Street	Class III Bike Boulevard	0.21	Priority Project F: Citywide Bike Boulevard Feasibility Study	$9,000
Medium	N-71	Gladys Avenue	North Whisman Road	Easy Street	Class III Bike Boulevard	0.39	Priority Project F: Citywide Bike Boulevard Feasibility Study	$16,000
Medium	N-72	Nita Avenue/ Whitney Drive/ Thompson Avenue/ Jane Lane	Rengstorff Avenue	San Antonio Road	Class III Bike Boulevard	1.01	Priority Project F: Citywide Bike Boulevard Feasibility Study	$42,000
Medium	N-73	Rainbow Drive	Sylvan Avenue	Alice Avenue	Class III Bike Boulevard	0.27	Priority Project F: Citywide Bike Boulevard Feasibility Study	$11,000
Medium	N-74	San Antonio Road	El Camino Real	California Street	Class II	0.23	Identified in the San Antonio Precise Plan (2014)	$18,000
Medium	N-75	California Street	Showers Drive	Bryant Street	To be determined	1.65	Under study: California Street/ Escuela Avenue Project	Requires further study
Medium	N-76	Ellis Street	Fairchild Drive	Manila Drive	Class II	0.19		$10,000
Medium	N-77	Calderon Avenue	Church Street	El Camino Real	Class II	0.19		$10,000

TABLE 5-7 NETWORK RECOMMENDATIONS PRIORITIZED WITH COST ESTIMATES

Priority	Reference Number	Location	Start	End	Project	Miles	Notes	Cost Estimate
Medium	N-78	Huff Avenue	Charleston Road	Alta Avenue	Class III	0.40	Identified in the North Bayshore Precise Plan (2014)	$4,000
Medium	N-79	Joaquin Road	Amphitheatre Parkway	Pear Avenue	Class II	0.53	Identified in the North Bayshore Precise Plan (2014)	$28,000
Medium	N-80	Macon Avenue	La Avenida Street	US Route 101	Class III	0.14	Identified in the North Bayshore Precise Plan (2014)	$1,000
Medium	N-81	Marine Way	Casey Avenue	Garcia Avenue	Class III	0.31	Identified in the North Bayshore Precise Plan (2014)	$3,000
Medium	N-82	New Street	El Camino Real	Showers Drive	Class III	0.34	Identified in the San Antonio Precise Plan (2014)	$3,000
Medium	N-83	San Antonio Circle	San Antonio Road	Showers Drive	Class III	0.23	Identified in the San Antonio Precise Plan (2014)	$2,000
Medium	N-84	Stierlin Road	Central Expressway	Shoreline Boulevard	Class II	0.39	Priority Project I: Shoreline Boulevard Transportation Corridor Study Improvements	$22,000
Medium	N-85	Martens-Yorkshire Path	Martens Avenue	Yorkshire Way	Class I	0.05		$39,000
Medium	N-86	Stevens Creek Trail	Heatherstone Way	Mountain View High School	Class I	0.58		$450,000
Medium	N-87	Bryant Avenue	Grant Road	Stevens Creek Trail	Class II	0.78		$41,000
Medium	N-88	Cuesta Drive	Miramonte Avenue	Grant Road	Class II	0.51		$27,000
Medium	N-89	Hans Avenue	Miramonte Avenue	Phyllis Avenue	Class II	0.51		$27,000
Medium	N-90	Charleston Road	San Antonio Road	North Rengstorff Avenue	Class II Buffered	0.57		$80,000
Medium	N-91	East Dana Street	Moorpark Way	West Dana Street	Class II Buffered	0.30	Priority Project F: Citywide Bike Boulevard Feasibility Study	$42,000
Medium	N-92	Franklin Avenue/ Diericx Drive/Lubich Drive	Sleeper Avenue	Bryant Avenue	Class III	0.89		$9,000
Medium	N-93	Glenborough Drive	Foxborough Drive	Sylvan Avenue	Class III	0.14		$1,000
Medium	N-94	Meadow Lane/ Barbara Avenue/ Fordham Way/ Spencer Way	Marilyn Drive	Lincoln Drive	Class III	1.19		$12,000
Medium	N-95	Pacific Drive	Whisman Station Drive	North Whisman Road	Class III	0.30		$3,000
Medium	N-96	South Drive	Hospital Drive	Permanente Creek Trail	Class III	0.16		$2,000
Medium	N-97	Dale Avenue	Heatherstone Way	Continental Circle	Class III Bike Boulevard	0.33	Priority Project F: Citywide Bike Boulevard Feasibility Study	$14,000

TABLE 5-7 NETWORK RECOMMENDATIONS PRIORITIZED WITH COST ESTIMATES

Priority	Reference Number	Location	Start	End	Project	Miles	Notes	Cost Estimate
Medium	N-98	Fairchild Drive	Evandale Avenue	North Whisman Road	Class III Bike Boulevard	0.56	Priority Project F: Citywide Bike Boulevard Feasibility Study	$24,000
Medium	N-99	Jardin Drive	Los Altos High School (where bike lanes start)	Blackfield Way	Class III Bike Boulevard	0.29	Priority Project F: Citywide Bike Boulevard Feasibility Study	$12,000
Medium	N-100	Leghorn Street	Sierra Vista	Independence Avenue	Class III Bike Boulevard	0.38	Priority Project F: Citywide Bike Boulevard Feasibility Study	$16,000
Medium	N-101	Mayfield Avenue-Whisman Road Bike Boulevard Extension	Gladys Avenue	Ellis Street	Class III Bike Boulevard	0.42	Priority Project F: Citywide Bike Boulevard Feasibility Study	$18,000
Medium	N-102	Truman Avenue	Oak Avenue	Bryant Avenue	Class IV	0.31		$62,000
Medium	N-103	Pacchetti Way	Showers Drive	San Antonio Shopping Center	Class IV	0.34	Identified in the San Antonio Precise Plan (2014)	$68,000
Medium	N-104	State Route 237	El Camino Real	Church Street	Class IV	0.18		$36,000
Low	N-105	Castro Street	El Camino Real	Miramonte Road	Class II	0.38		$20,000
Low	N-106	Armand Avenue	Villa Drive	La Avenida Street	Class III	0.08	Identified in the North Bayshore Precise Plan (2014)	$1,000
Low	N-107	Broderick Way	Terminal Boulevard	Casey Avenue	Class III	0.09	Identified in the North Bayshore Precise Plan (2014)	$1,000
Low	N-108	Coast Avenue	Marine Way	N/A	Class II	0.11	Identified in the North Bayshore Precise Plan (2014)	$6,000
Low	N-109	Inigo Way	Pear Avenue	La Avenida Street	Class III	0.14	Identified in the North Bayshore Precise Plan (2014)	$1,000
Low	N-110	Pear Avenue	North Shoreline Boulevard	Armand Avenue	Class III	0.31	Identified in the North Bayshore Precise Plan (2014)	$3,000
Low	N-111	Plymouth Street/ Space Park Way	Landings Drive	Armand Avenue	Class II	0.99	Identified in the North Bayshore Precise Plan (2014)	$51,000
Low	N-112	Stierlin Court/ Crittenden Lane Loop	North Shoreline Boulevard	North Shoreline Boulevard	Class II	0.86	Identified in the North Bayshore Precise Plan (2014)	$45,000
Low	N-113	Towne Circle Sidewalk	Towne Circle	Leland Avenue	Class I	0.02	Identified in the San Antonio Precise Plan (2014)	$16,000
Low	N-114	Fairchild Drive	North Whisman Road	Ellis Street	Class II	0.33		$17,000
Low	N-115	North Whisman Road	Fairchild Drive	East Middlefield Road	Class II	0.57		$30,000
Low	N-116	South Drive	Solace Place	Hospital Drive	Class II	0.14		$7,000
Low	N-117	North Whisman Road	East Middlefield Road	East Evelyn Avenue	Class II Buffered	0.60		$84,000

TABLE 5-7 NETWORK RECOMMENDATIONS PRIORITIZED WITH COST ESTIMATES								
Priority	**Reference Number**	**Location**	**Start**	**End**	**Project**	**Miles**	**Notes**	**Cost Estimate**
Low	N-118	Foxborough Drive	Path (connecting Foxborough Drive to Moorpark Way)	Glenborough Drive	Class III	0.11		$1,000
Low	N-119	Blackfield Way	Jardin Drive	Marich Way	Class III Bike Boulevard	0.24	Priority Project F: Citywide Bike Boulevard Feasibility Study	$10,000
Low	N-120	Continental Circle	Dale Avenue	The Americana	Class III Bike Boulevard	0.08	Priority Project F: Citywide Bike Boulevard Feasibility Study	$3,000
Low	N-121	Heatherstone Way	South Knickerbocker Drive	Dale Avenue	Class III Bike Boulevard	0.24	Priority Project F: Citywide Bike Boulevard Feasibility Study	$10,000
Low	N-122	Bernardo Avenue	Central Expressway	Middlfield Road	Class II	0.38	Priority Project G: Palo Alto-Sunnyvale Regional Connection (Middlefield Rd)	$20,000
Low	N-123	Escuela Avenue	Latham Street	Villa Street	To be determined	0.38	Under study: California Street/ Escuela Avenue Project	Requires further study
Low	N-124	Ellis Street	Fairchild Drive	Manila Drive	Class I	0.19		$147,000
Low	N-125	Alta Avenue	Charleston Road	US Route 101	Class II	0.32	Identified in the North Bayshore Precise Plan (2014)	$17,000
Low	N-126	Bayshore Parkway	Garcia Avenue	Amphitheatre Parkway	Class II	0.62	Identified in the North Bayshore Precise Plan (2014)	$32,000
Low	N-127	La Avenida Avenue	Shoreline Boulevard	Stevens Creek Trail	Class II	0.52	Identified in the North Bayshore Precise Plan (2014)	$27,000
Low	N-128	Landings Drive Loop	Charleston Road	Charleston Road	Class II	0.48	Identified in the North Bayshore Precise Plan (2014)	$25,000
Low	N-129	Independence Avenue	Leghorn Street	Charleston Road	Class II	0.17		$9,000
Low	N-130	Leong Drive	Moffett Boulevard	Evandale Avenue	Class II	0.13		$7,000
Low	N-131	Sylvan Avenue	Rainbow Drive	Moorpark Way	Class II	0.63		$33,000
Low	N-132	Yorkshire Way	Sleeper Avenue	Martens Avenue	Class III	0.12		$1,000

TABLE 5-8 SPOT RECOMMENDATIONS PRIORITIZED WITH COST ESTIMATES

Priority	Reference Number	Location	Recommended Improvement	Notes	Cost Estimate
High	S-13	Castro Street and El Camino Real	Bike crossing and turning improvements		$25,000
High	S-51	Castro Street/Moffett Boulevard/Central Expressway Intersection	Intersection Improvements	Priority Project B: Castro Street/Moffett Boulevard/Central Expressway Intersection	$100,000
High	S-2	Rengstorff Avenue and Central Expressway	Bicycle marking improvements		$75,000
High	S-20	Rengstorff Avenue and Crisanto Avenue	Bicycle marking improvements		$75,000
High	S-23	Farley Street and Middlefield Road	Bicycle crossing and turning improvements	Priority Project E: Permanente Creek Trail Extension Feasibility Study	$25,000
High	S-49	El Camino Real and Escuela Avenue / El Monte Avenue	Bicycle crossing and turning improvements; Bicycle marking improvements		$100,000
Medium	S-53	Shoreline Boulevard and Middlefield Road		Priority Project I: Shoreline Boulevard Transportation Corridor Study Improvements	$1,730,000
Medium	S-55	Shoreline Boulevard and Terra Bella Avenue	Protected Intersection Improvements	Identified in the Shoreline Boulevard Transportation Corridor Study (2014)	Requires further study
Medium	S-16	Dana Street and Calderon Avenue	Bicycle detection	Priority Project I: Shoreline Boulevard Transportation Corridor Study Improvements	$15,000
Medium	S-18	Moffett Boulevard and Middlefield Road	Bicycle crossing and turning improvements; Bicycle detection	Priority Project C: Moffett Boulevard Corridor	$40,000
Medium	S-44	Stevens Creek Trail and Dana Street	Improve access point		Requires further study
Medium	S-54	Shoreline Boulevard and Stierlin Road/ Montecito Avenue	Protected Intersection Improvements	Identified in the Shoreline Boulevard Transportation Corridor Study (2014)	Requires further study
Medium	S-10	Shoreline Boulevard and Villa Street	Bicycle marking improvements	Priority Project F: Citywide Bike Boulevard Feasibility Study	$75,000
Medium	S-11	Sleeper Avenue and Grant Road	Bike crossing and turning improvements		$25,000
Medium	S-19	Rengstorff Avenue and Rock Street	Bicycle marking improvements		$75,000
Medium	S-27	Middlefield Road and Old Middlefield Way	Bicycle crossing and turning improvements	Priority Project D: Old Middlefield Way Bike Lanes	$25,000
Medium	S-31	South Whisman Road and Ferry Morse Way	Bicycle crossing and turning improvements; Bicycle marking improvements		$100,000
Medium	S-33	Rengstorff Avenue and Middlefield Road	Bicycle crossing and turning improvements; Bicycle marking improvements		$100,000
Medium	S-41	Stevens Creek Trail and Hetch Hetchy Trail	Improve access point		Requires further study
Medium	S-43	Stevens Creek Trail and Evelyn Avenue	Improve access point		Requires further study

TABLE 5-8 SPOT RECOMMENDATIONS PRIORITIZED WITH COST ESTIMATES

Priority	Reference Number	Location	Recommended Improvement	Notes	Cost Estimate
Medium	S-48	Stevens Creek Trail and Middlefield Road	Improve access point		Requires further study
Medium	S-56	Permanente Creek Trail and Colony Street	Improve access point		Requires further study
Medium	S-3	Phyllis Avenue and Grant Road	Bike crossing and turning improvements		$25,000
Medium	S-22	Whisman Road and Middlefield Road	Bicycle crossing and turning improvements; Bicycle detection	Priority Project G: Palo Alto-Sunnyvale Regional Connection (Middlefield Rd)	$40,000
Medium	S-36	West Middlefield Road and Victory Avenue	Bicycle crossing and turning improvements	Priority Project G: Palo Alto-Sunnyvale Regional Connection (Middlefield Rd)	$25,000
Medium	S-40	Stevens Creek Trail and Moffett Blvd	Improve access point		Requires further study
Medium	S-52	Middlefield Road and Shoreline Boulevard	Bicycle marking improvements	Priority Project I: Shoreline Boulevard Transportation Corridor Study Improvements	$75,000
Medium	S-4	Castro Street and Miramonte Avenue	Bicycle detection		$15,000
Medium	S-5	Cuesta Drive and Miramonte Avenue	Bicycle marking improvements		$75,000
Medium	S-8	Grant Road and Bryant Avenue	Bike crossing and turning improvements		$25,000
Medium	S-9	Shoreline Boulevard and Pear Avenue	Bike crossing and turning improvements	Identified in the North Bayshore Precise Plan (2014)	$25,000
Medium	S-12	Bonita Avenue and Cuesta Drive	Bike crossing and turning improvements		$25,000
Medium	S-14	Grant Road and Cuesta Drive	Bicycle crossing and turning improvements; Bicycle marking improvements		$100,000
Medium	S-15	Bryant Avenue and Truman Avenue	Mountain View High School Access Project		$100,000
Medium	S-24	Evelyn Avenue and Hope Street	Bicycle detection; Bicycle marking improvements		$90,000
Medium	S-30	East Dana Street and Moorpark Way	Bicycle crossing and turning improvements	Priority Project F: Citywide Bike Boulevard Feasibility Study	$25,000
Medium	S-35	Montecito Avenue and Sierra Vista Avenue	Bicycle crossing and turning improvements	Priority Project F: Citywide Bike Boulevard Feasibility Study	$25,000
Medium	S-45	Stevens Creek Trail and Yuba Drive	Improve access point		Requires further study
Medium	S-46	Stevens Creek Trail and Sleeper Avenue	Improve access point		Requires further study
Medium	S-50	State Route 237 and Church Street	Bicycle crossing and turning improvements		$25,000
Low	S-1	Fordham Way and Cuesta Drive	Bike crossing and turning improvements		$25,000
Low	S-6	Springer Road and Cuesta Drive	Bicycle marking improvements		$75,000

TABLE 5-8 SPOT RECOMMENDATIONS PRIORITIZED WITH COST ESTIMATES					
Priority	**Reference Number**	**Location**	**Recommended Improvement**	**Notes**	**Cost Estimate**
Low	S-17	California Street and Castro Street	Bicycle detection		$15,000
Low	S-21	Rengstorff Avenue and 101 ramps (all)	Bicycle crossing and turning improvements; Bicycle marking improvements		$100,000
Low	S-29	Farley Street and Central Expressway	Bicycle detection	Priority Project E: Permanente Creek Trail Extension Feasibility Study	$15,000
Low	S-34	North Whisman Road and Gladys Avenue	Bicycle crossing and turning improvements	Priority Project F: Citywide Bike Boulevard Feasibility Study	$25,000
Low	S-37	Stevens Creek Trail and Crittenden Lane	Improve access point		Requires further study
Low	S-39	Stevens Creek Trail and La Avenida Avenue	Improve access point		Requires further study
Low	S-42	Stevens Creek Trail and Gladys Avenue	Improve access point		Requires further study
Low	S-47	Stevens Creek Trail and Dale Avenue	Improve access point		Requires further study
Low	S-7	Villa Street and Bush Street	Bicycle detection		$15,000
Low	S-25	Evelyn Avenue and Castro Street	Bicycle crossing and turning improvements		$25,000
Low	S-28	Moorpark Way and Sylvan Avenue	Bicycle marking improvements		$75,000
Low	S-32	El Monte Avenue and Springer Road	Bicycle crossing and turning improvements		$25,000
Low	S-38	Stevens Creek Trail and Google Fitness Trail	Improve access point		Requires further study
Low	S-26	Evelyn Avenue and Bernardo Avenue	Bicycle marking improvements		$10,000

5.7. MAINTENANCE

Bikeways require regular maintenance and repair. On-street bikeways are maintained as part of the normal roadway maintenance program and extra emphasis should be placed on keeping bike lanes and roadway shoulders clear of debris and keeping vegetation overgrowth from blocking visibility. The high cost of maintaining Class I facilities may be shared among various agencies or departments. The typical maintenance costs for the bikeway network are shown in **Table 5-9**

5.7.1. ON-GOING MAINTENANCE

Bikeways are an integral part of the City's transportation network, and maintenance of the bikeway network should be part of the ongoing maintenance program for all City transportation facilities. As such, bikeway network maintenance should be adequately funded.

The City should ensure that mechanisms exist to evaluate the bikeway network, to correct any potential hazards and to continue to improve the bicycle network.

TABLE 5-9 ANNUAL OPERATION AND MAINTENANCE COST ESTIMATES FOR HIGH PRIORITY PROJECTS

Facility Type	Unit Cost	Annual Cost	Notes
Class I Multi-use path	per mile	$60,000	Maintenance costs assume minimal landscaping, no lighting
Class II Bike Lane	per mile	$15,000	Assumes current street sweeping program
Class II Buffered	per mile	$15,000	Assumes current street sweeping program
Class III Bike Route	per mile	$5,000	Assumes current street sweeping program
Class III Bike Boulevard	per mile	$7,500	Assumes current street sweeping program
Class IV Protected Bike Lane	per mile	$25,000	Assumes bikeway accessible to current street sweeping program
Bicycle marking improvements	Intersection	$2,000	Assumes 2 approaches modified.
Bicycle crossing and turning improvements	Intersection	$2,500	Assumes 2 approaches modified.
Bicycle Signal Detection	Intersection	$2,500	Assumes 2 approaches modified.
Protected Intersection	Intersection	$4,000	Assumes 4 approaches modified.

5.8. MONITORING

5.8.1. PERFORMANCE MEASURES

Performance measures provide a metric against which the City can gauge the progress of improving its bicycling environment efforts. The following performance measures were developed in conjunction with the City staff and the Bicycle/Pedestrian Advisory Committee.

TABLE 5-10 BICYCLE PLAN PERFORMANCE MEASURES
1. Bike Network
Objective: Develop a connected bike network.
Strategy: Close gaps and cross barriers in the existing on-street bike network, enhance connections to existing trails network, develop, sign, and promote a low stress network; and identify opportunities to install Class IV separated bikeways.
Performance Measure A: Monitor and report miles of bike network (Class I, Class II, Class III with itemized Bicycle Boulevards, and Class IV bikeways) three years after the BTP is adopted.
Performance Measure B: Monitor and report number of high priority gaps closed and enhanced bicycle crossings (e.g. undercrossings, overcrossings, and enhanced intersection crossings) of major barriers (e.g. rail road tracks, highways, and major arterials) three years after the BTP is adopted.
2. Ridership
Objective: Increase number of people of all ages and skills biking in Mountain View.
Strategy A: Work with employers on encouragement programs, support an expansion of bike-share to employment centers, improve regional bikeway connections.
Performance Measure A: Conduct bike counts of BTP Update benchmark count locations three years after the BTP is adopted, compare the benchmark counts to the most recent American Community Survey commuter data.
Strategy B: Improve low-stress bikeway connections to schools. Continue to support the VERBS program.
Performance Measure B: Quarterly reporting of the percentage of students biking to school.
Strategy C: Increase the public's interest in cycling through education and encouragement, support of bike-share expansion, improved bike network.
Performance Measure C: Conduct bike counts of BTP Update benchmark count locations three years after the BTP is adopted, compare the benchmark counts to the most recent American Community Survey commuter data.

TABLE 5-10 BICYCLE PLAN PERFORMANCE MEASURES
3. Bicycle Friendly Community
Objective: Reach Gold-Level Bicycle Friendly Community (BFC) Status.
Strategy: Key strategies for Mountain View to elevate to BFC Gold Level status: • Increase percentage of arterial streets with dedicated bike facilities, especially protected or green bike lanes. • Fill a full-time bicycle coordinator position at the City. • Create and implement innovative marketing campaigns to encourage increased cycling and partner with area corporations
Performance Measure: Gold BFC Award Designation
4. Education, Encouragement, & Enforcement
Objective A: Increase bicycle education and safety awareness.
Strategy A: City to host or partner with other organization(s) at least two signature bicycle-related events per year. Continue to participate in Bike to Work Day, Bike Month, Library Bike-Related Events/Classes, Police Dept Bike-Related Events/Classes, and support grant-funded VERBS programs.
Performance Measure: Annual reporting of the number of bicycle events.
Objective B: Maintain the number of bicycle collisions to < 100 per 10k daily bicycle commuters*.
Strategy B1: Increase bicycle education for bicyclists, pedestrians and motorists.
Strategy B2: Enforce rules of the road.
Performance Measure: Annual reporting of the number of bicycle collisions and fatalities in Mountain View.
5. Maintenance
Objective: Maintain existing and enhanced bike facilities.
Strategy A1: Continue to include on-going maintenance as part of new CIPs.
Strategy A2: Continue to provide funding for striping, sweeping, slurry seal and maintenance of traffic signals.
Performance Measure A: Annual reporting on the funds spent on bicycle facility maintenance.
Strategy B: Respond to citizen-reported requests for location-specific maintenance or repair.
Performance Measure B: Annual reporting on the number of responses to citizen-reported bicycle facility maintenance and repair requests.
**In 2013, Mountain View had approximately 4,971 bicycle commuters and 27 bicycle-involved collisions, which would equate to 54 bicycle-involved collisions per 10K daily bicycle commuters. The US Census provides only bicycle commuting data. Therefore, commuter bicyclists, although not the only type of cyclist, is the type that will have the most consistent data and can be used as a proxy for the general bicycling population.*

5.8.2. BICYCLE FRIENDLY COMMUNITY GUIDANCE

The Bicycle Friendly Community (BFC[SM]) program provides a roadmap to improve conditions for bicycling and the guidance to implement a community's vision for a better, bikeable community a reality. Making bicycling safe and convenient are keys to improving public health, reducing traffic congestion, improving air quality and improving quality of life. Mountain View is currently a Silver Level Bicycle Friendly Community as designated by the League of American Bicyclists.

The Program provides guidance and benchmarking for building a Bicycle Friendly Community, the application itself is a rigorous and an educational tool in itself. Since its inception, more than 800 communities have applied for the five levels of the award – Diamond, Platinum, Gold, Silver and Bronze — providing a clear incentive for communities to continuously improve.

The BFC Program relies on the Five Es to rate a community's bicycling environment friendliness:

- **Engineering**: Creating safe and convenient places to ride and park.
- **Education**: Giving people of all ages and abilities the skills and confidence to ride.
- **Encouragement**: Creating a strong bike culture that welcomes and celebrates bicycling.
- **Enforcement**: Ensuring safe roads for all users.
- **Evaluation and Planning**: Planning for bicycling as a safe and viable transportation option.

To reach the next award level of Gold, this Plan recommends the City of Mountain View reach or maintain the milestones listed below. This Plan will be a valuable resource for monitoring the projects that improve Mountain View's bicycling environment and that will improve the City's Bicycle Friendly Community status in the future. It is important to note that although the milestones listed below specifically identify what the City needs to do to improve its BFC status, many of the milestones can be implemented more broadly to address and improve Mountain View's pedestrian and multi-modal environment.

ENFORCEMENT

- Designate a law enforcement bicycling liaison, a designated member of the Police Department through whom the City's Mobility Coordinator, advocacy groups and other interested parties can communicate about bicycle-related issues.
- Support laws and ordinances that contribute to a bicycle-friendly environment through targeted enforcement and/or the adoption of regulations that address situations that place bicyclists at risk (i.e. dooring, double-parking, distracted driving, etc.) and improve street safety (e.g., lowering speed limits).

EDUCATION

- Continue to promote bicycling through public education and outreach efforts.
- Offer bi-annual adult bicycle skills classes.
- Continue to offer bicycle education to at least 50 percent of primary and secondary schools.

ENGINEERING

- Continue to provide and improve bike access to public transportation. Mountain View currently offers bike parking and bike share at its two Caltrain stations and two transit centers and is actively working to improve access through the precise plan planning process and this BTP Update.
- Reach or maintain a total bicycle network mileage total road network mileage of at least 43%.
- Maintain or improve the percentage of arterial streets with bike lanes at 65% or greater.

EVALUATION

- Fund and maintain bike program staffing levels at least at a minimum of one staff person per 32,000 residents.
- Update and implement a new Bicycle Transportation Plan to maintain eligibility for State and other grant funding.

ENCOURAGEMENT

- Continue to support bike-related events.
- Continue to support bike month, bike to work and bike to school events.
- Operate and provide staff support for an active bicycle advisory committee.

- Coordinate with active advocacy groups (such as the Silicon Valley Bicycle Coalition).
- Continue to offer, maintain and enhance bicycle-related recreational facilities.

KEY OUTCOMES

- Maintain or improve Mountain View's current bicycle commuting rate of 6.5 percent.
- Maintain the bike-related collisions per 10,000 daily commuters*[1] to 100 or less.
- Reduce the bike-related fatalities per 10,000 daily commuters* to 0.6 or less.

5.9. FUNDING

The list of recommendations identified in Chapter **4** and priority projects described in this chapter will require substantial funding to implement and operate. The prioritized list of projects from **Table 5-2** identify projects that will most benefit the community. Bicycle funding is administered at all levels of government. A complete list of funding opportunities is provided in Appendix E.

1 *In 2013, Mountain View had approximately 4,971 bicycle commuters and 27 bicycle-involved collisions, which would equate to 54 bicycle-involved collisions per 10K daily bicycle commuters. The US Census provides only bicycle commuting data. Therefore, commuter bicyclists, although not the only type of cyclist, is the type that will have the most consistent data and can be used as a proxy for the general bicycling population.*

Figure 5-5 Bicycle events encourage people of all ages and abilities to try bicycling in Mountain View.

APPENDIX A - BICYCLE COUNTS

Traffic Data Service

Campbell, CA
(408) 377-2988
tdsbay@cs.com

File Name : 1AM FINAL
Site Code : 00000001
Start Date : 5/6/2014
Page No : 1

Groups Printed- Bikes

	AMPHITHEATRE PKWY Southbound					CHARLESTON RD Westbound					RENGSTORFF AVE Northbound					GARCIA AVE Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	2	0	0	0	2	0	0	0	0	0	1	2	1	0	4	0	2	0	0	2	8
07:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	3	0	0	3	5
07:30 AM	1	0	0	0	1	1	0	0	0	1	0	3	0	0	3	0	2	0	0	2	7
07:45 AM	0	0	0	0	0	0	0	0	0	0	2	3	2	0	7	0	4	0	0	4	11
Total	3	0	0	0	3	1	0	0	0	1	5	8	3	0	16	0	11	0	0	11	31
08:00 AM	0	0	1	0	1	0	1	1	0	2	0	5	0	0	5	0	4	0	0	4	12
08:15 AM	0	0	0	0	0	0	0	0	0	0	3	5	0	0	8	0	7	0	0	7	15
08:30 AM	0	0	0	0	0	0	0	0	1	1	3	9	2	0	14	0	12	4	0	16	31
08:45 AM	3	0	0	0	3	0	0	1	0	1	3	8	4	0	15	0	7	7	0	14	33
Total	3	0	1	0	4	0	1	2	1	4	9	27	6	0	42	0	30	11	0	41	91
Grand Total	6	0	1	0	7	1	1	2	1	5	14	35	9	0	58	0	41	11	0	52	122
Apprch %	85.7	0	14.3	0		20	20	40	20		24.1	60.3	15.5	0		0	78.8	21.2	0		
Total %	4.9	0	0.8	0	5.7	0.8	0.8	1.6	0.8	4.1	11.5	28.7	7.4	0	47.5	0	33.6	9	0	42.6	

	AMPHITHEATRE PKWY Southbound				CHARLESTON RD Westbound				RENGSTORFF AVE Northbound				GARCIA AVE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	0	**1**	1	0	**1**	**1**	**2**	0	5	0	5	0	4	0	4	12
08:15 AM	0	0	0	0	0	0	0	0	**3**	5	0	8	0	7	0	7	15
08:30 AM	0	0	0	0	0	0	0	0	3	**9**	2	14	0	**12**	4	**16**	30
08:45 AM	**3**	0	0	**3**	0	0	1	1	3	8	**4**	**15**	0	7	**7**	14	**33**
Total Volume	3	0	1	4	0	1	2	3	9	27	6	42	0	30	11	41	90
% App. Total	75	0	25		0	33.3	66.7		21.4	64.3	14.3		0	73.2	26.8		
PHF	.250	.000	.250	.333	.000	.250	.500	.375	.750	.750	.375	.700	.000	.625	.393	.641	.682

Traffic Data Service

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File Name : 1AM FINAL
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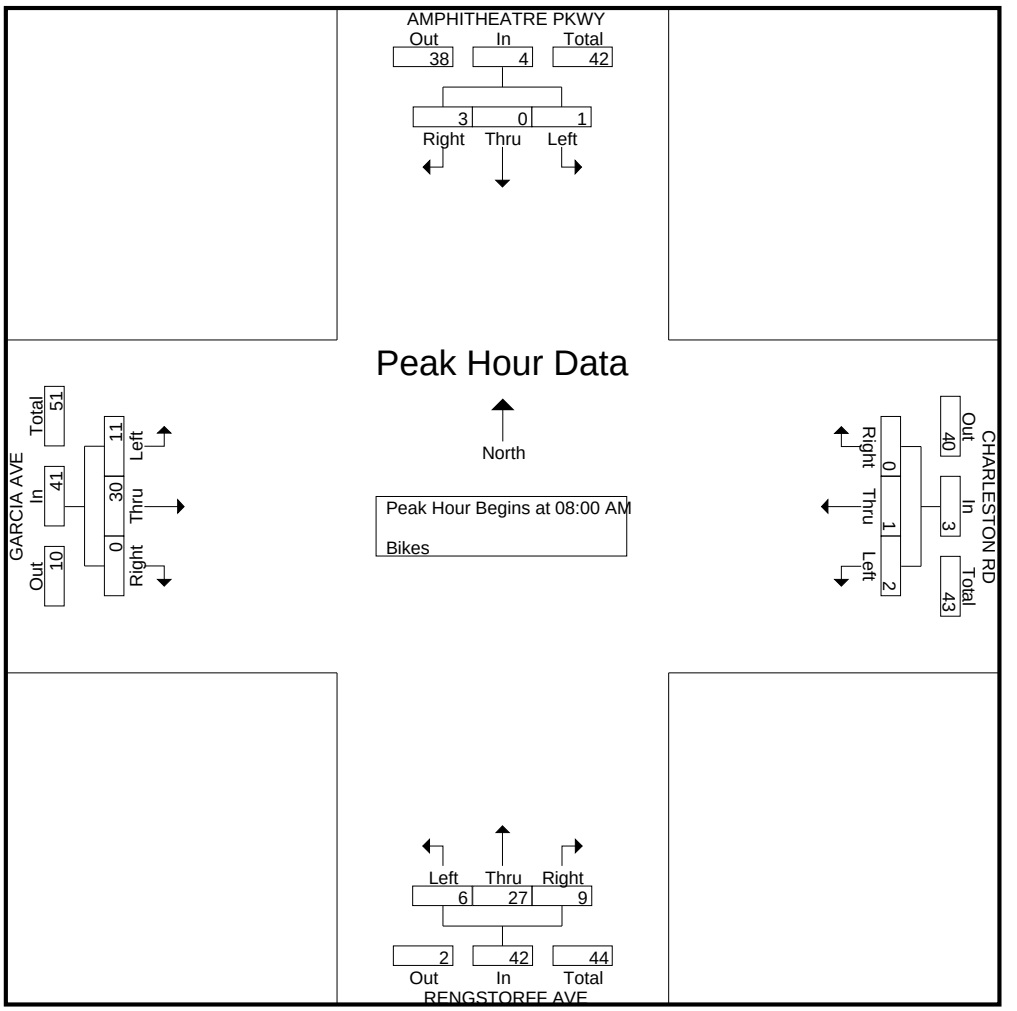

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File Name : 1PM FINAL
Site Code : 00000001
Start Date : 5/6/2014
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Groups Printed- Bikes

	AMPHITHEATRE PKWY Southbound					CHARLESTON RD Westbound					RENGSTORFF AVE Northbound					GARCIA AVE Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	1	1	1	1	0	0	2	1	2	0	0	3	0	2	4	0	6	12
04:15 PM	0	0	0	1	1	1	5	0	0	6	2	1	0	0	3	0	3	1	0	4	14
04:30 PM	0	0	0	0	0	0	6	0	0	6	0	1	1	0	2	0	5	1	0	6	14
04:45 PM	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	4	2	0	6	12
Total	0	0	0	2	2	2	18	0	0	20	3	4	1	0	8	0	14	8	0	22	52
05:00 PM	0	0	0	0	0	0	12	0	0	12	0	3	0	0	3	0	0	4	0	4	19
05:15 PM	0	0	0	0	0	1	9	0	0	10	0	0	0	0	0	0	0	1	0	1	11
05:30 PM	0	0	1	0	1	0	5	0	0	5	0	1	0	0	1	0	0	4	0	4	11
05:45 PM	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	0	0	1	0	1	5
Total	0	0	1	0	1	2	29	0	0	31	0	4	0	0	4	0	0	10	0	10	46
Grand Total	0	0	1	2	3	4	47	0	0	51	3	8	1	0	12	0	14	18	0	32	98
Apprch %	0	0	33.3	66.7		7.8	92.2	0	0		25	66.7	8.3	0		0	43.8	56.2	0		
Total %	0	0	1	2	3.1	4.1	48	0	0	52	3.1	8.2	1	0	12.2	0	14.3	18.4	0	32.7	

	AMPHITHEATRE PKWY Southbound				CHARLESTON RD Westbound				RENGSTORFF AVE Northbound				GARCIA AVE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	0	0	**1**	5	0	6	**2**	1	0	**3**	0	3	1	4	13
04:30 PM	0	0	0	0	0	6	0	6	0	1	**1**	2	0	**5**	1	**6**	14
04:45 PM	0	0	0	0	0	6	0	6	0	0	0	0	0	4	2	6	12
05:00 PM	0	0	0	0	0	**12**	0	**12**	0	**3**	0	3	0	0	**4**	4	**19**
Total Volume	0	0	0	0	1	29	0	30	2	5	1	8	0	12	8	20	58
% App. Total	0	0	0		3.3	96.7	0		25	62.5	12.5		0	60	40		
PHF	.000	.000	.000	.000	.250	.604	.000	.625	.250	.417	.250	.667	.000	.600	.500	.833	.763

Traffic Data Service

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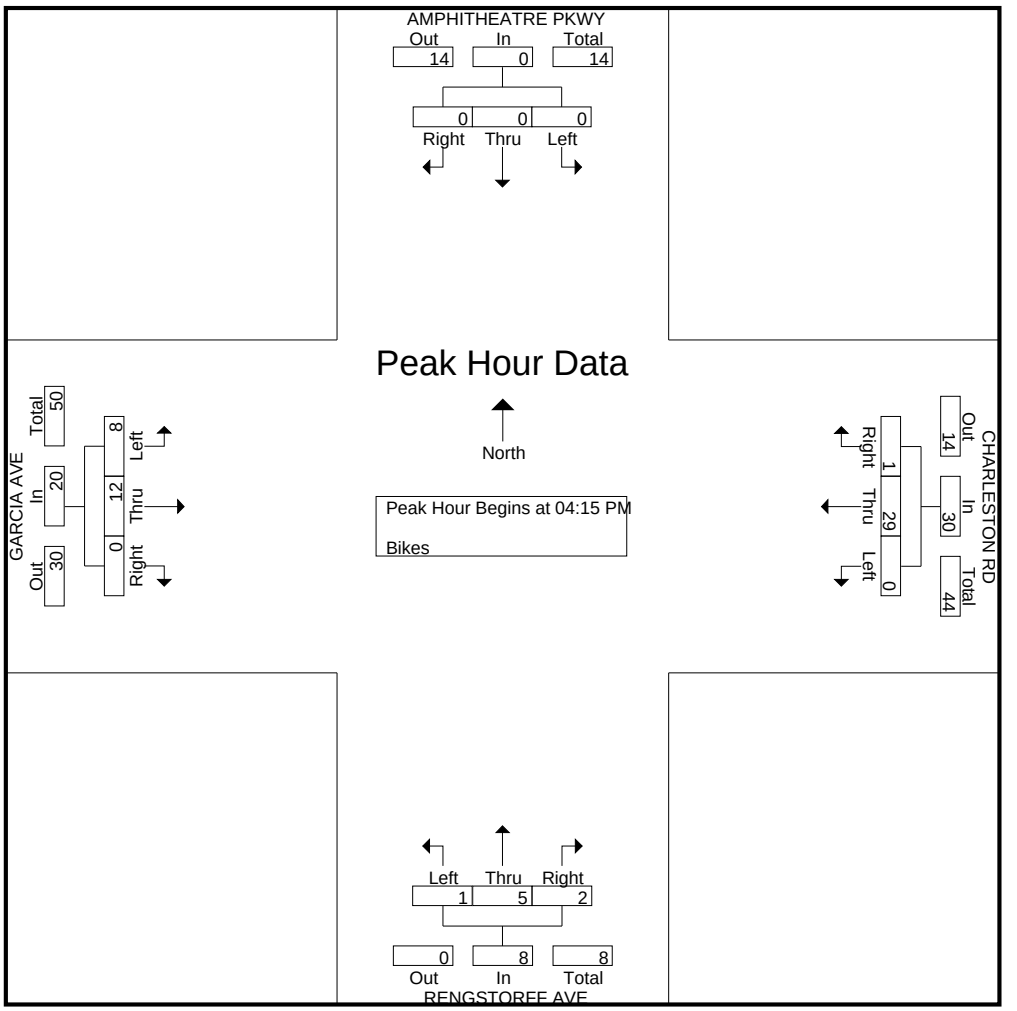

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File Name : 6AM FINAL
Site Code : 00000006
Start Date : 5/6/2014
Page No : 1

Groups Printed- Bikes

	N RENGSTORFF AVE Southbound					CENTRAL EXPY Westbound					S RENGSTORFF AVE Northbound					CENTRAL EXPY Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	1	0	0	1	0	0	1	0	1	0	4	0	0	4	0	2	0	0	2	8
07:15 AM	0	2	0	0	2	0	3	1	0	4	1	6	0	0	7	0	0	0	0	0	13
07:30 AM	0	5	0	0	5	0	1	0	0	1	0	7	0	0	7	0	2	0	0	2	15
07:45 AM	0	4	1	0	5	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	16
Total	0	12	1	0	13	0	4	2	0	6	1	28	0	0	29	0	4	0	0	4	52
08:00 AM	0	0	0	0	0	2	1	0	0	3	2	5	3	0	10	0	0	0	0	0	13
08:15 AM	0	0	1	0	1	0	0	0	0	0	1	6	1	0	8	0	2	0	0	2	11
08:30 AM	0	0	0	0	0	1	0	1	0	2	0	10	0	0	10	0	7	0	0	7	19
08:45 AM	1	1	0	0	2	0	1	1	0	2	1	15	1	0	17	0	4	0	0	4	25
Total	1	1	1	0	3	3	2	2	0	7	4	36	5	0	45	0	13	0	0	13	68
Grand Total	1	13	2	0	16	3	6	4	0	13	5	64	5	0	74	0	17	0	0	17	120
Apprch %	6.2	81.2	12.5	0		23.1	46.2	30.8	0		6.8	86.5	6.8	0		0	100	0	0		
Total %	0.8	10.8	1.7	0	13.3	2.5	5	3.3	0	10.8	4.2	53.3	4.2	0	61.7	0	14.2	0	0	14.2	

	N RENGSTORFF AVE Southbound				CENTRAL EXPY Westbound				S RENGSTORFF AVE Northbound				CENTRAL EXPY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	0	0	0	**2**	**1**	0	**3**	**2**	5	**3**	10	0	0	0	0	13
08:15 AM	0	0	**1**	1	0	0	0	0	1	6	1	8	0	2	0	2	11
08:30 AM	0	0	0	0	1	0	**1**	2	0	10	0	10	0	**7**	0	**7**	19
08:45 AM	**1**	**1**	0	**2**	0	1	1	2	1	**15**	1	**17**	0	4	0	4	**25**
Total Volume	1	1	1	3	3	2	2	7	4	36	5	45	0	13	0	13	68
% App. Total	33.3	33.3	33.3		42.9	28.6	28.6		8.9	80	11.1		0	100	0		
PHF	.250	.250	.250	.375	.375	.500	.500	.583	.500	.600	.417	.662	.000	.464	.000	.464	.680

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Campbell, CA

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File Name : 6AM FINAL
Site Code : 00000006
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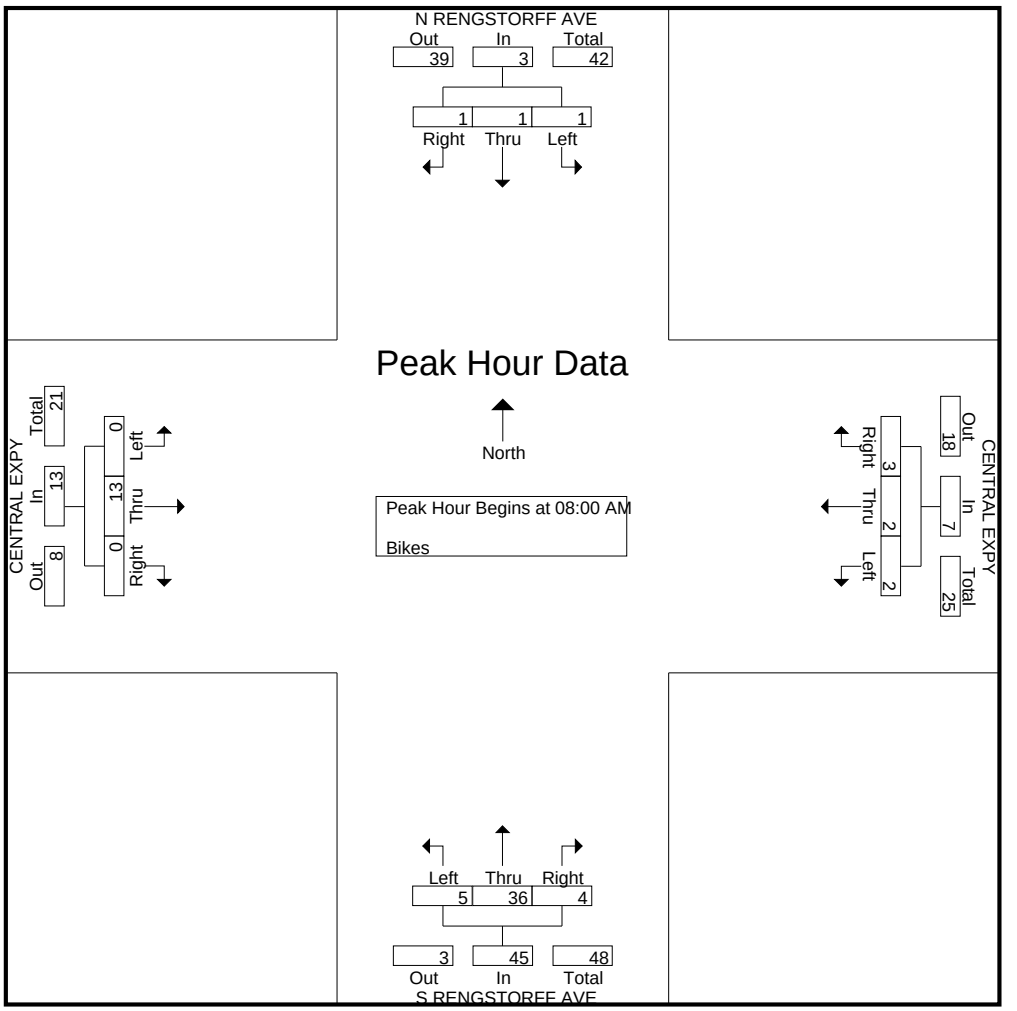

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File Name : 6PM FINAL
Site Code : 00000006
Start Date : 5/6/2014
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Groups Printed- Bikes

	N RENGSTORFF AVE Southbound					CENTRAL EXPY Westbound					S RENGSTORFF AVE Northbound					CENTRAL EXPY Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	2	0	0	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	3
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3
Total	0	3	0	0	3	0	0	0	0	0	0	0	1	0	1	0	3	0	0	3	7
05:00 PM	0	3	0	0	3	1	1	0	0	2	0	0	1	0	1	0	1	0	0	1	7
05:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	5	0	0	5	6
05:30 PM	0	1	0	0	1	0	0	2	0	2	0	0	0	0	0	0	1	0	0	1	4
05:45 PM	1	4	0	0	5	1	0	1	0	2	0	0	0	0	0	0	2	0	0	2	9
Total	1	8	0	0	9	2	2	3	0	7	0	0	1	0	1	0	9	0	0	9	26
Grand Total	1	11	0	0	12	2	2	3	0	7	0	0	2	0	2	0	12	0	0	12	33
Apprch %	8.3	91.7	0	0		28.6	28.6	42.9	0		0	0	100	0		0	100	0	0		
Total %	3	33.3	0	0	36.4	6.1	6.1	9.1	0	21.2	0	0	6.1	0	6.1	0	36.4	0	0	36.4	

	N RENGSTORFF AVE Southbound				CENTRAL EXPY Westbound				S RENGSTORFF AVE Northbound				CENTRAL EXPY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	3	0	3	**1**	**1**	0	**2**	0	0	**1**	**1**	0	1	0	1	7
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	**5**	0	**5**	6
05:30 PM	0	1	0	1	0	0	**2**	2	0	0	0	0	0	1	0	1	4
05:45 PM	**1**	**4**	0	**5**	1	0	1	2	0	0	0	0	0	2	0	2	**9**
Total Volume	1	8	0	9	2	2	3	7	0	0	1	1	0	9	0	9	26
% App. Total	11.1	88.9	0		28.6	28.6	42.9		0	0	100		0	100	0		
PHF	.250	.500	.000	.450	.500	.500	.375	.875	.000	.000	.250	.250	.000	.450	.000	.450	.722

Traffic Data Service

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Site Code : 00000006
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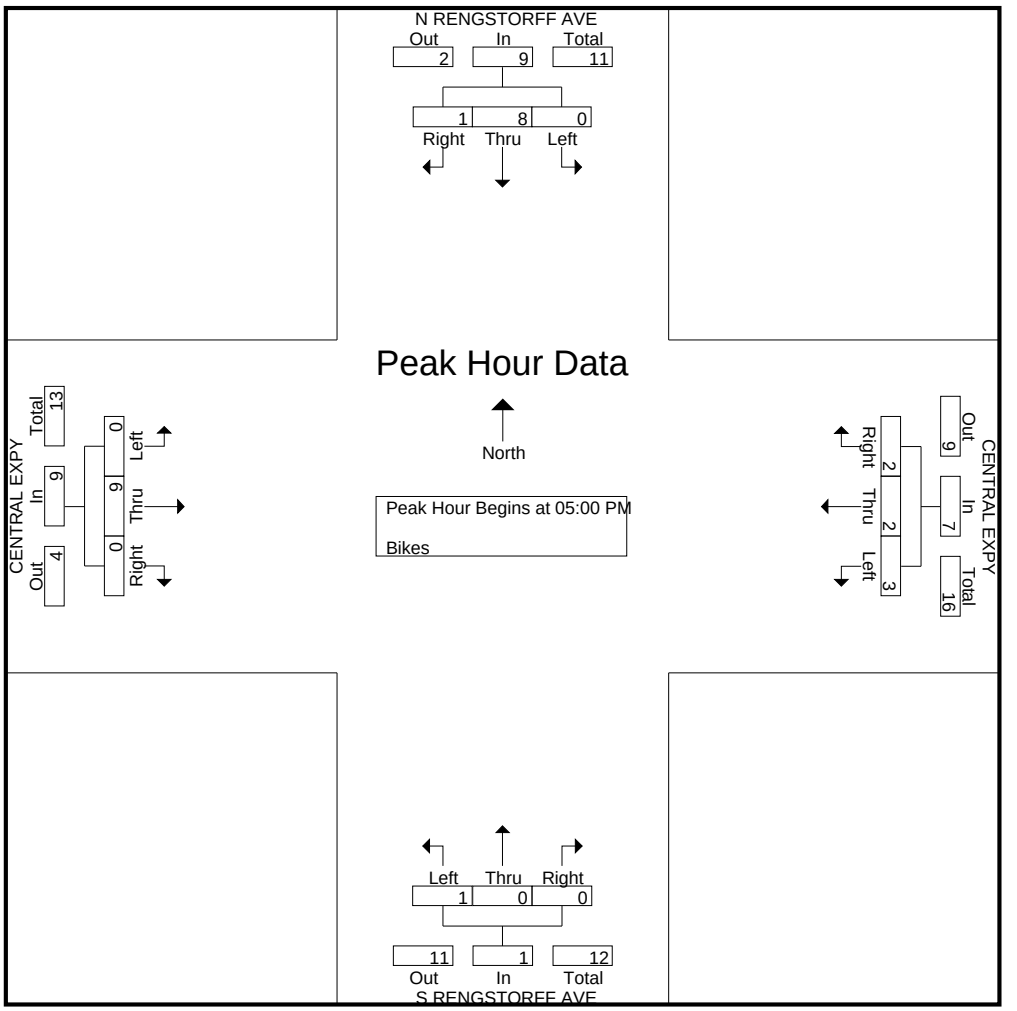

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File Name : 7AM FINAL
Site Code : 00000007
Start Date : 5/6/2014
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Groups Printed- Bikes

	MAYFIELD AVE Southbound					CENTRAL EXPY Westbound					Northbound					CENTRAL EXPY Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
07:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	1	0	2	3
07:30 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	2	0	5	7
07:45 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3
Total	0	0	1	0	1	0	5	0	0	5	0	0	0	0	0	0	6	3	0	9	15
08:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3
08:15 AM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	2	4	0	6	11
08:30 AM	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	0	5	1	0	6	9
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	1	0	1	0	8	0	0	8	0	0	0	0	0	0	10	5	0	15	24
Grand Total	0	0	2	0	2	0	13	0	0	13	0	0	0	0	0	0	16	8	0	24	39
Apprch %	0	0	100	0		0	100	0	0		0	0	0	0		0	66.7	33.3	0		
Total %	0	0	5.1	0	5.1	0	33.3	0	0	33.3	0	0	0	0	0	0	41	20.5	0	61.5	

	MAYFIELD AVE Southbound				CENTRAL EXPY Westbound				Northbound				CENTRAL EXPY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
08:15 AM	0	0	0	0	0	**5**	0	**5**	0	0	0	0	0	2	**4**	**6**	**11**
08:30 AM	0	0	**1**	**1**	0	2	0	2	0	0	0	0	0	**5**	1	6	9
Total Volume	0	0	1	1	0	10	0	10	0	0	0	0	0	10	5	15	26
% App. Total	0	0	100		0	100	0		0	0	0		0	66.7	33.3		
PHF	.000	.000	.250	.250	.000	.500	.000	.500	.000	.000	.000	.000	.000	.500	.313	.625	.591

Traffic Data Service

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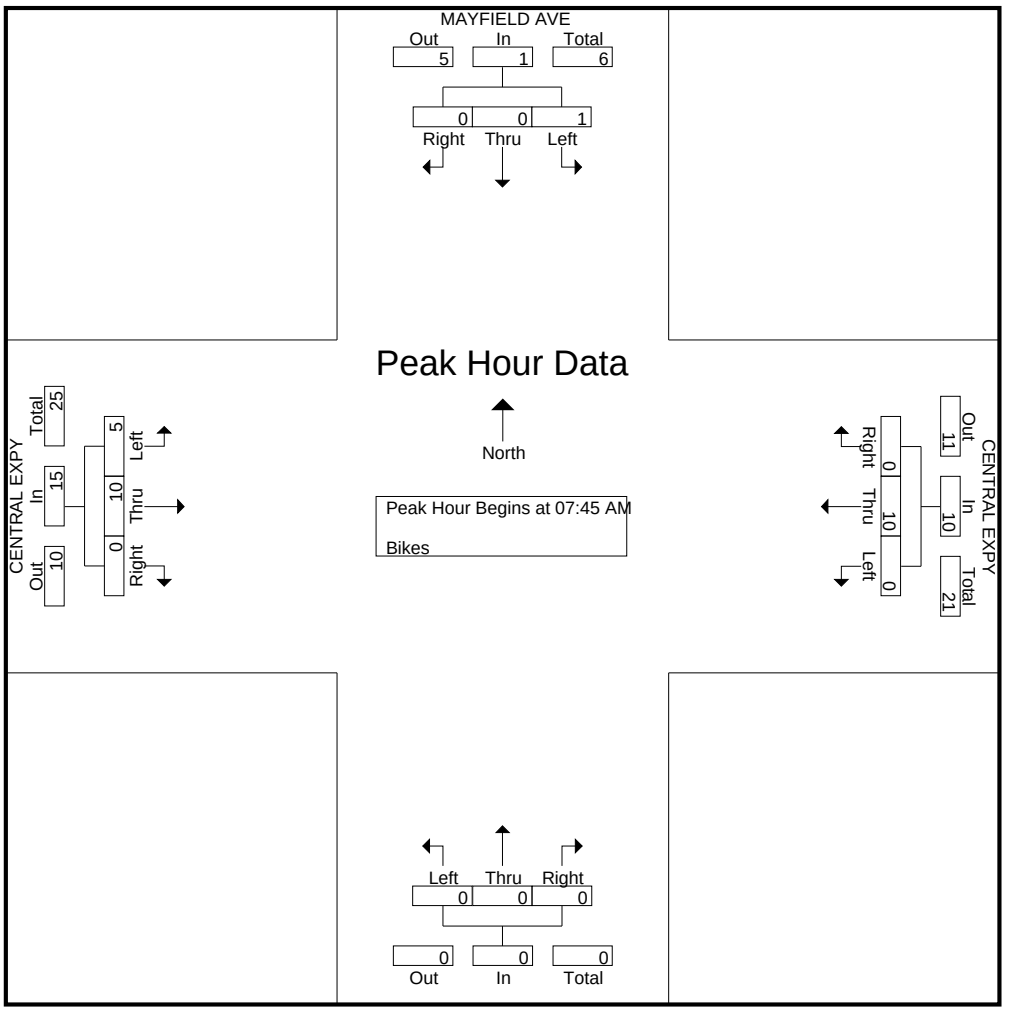

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File Name : 7PM FINAL
Site Code : 00000007
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Groups Printed- Bikes

	MAYFIELD AVE Southbound					CENTRAL EXPY Westbound					Northbound					CENTRAL EXPY Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	4
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	1	0	10	10
05:00 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	1	1	0	2	6
05:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	3	0	5	6
05:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	3	0	3	4
05:45 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	2	2	0	4	7
Total	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	5	9	0	14	23
Grand Total	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	14	10	0	24	33
Apprch %	0	0	0	0		0	100	0	0		0	0	0	0		0	58.3	41.7	0		
Total %	0	0	0	0	0	0	27.3	0	0	27.3	0	0	0	0	0	0	42.4	30.3	0	72.7	

	MAYFIELD AVE Southbound				CENTRAL EXPY Westbound				Northbound				CENTRAL EXPY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	**4**	0	**4**	0	0	0	0	0	1	1	2	6
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	**2**	**3**	**5**	6
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	3	3	4
05:45 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	2	2	4	**7**
Total Volume	0	0	0	0	0	9	0	9	0	0	0	0	0	5	9	14	23
% App. Total	0	0	0		0	100	0		0	0	0		0	35.7	64.3		
PHF	.000	.000	.000	.000	.000	.563	.000	.563	.000	.000	.000	.000	.000	.625	.750	.700	.821

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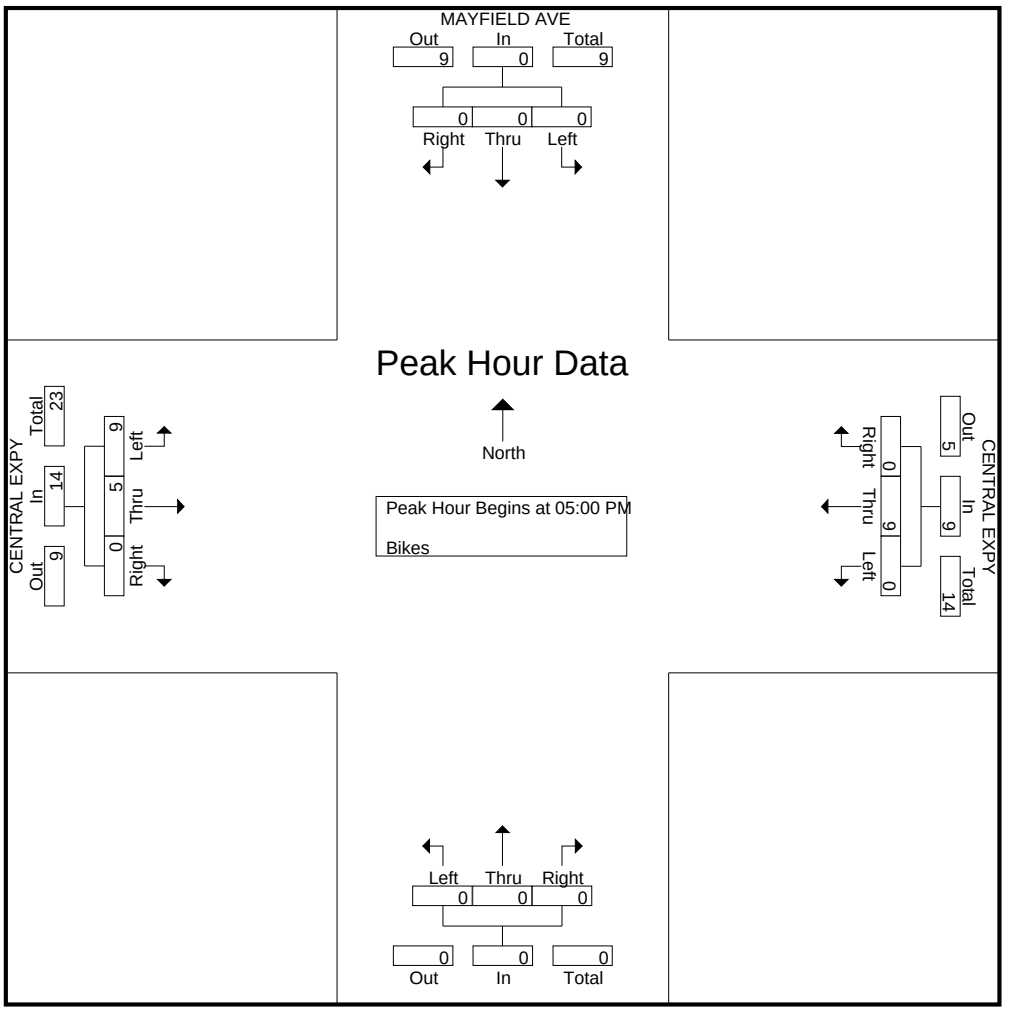

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File Name : 8AM FINAL
Site Code : 00000008
Start Date : 5/6/2014
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Groups Printed- Bikes

	SAN ANTONIO RD Southbound					CALIFORNIA ST Westbound					SAN ANTONIO RD Northbound					CALIFORNIA ST Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3
07:15 AM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	1	0	0	1	6
07:30 AM	0	2	0	0	2	0	7	1	0	8	0	0	0	0	0	0	3	0	0	3	13
07:45 AM	0	1	0	0	1	0	11	1	0	12	0	0	0	0	0	0	5	0	0	5	18
Total	0	3	0	0	3	0	25	2	0	27	0	0	0	0	0	0	10	0	0	10	40
08:00 AM	1	0	0	0	1	0	6	1	0	7	0	0	0	0	0	0	2	0	0	2	10
08:15 AM	0	0	0	0	0	0	9	0	0	9	0	2	0	0	2	0	2	1	0	3	14
08:30 AM	1	1	0	0	2	0	6	1	0	7	0	2	0	0	2	0	3	5	0	8	19
08:45 AM	0	2	0	0	2	0	18	0	0	18	1	1	0	0	2	0	2	0	0	2	24
Total	2	3	0	0	5	0	39	2	0	41	1	5	0	0	6	0	9	6	0	15	67
Grand Total	2	6	0	0	8	0	64	4	0	68	1	5	0	0	6	0	19	6	0	25	107
Apprch %	25	75	0	0		0	94.1	5.9	0		16.7	83.3	0	0		0	76	24	0		
Total %	1.9	5.6	0	0	7.5	0	59.8	3.7	0	63.6	0.9	4.7	0	0	5.6	0	17.8	5.6	0	23.4	

	SAN ANTONIO RD Southbound				CALIFORNIA ST Westbound				SAN ANTONIO RD Northbound				CALIFORNIA ST Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	**1**	0	0	1	0	6	**1**	7	0	0	0	0	0	2	0	2	10
08:15 AM	0	0	0	0	0	9	0	9	0	**2**	0	**2**	0	2	1	3	14
08:30 AM	1	1	0	**2**	0	6	1	7	0	2	0	2	0	**3**	**5**	**8**	19
08:45 AM	0	**2**	0	2	0	**18**	0	**18**	**1**	1	0	2	0	2	0	2	**24**
Total Volume	2	3	0	5	0	39	2	41	1	5	0	6	0	9	6	15	67
% App. Total	40	60	0		0	95.1	4.9		16.7	83.3	0		0	60	40		
PHF	.500	.375	.000	.625	.000	.542	.500	.569	.250	.625	.000	.750	.000	.750	.300	.469	.698

Traffic Data Service

Campbell, CA

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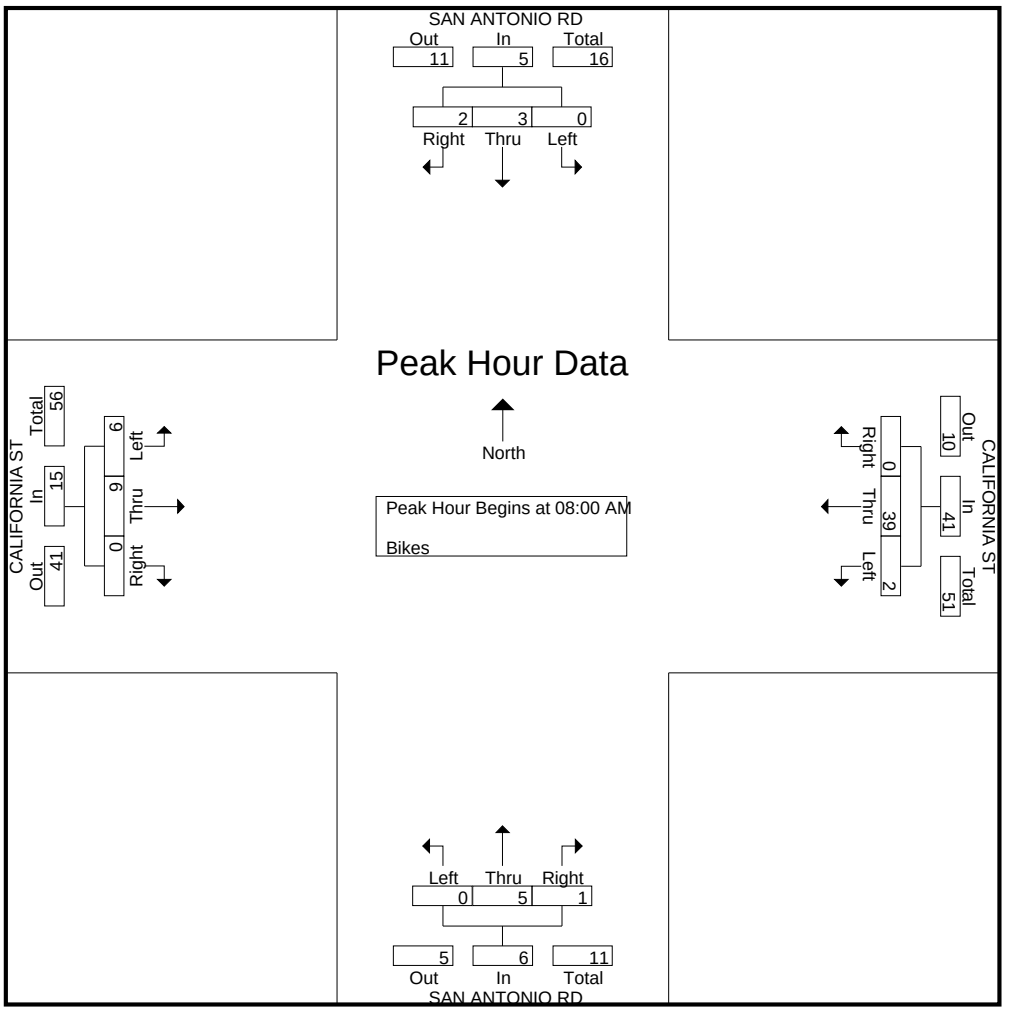

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File Name : 8PM FINAL
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Groups Printed- Bikes

	SAN ANTONIO RD Southbound					CALIFORNIA ST Westbound					SAN ANTONIO RD Northbound					CALIFORNIA ST Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	3	0	0	3	5
04:15 PM	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	5	0	0	5	7
04:30 PM	0	3	0	0	3	0	1	0	0	1	0	0	0	0	0	0	5	1	0	6	10
04:45 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	3	0	0	3	1	3	2	0	6	0	0	0	0	0	0	13	1	0	14	23
05:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	6	0	0	6	2	0	0	0	2	0	10	0	0	10	18
05:30 PM	0	1	0	0	1	0	5	0	0	5	0	1	0	0	1	0	6	1	0	7	14
05:45 PM	2	4	0	0	6	0	1	0	0	1	0	0	0	0	0	0	10	0	0	10	17
Total	2	5	0	0	7	0	13	0	0	13	2	1	0	0	3	0	26	1	0	27	50
Grand Total	2	8	0	0	10	1	16	2	0	19	2	1	0	0	3	0	39	2	0	41	73
Apprch %	20	80	0	0		5.3	84.2	10.5	0		66.7	33.3	0	0		0	95.1	4.9	0		
Total %	2.7	11	0	0	13.7	1.4	21.9	2.7	0	26	2.7	1.4	0	0	4.1	0	53.4	2.7	0	56.2	

	SAN ANTONIO RD Southbound				CALIFORNIA ST Westbound				SAN ANTONIO RD Northbound				CALIFORNIA ST Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	**6**	0	**6**	**2**	0	0	**2**	0	**10**	0	**10**	**18**
05:30 PM	0	1	0	1	0	5	0	5	0	**1**	0	1	0	6	**1**	7	14
05:45 PM	**2**	**4**	0	**6**	0	1	0	1	0	0	0	0	0	10	0	10	17
Total Volume	2	5	0	7	0	13	0	13	2	1	0	3	0	26	1	27	50
% App. Total	28.6	71.4	0		0	100	0		66.7	33.3	0		0	96.3	3.7		
PHF	.250	.313	.000	.292	.000	.542	.000	.542	.250	.250	.000	.375	.000	.650	.250	.675	.694

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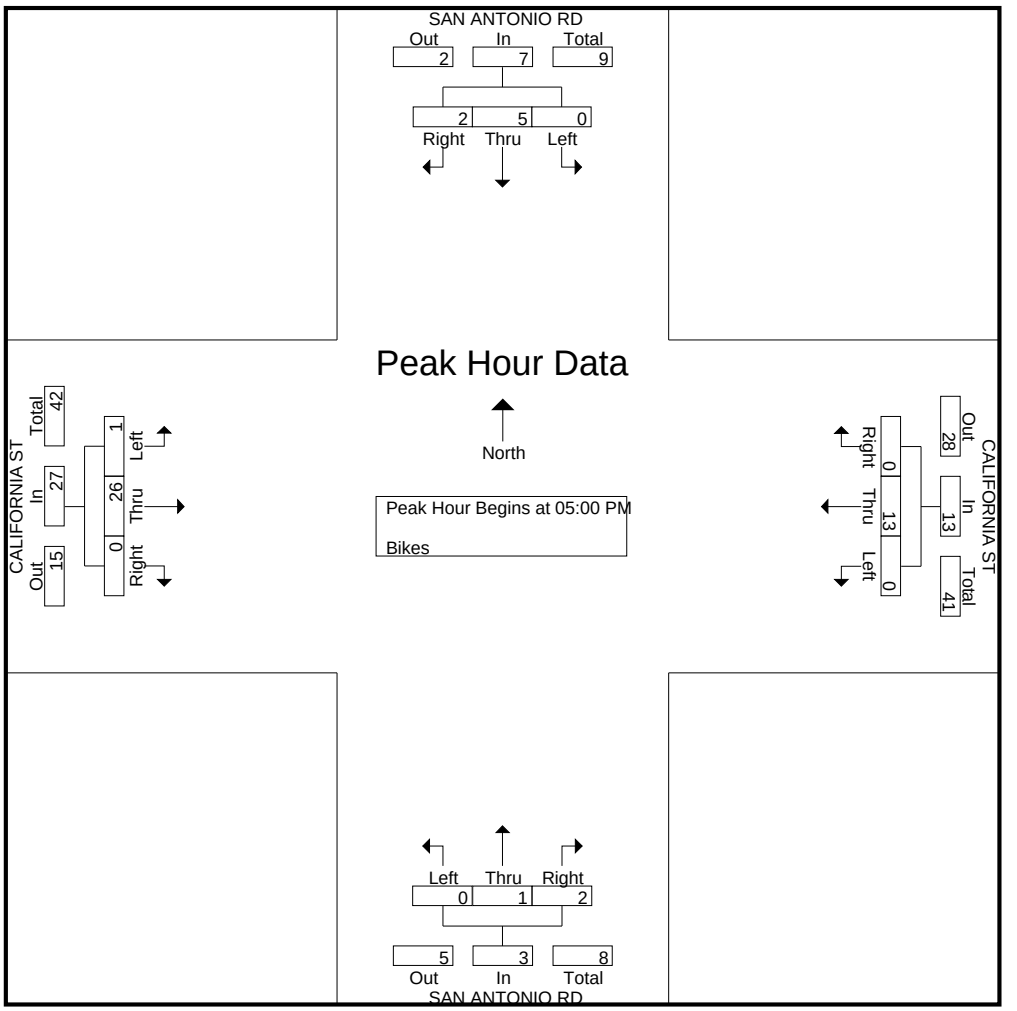

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File Name : 9AM FINAL
Site Code : 00000009
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Groups Printed- Bikes

	S SHORELINE BLVD Southbound					CALIFORNIA ST Westbound					S SHORELINE BLVD Northbound					CALIFORNIA ST Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	1	1	0	0	2	0	0	0	0	0	0	2	0	0	2	0	4	0	0	4	8
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	4	4
07:30 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	4	0	0	4	8
07:45 AM	0	2	0	0	2	0	3	0	0	3	0	1	0	0	1	0	8	0	0	8	14
Total	1	5	0	0	6	0	3	0	0	3	0	5	0	0	5	1	19	0	0	20	34
08:00 AM	1	2	0	0	3	1	4	0	0	5	0	1	0	0	1	0	5	1	0	6	15
08:15 AM	0	0	0	0	0	0	3	0	0	3	0	6	0	0	6	0	1	1	0	2	11
08:30 AM	0	4	0	0	4	0	3	0	0	3	0	5	0	0	5	0	7	0	0	7	19
08:45 AM	0	0	0	0	0	0	4	0	0	4	0	8	0	0	8	1	2	4	0	7	19
Total	1	6	0	0	7	1	14	0	0	15	0	20	0	0	20	1	15	6	0	22	64
Grand Total	2	11	0	0	13	1	17	0	0	18	0	25	0	0	25	2	34	6	0	42	98
Apprch %	15.4	84.6	0	0		5.6	94.4	0	0		0	100	0	0		4.8	81	14.3	0		
Total %	2	11.2	0	0	13.3	1	17.3	0	0	18.4	0	25.5	0	0	25.5	2	34.7	6.1	0	42.9	

	S SHORELINE BLVD Southbound				CALIFORNIA ST Westbound				S SHORELINE BLVD Northbound				CALIFORNIA ST Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	**1**	2	0	3	**1**	**4**	0	**5**	0	1	0	1	0	5	1	6	15
08:15 AM	0	0	0	0	0	3	0	3	0	6	0	6	0	1	1	2	11
08:30 AM	0	**4**	0	**4**	0	3	0	3	0	5	0	5	0	**7**	0	**7**	**19**
08:45 AM	0	0	0	0	0	4	0	4	0	**8**	0	**8**	**1**	2	**4**	7	19
Total Volume	1	6	0	7	1	14	0	15	0	20	0	20	1	15	6	22	64
% App. Total	14.3	85.7	0		6.7	93.3	0		0	100	0		4.5	68.2	27.3		
PHF	.250	.375	.000	.438	.250	.875	.000	.750	.000	.625	.000	.625	.250	.536	.375	.786	.842

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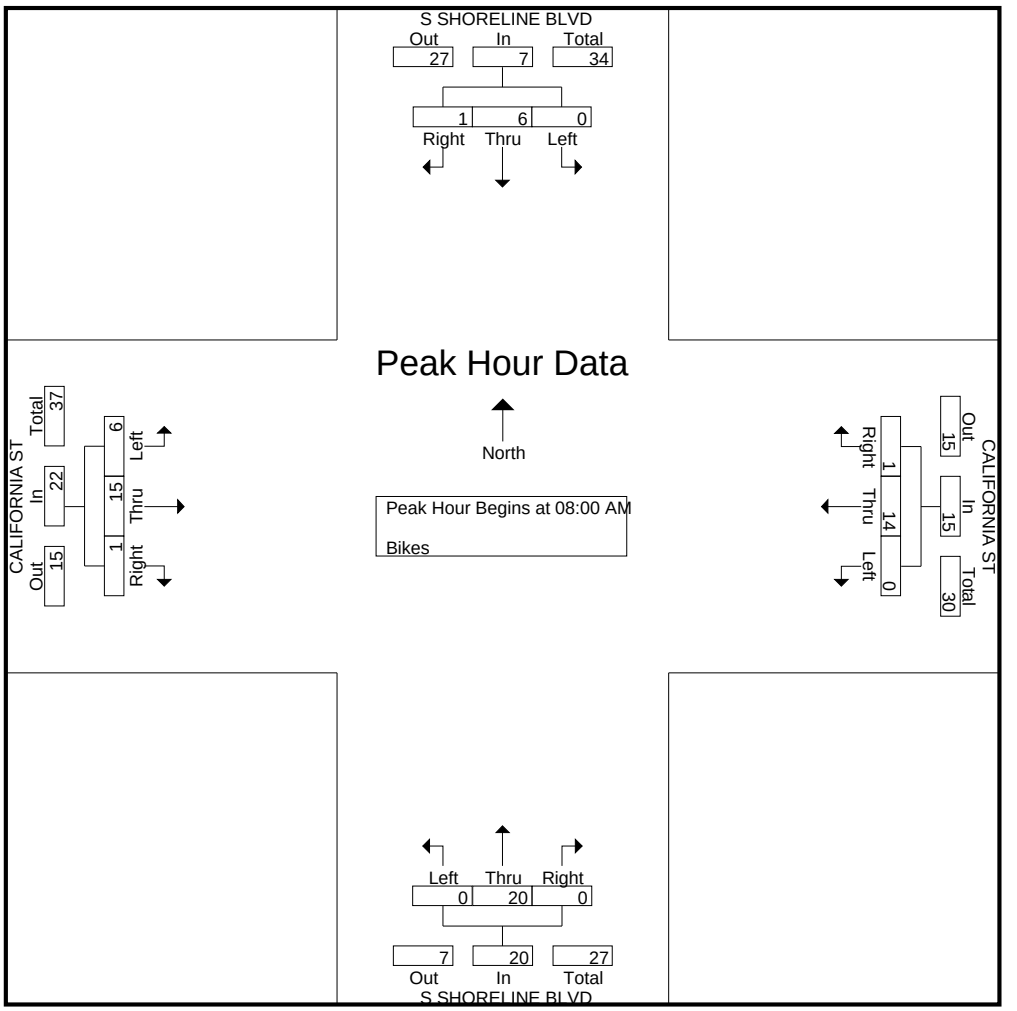

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Groups Printed- Bikes

	S SHORELINE BLVD Southbound					CALIFORNIA ST Westbound					S SHORELINE BLVD Northbound					CALIFORNIA ST Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	4
07:15 AM	0	2	0	0	2	0	2	0	0	2	0	1	0	0	1	0	3	0	0	3	8
07:30 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	6	0	0	6	9
07:45 AM	0	2	1	0	3	0	3	0	0	3	0	1	0	0	1	0	2	0	0	2	9
Total	0	5	1	0	6	0	8	0	0	8	0	2	0	0	2	1	13	0	0	14	30
08:00 AM	2	2	0	0	4	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	7
08:15 AM	0	4	0	0	4	0	8	0	0	8	0	0	1	0	1	0	0	0	0	0	13
08:30 AM	0	4	0	0	4	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4	12
08:45 AM	0	2	0	0	2	0	3	1	0	4	0	0	0	0	0	1	5	0	0	6	12
Total	2	12	0	0	14	0	16	1	0	17	0	1	1	0	2	1	10	0	0	11	44
Grand Total	2	17	1	0	20	0	24	1	0	25	0	3	1	0	4	2	23	0	0	25	74
Apprch %	10	85	5	0		0	96	4	0		0	75	25	0		8	92	0	0		
Total %	2.7	23	1.4	0	27	0	32.4	1.4	0	33.8	0	4.1	1.4	0	5.4	2.7	31.1	0	0	33.8	

	S SHORELINE BLVD Southbound				CALIFORNIA ST Westbound				S SHORELINE BLVD Northbound				CALIFORNIA ST Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	**2**	2	0	**4**	0	1	0	1	0	**1**	0	**1**	0	1	0	1	7
08:15 AM	0	**4**	0	4	0	**8**	0	**8**	0	0	**1**	1	0	0	0	0	**13**
08:30 AM	0	4	0	4	0	4	0	4	0	0	0	0	0	4	0	4	12
08:45 AM	0	2	0	2	0	3	**1**	4	0	0	0	0	**1**	**5**	0	**6**	12
Total Volume	2	12	0	14	0	16	1	17	0	1	1	2	1	10	0	11	44
% App. Total	14.3	85.7	0		0	94.1	5.9		0	50	50		9.1	90.9	0		
PHF	.250	.750	.000	.875	.000	.500	.250	.531	.000	.250	.250	.500	.250	.500	.000	.458	.846

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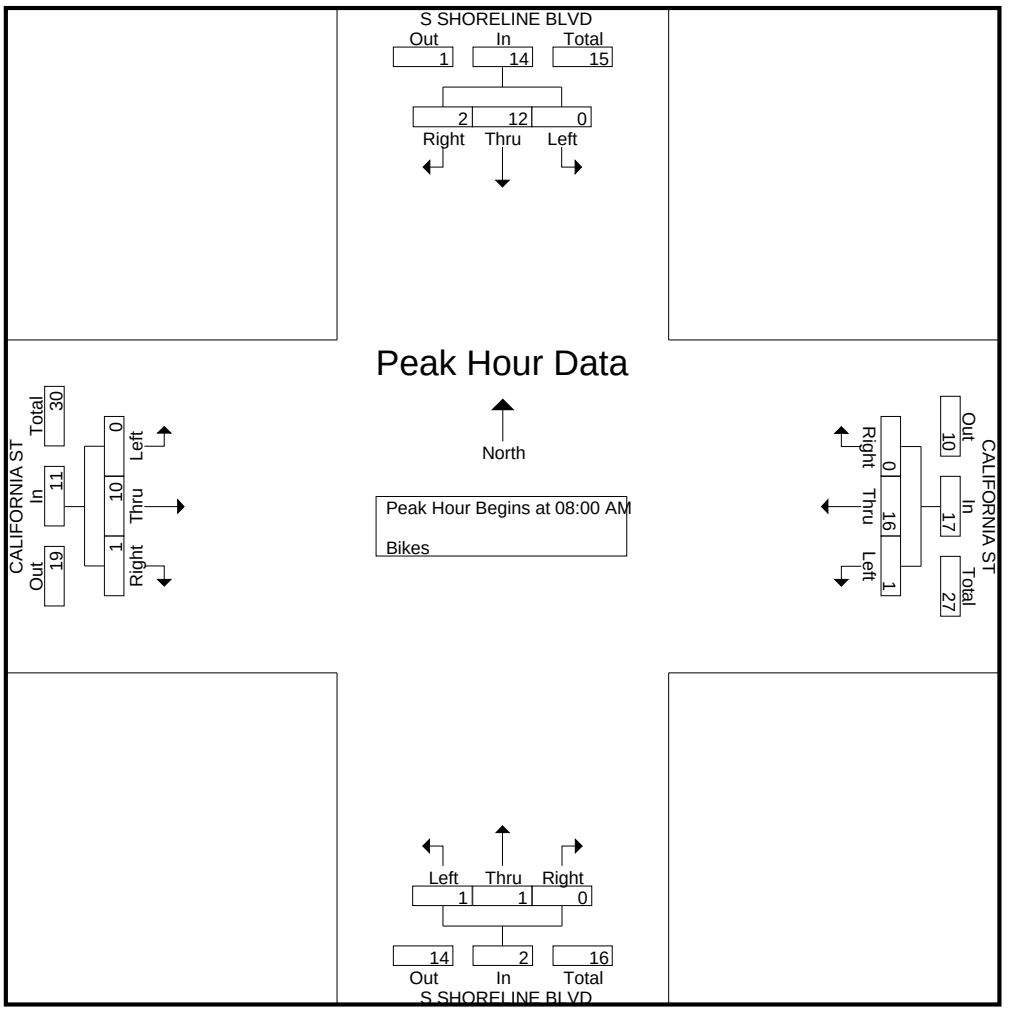

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File Name : 10AM FINAL
Site Code : 00000010
Start Date : 5/6/2014
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Groups Printed- Bikes

	MOFFETT BLVD Southbound					CENTRAL EXPY Westbound					CASTRO ST Northbound					CENTRAL EXPY Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	2	0	0	2	0	0	1	0	1	0	9	2	0	11	0	5	0	0	5	19
07:15 AM	0	0	0	0	0	0	1	0	0	1	1	6	1	0	8	0	1	0	0	1	10
07:30 AM	0	1	0	0	1	1	0	0	0	1	0	6	0	0	6	1	0	0	0	1	9
07:45 AM	0	0	0	0	0	1	2	0	0	3	0	10	1	0	11	0	1	0	0	1	15
Total	0	3	0	0	3	2	3	1	0	6	1	31	4	0	36	1	7	0	0	8	53
08:00 AM	0	1	2	0	3	0	3	0	0	3	2	15	1	0	18	0	1	0	0	1	25
08:15 AM	0	0	1	0	1	0	0	0	0	0	0	5	0	0	5	0	1	1	0	2	8
08:30 AM	1	0	1	0	2	0	0	1	0	1	0	9	0	0	9	1	2	0	0	3	15
08:45 AM	0	0	1	0	1	0	1	0	0	1	0	17	1	0	18	0	1	0	0	1	21
Total	1	1	5	0	7	0	4	1	0	5	2	46	2	0	50	1	5	1	0	7	69
Grand Total	1	4	5	0	10	2	7	2	0	11	3	77	6	0	86	2	12	1	0	15	122
Apprch %	10	40	50	0		18.2	63.6	18.2	0		3.5	89.5	7	0		13.3	80	6.7	0		
Total %	0.8	3.3	4.1	0	8.2	1.6	5.7	1.6	0	9	2.5	63.1	4.9	0	70.5	1.6	9.8	0.8	0	12.3	

	MOFFETT BLVD Southbound				CENTRAL EXPY Westbound				CASTRO ST Northbound				CENTRAL EXPY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	**1**	**2**	**3**	0	**3**	0	**3**	**2**	15	**1**	**18**	0	1	0	1	**25**
08:15 AM	0	0	1	1	0	0	0	0	0	5	0	5	0	1	**1**	2	8
08:30 AM	**1**	0	1	2	0	0	**1**	1	0	9	0	9	**1**	**2**	0	**3**	15
08:45 AM	0	0	1	1	0	1	0	1	0	**17**	1	18	0	1	0	1	21
Total Volume	1	1	5	7	0	4	1	5	2	46	2	50	1	5	1	7	69
% App. Total	14.3	14.3	71.4		0	80	20		4	92	4		14.3	71.4	14.3		
PHF	.250	.250	.625	.583	.000	.333	.250	.417	.250	.676	.500	.694	.250	.625	.250	.583	.690

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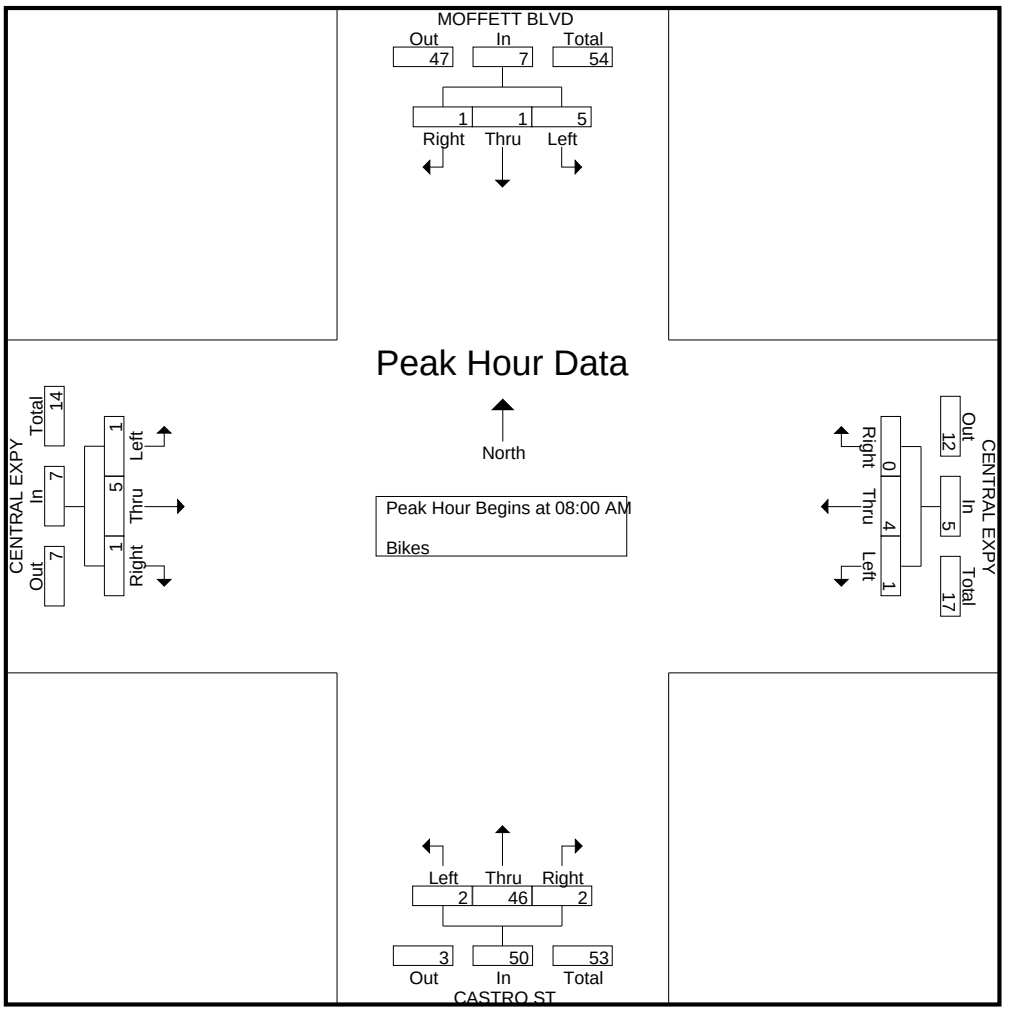

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Groups Printed- Bikes

	MOFFETT BLVD Southbound					CENTRAL EXPY Westbound					CASTRO ST Northbound					CENTRAL EXPY Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	3
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3
04:30 PM	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1	0	2	0	0	2	6
04:45 PM	0	0	0	0	0	0	0	0	0	0	2	5	1	0	8	0	1	0	0	1	9
Total	0	3	0	0	3	0	2	0	0	2	2	7	1	0	10	0	6	0	0	6	21
05:00 PM	0	3	0	0	3	0	1	0	0	1	0	2	1	0	3	0	0	0	0	0	7
05:15 PM	1	5	1	0	7	0	3	0	0	3	0	2	0	0	2	0	0	0	0	0	12
05:30 PM	2	7	0	0	9	1	2	0	0	3	0	7	0	0	7	0	0	0	0	0	19
05:45 PM	1	4	0	0	5	0	3	0	0	3	0	5	2	0	7	0	0	0	0	0	15
Total	4	19	1	0	24	1	9	0	0	10	0	16	3	0	19	0	0	0	0	0	53
Grand Total	4	22	1	0	27	1	11	0	0	12	2	23	4	0	29	0	6	0	0	6	74
Apprch %	14.8	81.5	3.7	0		8.3	91.7	0	0		6.9	79.3	13.8	0		0	100	0	0		
Total %	5.4	29.7	1.4	0	36.5	1.4	14.9	0	0	16.2	2.7	31.1	5.4	0	39.2	0	8.1	0	0	8.1	

	MOFFETT BLVD Southbound				CENTRAL EXPY Westbound				CASTRO ST Northbound				CENTRAL EXPY Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	3	0	3	0	1	0	1	0	2	1	3	0	0	0	0	7
05:15 PM	1	5	**1**	7	0	**3**	0	**3**	0	2	0	2	0	0	0	0	12
05:30 PM	**2**	**7**	0	**9**	**1**	2	0	3	0	**7**	0	**7**	0	0	0	0	**19**
05:45 PM	1	4	0	5	0	3	0	3	0	5	**2**	7	0	0	0	0	15
Total Volume	4	19	1	24	1	9	0	10	0	16	3	19	0	0	0	0	53
% App. Total	16.7	79.2	4.2		10	90	0		0	84.2	15.8		0	0	0		
PHF	.500	.679	.250	.667	.250	.750	.000	.833	.000	.571	.375	.679	.000	.000	.000	.000	.697

Traffic Data Service

Campbell, CA

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File Name : 10PM FINAL
Site Code : 00000010
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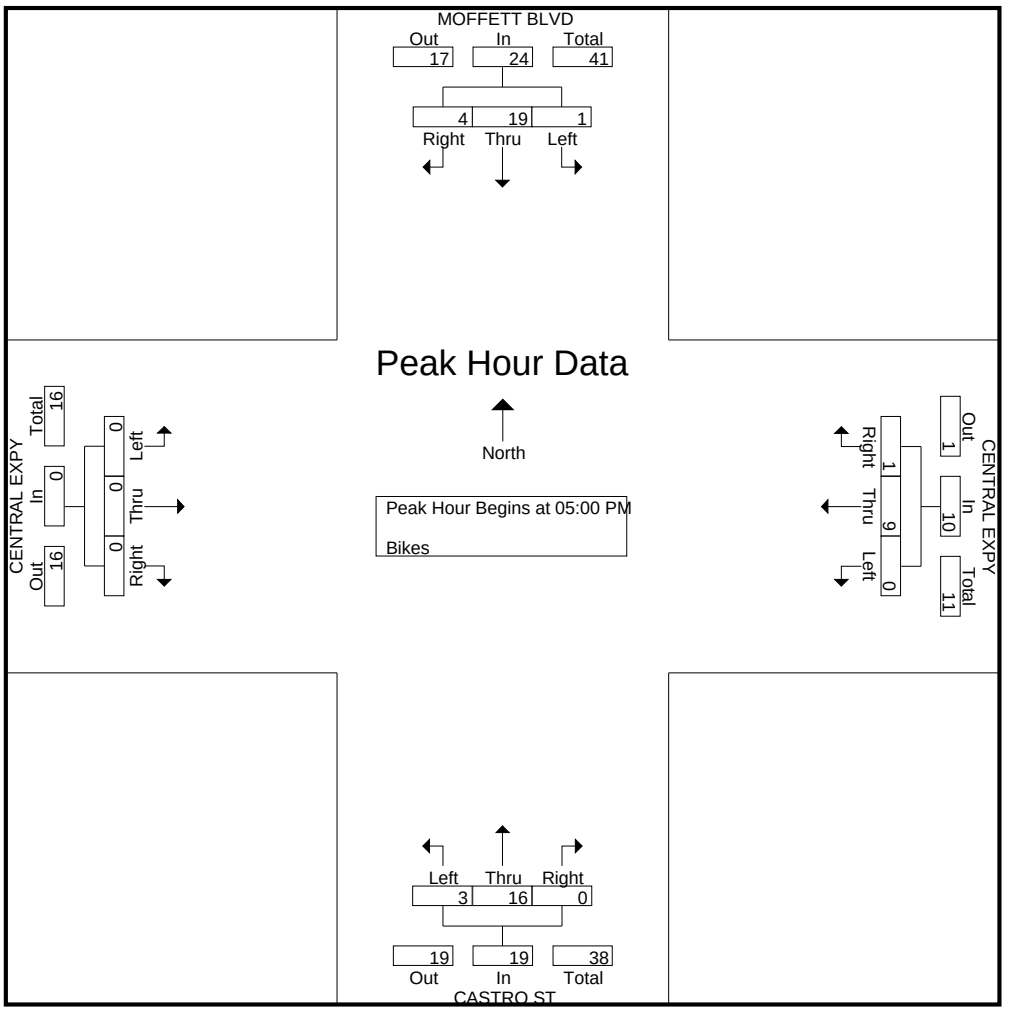

Traffic Data Service

Campbell, CA
(408) 377-2988
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File Name : 11AM FINAL
Site Code : 00000011
Start Date : 5/6/2014
Page No : 1

Groups Printed- Bikes

	CASTRO ST Southbound					CHURCH ST Westbound					CASTRO ST Northbound					CHURCH ST Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
07:15 AM	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	3
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	0	0	1	0	1	7
07:45 AM	0	2	0	0	2	2	6	0	0	8	2	4	1	0	7	0	0	0	0	0	17
Total	1	3	0	0	4	2	7	0	0	9	2	10	1	0	13	0	2	1	0	3	29
08:00 AM	0	1	0	0	1	0	2	0	0	2	4	2	0	0	6	0	2	0	0	2	11
08:15 AM	0	1	0	0	1	0	2	1	0	3	0	4	0	0	4	1	3	0	0	4	12
08:30 AM	2	1	0	0	3	0	4	1	0	5	1	1	0	0	2	1	0	0	0	1	11
08:45 AM	0	2	0	0	2	0	0	3	0	3	2	4	1	0	7	0	4	0	0	4	16
Total	2	5	0	0	7	0	8	5	0	13	7	11	1	0	19	2	9	0	0	11	50
Grand Total	3	8	0	0	11	2	15	5	0	22	9	21	2	0	32	2	11	1	0	14	79
Apprch %	27.3	72.7	0	0		9.1	68.2	22.7	0		28.1	65.6	6.2	0		14.3	78.6	7.1	0		
Total %	3.8	10.1	0	0	13.9	2.5	19	6.3	0	27.8	11.4	26.6	2.5	0	40.5	2.5	13.9	1.3	0	17.7	

	CASTRO ST Southbound				CHURCH ST Westbound				CASTRO ST Northbound				CHURCH ST Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	**2**	0	2	**2**	**6**	0	**8**	2	**4**	**1**	**7**	0	0	0	0	**17**
08:00 AM	0	1	0	1	0	2	0	2	**4**	2	0	6	0	2	0	2	11
08:15 AM	0	1	0	1	0	2	**1**	3	0	4	0	4	**1**	**3**	0	**4**	12
08:30 AM	**2**	1	0	**3**	0	4	1	5	1	1	0	2	1	0	0	1	11
Total Volume	2	5	0	7	2	14	2	18	7	11	1	19	2	5	0	7	51
% App. Total	28.6	71.4	0		11.1	77.8	11.1		36.8	57.9	5.3		28.6	71.4	0		
PHF	.250	.625	.000	.583	.250	.583	.500	.563	.438	.688	.250	.679	.500	.417	.000	.438	.750

Traffic Data Service

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File Name : 11AM FINAL
Site Code : 00000011
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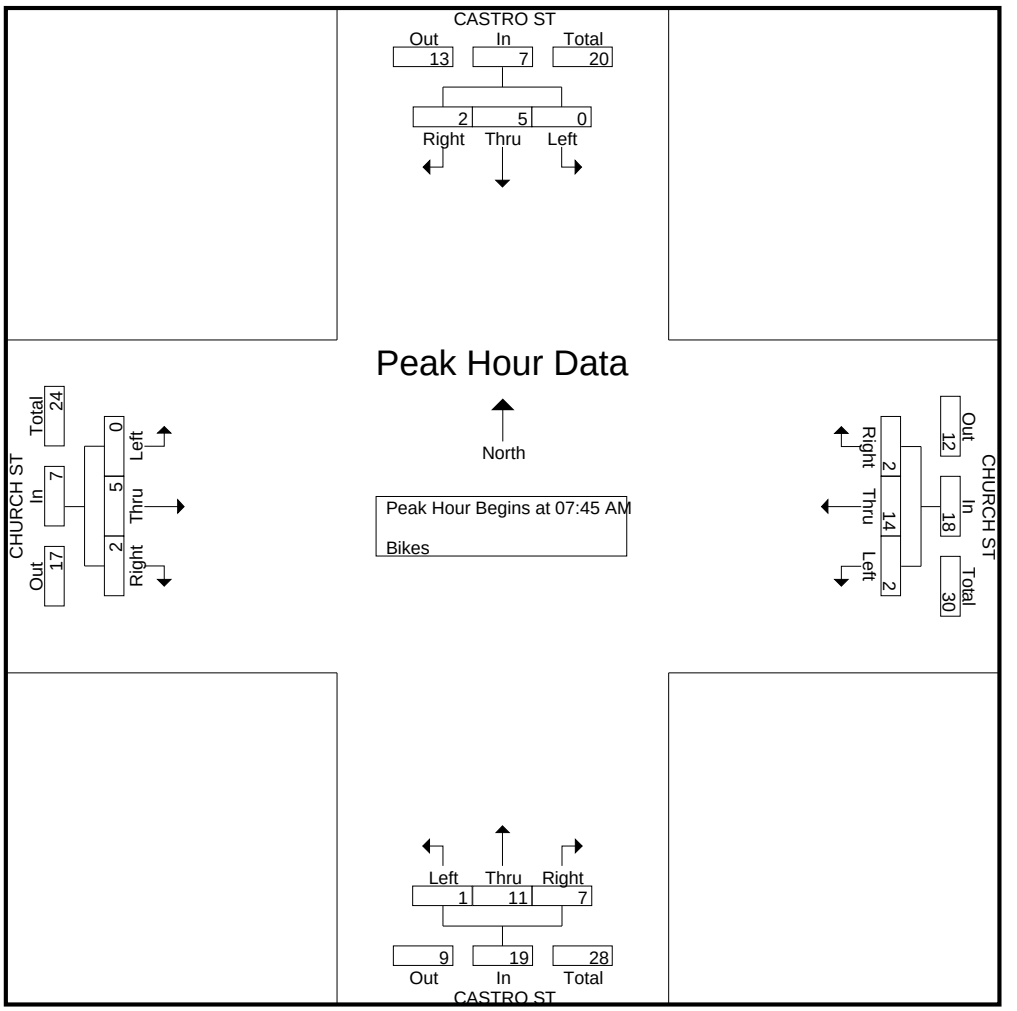

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File Name : 11PM FINAL
Site Code : 00000011
Start Date : 5/6/2014
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Groups Printed- Bikes

	CASTRO ST Southbound					CHURCH ST Westbound					CASTRO ST Northbound					CHURCH ST Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	1	1	0	0	2	4
04:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	1	0	0	1	3
04:30 PM	0	5	1	0	6	0	1	1	0	2	0	1	1	0	2	0	2	0	0	2	12
04:45 PM	1	3	0	0	4	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	6
Total	1	8	1	0	10	0	3	1	0	4	1	3	2	0	6	1	4	0	0	5	25
05:00 PM	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	1	0	0	1	3
05:15 PM	0	0	0	0	0	0	0	1	0	1	0	2	0	0	2	0	4	0	0	4	7
05:30 PM	0	0	2	0	2	0	0	0	0	0	0	1	0	0	1	0	2	0	0	2	5
05:45 PM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	3	0	3	0	0	3	0	3	0	4	0	0	4	0	7	0	0	7	17
Grand Total	1	8	4	0	13	0	3	4	0	7	1	7	2	0	10	1	11	0	0	12	42
Apprch %	7.7	61.5	30.8	0		0	42.9	57.1	0		10	70	20	0		8.3	91.7	0	0		
Total %	2.4	19	9.5	0	31	0	7.1	9.5	0	16.7	2.4	16.7	4.8	0	23.8	2.4	26.2	0	0	28.6	

	CASTRO ST Southbound				CHURCH ST Westbound				CASTRO ST Northbound				CHURCH ST Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	**5**	**1**	**6**	0	**1**	**1**	**2**	0	1	**1**	**2**	0	2	0	2	**12**
04:45 PM	**1**	3	0	4	0	0	0	0	**1**	1	0	2	0	0	0	0	6
05:00 PM	0	0	0	0	0	0	1	1	0	1	0	1	0	1	0	1	3
05:15 PM	0	0	0	0	0	0	1	1	0	**2**	0	2	0	**4**	0	**4**	7
Total Volume	1	8	1	10	0	1	3	4	1	5	1	7	0	7	0	7	28
% App. Total	10	80	10		0	25	75		14.3	71.4	14.3		0	100	0		
PHF	.250	.400	.250	.417	.000	.250	.750	.500	.250	.625	.250	.875	.000	.438	.000	.438	.583

Traffic Data Service

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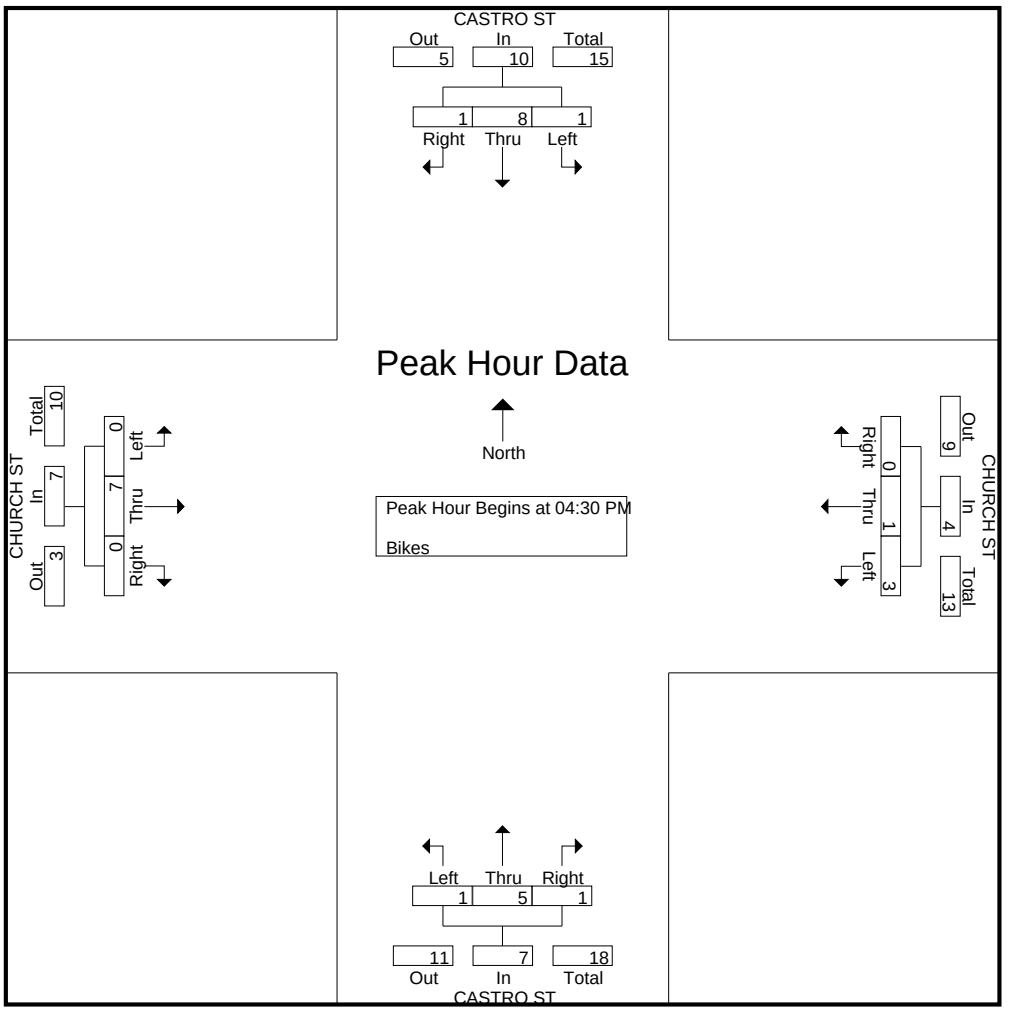

Traffic Data Service

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File Name : 15AM FINAL
Site Code : 00000015
Start Date : 5/6/2014
Page No : 1

Groups Printed- Bikes

	S WHISMAN RD Southbound					E DANA ST Westbound					Northbound					E DANA ST Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	2	0	3	5
07:30 AM	0	0	0	0	0	1	5	0	0	6	0	0	0	0	0	0	2	1	0	3	9
07:45 AM	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	0	0	0	0	0	11
Total	0	0	0	0	0	1	19	0	0	20	0	0	0	0	0	0	3	3	0	6	26
08:00 AM	0	0	0	0	0	1	8	0	0	9	0	0	0	0	0	0	2	2	0	4	13
08:15 AM	0	0	1	0	1	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	7
08:30 AM	2	0	1	0	3	1	6	0	0	7	0	0	0	0	0	0	2	0	0	2	12
08:45 AM	1	0	0	0	1	1	7	0	0	8	0	0	0	0	0	0	0	2	0	2	11
Total	3	0	2	0	5	3	25	0	0	28	0	0	0	0	0	0	6	4	0	10	43
Grand Total	3	0	2	0	5	4	44	0	0	48	0	0	0	0	0	0	9	7	0	16	69
Apprch %	60	0	40	0		8.3	91.7	0	0		0	0	0	0		0	56.2	43.8	0		
Total %	4.3	0	2.9	0	7.2	5.8	63.8	0	0	69.6	0	0	0	0	0	0	13	10.1	0	23.2	

	S WHISMAN RD Southbound				E DANA ST Westbound				Northbound				E DANA ST Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	0	**11**	0	**11**	0	0	0	0	0	0	0	0	11
08:00 AM	0	0	0	0	**1**	8	0	9	0	0	0	0	0	**2**	**2**	**4**	**13**
08:15 AM	0	0	**1**	1	0	4	0	4	0	0	0	0	0	2	0	2	7
08:30 AM	**2**	0	1	**3**	1	6	0	7	0	0	0	0	0	2	0	2	12
Total Volume	2	0	2	4	2	29	0	31	0	0	0	0	0	6	2	8	43
% App. Total	50	0	50		6.5	93.5	0		0	0	0		0	75	25		
PHF	.250	.000	.500	.333	.500	.659	.000	.705	.000	.000	.000	.000	.000	.750	.250	.500	.827

Traffic Data Service

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File Name : 15AM FINAL
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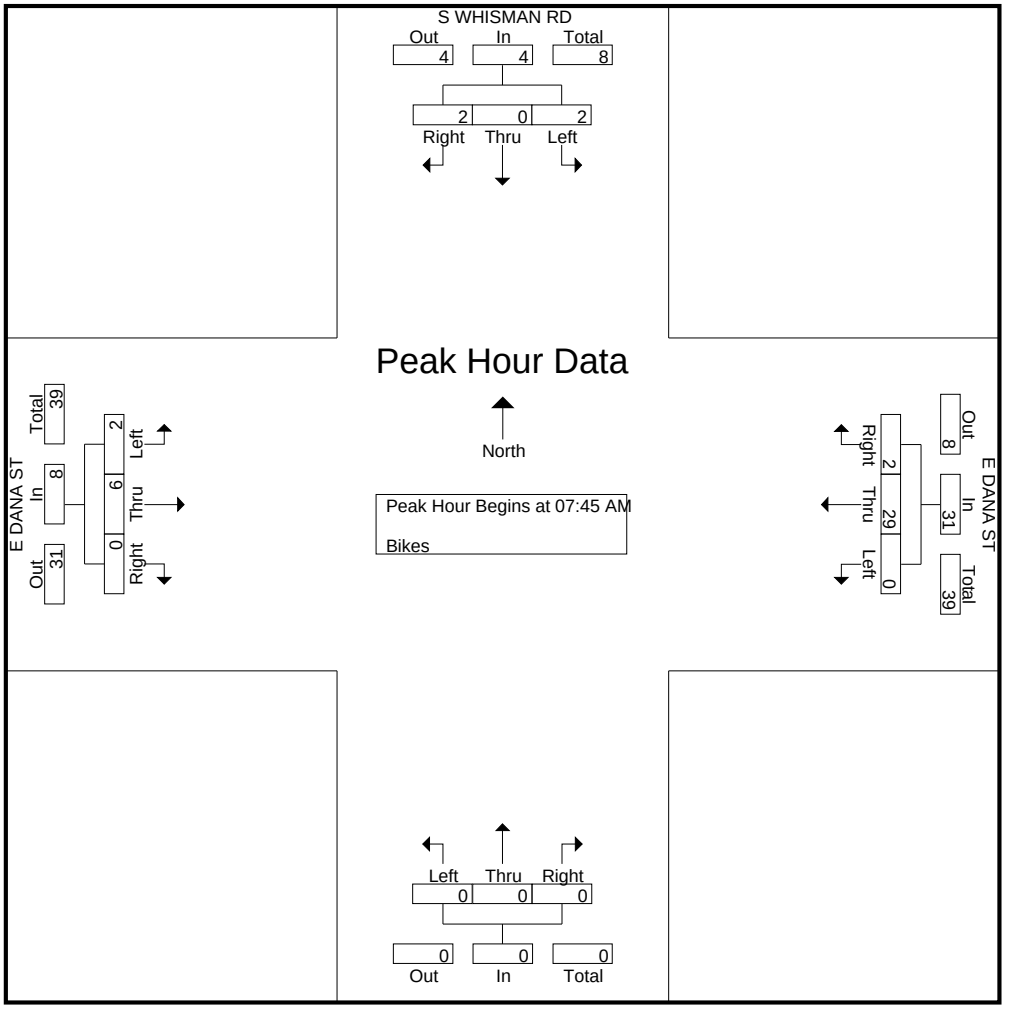

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File Name : 15PM FINAL
Site Code : 00000015
Start Date : 5/6/2014
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Groups Printed- Bikes

	S WHISMAN RD Southbound					E DANA ST Westbound					Northbound					E DANA ST Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	5
07:30 AM	3	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	8
07:45 AM	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	5
Total	7	0	3	0	10	0	0	0	0	0	0	0	0	0	0	0	9	0	0	9	19
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3
08:15 AM	1	0	1	0	2	1	1	0	0	2	0	0	0	0	0	0	1	0	0	1	5
08:30 AM	3	0	1	0	4	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	5
08:45 AM	6	0	1	0	7	0	3	0	0	3	0	0	0	0	0	0	9	0	0	9	19
Total	10	0	3	0	13	1	5	0	0	6	0	0	0	0	0	0	13	0	0	13	32
Grand Total	17	0	6	0	23	1	5	0	0	6	0	0	0	0	0	0	22	0	0	22	51
Apprch %	73.9	0	26.1	0		16.7	83.3	0	0		0	0	0	0		0	100	0	0		
Total %	33.3	0	11.8	0	45.1	2	9.8	0	0	11.8	0	0	0	0	0	0	43.1	0	0	43.1	

	S WHISMAN RD Southbound				E DANA ST Westbound				Northbound				E DANA ST Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
08:15 AM	1	0	**1**	2	**1**	1	0	2	0	0	0	0	0	1	0	1	5
08:30 AM	3	0	1	4	0	1	0	1	0	0	0	0	0	0	0	0	5
08:45 AM	**6**	0	1	**7**	0	**3**	0	**3**	0	0	0	0	0	**9**	0	**9**	**19**
Total Volume	10	0	3	13	1	5	0	6	0	0	0	0	0	13	0	13	32
% App. Total	76.9	0	23.1		16.7	83.3	0		0	0	0		0	100	0		
PHF	.417	.000	.750	.464	.250	.417	.000	.500	.000	.000	.000	.000	.000	.361	.000	.361	.421

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File Name : 15PM FINAL
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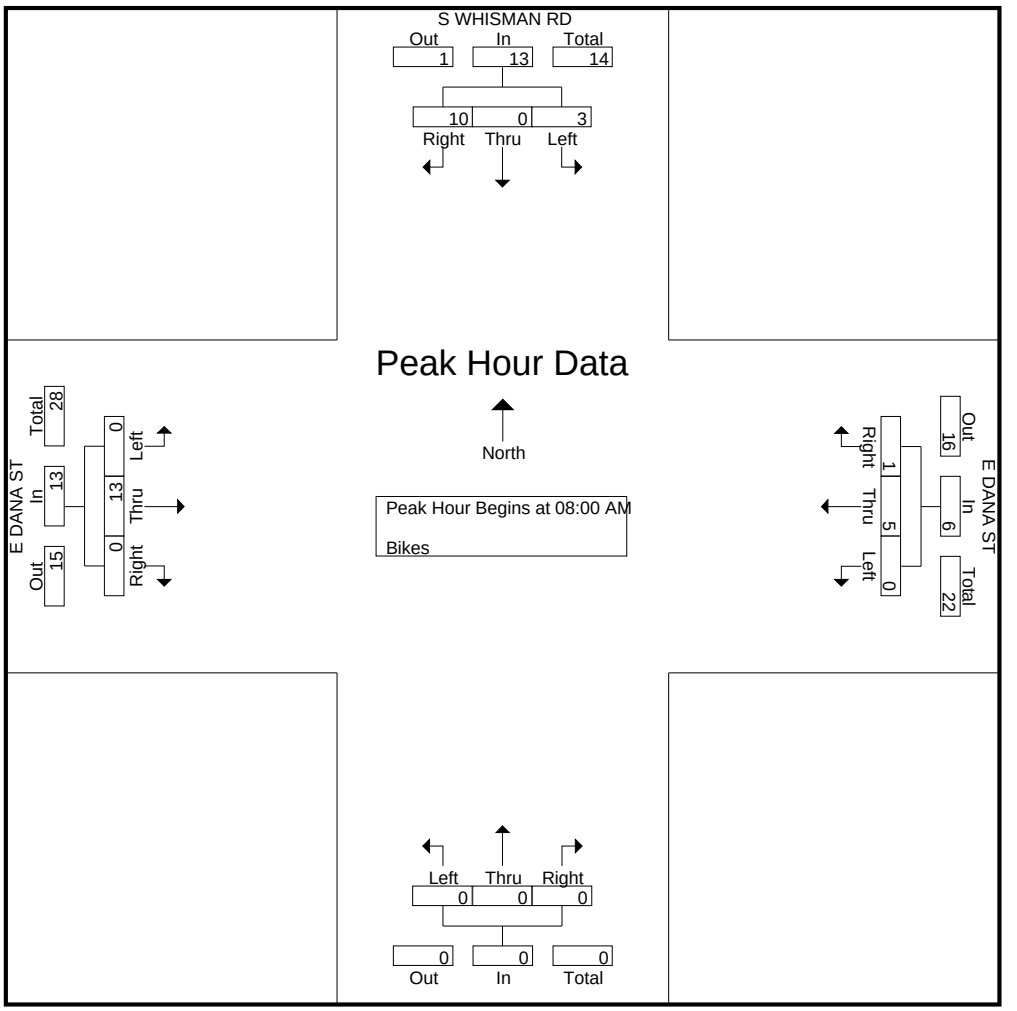

Traffic Data Service

Campbell, CA
(408) 377-2988
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File Name : 17AM FINAL
Site Code : 00000017
Start Date : 5/6/2014
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Groups Printed- Bikes

	N WHISMAN RD Southbound					DRIVEWAY Westbound					N WHISMAN RD Northbound					HETCH HETCHY TRAIL Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	2	0	1	0	3	0	0	0	0	0	2	1	1	0	4	0	1	1	0	2	9
Total	2	1	1	0	4	0	0	0	0	0	2	1	1	0	4	0	1	1	0	2	10
08:00 AM	3	1	0	0	4	1	0	0	0	1	1	4	0	0	5	0	2	0	0	2	12
08:15 AM	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	13	0	0	13	16
08:30 AM	4	1	0	0	5	0	0	0	0	0	2	4	3	0	9	0	10	0	0	10	24
08:45 AM	2	2	0	0	4	0	0	0	0	0	2	2	2	0	6	1	5	0	0	6	16
Total	10	6	0	0	16	1	0	0	0	1	5	10	5	0	20	1	30	0	0	31	68
Grand Total	12	7	1	0	20	1	0	0	0	1	7	11	6	0	24	1	31	1	0	33	78
Apprch %	60	35	5	0		100	0	0	0		29.2	45.8	25	0		3	93.9	3	0		
Total %	15.4	9	1.3	0	25.6	1.3	0	0	0	1.3	9	14.1	7.7	0	30.8	1.3	39.7	1.3	0	42.3	

	N WHISMAN RD Southbound				DRIVEWAY Westbound				N WHISMAN RD Northbound				HETCH HETCHY TRAIL Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	3	1	0	4	**1**	0	0	**1**	1	**4**	0	5	0	2	0	2	12
08:15 AM	1	**2**	0	3	0	0	0	0	0	0	0	0	0	**13**	0	**13**	16
08:30 AM	**4**	1	0	**5**	0	0	0	0	**2**	4	**3**	**9**	0	10	0	10	**24**
08:45 AM	2	2	0	4	0	0	0	0	2	2	2	6	**1**	5	0	6	16
Total Volume	10	6	0	16	1	0	0	1	5	10	5	20	1	30	0	31	68
% App. Total	62.5	37.5	0		100	0	0		25	50	25		3.2	96.8	0		
PHF	.625	.750	.000	.800	.250	.000	.000	.250	.625	.625	.417	.556	.250	.577	.000	.596	.708

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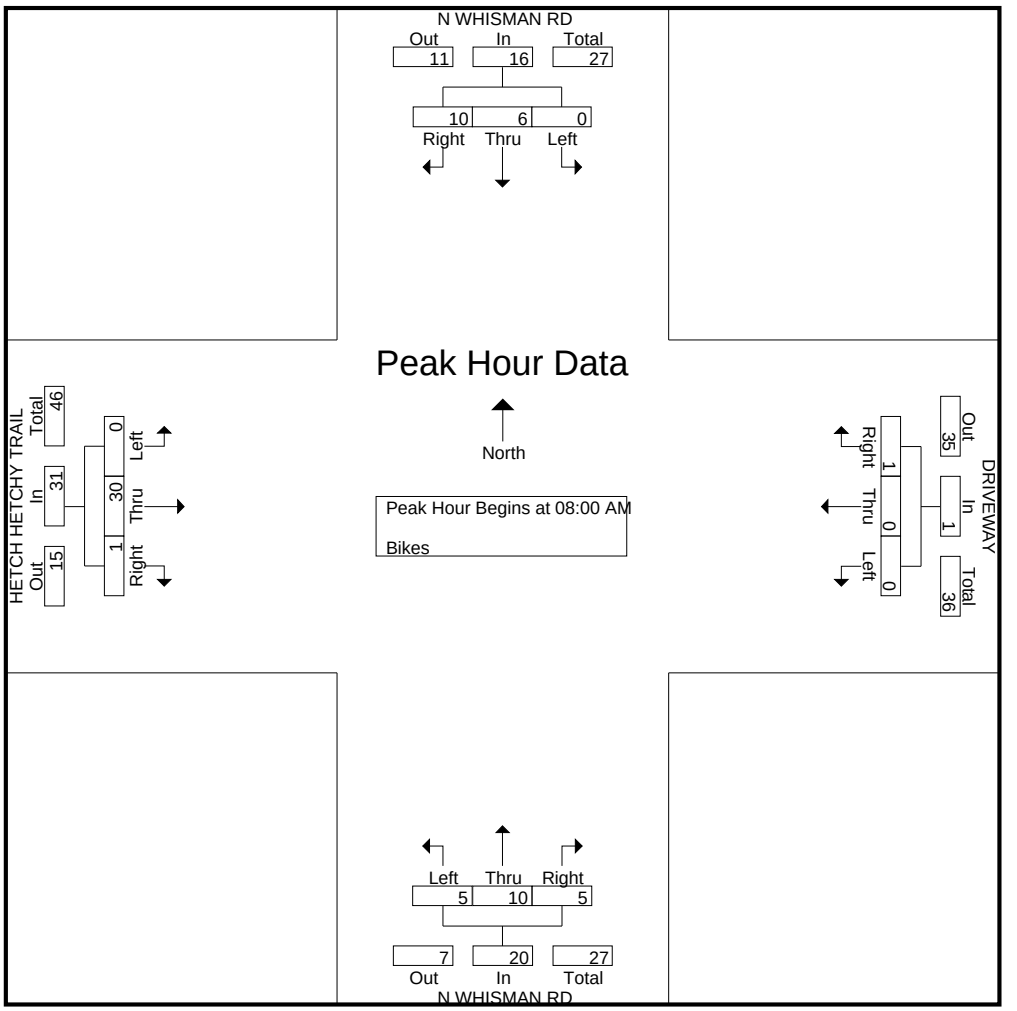

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File Name : 17PM FINAL
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Groups Printed- Bikes

	N WHISMAN RD Southbound					DRIVEWAY Westbound					N WHISMAN RD Northbound					HETCH HETCHY TRAIL Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	1	0	0	1	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	3
Total	0	2	0	0	2	0	1	1	0	2	1	0	0	0	1	0	0	0	0	0	5
05:00 PM	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	0	3	0	0	3	7
05:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	3	0	0	3	0	4	3	0	7	1	0	0	0	1	0	0	0	0	0	11
05:45 PM	0	5	0	0	5	1	0	0	0	1	1	0	0	0	1	0	1	0	0	1	8
Total	0	8	0	0	8	1	8	3	0	12	3	0	0	0	3	0	4	0	0	4	27
Grand Total	0	10	0	0	10	1	9	4	0	14	4	0	0	0	4	0	4	0	0	4	32
Apprch %	0	100	0	0		7.1	64.3	28.6	0		100	0	0	0		0	100	0	0		
Total %	0	31.2	0	0	31.2	3.1	28.1	12.5	0	43.8	12.5	0	0	0	12.5	0	12.5	0	0	12.5	

	N WHISMAN RD Southbound				DRIVEWAY Westbound				N WHISMAN RD Northbound				HETCH HETCHY TRAIL Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	3	0	3	**1**	0	0	**1**	0	**3**	0	**3**	7
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:30 PM	0	3	0	3	0	**4**	**3**	**7**	1	0	0	1	0	0	0	0	**11**
05:45 PM	0	**5**	0	**5**	**1**	0	0	1	1	0	0	1	0	1	0	1	8
Total Volume	0	8	0	8	1	8	3	12	3	0	0	3	0	4	0	4	27
% App. Total	0	100	0		8.3	66.7	25		100	0	0		0	100	0		
PHF	.000	.400	.000	.400	.250	.500	.250	.429	.750	.000	.000	.750	.000	.333	.000	.333	.614

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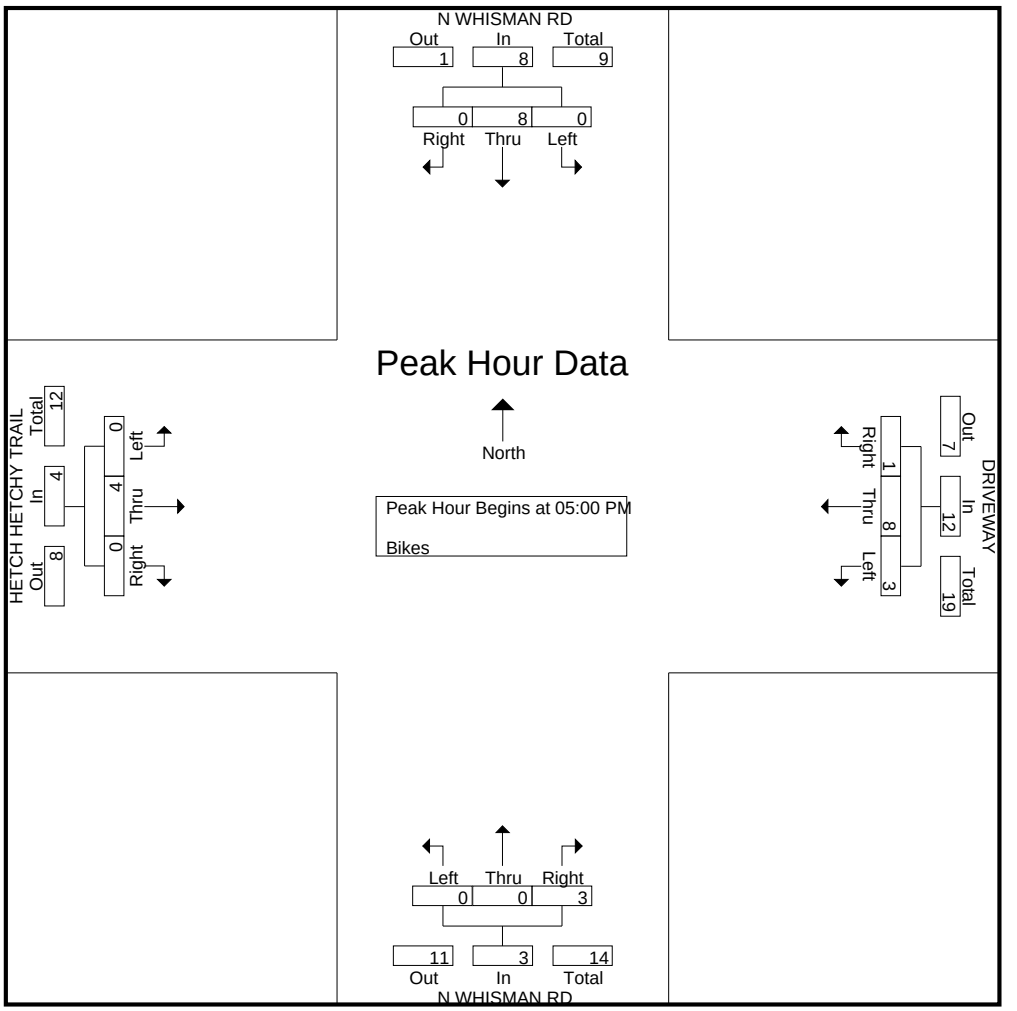

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File Name : 18AM FINAL
Site Code : 00000018
Start Date : 5/6/2014
Page No : 1

Groups Printed- Bikes

	ELLIS ST Southbound					E MIDDLEFIELD RD Westbound					Northbound					E MIDDLEFIELD RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	5	0	0	6	0	0	0	0	0	0	1	0	0	1	7
07:15 AM	0	0	1	0	1	2	3	0	0	5	0	0	0	0	0	0	3	3	0	6	12
07:30 AM	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	0	2	1	0	3	7
07:45 AM	2	0	0	0	2	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	6
Total	2	0	1	0	3	6	11	0	0	17	0	0	0	0	0	0	8	4	0	12	32
08:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	2	0	4	5
08:15 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	3	2	0	5	6
08:30 AM	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	7	1	0	8	11
08:45 AM	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	0	8	4	0	12	17
Total	0	0	0	0	0	3	7	0	0	10	0	0	0	0	0	0	20	9	0	29	39
Grand Total	2	0	1	0	3	9	18	0	0	27	0	0	0	0	0	0	28	13	0	41	71
Apprch %	66.7	0	33.3	0		33.3	66.7	0	0		0	0	0	0		0	68.3	31.7	0		
Total %	2.8	0	1.4	0	4.2	12.7	25.4	0	0	38	0	0	0	0	0	0	39.4	18.3	0	57.7	

	ELLIS ST Southbound				E MIDDLEFIELD RD Westbound				Northbound				E MIDDLEFIELD RD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	2	4	5
08:15 AM	0	0	0	0	**1**	0	0	1	0	0	0	0	0	3	2	5	6
08:30 AM	0	0	0	0	1	2	0	3	0	0	0	0	0	7	1	8	11
08:45 AM	0	0	0	0	1	**4**	0	**5**	0	0	0	0	0	**8**	**4**	**12**	**17**
Total Volume	0	0	0	0	3	7	0	10	0	0	0	0	0	20	9	29	39
% App. Total	0	0	0		30	70	0		0	0	0		0	69	31		
PHF	.000	.000	.000	.000	.750	.438	.000	.500	.000	.000	.000	.000	.000	.625	.563	.604	.574

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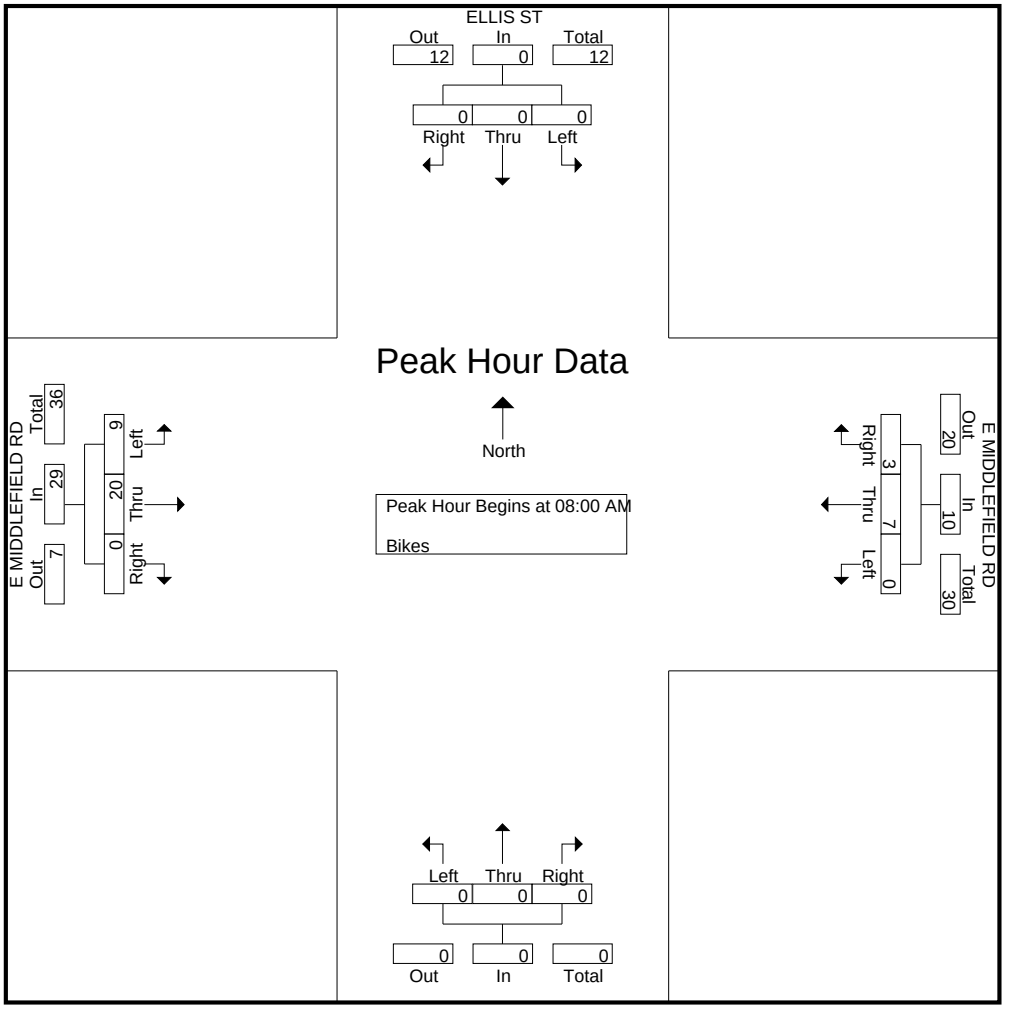

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File Name : 18PM FINAL
Site Code : 00000018
Start Date : 5/6/2014
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Groups Printed- Bikes

	ELLIS ST Southbound					E MIDDLEFIELD RD Westbound					Northbound					E MIDDLEFIELD RD Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
04:15 PM	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	5
04:30 PM	3	0	1	0	4	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	5
04:45 PM	2	0	1	0	3	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	8
Total	5	0	3	0	8	0	7	0	0	7	0	0	0	0	0	0	4	0	0	4	19
05:00 PM	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	0	4	0	0	4	8
05:15 PM	3	0	1	0	4	0	3	0	0	3	0	0	0	0	0	0	1	2	0	3	10
05:30 PM	0	0	1	0	1	0	8	0	0	8	0	0	0	0	0	0	2	0	0	2	11
05:45 PM	0	0	2	0	2	0	6	0	0	6	0	0	0	0	0	0	4	0	0	4	12
Total	3	0	5	0	8	0	20	0	0	20	0	0	0	0	0	0	11	2	0	13	41
Grand Total	8	0	8	0	16	0	27	0	0	27	0	0	0	0	0	0	15	2	0	17	60
Apprch %	50	0	50	0		0	100	0	0		0	0	0	0		0	88.2	11.8	0		
Total %	13.3	0	13.3	0	26.7	0	45	0	0	45	0	0	0	0	0	0	25	3.3	0	28.3	

	ELLIS ST Southbound				E MIDDLEFIELD RD Westbound				Northbound				E MIDDLEFIELD RD Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	1	1	0	3	0	3	0	0	0	0	0	**4**	0	**4**	8
05:15 PM	**3**	0	1	**4**	0	3	0	3	0	0	0	0	0	1	**2**	3	10
05:30 PM	0	0	1	1	0	**8**	0	**8**	0	0	0	0	0	2	0	2	11
05:45 PM	0	0	**2**	2	0	6	0	6	0	0	0	0	0	4	0	4	**12**
Total Volume	3	0	5	8	0	20	0	20	0	0	0	0	0	11	2	13	41
% App. Total	37.5	0	62.5		0	100	0		0	0	0		0	84.6	15.4		
PHF	.250	.000	.625	.500	.000	.625	.000	.625	.000	.000	.000	.000	.000	.688	.250	.813	.854

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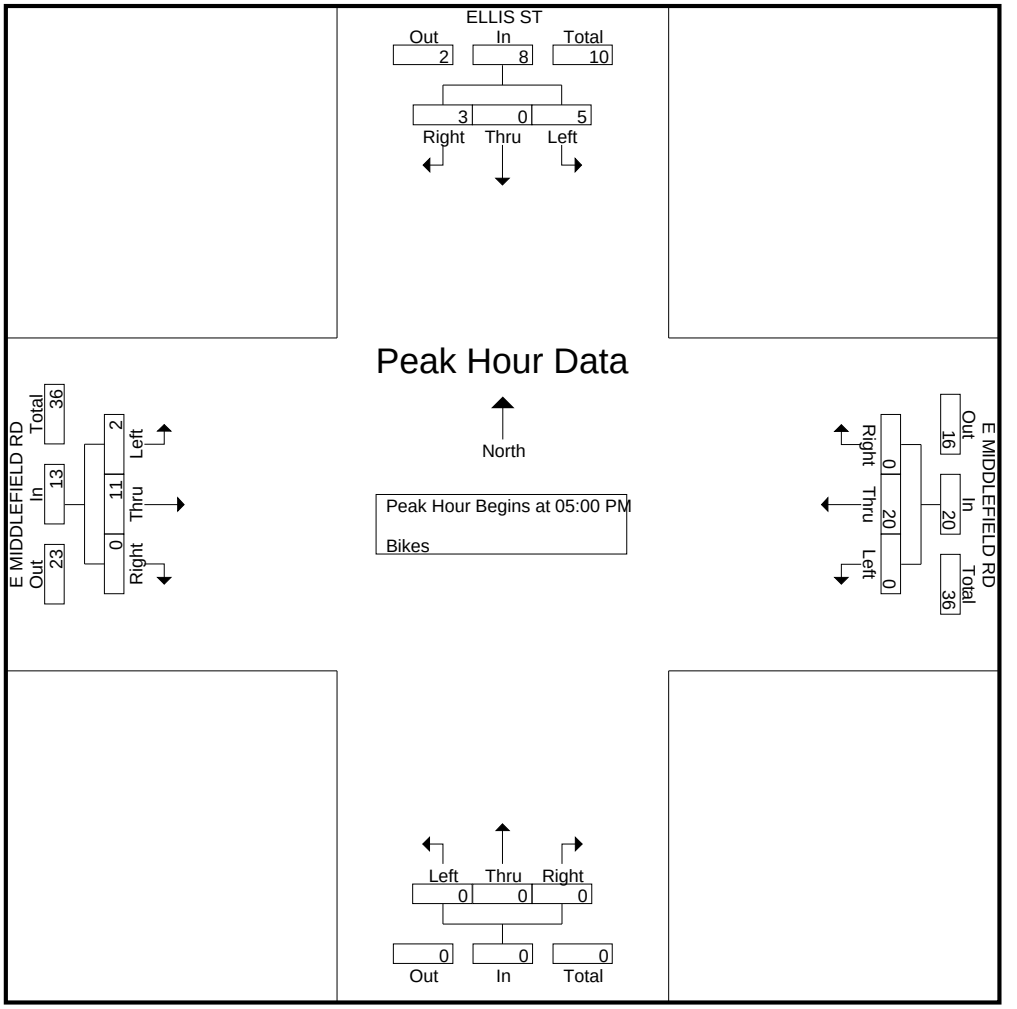

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File Name : 19AM FINAL
Site Code : 00000019
Start Date : 5/8/2014
Page No : 1

Groups Printed- Bikes

	Southbound					HEATHERSTONE WAY Westbound					STEVENS CREEK TRAIL Northbound					DALE AVE Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	2	13	0	15	0	0	0	0	0	6	0	0	0	6	21
07:15 AM	0	0	0	0	0	0	0	12	0	12	1	0	0	0	1	5	0	0	0	5	18
07:30 AM	0	0	0	0	0	0	1	14	0	15	2	0	1	0	3	3	0	0	0	3	21
07:45 AM	0	0	0	0	0	0	0	38	0	38	3	0	1	0	4	10	1	0	0	11	53
Total	0	0	0	0	0	0	3	77	0	80	6	0	2	0	8	24	1	0	0	25	113
08:00 AM	0	0	0	0	0	0	0	16	0	16	9	0	2	0	11	10	2	0	0	12	39
08:15 AM	0	0	0	0	0	0	2	37	0	39	4	0	2	0	6	18	1	0	0	19	64
08:30 AM	0	0	0	0	0	0	0	76	0	76	5	0	2	0	7	4	0	0	0	4	87
08:45 AM	0	0	0	0	0	0	0	31	0	31	6	0	1	0	7	4	1	0	0	5	43
Total	0	0	0	0	0	0	2	160	0	162	24	0	7	0	31	36	4	0	0	40	233
Grand Total	0	0	0	0	0	0	5	237	0	242	30	0	9	0	39	60	5	0	0	65	346
Apprch %	0	0	0	0		0	2.1	97.9	0		76.9	0	23.1	0		92.3	7.7	0	0		
Total %	0	0	0	0	0	0	1.4	68.5	0	69.9	8.7	0	2.6	0	11.3	17.3	1.4	0	0	18.8	

	Southbound				HEATHERSTONE WAY Westbound				STEVENS CREEK TRAIL Northbound				DALE AVE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	0	0	38	38	3	0	1	4	10	1	0	11	53
08:00 AM	0	0	0	0	0	0	16	16	**9**	0	**2**	**11**	10	**2**	0	12	39
08:15 AM	0	0	0	0	0	**2**	37	39	4	0	2	6	**18**	1	0	**19**	64
08:30 AM	0	0	0	0	0	0	**76**	**76**	5	0	2	7	4	0	0	4	**87**
Total Volume	0	0	0	0	0	2	167	169	21	0	7	28	42	4	0	46	243
% App. Total	0	0	0		0	1.2	98.8		75	0	25		91.3	8.7	0		
PHF	.000	.000	.000	.000	.000	.250	.549	.556	.583	.000	.875	.636	.583	.500	.000	.605	.698

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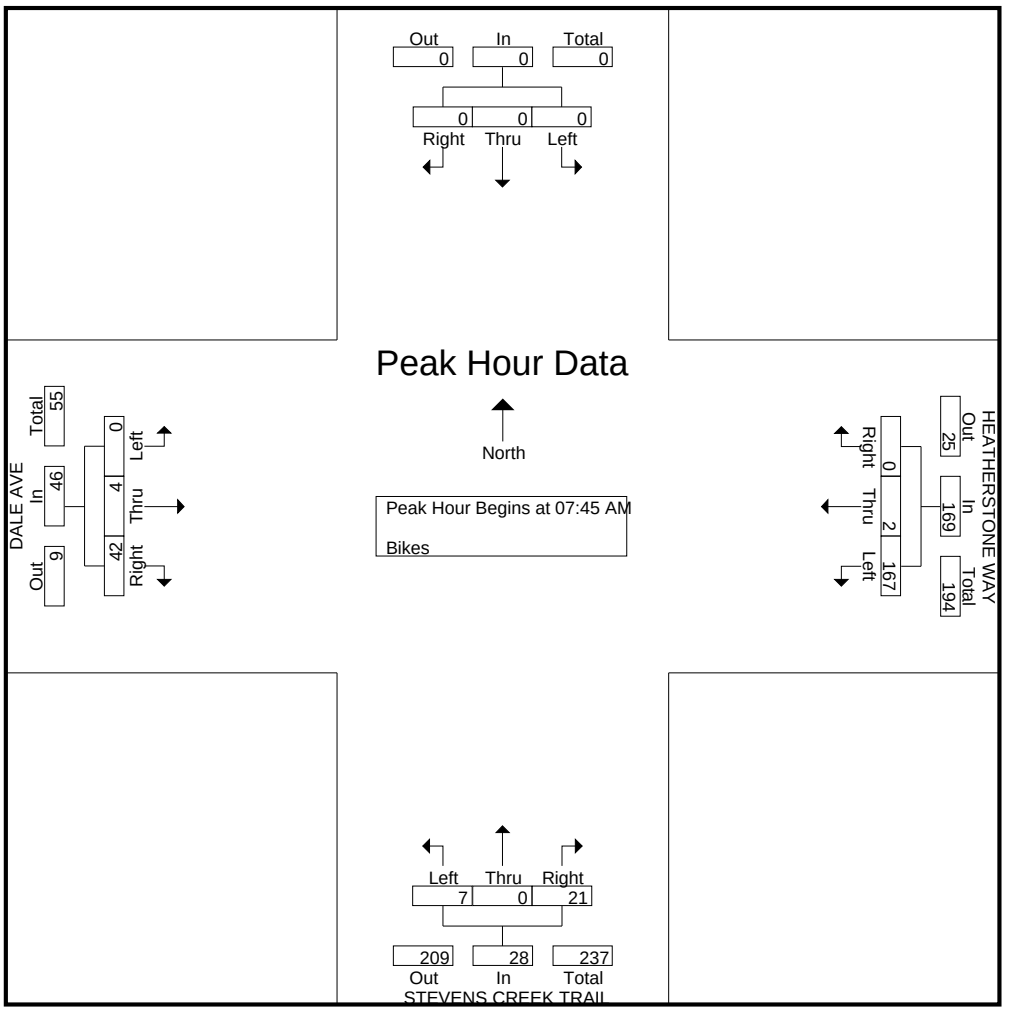

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File Name : 19PM FINAL
Site Code : 00000019
Start Date : 5/8/2014
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Groups Printed- Bikes

	Southbound					HEATHERSTONE WAY Westbound					STEVENS CREEK TRAIL Northbound					DALE AVE Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	1	0	1	3	0	0	0	3	1	0	0	0	1	5
07:15 AM	0	0	0	0	0	0	1	0	0	1	5	0	4	0	9	1	0	0	0	1	11
07:30 AM	0	0	0	0	0	0	1	0	0	1	2	0	1	0	3	1	1	0	0	2	6
07:45 AM	0	0	0	0	0	0	3	3	0	6	18	0	1	0	19	3	1	0	0	4	29
Total	0	0	0	0	0	0	5	4	0	9	28	0	6	0	34	6	2	0	0	8	51
08:00 AM	0	0	0	0	0	0	0	0	0	0	5	0	4	0	9	0	1	0	0	1	10
08:15 AM	0	0	0	0	0	0	0	4	0	4	26	0	7	0	33	0	0	0	0	0	37
08:30 AM	0	0	0	0	0	0	0	0	0	0	27	0	3	0	30	0	0	0	0	0	30
08:45 AM	0	0	0	0	0	0	0	3	0	3	26	0	0	0	26	0	2	0	0	2	31
Total	0	0	0	0	0	0	0	7	0	7	84	0	14	0	98	0	3	0	0	3	108
Grand Total	0	0	0	0	0	0	5	11	0	16	112	0	20	0	132	6	5	0	0	11	159
Apprch %	0	0	0	0		0	31.2	68.8	0		84.8	0	15.2	0		54.5	45.5	0	0		
Total %	0	0	0	0	0	0	3.1	6.9	0	10.1	70.4	0	12.6	0	83	3.8	3.1	0	0	6.9	

	Southbound				HEATHERSTONE WAY Westbound				STEVENS CREEK TRAIL Northbound				DALE AVE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	0	0	0	0	0	0	0	5	0	4	9	0	1	0	1	10
08:15 AM	0	0	0	0	0	0	**4**	**4**	26	0	**7**	**33**	0	0	0	0	**37**
08:30 AM	0	0	0	0	0	0	0	0	**27**	0	3	30	0	0	0	0	30
08:45 AM	0	0	0	0	0	0	3	3	26	0	0	26	0	**2**	0	**2**	31
Total Volume	0	0	0	0	0	0	7	7	84	0	14	98	0	3	0	3	108
% App. Total	0	0	0		0	0	100		85.7	0	14.3		0	100	0		
PHF	.000	.000	.000	.000	.000	.000	.438	.438	.778	.000	.500	.742	.000	.375	.000	.375	.730

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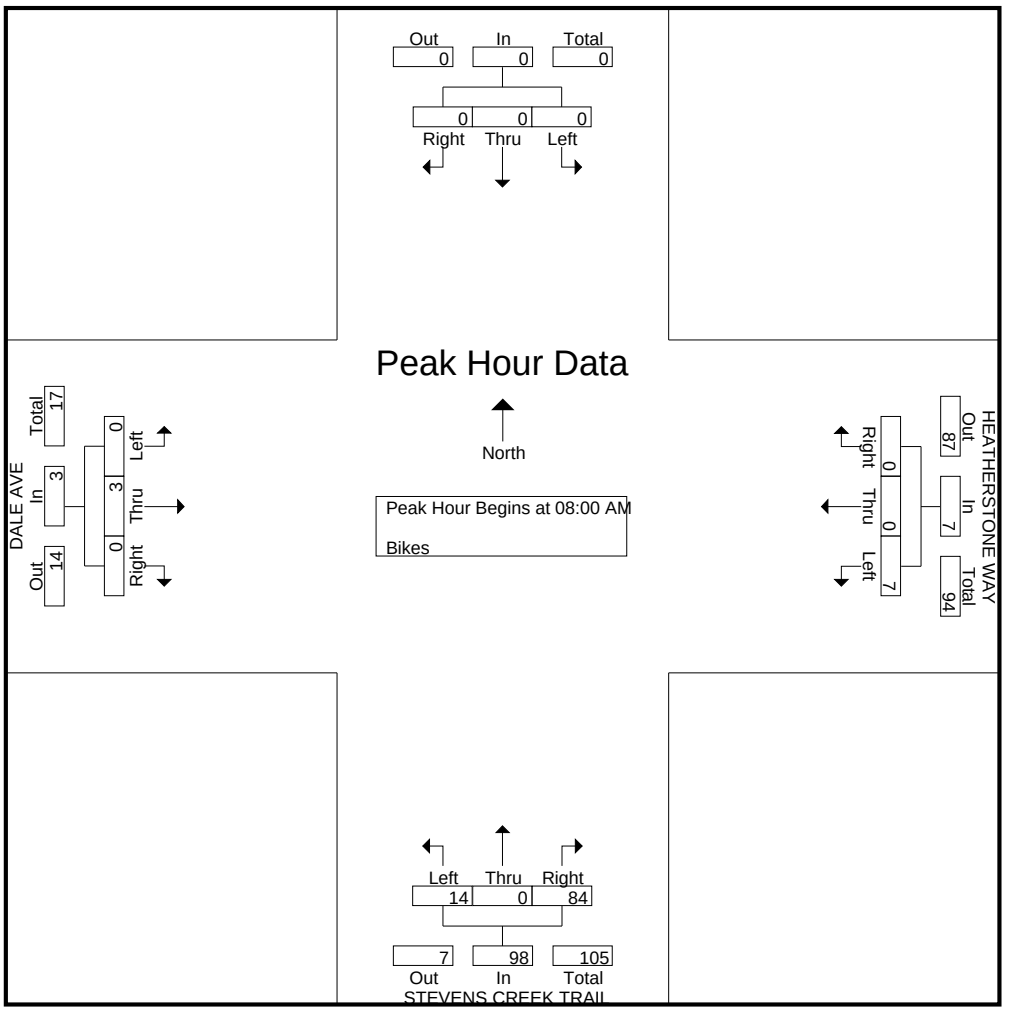
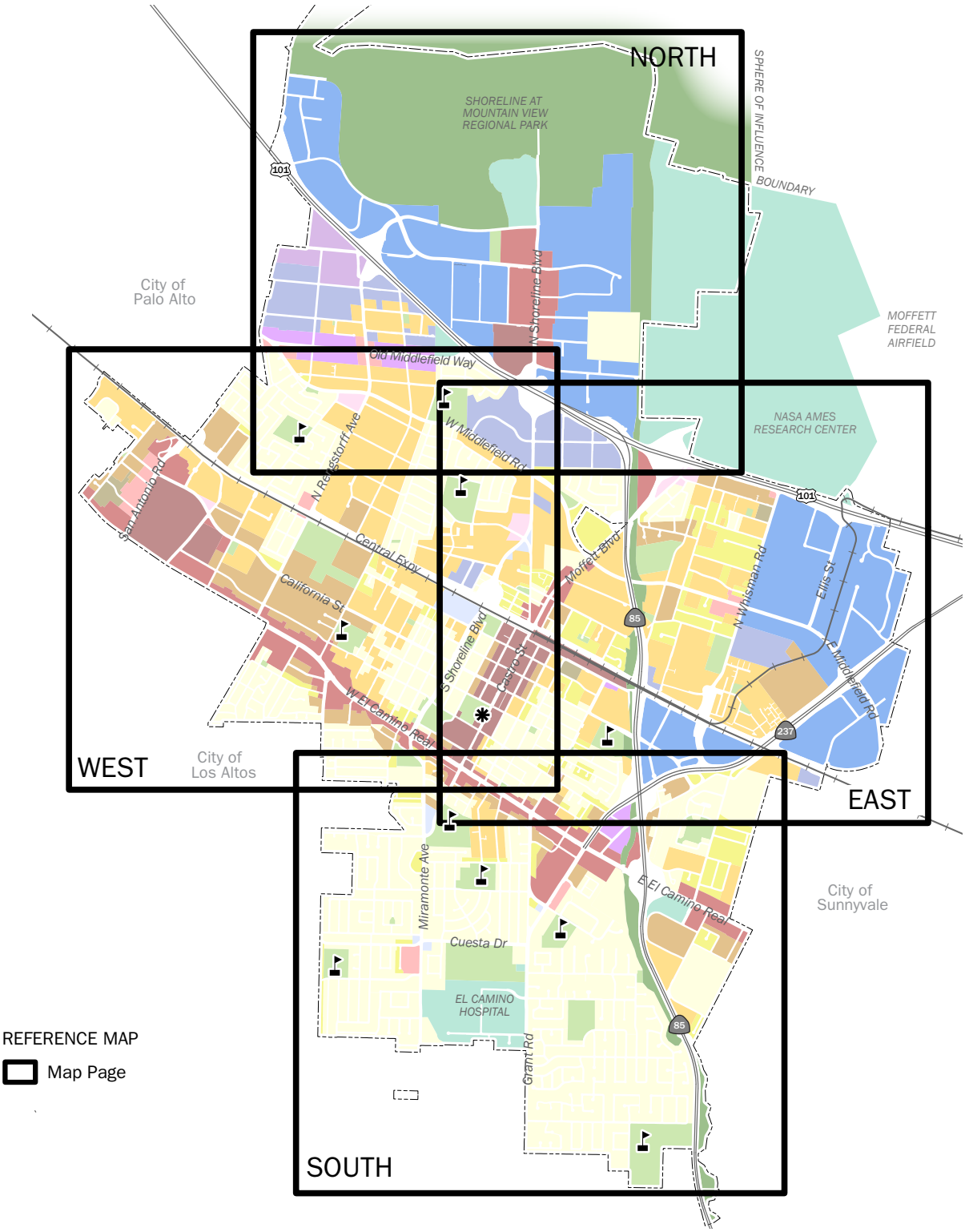
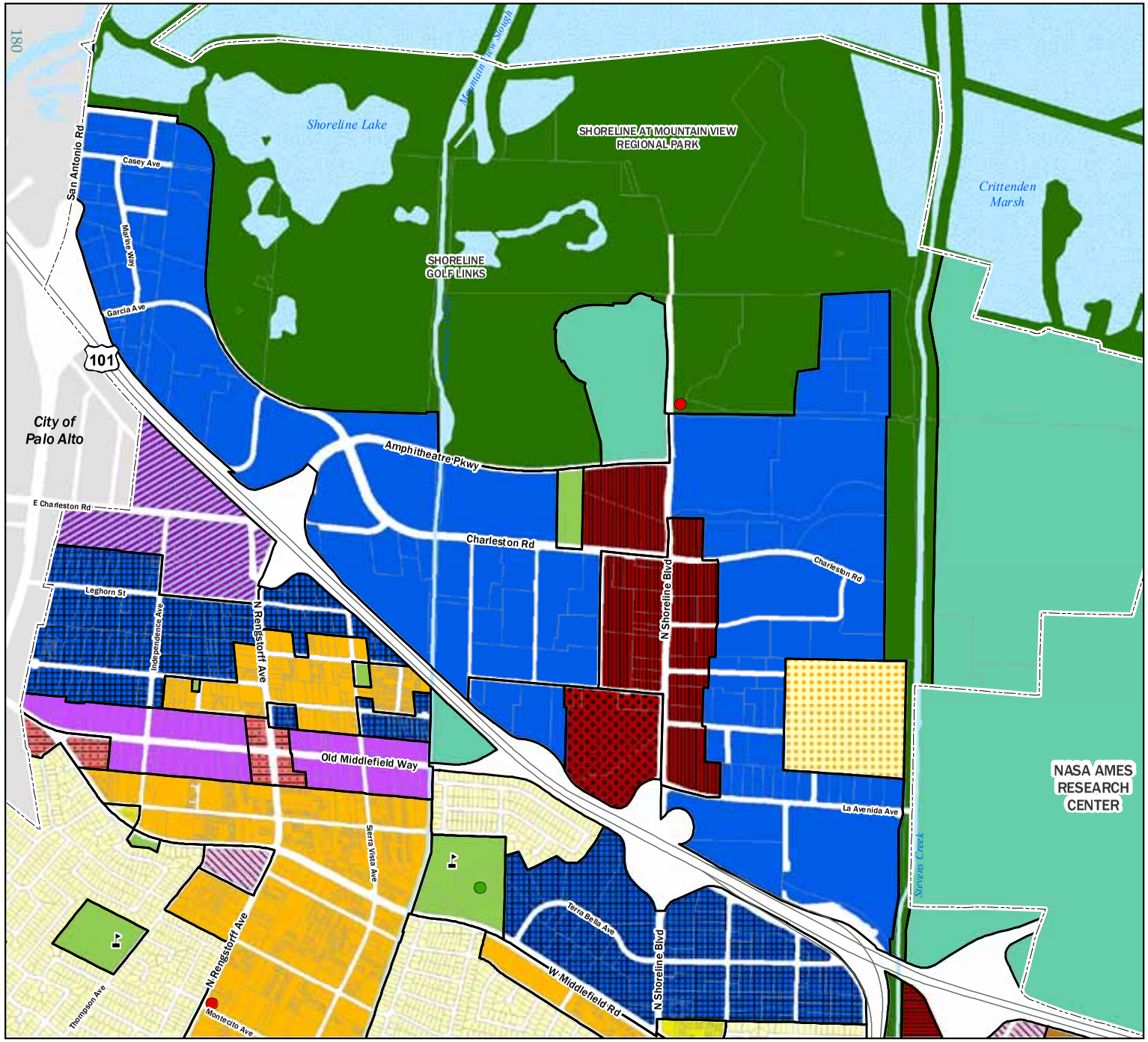


APPENDIX B - 2030 GENERAL PLAN LAND USE MAPS

General Plan Land Use Maps





GENERAL PLAN LAND USE MAP

North

Land Use Designations

Residential
- Low Density Residential
- Medium Low Density Residential
- Medium Density Residential
- Medium High Density Residential
- High Density Residential
- Mobile Home Park

Commercial
- Neighborhood Commercial
- General Commercial
- Industrial / Regional Commercial

Office / Industrial
- Office
- General Industrial
- High-Intensity Office

Mixed-Use
- Neighborhood Mixed-Use
- General Mixed-Use
- Mixed-Use Corridor
- North Bayshore Mixed-Use
- Mixed-Use Center
- Downtown Mixed-Use

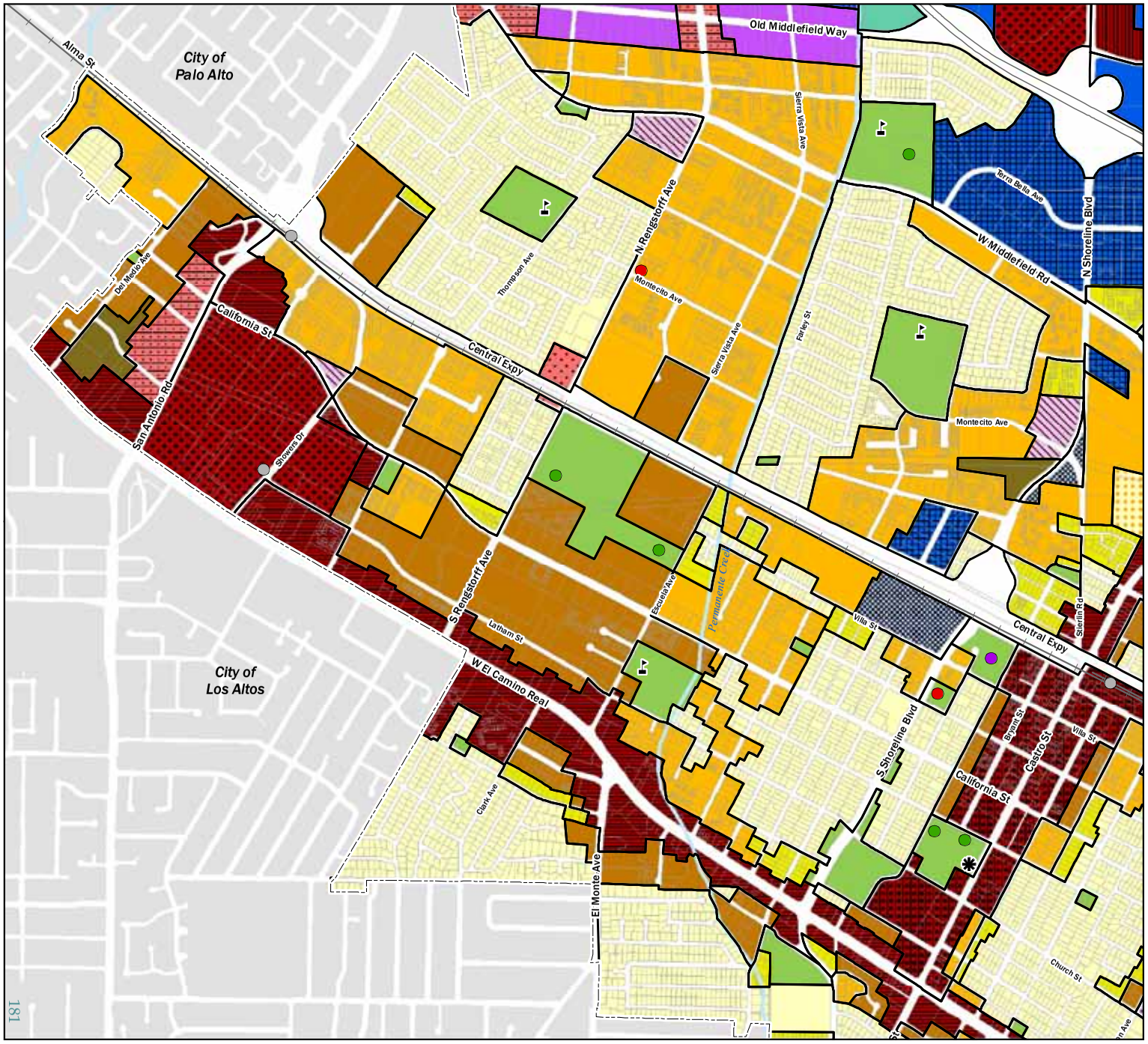
Public / Institutional
- Parks, Schools & City Facilities
- Regional Park
- Institutional

Public Facilities
- City Operations & Administration
- Transit Station
- Community Facility
- Fire Station
- School
- City Hall

- City Limits
- Parcels
- Water Bodies
- Freeways
- Rail
- Creeks

The Land Use Map is one of several General Plan diagrams that affect development. The General Plan text is also an integral part of the City's land use plan and must also be consulted.
The City of Mountain View is neither liable nor responsible for use of this map beyond its intended purposes.

Feet
0 500 1,000 1,500 2,000



GENERAL PLAN LAND USE MAP

West

Land Use Designations

Residential

- Low Density Residential
- Medium Low Density Residential
- Medium Density Residential
- Medium High Density Residential
- High Density Residential
- Mobile Home Park

Commercial

- Neighborhood Commercial
- General Commercial
- Industrial / Regional Commercial

Office / Industrial

- Office
- General Industrial
- High-Intensity Office

Mixed-Use

- Neighborhood Mixed-Use
- General Mixed-Use
- Mixed-Use Corridor
- North Bayshore Mixed-Use
- Mixed-Use Center
- Downtown Mixed-Use

Public / Institutional

- Parks, Schools & City Facilities
- Regional Park
- Institutional

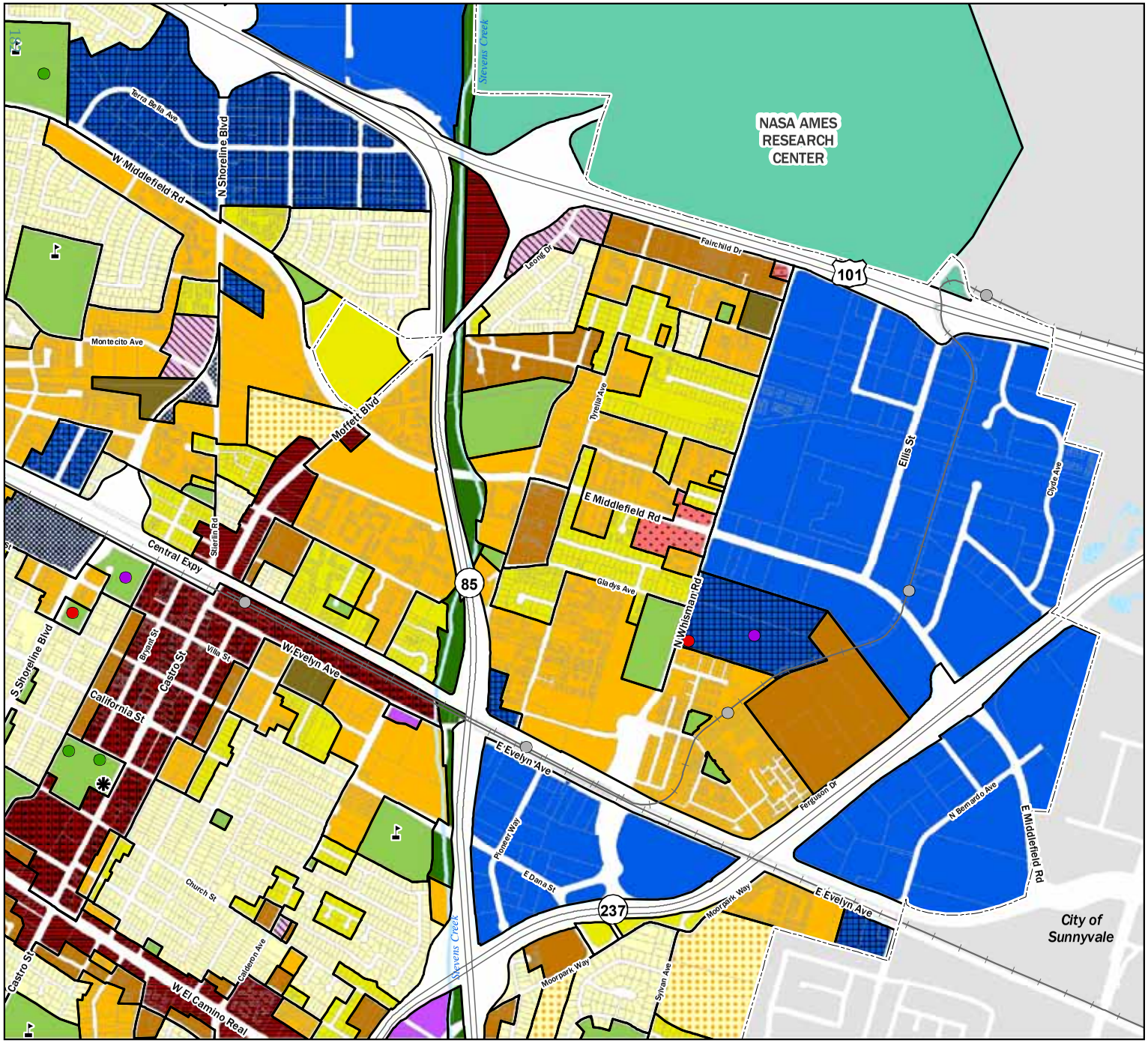
Public Facilities

- City Operations & Administration
- Transit Station
- Community Facility
- Fire Station
- School
- City Hall

- City Limits
- Parcels
- Water Bodies
- Freeways
- Rail
- Creeks

The Land Use Map is one of several General Plan diagrams that affect development. The General Plan text is also an integral part of the City's land use plan and must also be consulted.
The City of Mountain View is neither liable nor responsible for use of this map beyond its intended purposes.

0 500 1,000 1,500 2,000 Feet



GENERAL PLAN LAND USE MAP

East

Land Use Designations

Residential

- Low Density Residential
- Medium Low Density Residential
- Medium Density Residential
- Medium High Density Residential
- High Density Residential
- Mobile Home Park

Commercial

- Neighborhood Commercial
- General Commercial
- Industrial / Regional Commercial

Office / Industrial

- Office
- General Industrial
- High-Intensity Office

Mixed-Use

- Neighborhood Mixed-Use
- General Mixed-Use
- Mixed-Use Corridor
- North Bayshore Mixed-Use
- Mixed-Use Center
- Downtown Mixed-Use

Public / Institutional

- Parks, Schools & City Facilities
- Regional Park
- Institutional

Public Facilities

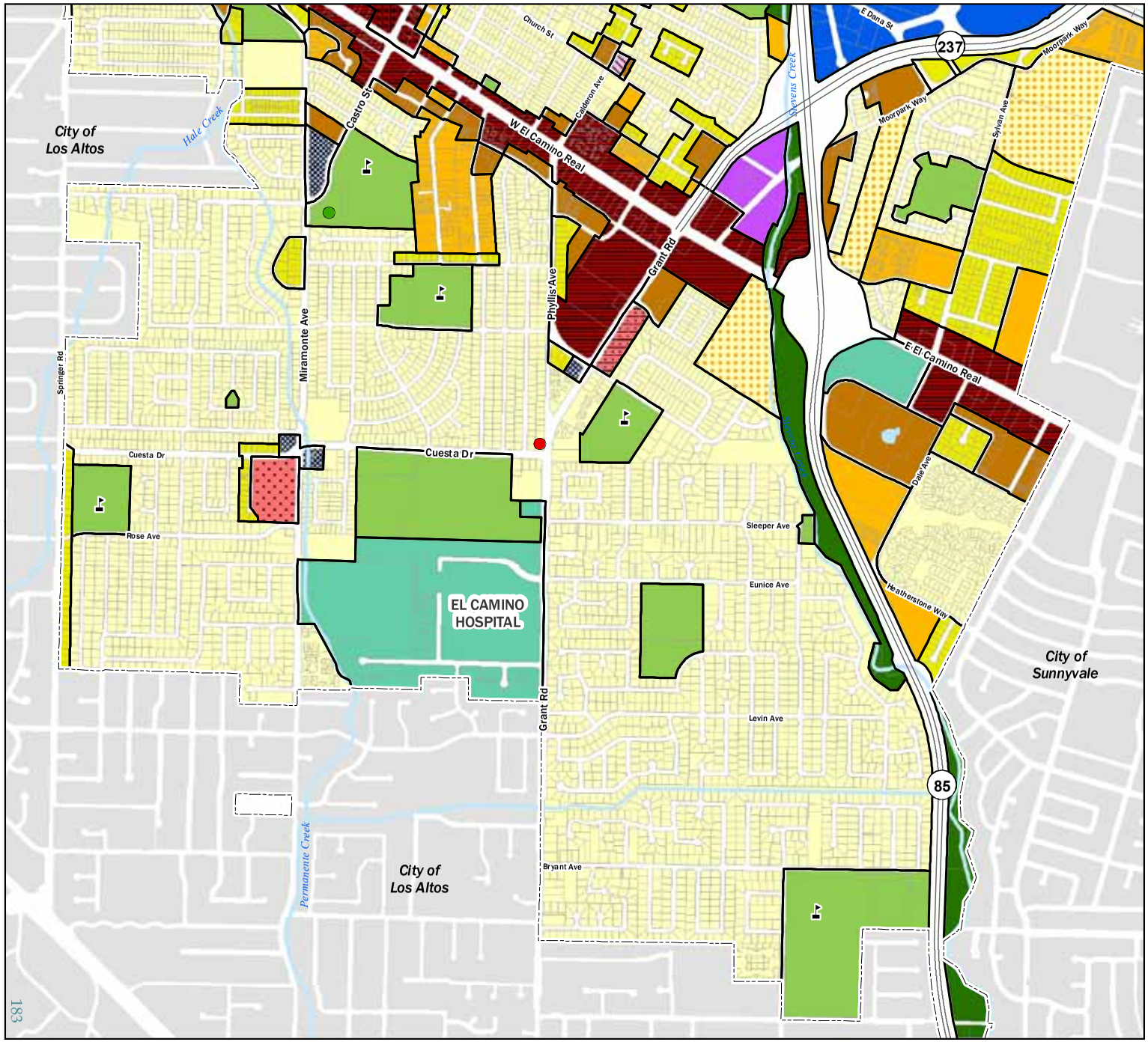
- City Operations & Administration
- Transit Station
- Community Facility
- Fire Station
- School
- City Hall

- City Limits
- Parcels
- Water Bodies
- Freeways
- Rail
- Creeks

The Land Use Map is one of several General Plan diagrams that affect development. The General Plan text is also an integral part of the City's land use plan and must also be consulted.

Feet

0 500 1,000 1,500 2,000



GENERAL PLAN LAND USE MAP

South

Land Use Designations

Residential
- Low Density Residential
- Medium Low Density Residential
- Medium Density Residential
- Medium High Density Residential
- High Density Residential
- Mobile Home Park

Commercial
- Neighborhood Commercial
- General Commercial
- Industrial / Regional Commercial

Office / Industrial
- Office
- General Industrial
- High-Intensity Office

Mixed-Use
- Neighborhood Mixed-Use
- General Mixed-Use
- Mixed-Use Corridor
- North Bayshore Mixed-Use
- Mixed-Use Center
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The Land Use Map is one of several General Plan diagrams that affect development. The General Plan text is also an integral part of the City's land use plan and must also be consulted.
The City of Mountain View is neither liable nor responsible for use of this map beyond its intended purposes.

0 500 1,000 1,500 2,000 Feet

APPENDIX C - PLANS AND POLICIES

TABLE OF CONTENTS

C.1. CITY OF MOUNTAIN VIEW

C.1.1. MOUNTAIN VIEW 2030 GENERAL PLAN

On July 10, 2012, the City Council adopted the 2030 General Plan, a comprehensive update to the City's 1992 General Plan. The 2030 General Plan is the guiding document for the City's physical development. It includes goals, policies and graphics that convey a long-term vision and guide local decision-making to achieve that vision. The General Plan is the foundation for zoning regulations, subdivisions and public works plans. It also addresses other issues related to the City's physical environment, such as noise and safety. A list of the General Plan 2030 components most applicable to bicycling is provided below.

MOBILITY POLICIES

GOAL MOB-1: Streets that safely accommodate all transportation modes and persons of all abilities.

- **MOB 1.2:** *Accommodating all modes.* Plan, design and construct new transportation improvement projects to safely accommodate the needs of pedestrians, bicyclists, transit riders, motorists and persons of all abilities.
- **MOB 1.3:** *Pedestrian and bicycle placemaking*. Promote pedestrian and bicycle improvements that improve connectivity between neighborhoods, provide opportunities for distinctive neighborhood features and foster a greater sense of community.

GOAL MOB-3: A safe and comfortable pedestrian network for people of all ages and abilities at all times.

- **MOB 3.3**: *Pedestrian and bicycle crossings.* Enhance pedestrian and bicycle crossings at key locations across physical barriers.
- **MOB 3.5**: *Walking and bicycling outreach.* Actively engage the community in promoting walking and bicycling through education, encouragement and outreach on improvement projects and programs.

GOAL MOB-4: A comprehensive and well-used bicycle network that comfortably accommodates bicyclists of all ages and skill levels

- **MOB 4.1**: *Bicycle network.* Improve faculties and eliminate gaps along the bicycle network to connect destinations across the city.
- **MOB 4.2**: *Planning for bicycles.* Use planning processes to identify or carry out improved bicycle connections and bicycle parking.
- **MOB 4.3**: *Public bicycle parking*. Increase the amount of well-maintained, publically accessible bicycle parking and storage throughout the city.
- **MOB 4.4**: *Bicycle parking standards.* Maintain bicycle parking standards and guidelines for bicycle parking and storage in convenient places in private development to enhance the bicycle network.
- **MOB 4.5:** *Promoting safety.* Educate bicyclists and motorists on bicycle safety.

GOAL MOB-6: Safe and convenient pedestrian and bicycling access to schools for all children.

- **MOB 6.2:** *Prioritizing projects*. Ensure that bicycle and pedestrian safety improvements include projects to enhance safe accessibility to schools.
- **MOB 6.4**: *Education*. Support education programs that promote safe walking and bicycling to schools.

GOAL MOB-11: Well-maintained transportation infrastructure.

- **MOB 11.1**: *Funding.* Ensure sustainable funding levels for maintaining all city transportation infrastructure.
- **MOB 11.2**: *Prioritized existing facilities*. Prioritize maintenance and enhancement of existing facilities over expansion.
- **MOB 11.3**: *Facility types.* Maintain and enhance walking, bicycling and transit-related facilities to address community needs.
- **MOB 11.4**: *Life-cycle costs*. Examine life-cycle costs when comparing project alternatives in order to make the best use of limited City resources.

PARKS AND OPEN SPACE POLICIES

GOAL POS-2: Parks and public facilities equitably distributed throughout the community and accessible to residents and employees.

- **POS 2.3**: *Pedestrian and bicycle access*. Improve pedestrian and bicycle access to parks, and create new connections to parks to minimize pedestrian and bicycle travel distances.

GOAL POS-6: An integrated system of multi-use trails connecting to key local and regional destinations and amenities.

- **POS 6.1**: *Citywide network of pathways*. Develop a citywide network of pedestrian and bicycle pathways to connect neighborhoods, employment centers, open space resources and major destinations within the city.

C.1.2. MOUNTAIN VIEW CITY CODE

The Mountain View City Code includes provisions enacted by the City Council to maintain a healthy, safe and clean environment, carry out established land use policy and preserve the quality-of-life in the community. A brief summary of bicycle-related Code provisions is provided below.

CHAPTER 19 MOTOR VEHICLES AND TRAFFIC

SEC. 19.2. Application of chapter to bicycle riders and drivers of animals. Every person riding a bicycle or riding or driving an animal upon the highway shall be granted all the rights and shall be subject to all the duties applicable to the driver of a vehicle by this chapter, except those provisions which, by their very nature, can have no application. *(Ord. No. 175.587, 1/25/60.)*

SEC. 19.51. Riding bicycles on sidewalks prohibited. No person shall ride a bicycle upon any sidewalk in the business district. *(Ord. No. 175.587, 1/25/60.)*

SEC. 19.52. Method of riding upon roadways. The rider of any bicycle on the roadway shall ride as nearly as practicable to the right-hand curb or edge of the roadway. *(Ord. No. 175.587, 1/25/60.)*

SEC. 19.54. Use of roller skates, in-line skates, skateboards, bicycles and coasters in business districts or any city-owned parking structures. No person shall skate with roller skates or in-line roller skates, or propel any coaster-brake wagons or vehicles or skateboards or ride bicycles upon and along any sidewalk in any business district or in any city-owned parking structure, except riding a bicycle is allowed in city-owned parking structures for the limited purpose of accessing bicycle parking. *(Ord. No. 175.587, 1/25/60; Ord No. 12.92, 5/12/92.)*

SEC. 19.57. Bicycle parking spaces (e). The city traffic engineer is hereby authorized to designate and establish bicycle parking spaces for use at such places and during such times as he may deem suitable and necessary. The city traffic engineer may also authorize the placing of bicycle parking racks in the spaces so designated. When official signs or markings restricting parking to bicycles only are in place, bicycles shall be parked only in such places, and no person shall park or stand any vehicle other than a bicycle or other two-wheeled vehicle in such a space. It shall further be unlawful to park any bicycle on any sidewalk except as hereinabove specified. *(Ord. No. 175.587, 1/25/60.)*

CHAPTER 36 ZONING

SEC. 36.32. Purpose (d). Encourage the use of alternative modes of transportation by providing for safe, adequate and convenient bicycle and carpool parking.

SEC. 36.32.50. Required number of parking spaces. Each land use shall provide the minimum number of off-street parking spaces required by this section.

Uses not listed. Land uses not specifically listed by the following subsection B below shall provide parking as required by the zoning administrator. In determining appropriate off-street parking requirements, the zoning administrator shall use the requirements of subsection B below as a general guide in determining the minimum number of off-street parking spaces necessary to avoid undue interference with public use of streets and alleys.

Parking requirements by land use. The following minimum number of parking spaces shall be provided for each use:

TABLE C-1 MOUNTAIN VIEW CITY CODE REQUIRED BICYCLE PARKING SPACES		
Land Use Type	**Vehicle Spaces Required**	**Bicycle Spaces Required**
Manufacturing and General Industrial		
Manufacturing and industrial, general	1 space for each 250 sq. ft. of gross floor area plus 1 space for each vehicle operated in connection with each on-site use	5 percent of vehicle spaces
Recycling facilities	Space shall be provided for the anticipated peak load of customers to circulate, park and deposit recyclable materials. If the facility is open to the public, an on-site parking area shall be provided for a minimum of 10 customers at any one time	None
	One employee parking space shall be provided on-site for each commercial vehicle operated by the processing center	5 percent of vehicle spaces
Recreation, Education, Public Assembly Uses		
Centers	1 space for each employee, plus 1 space for every 15 children for visitor parking and drop-off areas	2 percent of vehicle spaces
Large family care homes	1 space for each employee	
Churches, mortuaries	1 space for each 170 sq. ft. of gross floor area	5 percent of vehicle spaces for churches; 2 spaces for mortuaries
Indoor recreation and fitness centers		
Arcades	1 space for each 200 sq. ft. of gross floor area	5 percent of vehicle spaces
Bowling alleys	Parking study required	
Dance halls	Parking study required	None
Health/fitness clubs	1 space for each 200 sq. ft. of gross floor area	5 percent of vehicle spaces
Libraries and museums	Parking study required	5 percent of vehicle spaces
Membership organizations	1 space for every 3.5 fixed seats	5 percent of vehicle spaces
Pool and billiard rooms	2.5 spaces for each table	5 percent of vehicle spaces
Schools	Parking study required	Parking study required
Studios for dance, art, etc.	1 space for each 2 students	5 percent of vehicle spaces
Tennis/racquetball courts	Parking study required	5 percent of vehicle spaces
Theaters and meeting halls	1 space for every 3.5 fixed seats	5 percent of vehicle spaces
Residential Uses		
Companion units (See Section 36.12.60	1 space per bedroom	None
Multi-family dwellings		
Studio unit	1.5 spaces per unit, 1 space shall be covered	1 space per unit (refer to Section 36.32.85.a.1)
1-bedroom unit less than or equal to 650 square feet	1.5 spaces per unit, 1 space shall be covered	
1-bedroom unit greater than 650 square feet	2 spaces per unit, 1 space shall be covered.	
2-bedrooms or more	2 spaces per unit, 1 space shall be covered.	

TABLE C-1 MOUNTAIN VIEW CITY CODE REQUIRED BICYCLE PARKING SPACES		
Land Use Type	**Vehicle Spaces Required**	**Bicycle Spaces Required**
Guest	15 percent of the parking spaces required for the project shall be conveniently located for guest parking. The zoning administrator may increase the parking requirement to 2.3 spaces per unit if needed to ensure adequate guest spaces	1 space per 10 units
Rooming and boarding houses	Parking study required	Parking study required
Senior congregate care housing	1.15 spaces per unit; half the spaces shall be covered	2 percent of vehicle spaces
Senior care facility	Parking study required	Parking study required
Single-family housing and each dwelling unit in a duplex (See Section 36.10.15 - Single-Family; See Section 36.10.50 for unit in duplex)	2 spaces, 1 of which shall be covered	None
Single-room occupancies	1 space per dwelling unit; plus 1 for every nonresident employee. Reduction of up to 0.50 space per unit may be granted through the conditional use permit process	1 space per 10 units
Small-lot, single-family developments	2 spaces, one of which shall be covered, and 0.50 guest space per unit	None
Townhouse developments		
Per unit	2 spaces, one shall be covered.	1 space per unit
Guest	Guest parking shall equal in total an additional 0.6 space for each unit, for an aggregate ratio of 2.6 spaces for each unit.	
Rowhouse developments		
Studio unit	1.5 spaces per unit, 1 space shall be covered.	1 space per unit
1-bedroom or more	2 covered spaces.	
Guest	Guest parking shall equal in total an additional 0.3 space for each unit.	
Retail Trade		
Auto, mobile home, vehicle and parts sale	1 space for each 450 sq. ft. of gross floor area for showroom and office, plus 1 space for each 2,000 sq. ft. of outdoor display area, plus 1 space for each 500 sq. ft. of gross floor area for vehicle repair, plus 1 space for each 300 sq. ft. of gross floor area for the parts department	5 percent of vehicle spaces
Furniture, furnishings and home equipment stores	1 space for each 600 sq. ft. of gross floor area	5 percent of vehicle spaces
Plant nurseries	Parking study required	Parking study required
Restaurants, cafés, bars, other eating/drinking places		
Take-out only	1 space for each 180 sq. ft. of gross floor area	
Fast food (counter service)	1 space for each 100 sq. ft.; minimum 25 spaces	5 percent of vehicle spaces

TABLE C-1 MOUNTAIN VIEW CITY CODE REQUIRED BICYCLE PARKING SPACES		
Land Use Type	**Vehicle Spaces Required**	**Bicycle Spaces Required**
Table service	1 space for each 2.5 seats or 1 space for each 100 sq. ft. of gross floor area, whichever is greater	
Outdoor seating	1 space for each 2.5 seats	
Retail stores		
General merchandise	1 space for each 180 sq. ft. of gross floor area	5 percent of vehicle spaces
Warehouse retail	Parking study required	Parking study required
Service stations	1 space for each 180 sq. ft. of gross floor area	None
Shopping centers	1 space for each 250 sq. ft. of gross floor area	5 percent of vehicle spaces
Service uses		
Animal service establishment	1 space for each 200 sq. ft. of gross floor area	2 percent of vehicle spaces
Banks and financial services	1 space for each 300 sq. ft. of gross floor area, plus one space per ATM	5 percent of vehicle spaces
Hotels and motels	1 space for each guest room, plus 1 space for each 2 employees, plus as required for ancillary uses	2 percent of vehicle spaces
Medical services	Clinic, offices, labs, under 20,000 sq. ft.	1 space for each 150 sq. ft. of gross floor area
Clinics, offices, labs, greater than 20,000 square feet	1 space for each 225 sq. ft. of gross floor area	2 percent of vehicle spaces
Extended care	1 space for each 3 beds, plus 1 space for each employee	
Hospitals	1 space for each patient bed	
Offices, administrative, corporate, research and development	1 space for each 300 sq. ft. of gross floor area	5 percent of vehicle spaces
Personal services	1 space for each 180 sq. ft. of gross floor area	5 percent of vehicle spaces
Vehicle washing	Parking study required	None
Repair and maintenance—vehicle		
Lube-n-tune	2 spaces per service bay	None
Repair garage	5 spaces, plus 1 space for each 200 sq. ft. of gross floor area	None
Storage, personal storage facilities	1 space for each 2,000 sq. ft. of gross floor area plus 2 spaces for any resident manager	None
Warehousing and data centers	1 space for each 500 sq. ft. of gross floor area plus 1 space for each company vehicle	5 percent of vehicle spaces

SEC. 36.32.85. Bicycle parking facilities. Bicycle parking facilities shall be provided in compliance with this section and the Bicycle Parking Guidelines provided by the Community Development Department.

CLASSIFICATION OF BICYCLE PARKING FACILITIES

Class I facilities. Intended for long-term parking (e.g., for employees); protects against theft of entire bicycle and of its components and accessories. The facility shall also protect the bicycles from inclement weather, including wind-driven rain. Three (3) design alternatives for Class I facilities are as follows:

a. **Bicycle locker.** A fully enclosed, weather-resistant space accessible only by the owner or operator of the bicycle. Bicycle lockers may be premanufactured or designed for individual sites. All bicycle lockers shall be fitted with key locking mechanisms. This is the preferred Class I facility;

b. **Restricted access.** Class III bicycle parking facilities located within an interior locked room or locked enclosure accessible by key only to the owners or operators of the bicycles parked within. The maximum capacity of each restricted room or enclosure shall be ten (10) bicycles; and

c. **Enclosed cages.** An exterior enclosure for individual bicycles, where contents are visible from the sides but the top is covered, and which can be securely locked by a user-provided lock. This type of facility is only to be used for retail and service uses and multiple-family development.

d. **Other.** Class I facilities other than lockers, restricted access rooms or enclosed cages, but providing the same level of security, may be approved by the zoning administrator. A written building management policy of permitting bicycles to be stored in private offices or multi-family dwellings (including apartments, townhomes and condominiums), or in designated areas within the structure where adequate security is provided, may be approved by the zoning administrator as an alternative to Class I facilities.

Class II and Class III facilities. Intended for short term parking (e.g., for shoppers, visitors). A stationary object to which the user can lock the frame and both wheels. Should be protected from weather whenever possible. The zoning administrator may require either a Class II or Class III facility depending on where the facilities are to be located.

- **Class II**. Class II facilities are designed so that the lock is protected from physical assault and therefore the facility need not be within constant visual range. A Class II rack shall accept padlocks and high security, U-shaped locks.
- **Class III.** Class III facilities are less secure and, therefore, shall be within constant visual range of persons within the adjacent structure or located in well-traveled pedestrian areas.

Bicycle parking design standards:

e. **Clearance**. Class I(b), Class II and Class III facilities shall provide at least a twenty-four (24) inch clearance from the centerline of each adjacent bicycle, and at least eighteen (18) inches from walls or other obstructions;

f. **Aisle**. An aisle or other space shall be provided for bicycles to enter and leave the facility. This aisle shall have a width of at least five (5) feet to the front or the rear of a standard six (6) foot bicycle parked in the facility;

g. **Building entrance—Class I.** Class I facilities at employment sites shall be located near the structure entrances used by employees;

h. **Building entrance—Class II and III**. Class II or Class III facilities intended for customers or visitors shall be located near the main structure used by the public;

i. **Paving.** Paving of bicycle parking areas is required;

j. **Convenience.** Convenient access to bicycle parking facilities shall be provided. Where access is via a sidewalk or pathway, curb ramps shall be installed where appropriate;

k. **Lighting.** Lighting shall be provided in all bicycle parking areas. In both exterior and interior locations, lighting of not less than one (1) foot candle of illumination at ground level shall be provided; and

l. **Review.** The zoning administrator shall have the authority to review the design of all bicycle parking facilities required by this section with respect to safety, security and convenience. The zoning

administrator shall consider the bicycle parking guidelines in determining the type, location and design of bicycle parking facilities.

Number and type of bicycle spaces required. The following standards shall apply:

a. **Number of bicycle parking spaces.** The number of bicycle parking spaces required is determined by Section 36.32.50 (Required Parking Spaces); and

b. **Class of bicycle parking spaces.** The zoning administrator may require that a certain percentage of the spaces be Class I, Class II or Class III depending on the potential users. The zoning administrator shall use the Bicycle Parking Guidelines in determining the appropriate proportions of each class.

Showers and changing room standards. Two (2) employee shower and changing room facilities, one each for male and female employees, shall be provided for any new structure constructed or for any addition to or enlargement of, any existing structure requiring over two hundred (200) employee parking spaces. This requirement is applicable to industrial, research and development, corporate office and similar high-employment businesses. The floor area used for shower and changing rooms shall not be included in the calculations for floor area ratio limits. *(Ord. No. 18.13, § 1, 12/10/13)*

SEC. 36.32.90. Nonconforming parking areas. Any automobile or bicycle parking facilities lawfully existing on the effective date of this ordinance shall be "grandfathered" and may continue pursuant to Section 36.06.65, Continuing existing uses, of this chapter except that parking required for additions and expansions of existing buildings and changes in land use shall comply with all provisions of this article. *(Ord. No. 18.13, § 1, 12/10/13)*

CHAPTER 38 REGULATION THE USE OF CITY PARKS AND OTHER CITY FACILITIES

SEC. 38.9. Prohibited activities in parks or facilities. The following activities are prohibited in any park or recreational facility:

f. […] Operating or riding a motorcycle, moped, motorbike, motorized bicycle, motorized scooter or any other vehicle on any path or walkway in a park or facility. This section does not apply to wheelchairs and other devices for the disabled or vehicles in the service of the city parks or facility. This section shall not apply to the use of an electric personal assistive mobility device (EPAMD) on any city trail or walkway within a city park or facility.

g. Stopping, parking, riding or driving any horse or other animal, or propelling or parking any bicycle, unicycle, skateboard, roller skates, roller blades or other wheeled apparatus elsewhere than on the areas designated for those uses or upon the lawn or landscaped areas of a park or facility. This section does not apply to wheelchairs and other devices for the disabled or vehicles in the service of the city parks or facilities.

h. Operating, riding or propelling a vehicle, bicycle or other wheeled apparatus on a bike path or walkway at a speed greater than is reasonable and prudent under the conditions then existing. […]

x. Skating with roller skates, in-line skating or propelling any wagon, scooter or vehicle, skateboard, bicycle or other wheeled apparatus, except wheelchairs or other apparatus for the disabled, upon any city-owned tennis court.

SEC. 38.18. Special provisions for Shoreline at Mountain View. In addition to the general provisions set forth in Sec. 38.1 through 38.19 inclusive, the following provisions shall also apply only to Shoreline at Mountain View Park:

g. […] Bicycle riders, hikers and joggers shall be limited in the use of all premises to the prepared trails and boardwalks designated for such purposes. Skateboards shall be prohibited in Shoreline at Mountain View Park. […]

SEC. 38.105. Use of roller skates, in-line roller skates, skateboards, bicycles and coasters on the City Hall Plaza, in the city-owned parking structure at City

Hall or on the outdoor amphitheater area adjacent to the Center for the Performing Arts at City Hall. No person shall skate with roller skates or in-line roller skates or propel any coaster-brake wagons or vehicles or skateboards, or ride bicycles on the City Hall Plaza, in the city-owned parking structure at City Hall or on the outdoor amphitheater area adjacent to the Center for the Performing Arts at City Hall, except riding a bicycle is allowed in the city-owned parking structure at City Hall for the limited purpose of accessing bicycle parking." *(Ord. No. 6.14, § 1, 4/22/14.)*

C.1.3. SCHOOL ZONE SPEED LIMIT

In January 2014, the City of Mountain View established a 15 mile per hour (MPH) and extended 25 MPH school zone speed limit around public and private schools. The 15 MPH speed limit is established when children are present in zones up to 500 feet from school grounds. The 25 MPH speed limit is established when children are present in zones up to 1,000 feet from school grounds. Sixteen streets meet the basic criteria for the 15 MPH zones and one street meets the criteria for an extended 25 MPH school zone: Hans Avenue, Barbara Avenue, Martens Avenue, Escuela Avenue, Latham Street, Thompson Avenue, Rose Avenue, San Luis Avenue, San Pierre Way, Montecito Avenue, Rock Street, Mountain View Avenue, Dana Street, Easy Street, Bryan Avenue, and Truman Avenue.

C.1.4. MOUNTAIN VIEW CAPITAL IMPROVEMENT PROGRAM

The Mountain View Capital Improvement Program (CIP) is an annually adopted plan that identifies capital projects funding priorities for the City.

C.1.5. CITY OF MOUNTAIN VIEW PARKS AND OPEN SPACE PLAN

The Parks and Open Space Plan (POSP) represents a review of parks and open space needs throughout the City as well as within each neighborhood Planning Area. The POSP offers both a long-range vision and an evaluation of current needs based on new development and future parks and open space projects. The Plan also prioritizes Planning Areas that are most in need of additional open space. The last update of the POSP was adopted by the City Council in 2014. The current POSP is a periodic update and intended to ensure the POSP remains relevant and responsive to the changing needs of the community. Key recommendations of the POSP that relate to the BTP Update include:

- Improve access to parks, trails, and pathways through safe street crossings and other techniques;
- Continue developing a City-wide network of trails and pathways to connect neighborhoods to each other and to open space resources, trails, and transit centers; and
- Look for opportunities to develop an east-west trail corridor.

C.1.6. SAN ANTONIO PRECISE PLAN

The San Antonio Precise Plan (SAPP) implements the goals and policies set forth in the City of Mountain View 2030 General Plan (General Plan) for the San Antonio Precise Plan Area (SAPP Area). Using input gathered through a separate San Antonio visioning process and during the Precise Plan process, the SAPP provides guiding principles, policies, development criteria and implementation strategies to coordinate future private development and public improvements given the unique opportunities and characteristics of the SAPP Area. The SAPP is a regulatory document guiding how future development in the SAPP Area will achieve the General Plan vision to transform the existing regional commercial area into a mixed-use core within a broader existing residential neighborhood, taking into account the area's proximity to transit services and location along two of the most heavily traveled corridors in the City: El Camino Real and San Antonio Road. It identifies California Street, Latham Street, Showers Drive, Pacchetti Way and new internal street corridors as primary bicycle routes. The SAPP was adopted by City Council in December 2014.

C.1.7. EL CAMINO REAL PRECISE PLAN

The purpose of this Precise Plan is to provide a roadmap for future changes and investment to the El Camino Real

corridor. These changes will transform its auto-oriented character into a vibrant, multi-modal and revitalized area, providing gathering spaces and key destinations, a new mix of uses and improvements promoting safety and comfort. The El Camino Real Precise Plan contains guidance for this change in the form of standards and guidelines for new development, direction for potential street improvements, and implementation actions. The El Camino Real Precise Plan was adopted by City Council in November 2014. The El Camino Real Precise Plan proposes the following bicycle facilities:

- El Camino Real bicycle facilities (buffered bike lanes, cycletrack, or other facilities) between Calderon Avenue and the Sunnyvale/Mountain View border;
- Prioritized bicycle crossings of El Camino Real, and continuation of bicycle facilities on either side of El Camino Real;
- Additional bicycle lanes or cycletrack on El Camino Real based on specific criteria;
- El Camino Real bikeshare stations;
- A parallel Bicycle Boulevard treatments, such as Latham Street and Church Street; and
- Bicycle parking facilities at Village Centers and Neighborhood Corners.

C.1.8. NORTH BAYSHORE PRECISE PLAN

The North Bayshore Precise Plan is based on the bold vision set forth in the 2030 General Plan. In November 2014, City Council adopted the North Bayshore Precise Plan that will guide change and investment in regard to land use, sustainability, habitat preservation, economic development, and mobility. The North Bayshore Precise Plan includes transportation improvements to support an additional 3,500 pedestrian and bicycle trips in and out of the Precise Plan area during the peak period. Improvements include North Bayshore cycletracks and green streets, Shoreline Boulevard cycletrack and a bike/pedestrian bridge over US Route 101.

C.1.9. EAST WHISMAN PRECISE PLAN

City of Mountain View will amend the existing Whisman Station Priority Development Area (PDA) to include the East Whisman area. The proposed PDA boundaries include US Route 101 Freeway to the north, the city limits to the east, Central Expressway to the south, and Whisman Road to the west. The amendment will develop an East Whisman Precise Plan, with the following key objectives: (1) increase employment near transit, (2) improve ridership and accessibility to transit, and (3) provide more jobs in close proximity to existing residential neighborhoods. The City is also funding an East Whisman infrastructure plan, including transit-related improvements, to accommodate new or expanded infrastructure needs in the area. The East Whisman Precise Plan is scheduled to be completed in 2016.

C.1.10. SOUTH WHISMAN PRECISE PLAN

In April 2009, the City Council adopted the South Whisman Precise Plan (Precise Plan) for approximately 38-acres of land bounded by Ferguson Drive and Highway 237 to the east, office properties fronting East Middlefield Road to the north, the Whisman Station residential neighborhood to the south, and the light rail transit line tracks to the west. The purpose of the Precise Plan is to establish a comprehensive framework of development objectives, standards, and design guidelines for a new residential neighborhood and public park.

The Precise Plan envisions a walkable neighborhood with convenient access to transit, parks, and services. A centrally located public park will become the primary focal point of the development and be shared by South Whisman residents and the surrounding community. All new streets will be public streets designed in a traditional interconnected grid pattern to provide multiple connections and routes for vehicles, bicyclists, and pedestrians. The Precise Plan includes a mix of housing types and densities, and public and private open spaces located in close proximity to the Whisman Light Rail Station.

C.1.11. SHORELINE BOULEVARD TRANSPORTATION CORRIDOR STUDY

The purpose of the Shoreline Boulevard Transportation

Corridor Study (Corridor Study) was to determine the feasibility of, and develop a conceptual design for, integrated transit, bicycle, and pedestrian facilities in the Shoreline Boulevard Corridor from the Downtown Transit Center to North Bayshore (in support of the commute mode shift targets). In November 2014, City Council approved the proposed conceptual plan for the Shoreline Boulevard Transportation Corridor improvements. Key components of the recommended package of Corridor improvements:

- Construction of a new bicycle/pedestrian bridge and connecting cycle track over U.S. Route 101.
- Enhancements to existing bicycle facilities on the U.S. Route 101 overpass.
- Improvements to the intersection at Shoreline Boulevard/Terra Bella Avenue, including a new scramble phase for bicyclists and pedestrians.
- New protected intersection features at the Shoreline Boulevard and Middlefield Road intersection.
- Construction of a center-running, reversible transit lane on Shoreline Boulevard from Middlefield Road to Plymouth Avenue.
- Installation of one-way cycle tracks on Shoreline Boulevard from Stierlin Road to Terra Bella Avenue, including a protected bicycle lane with vehicle access to the Buddhist Temple via the Stierlin Road slip lane.
- New protected intersection features at the Montecito Avenue and Shoreline Boulevard intersection.
- New bicycle lanes on Stierlin Road, with additional pedestrian and traffic calming features.
- Intersection improvements to enhance safety and accessibility at the Castro Street/ Moffett Boulevard/ Central Expressway intersection.
- Pedestrian and bicycle access improvements, plus loading and operational changes for shuttles, at the Mountain View Transit Center.

C.2. COUNTY OF SANTA CLARA

C.2.1. 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 and is expected to be adopted by summer of 2015.

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)

C.2.2. 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, 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.

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.

C.2.3. VALLEY TRANSPORTATION AUTHORITY: VALLEY TRANSPORTATION PLAN 2040

The Valley Transportation Plan 2040 is Santa Clara County's long-range planning document that feeds into the Metropolitan Transportation Commission's (MTC's) Regional Transportation Plan (RTP) 2040 and incorporates specific needs identified by the Valley Transportation Authority (VTA) and individual cities, including Mountain View. 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.

C.3. REGIONAL

Regional planning and policy documents are far-reaching, presenting policies for all jurisdictions in a region or specific recommendations for jurisdictions running through or adjacent to the City of Mountain View (e.g., MTC and Caltrain). The MTC is the Federally designated regional transportation planning, coordinating and financing agency for the San Francisco Bay Area. The Association of Bay Area Governments (ABAG), made up of the nine counties surrounding the Bay, is the comprehensive planning agency for the region.

C.3.1. REGIONAL BICYCLE PLAN (2009)

The Regional Bicycle Plan, produced by the 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.

C.3.2. SAN FRANCISCO BAY TRAIL GAP ANALYSIS (2005)

The San Francisco Bay Trail Gap Analysis Study is a continuation of the Bay Trail Plan (1989), which seeks to complete a continuous 500-mile regional hiking and bicycling trail around the San Francisco Bay. The following policies are from the Bay Trail Plan prepared by ABAG pursuant to SB100, which the Gap Analysis supports.

- Trail alignment policies reflect the goals of the Bay Trail program—to develop a continuous trail which highlights the wide variety of recreational and interpretive experiences offered by the diverse bay environment and is situated as close as feasible to the shoreline, within the constraints defined by other policies of the plan.
- Trail design policies underscore the importance of creating a trail which is accessible to the widest possible range of trail users and which is designed to respect the natural or built environments through which it passes. Minimum design guidelines for trail development are recommended for application by implementing agencies.
- Transportation access policies reflect the need for bicycle and pedestrian access on Bay Area toll bridges, in order to create a continuous trail and to permit cross-bay connections as alternative trail routes.
- Implementation policies define a structure for successful implementation of the Bay Trail, including mechanisms for continuing trail advocacy, oversight and management.

C.3.3. CALTRAIN BICYCLE ACCESS AND PARKING PLAN (2008)

The Caltrain Bicycle Access and Parking Plan proposes improvements to the ten highest bicycle ridership stations in the system with the intent to increase the number of people that arrive at the stations by bicycle. The Mountain View Station is included in the stations assessed by the plan, which provides 141 bicycle parking spaces, including racks and locker spaces. The plan does not recommend more bicycle parking spaces, but the conversion of the racks to ones made of thinner metal and conversion of the keyed bicycle lockers to electronic

lockers. The plan identifies limited bicycle access to the northbound platform and recommends improving bicycle access from southbound Castro Street/Moffett Blvd. It also recommends reconfiguring the parking lot fence at Bush Street, the Evelyn Avenue intersection, and Bush Street to allow bike/pedestrian access through the parking lot.

C.3.4. GRAND BOULEVARD INITIATIVE

The Grand Boulevard Initiative (GBI) is a collaborative effort between multiple cities, counties, local and regional agencies to transform El Camino Real, a 43-mile corridor along the San Francisco Peninsula, into a boulevard that connects walkable, people-friendly communities. Representatives from the City of Mountain View sit on the GBI Task Force and the GBI Working Committee to ensure coordination between the GBI guiding principles and planning activity along El Camino Real. The GBI has ten guiding principles. Below are the principles that are most relevant to the Bike Plan Update.

- Strengthen pedestrian and bicycle connections with the corridor
- Reduce the distance between corridor crossings to improve connectivity with adjacent neighborhoods where appropriate.
- Provide pedestrian cut-through linkages to access parking lots, alleys and neighborhood routes between blocks, including additions to "Safe Route to Schools" paths.
- Design parallel access routes where needed to separate pedestrian and bike movements.
- Develop a balanced multimodal corridor to maintain and improve mobility of people and vehicles along the corridor

C.4. STATE

State planning and policy documents are the most far-reaching, presenting policies and goals for Regional Transportation Plans and Metropolitan Planning Organizations.

C.4.1. STATE ASSEMBLY BILL 32: GLOBAL WARMING SOLUTIONS (2006)

The Global Warming Solutions Act sets discrete actions for California to reduce greenhouse gas emissions to 1990 levels by 2020, which represent a 25 percent reduction statewide. The California Air Resources Board, the agency responsible for implementing the Bill, drafted the AB 32 Climate Change Scoping Plan, which includes a set of actions aimed at reducing greenhouse gas emissions, including encouraging more bicycling and walking as a means of transportation.

C.4.2. STATE ASSEMBLY BILL 1358: COMPLETE STREETS (2008)

AB 1358 requires the legislative body of any City or County to, upon revision of a general plan or circulation element, ensure that streets accommodate all user types, e.g. pedestrians, bicyclists, transit riders, motorists, children, persons with disabilities and elderly persons. Beginning January 1, 2011, Cities and Counties must include accommodation of all street users in Circulation Element revisions.

C.4.3. STATE SENATE BILL 375: SUSTAINABLE COMMUNITIES (2009)

Signed into law in 2008, SB 375 links land use planning with greenhouse gas emissions, first requiring the California Air Resources Board to set emission reduction goals for metropolitan planning organizations (MPO) (ABAG is the MPO for the Bay Area) and then requiring ABAG to develop a land use plan to meet that goal. ABAG must make transportation funding decisions consistent with their new plan, namely by developing a required Sustainable Communities Strategy (SCS) in the Regional Transportation Plan. The SCS must also be consistent with the Regional Housing Needs Assessment (RHNA) allocation. ABAG has already implemented a similar strategy with its Priority Development Areas (PDA), which works with local jurisdictions to concentrate housing around transit stations. The City of Mountain View compliance with ABAG's SCS and consequently SB 375 is setting minimum density and development standards when rezoning an area. Aspects

relevant to this Citywide Bicycle Transportation Plan are listed below.

- Air Resources Board (ARB) creation of regional targets for greenhouse gas emissions reduction tied to land use.
- Regional planning agencies must create a plan, including a Sustainable Communities Strategy, to meet those targets.
- Regional transportation funding decisions must be consistent with this new plan.
- RHNA guiding local housing efforts that are informed by efficient use of the transportation system.

C.4.4. STATE ASSEMBLY BILL 1193: BIKEWAYS (2014)

AB 1193 categorizes cycle tracks or separated bikeways as Class IV bikeways, requires the California Department of Transportation to establish minimum safety design criteria for each type of bikeway, and authorizes a local agency to utilize other minimum safety criteria for bikeways that meet specified conditions if adopted by resolution at a public meeting. The later provision allows local jurisdictions to choose alternative guidelines, such as the National Association of City transportation Officials (NACTO) Urban Bikeway Design Guide, if the California Department of Transportation does not adequately address local conditions.

C.4.5. STATE 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 3 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.

C.4.6. CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (2012)

This California Manual on Uniform Traffic Control Devices (California MUTCD) is published by the State of California Department of Transportation (Caltrans) and is issued to adopt uniform standards and specifications for all official traffic control devices in California, in accordance with Section 21400 of the California Vehicle Code. The California MUTCD uses a format similar to the national MUTCD. It incorporates FHWA's MUTCD in its entirety and explicitly shows which portions thereof are applicable or not applicable in California.

C.4.7. CALIFORNIA HIGHWAY DESIGN MANUAL (2012)

The California Highway Design Manual (HDM) provides detailed guidance related to planning and design of roadways, including bicycle and pedestrian facilities. Chapter 1000 Bicycle Transportation Design discusses bikeway planning and design.

C.4.8. DESIGN FLEXIBILITY IN MULTIMODAL DESIGN

On April 10, 2014, the Caltrans Chief of the Division of Design released a memorandum reaffirming its commitment to providing flexibility in design multimodal transportation systems. The Memorandum identifies the AASHTO Bike Guide and the NACTO Urban Bikeway Design Guide as valuable resources. By endorsing the NACTO Urban Bikeway Design Guide, Caltrans states that municipalities can use NACTO designs in projects, however the guidelines do not necessarily supersede the HDM or CAMUTCD. Caltrans staff and local agency staff should work together in selecting a final design solution.

C.4.9. CALIFORNIA VEHICLE CODE

The California Vehicle Code (CVC) regulates many aspects of transportation within the state, particularly vehicle use and registration, and enumerates the powers and duties of the Department of Transportation (Caltrans). Division 11 of the code also provides the legal framework, or "rules of the road," for motor vehicles,

bicycles, and pedestrians operating on public roadways in California.

CVC Section 21200 – 21212 deals specifically with bicycle use and establishes that all persons riding a bicycle are considered "vehicles," subject to most rules and regulations provided elsewhere in the Vehicle Code. This includes the right to access all state highways except where bicycles are specifically excluded by official signage for the safety of all users, and the obligation to signal at all turns.

C.4.10. CALIFORNIA GOVERNMENT CODE §65302 (COMPLETE STREETS)

California Assembly Bill (AB) 1358, also known as the Complete Streets Bill, amended the California Government Code §65302 to require that all major revisions to a city or county's Circulation Element include provisions for the accommodation of all roadway users including bicyclists and pedestrians. Accommodations include bikeways, sidewalks, crosswalks, and curb extensions. The Government Code §65302 reads:

(2)(A) Commencing January 1, 2011, upon any substantive revisions of the circulation element, the legislative body shall modify the circulation element to plan for a balanced, multimodal transportation network that meets the needs of all users of streets, roads, and highways for safe and convenient travel in a manner that is suitable to the rural, suburban, or urban context of the general plan.

(B) For purposes of this paragraph, 'users of streets, roads, and highways' means bicyclists, children, persons with disabilities, motorists, movers of commercial goods, pedestrians, users of public transportation, and seniors.

C.4.11. CALIFORNIA GREEN BUILDING STANDARDS CODE (2013)

Officially known as the CALGreen Code, this standard includes bicycle parking requirements for new developments which may be mandatory depending on the type of occupancy (**Table C-2**).

TABLE C-2 CALIFORNIA GREEN CODE BICYCLE PARKING REQUIREMENTS

Category	Description
Bicycle Parking and Changing Rooms	Comply with sections 5.106.4.1 and 5.106.4.2; or meet local ordinance or meet the applicable local ordinance, whichever is stricter.
Short-Term Bicycle Parking	If the new project or an addition or alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5 percent of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack. (Exception: Additions or alterations which add nine or less visitor vehicle parking spaces.)
Long-Term Bicycle Parking	For buildings with over 10 tenant-occupants or additions or alternations that add 10 or more vehicular parking spaces, provide secure bicycle parking for 5 percent of the tenant vehicle parking spaces being added, with minimum of one space. Acceptable parking facilities shall be convenient from the street and may include: • Covered, lockable enclosures with permanently anchored racks for bicycles; • Lockable bicycle rooms with permanently anchored racks; or • Lockable, permanently anchored bicycle lockers.
Bicycle Parking for Public Schools: Short-Term	Provide permanently anchored bicycle racks within 200 feet of the student entrance, readily visible to passers-by, for 5 percent of the student population based on total occupant load of the campus with a minimum of one two-bike capacity rack.
Bicycle Parking for Public Schools: Long-Term	Provide secure bicycle parking for 5 percent of employees, based on the total number of motorized vehicle parking capacity in the staff parking lot, with a minimum of one space. Acceptable bicycle parking facilities shall be convenient from the street or staff parking area and shall meet one of the following: • Covered, lockable enclosures with permanently anchored racks for bicycles; • Lockable bicycle rooms with permanently anchored racks; or • Lockable, permanently anchored bicycle lockers.

C.4.12. CALIFORNIA ACTIVE TRANSPORTATION PROGRAM

The Active Transportation Program (ATP) is a consolidation of existing federal and state transportation programs, including the Transportation Alternatives Program (TAP), Bicycle Transportation Account (BTA), and State Safe Routes to School (SR2S), into a single program focused on active transportation. The ATP was signed into legislation on September 26, 2013.

The purpose of ATP is to encourage increased use of active modes of transportation by achieving the following goals:

- 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 (GHG) 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.

C.5. FEDERAL

C.5.1. US DEPARTMENT OF TRANSPORTATION POLICY STATEMENT ON BICYCLE AND PEDESTRIAN ACCOMMODATION REGULATIONS AND RECOMMENDATION (2010)

This official United States Department of Transportation (DOT) Policy Statement reflects and clarifies the Department's support for the development of fully integrated active transportation networks, and emphasizes the multiple benefits of walking and bicycling. Although not associated with new or modified federal programs or guidelines, the statement does encourage specific actions for improving bicycling and walking conditions, including considering bicycling and walking as equals with other transportation modes, avoiding minimum standards for bicycle and pedestrian facilities, where feasible, in anticipation of future growth in demand, and collecting data on walking and biking trips.

C.5.2. MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES

The Manual on Uniform Traffic Control Devices (MUTCD), which is administered by the Federal Highway Administration (FHWA), is a compilation of national standards for all traffic control devices, including road markings, highway signs, and traffic signals. It is updated periodically to accommodate the nation's changing transportation needs and address new safety technologies, traffic control tools and traffic management techniques. The MUTCD, the most recent version of which was published in December 2009, includes a separate chapter (Chapter 9) on traffic control standards and guidelines specific to bicycle facilities.

C.5.3. AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS - GUIDE FOR THE DEVELOPMENT OF BICYCLE FACILITIES

Although the principle design reference document published by the American Association of State Highway and Transportation Officials (AASHTO) is often considered A Policy on Geometric Design of Highways and Streets (5th Edition), the Guide for the Planning, Design, and Operation of Bicycle Facilities has emerged as the more relevant and defining publication for technical issues dealing with bicycle facilities. This document - first published in 1981, revised in 1999, and most recently in 2012 – is intended as a design resource for "proven and tested" national best practices in bicycle design. The latest edition provides bikeway type selection guidance, bike lane guidance, signal guidance, shared-use path guidance, and affirms lane diets and road diets.

APPENDIX D - BICYCLE PARKING RECOMMENDATIONS

D.1. EXAMPLE BICYCLE PARKING CODE LANGUAGE AND RATES

The following text presents proposed language and rates for possible inclusion in the City's Zoning Code in 36.37 Parking and Loading. The City would need to conduct an zoning code amendment process to modify the existing bicycle parking requirements.

D.1.1. CODE LANGUAGE

36.37.040 NUMBER OF PARKING SPACES REQUIRED

36.37.100 BICYCLE PARKING STANDARDS

These bicycle parking requirements shall apply to the indicated activities as specified below.

1. Bicycle Parking Required for New and Existing Uses. Bicycle parking shall be provided for new development projects, additions to existing buildings, and new living units in existing buildings. Bicycle parking as prescribed hereafter shall be provided for activities occupying buildings, or portions of, which are constructed, established, wholly reconstructed, or moved onto a new lot, except to the extent that existing bicycle parking exceeds such requirements for any existing facilities. The required amount of new bicycle parking shall be based on the cumulative increase in floor area, or other applicable unit of measurement prescribed hereafter. If an existing building is altered or changed in occupancy so as to result in an increase in the number of residential living units, bicycle parking shall be provided for the new units.
2. More Than One (1) Activity on a Lot. Whenever a single lot contains different activities with the same bicycle parking requirement, the overall bicycle parking requirement shall be based on the sum of all such activities. Whenever a single lot contains activities with different bicycle parking requirements, the overall requirement shall be the sum of the requirements for each activity calculated separately.
3. Determination by Zoning Administrator. For uses not listed in the schedules of bicycle parking requirements, bicycle parking spaces shall be provided on the same basis as required for the most similar listed use, or as determined by the Zoning Administrator.
4. Standards for Required Bicycle Parking.

   A. Types of Required Bicycle Parking.

      i. Long-Term Bicycle Parking. Each long-term bicycle parking space shall consist of a locker or a rack located within a locked enclosure, such as a secure room or controlled access area, providing protection for each bicycle from theft, vandalism and weather. Long-term bicycle parking is meant to accommodate employees, students, residents, commuters, and others expected to park more than two (2) hours.

      ii. Short-Term Bicycle Parking. Short-term bicycle parking shall consist of a bicycle rack or racks and is meant to accommodate visitors, customers, messengers, and others expected to park not more than two (2) hours.

   B. Minimum Specifications for Required Bicycle Parking.

      i. All bicycle parking facilities shall be dedicated for the exclusive use of bicycle parking and shall not be intended for the use of motorized two-wheeled or similar vehicles.

      ii. All required short-term bicycle parking spaces shall permit the locking of the bicycle frame and one (1) wheel with a U-type lock, support the bicycle in a stable horizontal position without damage to wheels, frame, or components, and provide two (2) points of contact with the bicycle's frame. Art racks are subject to review by the Zoning Administrator.

      iii. All required long-term bicycle parking spaces, with the exception of individual bicycle lockers, shall permit the locking of the bicycle frame and one (1) wheel with a U-type lock and support the bicycle in a stable position without damage to wheels, frame, or components.

      iv. Bicycle parking facilities shall be securely

anchored so they cannot be easily removed and shall be of sufficient strength and design to resist vandalism and theft.

v. The overall design and spacing of such facilities shall meet the standards of subsection (3).

C. Location and Design of Required Bicycle Parking. Required bicycle parking shall be placed on site(s) as set forth below:

i. A short-term bicycle parking space shall be at least two and one-half (2.5) feet in width by six (6) feet in length to allow sufficient space between parked bicycles.

ii. Bicycle parking facilities shall not impede pedestrian or vehicular circulation.

iii. Bicycle parking racks located on sidewalks should be kept clear of the pedestrian through zone.

iv. Bicycle parking facilities are subject to the following standards:

- Short-term bicycle racks shall be located with at least 30 inches clearance in all directions from any obstruction, including but not limited to other racks, walls, and landscaping. Large retail uses, supermarkets, and grocery stores are encouraged to locate racks with a 36-inch clearance in all directions from any vertical obstruction, including but not limited to other racks, walls, and landscaping.
- All bicycle facilities shall provide a minimum four (4) foot aisle to allow for unobstructed access to the designated bicycle parking area.
- All long-term bicycle parking facilities shall include a variety of rack types to accommodate different bicycle sizes, styles, and users, as determined by the Zoning Administrator.

v. Bicycle parking facilities within auto parking facilities shall be protected from damage by cars by a physical barrier such as curbs, wheel stops, poles, bollards, or other similar features capable of preventing automobiles from entering the designated bicycle parking area.

vi. Short-term bicycle parking facilities serving community activity centers such as libraries and community centers should incorporate weather-protective enclosures shielding the designated bicycle area from typical inclement weather when feasible.

vii. Bicycle parking facilities shall be located in highly visible well-lighted areas. In order to maximize security, whenever possible short-term bicycle parking facilities shall be located in areas highly visible from the street and from the interior of the building they serve (i.e., placed adjacent to windows).

viii. The location and design of required bicycle parking shall be of a quality, character and color that harmonize with adjoining land uses. Required bicycle parking shall be incorporated whenever possible into building design or street furniture.

ix. Long-term bicycle parking shall be covered and shall be located on site or within 200 feet of the main building entrance. The main building entrance is defined as publicly accessible entrances and shall exclude gated private garage entrances, trash room entrances, and other building entrances that are not publicly accessible.

x. Short-term bicycle parking must be along project frontage and within 50 feet of the main entrance to the building or commercial use or up to 100 feet where existing conditions do not allow placement within 50 feet. It should be in a well-trafficked location visible from the entrance. When the main entrance fronts the sidewalk, the installer must apply for an encroachment permit from the City to install the bicycle parking in the public right-of-way. The main building entrance excludes garage entrances, trash room entrances, and other building entrances that are not publicly accessible.

xi. If required bicycle parking is not visible from the street or main building entrance, a sign must be posted at the main building entrance indicating the location of the

bicycle parking.

5. Minimum Number of Required Bicycle Parking Spaces. The rules for calculating the minimum number of bicycle parking spaces are:

   A. If after calculating the number of required bicycle parking spaces a quotient is obtained containing a fraction of one-half or more, an additional space shall be required; if such fraction is less than one-half it may be disregarded.

   B. When the bicycle parking requirement is based on number of employees or number of students, the number of spaces shall be based on the number of working persons on the lot during the largest shift of the peak season or the highest expected student capacity. If the Zoning Administrator determines that this number is difficult to verify for a specific facility, then the number of required long-term bicycle parking spaces shall be a minimum of two (2) spaces or five (5) percent of the amount of required automobile spaces for the proposed facility, whichever is greater.

   C. When the bicycle parking requirement is based on number of seats, in the case of pews or similar facilities each 18 inches shall be counted as one seat.

   D. The calculation of short-term bicycle parking may include existing racks that are in the public right-of-way and are within 100 feet of the main entrance.

6. Bicycle Parking Rates. Required bicycle parking rates vary depending on whether the associated land use is located within or outside the Downtown Area.

   A. Downtown Area.

      i. Minimum Parking Requirements. Where a parcel of real property is located within

TABLE D-1 DOWNTOWN PLANNING AREA - PROPOSED NEW MINIMUM BICYCLE PARKING STALLS REQUIRED

Use	Minimum Short-Term Bike Parking Spaces Required	Minimum Long-Term Bike Parking Spaces Required
(A) Hotels, excluding accessory restaurants and bars	1 per 20 units	1 per 20 employees
(B) Indoor Theatres and Cinemas		
Weekly matinees	1 per 20 fixed seats	1 per 40 fixed seats
Weekend matinees and evenings	1 per 20 fixed seats	1 per 40 fixed seats
(C) Offices		
Financial	1 per 20,000 s.f.	1 per 10,000 s.f.
General	1 per 20,000 s.f.	1 per 10,000 s.f.
Medical	1 per 20,000 s.f.	1 per 10,000 s.f.
(D) Residential uses (within the Retail Core Subarea as defined in the Down-town Specific Plan)		
Studio	0.05 per unit	1.0 per unit
One-bedroom	0.05 per unit	1.0 per unit
Two-bedrooms	0.10 per unit	1.25 per unit
Three or more bedrooms	0.15 per unit	1.5 per unit
(E) Restaurants and bars, excluding fast food restaurants	1 per 5,000 s.f.	1 per 12,000 s.f.
(F) Retail stores	1 per 2,000 s.f.	1 per 12, 000 s.f.
(G) Services	1 per 10,000 s.f.	1 per 20,000 s.f.
(H) Fast food, drive-in, drive-thru, and take-out restaurants	1 per 10,000 s.f.	1 per 20,000 s.f.

the Downtown Area, new projects to be located on said parcel shall meet the bicycle parking requirements as shown in **Table C-1**.

B. Outside Downtown Area.

i. Minimum Parking Requirements. For the following uses on property located outside the Downtown Area, bicycle parking stalls shall be provided as listed in **Table C-1**. Bicycle parking stalls required on an employee basis shall be based on the maximum number of employees on duty, or residing, or both, on the premises at any one (1) time.

TABLE D-2 OUTSIDE DOWNTOWN PLANNING AREA - PROPOSED NEW MINIMUM BICYCLE PARKING STALLS REQUIRED

USes	Minimum Short-Term Bike Parking Spaces Required	Minimum Long-Term Bike Parking Spaces Required
1. Residential Uses:		
A. Single Family Dwelling (Detached with private garage. If includes shared garage, bicycle parking requirements for Multiple Family Dwelling shall apply.)	No spaces required	No spaces required
Under 3,000 sq. ft. of floor area*	No spaces required	No spaces required
3,000 - 3,749 sq. ft. of floor area*	No spaces required	No spaces required
3,750 sq. ft. of floor area* and above	No spaces required	No spaces required
B. Secondary Unit	No spaces required	No spaces required
C. Multiple Family Dwelling (two-family, townhouse, condominium, apartments and apartment hotels)		
Studio	0.05 per unit	1.0 per unit
One-bedroom	0.05 per unit	1.0 per unit
Two-bedroom	0.10 per unit	1.25 per unit
Three or more bedroom (or any dwelling unit over 1,400 square feet in floor area	0.15 per unit	1.5 per unit
2. Commercial Shopping Centers:		
A. Community Shopping Center	1 per 5,000 s.f.	1 per 12,000 s.f.
B. Regional Shopping Center	1 per 10,000 s.f.	1 per 20,000 s.f.
Note: The above requirements will apply for all commercial shopping centers in the city; however, whenever the zoning administrator determines that delineation of independent uses is required, the following standards shall apply:		
3. Commercial, Retail, and Service Uses:		
A. Automobile service and gas stations (see Section 27.64.185)	2 spaces	Min. of 1 space
B. Automobile washing and cleaning establishments, except self-service.	None	Min. of 2 spaces
C. Barber shops or beauty parlors	1 per 2,000 s.f.	1 per 12,000 s.f.
D. Buildings used solely for coin-operated laundromats	1 per 2,000 s.f.	1 per 5,000 s.f.
E. Cemeteries, mausoleums, and columbaria	0.05 per acre	0.05 per acre

TABLE D-2 OUTSIDE DOWNTOWN PLANNING AREA - PROPOSED NEW MINIMUM BICYCLE PARKING STALLS REQUIRED		
USes	**Minimum Short-Term Bike Parking Spaces Required**	**Minimum Long-Term Bike Parking Spaces Required**
F. Contractors' storage yards in connection with contractor's business; salvage yard; junk yard; automobile wrecking yard; storage yard	No spaces required	No spaces required
G. Dry cleaners	1 per 2,000 s.f.	1 per 12,000 s.f.
H. Home improvement centers	1 per 10,000 s.f.	1 per 20,000 s.f.
I. Retail stores, food stores, and drugstores	1 per 2,000 s.f.	1 per 12,000 s.f.
J. Self-service automobile washes	No spaces required	No spaces required
4. Commercial and Public Recreation Uses:		
A. Public Parks [Public parks are considered a single lot with different activities. Rates shall be a sum of activities as described in 27.64.262 (c)].		
Parks of any size.	1 per acre	No spaces required
Sports courts (e.g., tennis, bocci ball and basketball)	1 per court	No spaces required
Ball fields (e.g., soccer and softball)	1 per acre	No spaces required
Group picnic areas	2 spaces per picnic table or per 10 seats	No spaces required
Passive useable turf whose primary purpose is for informal play, family picnics or relaxation and play/courtyards. (Excludes areas that are less than 5,000 square feet.)	1 per 20,000 s.f.	No spaces required
Play areas (children)	1 per acre	No spaces required
Recreation center	1 per 5,000 s.f.	1 per 20,000 s.f.
B. Health studios and spas	1 per 2,000 s.f.	1 per 20,000 s.f.
C. Dance Studio	1 per 2,000 s.f.	1 per 12,000 s.f.
5. Educational Uses:		
A. Colleges, universities, and institutions of higher learning, parochial and private	1 for every 10 students of planned capacity	1 per 10 employees
B. Day nurseries, including preschools and nursery schools	1 per 20 students	1 per 20 employees
C. Elementary and junior high schools	1 per 20 students	1 per 10 employees
D. Senior high schools	1 per 20 students	1 per 10 employees
E. Trade schools, business colleges, and commercial schools	1 per 20 students	1 per 10 employees
6. Health Uses:		
A. Dental clinics or offices; medical clinics or offices	1 per 5,000 s.f.	1 per 12,000 s.f.
B. Health centers, government operated	1 per 5,000 s.f.	1 per 12,000 s.f.
C. Hospitals	1 per 20,000 s.f.	1 per 20 employees or 70,000 s.f., whichever fewer
D. Veterinary hospitals & clinics	1 per 5,000 s.f.	1 per 12,000 s.f.
7. Office, Professional Uses:		
A. Commercial banks, savings and loan office, other financial institutions, including stock brokerages	1 per 2,000 s.f.	1 per 12,000 s.f.

TABLE D-2 OUTSIDE DOWNTOWN PLANNING AREA - PROPOSED NEW MINIMUM BICYCLE PARKING STALLS REQUIRED		
USes	**Minimum Short-Term Bike Parking Spaces Required**	**Minimum Long-Term Bike Parking Spaces Required**
B. Offices	1 per 20,000 s.f.	1 per 10,000 s.f.
8. Manufacturing Plants and Kindred Uses:		
A. Wholesale establishments, warehouses, storage buildings, or structures	1 per 5,000 s.f.	1 per 20,000 s.f.
9. Places of Assembly:		
A. Fast food, drive-in, drive-thru, and take-out restaurants	1 per 10,000 s.f.	1 per 20,000 s.f.
B. Libraries, art galleries and museums; Public	1 per 10,000 s.f.	1 per 20,000 s.f.
C. Restaurants, taverns, lounges, and other establishments for the sale and consumption on the premises of food and beverages	1 per 10,000 s.f.	1 per 20,000 s.f.
D. Theaters (indoor)	1 per 40 fixed seats	1 per 80 fixed seats
** Excluding enclosed parking facilities, uninhabitable accessory structures and covered patios.*		

APPENDIX E - FUNDING

This appendix provides information on potential funding sources for bicycle improvements. Federal, state and local government agencies invest billions of dollars every year in the nation's transportation system. Only a fraction of that funding is used in development projects, policy development and planning to improve conditions for bicyclists. Even though appropriate funds are limited, they are available. To support agency efforts to find outside funding sources to implement bicycle improvements, a summary by source type is provided below.

E.1. FEDERAL SOURCES

E.1.1. MOVING AHEAD FOR PROGRESS IN THE TWENTY-FIRST CENTURY (MAP-21)

The largest source of Federal funding for bicycle and pedestrian projects is the USDOT Federal-Aid Highway Program, which Congress has reauthorized roughly every six years since passage of the Federal-Aid Road Act of 1916. The latest act, Moving Ahead for Progress in the Twenty-First Century (MAP-21) was enacted in July 2012 as Public Law 112-141. The Act replaces the Safe, Accountable, Flexible, and Efficient Transportation Equity Act – a Legacy for Users (SAFETEA-LU), which was valid from August 2005 - June 2012. SAFETEA-LU contained dedicated programs including Transportation Enhancements, Safe Routes to School, and Recreational Trails, all commonly tapped sources of funding to make non-motorized improvements nationwide. MAP-21 combines these programs into a single source called the Transportation Alternatives Program (TAP).

More information: http://www.fhwa.dot.gov/map21/guidance/guidetap.cfm

MAP-21 authorized funding for federal surface transportation programs including highways and transit for fiscal years 2013 and 2014. To allow more time for development of along-term reauthorization of funding, Congress enacts short term extensions of the expiring law. It is not possible to guarantee the continued availability of any listed MAP-21 programs or to predict their future funding levels or policy guidance. Nevertheless, many bicycle and pedestrian transportation improvements programs have been included in some form since the passage of the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991 and thus may continue to provide capital for active transportation projects and programs.

In California, federal monies are administered through the California Department of Transportation (Caltrans). Most, but not all, of these programs are oriented toward transportation versus recreation, with an emphasis on reducing auto trips and providing inter-modal connections. Federal funding is intended for capital improvements and safety and education programs, and projects must relate to the surface transportation system. There are a number of programs identified within MAP-21 that are applicable to bicycle and pedestrian projects. These programs are discussed on the following pages.

More information: http://www.fhwa.dot.gov/map21/summaryinfo.cfm

E.1.2. TRANSPORTATION ALTERNATIVES

Transportation Alternatives Program (TAP) is a new funding source under MAP-21 that consolidates three formerly separate programs under SAFETEA-LU: Transportation Enhancements (TE), Safe Routes to School (SR2S and SRTS), and the Recreational Trails Program (RTP). These funds may be used for a variety of pedestrian, bicycle, and complete street projects including sidewalks, bikeways, multi-use paths, and rail-trails. TAP funds may also be used for selected education and encouragement programming such as Safe Routes to School, despite the fact that TAP does not provide a guaranteed set-aside for this activity as SAFETEA-LU did. MAP-21 provides $85.0 million nationally for the RTP.

Eligible activities under the TAP Program include:

1. **Transportation Alternatives** as defined by Section 1103 (a)(29). This category includes the construction, planning, and design of a range of bicycle and 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 a new eligible activity.

More information: http://www.fhwa.dot.gov/environment/transportation_enhancements/legislation/map21.cfm

2. **Recreational Trails Program (RTP).** 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, bicycling, 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. RTP 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)

   Under MAP-21, dedicated funding for the RTP continues at FY2009 levels – roughly $85.0 million annually. California will receive $5,756,189 in RTP funds per federal fiscal year through FY2014.

   More information: http://www.fhwa.dot.gov/environment/recreational_trails/funding/apportionments_obligations/recfunds_2009.cfm

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, trails or bikeways. Eligible improvements include sidewalk improvements, traffic calming/speed reduction, pedestrian and bicycle crossing improvements, on-street bicycle facilities, off-street bicycle and pedestrian facilities, and secure bicycle parking facilities.
   - Education and Encouragement Efforts. These programs are designed to teach children safe bicycling and 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 bicycle/pedestrian safety video games; and promotional events and activities (e.g., assemblies, bicycle rodeos, 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.

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

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.

Average annual funds available through TAP over the life of MAP-21 equal $814.0 million nationally, which is based on a 2 percent set-aside of total MAP-21 authorizations. Projected MAP-21 apportionments for California total $3,546,492,430 for FY2013 and $3,576,886,247 for FY2014 (http://www.fhwa.dot.gov/MAP21/funding.cfm). The 2 percent set-aside for TAP funds in California will be about $71,000,000 for the next two fiscal cycles. State DOTs may elect to transfer up to 50 percent of TAP funds to other highway programs, so the amount listed above represents the maximum potential funding. TAP funds are typically allocated through MPOs and require a 20 percent local match.

E.1.3. SURFACE TRANSPORTATION PROGRAM

The Surface Transportation Program (STP) 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 on-street bicycle facilities, off-street trails, sidewalks, crosswalks, bicycle and pedestrian signals, parking, 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, STP-funded bicycle and 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 STP 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.

More information: http://www.dot.ca.gov/hq/transprog/federal/rstp/Official_RSTP_Web_Page.htm

E.1.4. HIGHWAY SAFETY IMPROVEMENT PROGRAM

MAP-21 doubles the amount of funding available through the Highway Safety Improvement Program (HSIP) relative to SAFETEA-LU. HSIP provides $2.4 billion nationally for projects and programs that help communities achieve significant reductions in traffic fatalities and serious injuries on all public roads, bikeways, and walkways. MAP-21 preserves the Railway-Highway Crossings Program within HSIP but discontinues the High-Risk Rural Roads Program unless safety statistics demonstrate that fatalities are increasing on these roads. HSIP is a data-driven funding program, and eligible projects must be identified through analysis of crash experience, crash potential, crash rate, or other similar metrics. Infrastructure and non-infrastructure projects are eligible for HSIP funds. Bicycle and 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.

More information: http://www.dot.ca.gov/hq/traffops/survey/SHSP/SHSP_Final_Draft_Print_Version.pdf

E.1.5. PILOT TRANSIT-ORIENTED DEVELOPMENT PLANNING

MAP-21 establishes a new pilot program to promote planning for Transit-Oriented Development. At the time of writing, the details of this program are not fully clear; although, the bill text states that the Secretary of Transportation may make grants available for the planning of projects that seek to "facilitate multimodal connectivity and accessibility," and "increase access to transit hubs for pedestrian and bicycle traffic."

E.1.6. TRANSPORTATION INVESTMENTS GENERATING ECONOMIC RECOVERY

The Transportation Investment Generating Economic Recovery (TIGER Discretionary Grant Program) provides a unique opportunity for the U.S. Department of Transportation to invest in road, rail, transit and port projects that promise to achieve critical national

objectives. The U.S. Congress has dedicated more than $4.1 billion to the program since inception: $1.5 billion for TIGER I, $600.0 million for TIGER II, $526.9 million for FY2011, $500.0 million for FY2012, $473.8 million for FY2013, and $600.0 million for the FY2014 round to fund projects that have a significant impact on the nation, a region or a metropolitan area. The TIGER Discretionary Grant Program's highly competitive process, galvanized by tremendous applicant interest, has allowed USDOT to fund 271 innovative capital projects throughout the nation. Each project is multi-modal, multi-jurisdictional or otherwise challenging to fund through existing programs. The TIGER Discretionary Grant Program enables USDOT to use a rigorous process to select projects with exceptional benefits, explore ways to deliver projects faster and save on construction costs, and make investments in the nation's infrastructure that make communities more livable and sustainable. Many awards have been made to construct bicycle and pedestrian infrastructure, including projects in Atlanta, GA, Birmingham, AL, Fresno, Indianapolis, IN, and Philadelphia, PA.

E.1.7. 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, provide 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 bicycle and 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). MCOG and Caltrans should track Partnership communications and be prepared to respond proactively to announcements of new grant programs.

More information: http://www.epa.gov/smartgrowth/partnership/

E.1.8. RIVERS, TRAILS, AND CONSERVATION ASSISTANCE PROGRAM

The Rivers, Trails and Conservation Assistance Program (RTCA) is the community assistance arm of the National Park Service. RTCA provides technical assistance to communities in order to preserve open space and develop trails. The assistance that RTCA provides is not for infrastructure, but rather building plans, engaging public participation, and identifying other sources of funding for conversation and outdoor recreation projects.

More information: http://www.nps.gov/pwro/rtca/who-we-are.htm

E.1.9. COMMUNITY DEVELOPMENT BLOCK GRANTS

The Community Development Block Grants (CDBG) program provides money for streetscape revitalization, which may be largely comprised of pedestrian improvements, however bicycle projects are not excluded. Federal CDBG grantees may "use Community Development Block Grant funds for activities that include (but are not limited to): acquiring real property; reconstructing or rehabilitating housing and other property; building public facilities and improvements, such as streets, sidewalks, community and senior citizen centers and recreational facilities; paying for planning and administrative expenses, such as costs related to developing a consolidated plan and managing Community Development Block Grant funds; provide public services for youths, seniors, or the disabled; and initiatives such as neighborhood watch programs." Trails and greenway projects that enhance accessibility are the best fit for this funding source. CDBG funds could also be used to write ADA Transition Plans.

More information: www.hud.gov/cdbg

E.1.10. COMMUNITY TRANSFORMATION GRANTS

Community Transformation Grants administered through the Centers for Disease Control (CDC) support community–level efforts to reduce chronic diseases such as heart disease, cancer, stroke, and diabetes. Active transportation infrastructure and programs that promote healthy lifestyles are a good fit for this program, particularly if such improvements benefit groups experiencing the greatest burden of chronic disease.

More information: http://www.cdc.gov/communitytransformation/

E.1.11. NATIONAL SCENIC BYWAYS PROGRAM

The Federal Highway Administration (FHWA), part of the USDOT manages the National Scenic Byways Grant Program, which recognizes roads having outstanding scenic, historic, cultural, natural, recreational, and archaeological qualities by providing grants that support projects that manage and protect these roads and improve visitor facilities.

More information: http://www.fhwa.dot.gov/discretionary/2012nsbp.cfm

E.1.12. FEDERAL RECOVERY ACT STATE FISCAL STABILIZATION FUNDING

As part of the Federal Recovery Act of 2009, states will be receiving $53.6 billion in state fiscal stabilization funding. States must use 18.2 percent of their funding – or $9.7 billion – for public safety and government services. An eligible activity under this section is to provide funding to K-12 schools and institutions of higher education to make repairs, modernize, and make renovations to meet green building standards. The Leadership in Energy and Environmental Design (LEED) Green Building Rating System, developed by the U.S. Green Building Council (USGBC), addresses green standards for schools that include bicycle and pedestrian facilities and access to schools. Another $5.0 billion is provided for the Energy Efficiency and Conservation Block Grant Program. This provides formula funding to cities, counties and states to undertake a range of energy efficiency activities. One eligible use of funding is for bicycle and pedestrian infrastructure.

More information: *http://www2.ed.gov/policy/gen/leg/recovery/factsheet/stabilization-fund.html*

E.2. STATE SOURCES

E.2.1. ACTIVE TRANSPORTATION PROGRAM

With the consolidation of federal funding sources in MAP-21, the California State Legislature has moved to consolidate a number of state-funded programs centered on alternative transportation into a single program. The resulting Active Transportation Program (ATP) will consolidate the federal programs, Bicycle Transportation Account, the Safe Routes to Schools Program, and the Recreational Trails Program. The ATP's authorizing legislation (signed into law by the Governor on September 26, 2013) also includes placeholder language to allow the ATP to receive funding from the newly established Cap-and-Trade Program in the future. The Statewide Competitive ATP will have $180 million available statewide for the 2014/2015 and 2015/2016 fiscal cycles. The Regional Competitive ATP will have $30 million available for the Metropolitan Transportation Commission (MTC) region 2014/2015 and 2015/2016 fiscal cycles. The California Transportation Commission writes guidelines and allocates funds for the ATP, while the ATP will be administered by the Caltrans Division of Local Assistance. Goals of the ATP are currently defined as the following:

1. Increasing the proportion of trips accomplished by biking and walking;
2. Increasing safety and mobility for non-motorized users;
3. Advancing active transportation efforts of regional agencies to achieve the greenhouse gas reduction goals;
4. Enhancing public health;
5. Ensuring that disadvantaged communities fully share in the benefit of the program; and,
6. Providing a broad spectrum of projects to benefit

many types of active transportation users.

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

E.2.2. STATE HIGHWAY OPERATIONS & PROTECTION PROGRAM

The State Highway Operations and Protection Program (SHOPP) is a four year program that funds projects on the state highway system to maintain and preserve the asset. The program is primarily funded by federal highway trust funds. The federal funds that make up the SHOPP are National Highway Performance Program (NHPP), the Surface Transportation Program (STP), and the Highway Safety Improvement Program (HSIP). The new federal act, Moving Ahead for Progress in the 21st Century (MAP-21), requires that the states implement targets based on performance measures that will be forthcoming. This will dictate how funds need to be programmed based on meeting the targets. The emphasis of the federal bill is to maintain and/or improve the current asset condition and to address the safety needs. The cycle includes identification of rehabilitation and reconstruction needs in the ten year plan, the estimation of available funding in the fund estimate, and finally a financially-constrained portfolio of projects in the four-year SHOPP. As required by statutes, the SHOPP is updated every two years. The SHOPP project funding process is internal to Caltrans. SHOPP projects are originally scoped through the ten year SHOPP plan process. The ten year SHOPP plan has a fiscally-constrained list of program areas that have specific estimated amounts of funding. The determination of the balance of funds for each of the areas is based on federal funding programs, priorities as agreed between the Caltrans and the CTC, and direction from the Caltrans SHOPP Executive Committee. The priorities are:

1. Collision reduction, major damage restoration, and mandates such as ADA and stormwater management
2. Pavement, bridge, roadside, and facility preservation
3. Mobility

There is clearly not enough funding to fund the SHOPP needs and thus each category has constrained funding.

More information: http://www.dot.ca.gov/hq/transprog/SHOPP/2014%20SHOPP/SHCC%20SHOPP%20issue%20paperpdf.pdf

E.2.3. CALTRANS PLANNING GRANTS

Caltrans also administers the Transportation Planning Grant Program that funds projects to improve mobility. In the past year, Caltrans awarded $10.0 million in grant funding to 70 applicants, in two sub-categories: Environmental Justice grants and Community Based Transportation Plan grants.

More information: http://www.dot.ca.gov/hq/tpp/grants.html

E.2.4. ENVIRONMENTAL JUSTICE GRANT PROGRAM

The Environmental Justice (EJ) Grant Program promotes the involvement of low-income, minority communities, and Native American tribal governments in the planning for transportation projects. EJ grants have a clear focus on transportation and community development issues to prevent or mitigate disproportionate, negative impacts while improving mobility, access, safety, and opportunities for affordable housing and economic development. Grants are available to cities, counties, transit districts, and tribal governments.

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

E.2.5. COMMUNITY BASED TRANSPORTATION PLANNING GRANT PROGRAM

The Community Based Transportation Planning (CBTP) grant program promotes transportation and land use planning projects that encourage community involvement and partnership. These grants include community and key stakeholder input, collaboration, and consensus building through an active public engagement process. CBTP grants support livable and sustainable community concepts with a transportation

or mobility objective to promote community identity and quality of life.

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

E.2.6. PETROLEUM VIOLATION ESCROW ACCOUNT

In the late 1970s, a series of federal court decisions against selected United States oil companies ordered refunds to the states for price overcharges on crude oil and refined petroleum products during a period of price control regulations. To qualify for Petroleum Violation Escrow Account (PVEA) funding, a project must save or reduce energy and provide a direct public benefit within a reasonable time frame. In the past, the PVEA has been used to fund programs based on public transportation, computerized bus routing and ride sharing, home weatherization, energy assistance and building energy audits, highway and bridge maintenance, and reducing airport user fees. In California, Caltrans Division of Local Assistance administers funds for transportation-related PVEA projects. PVEA funds do not require a match and can be used as match for additional federal funds.

More information: www.dot.ca.gov/hq/LocalPrograms/lam/prog_g/g22state.pdf

E.2.7. OFFICE OF TRAFFIC SAFETY GRANTS

The Office of Traffic Safety (OTS) distributes grants statewide to establish new traffic safety programs or fund ongoing safety programs. OTS grants are supported by federal funding under the National Highway Safety Act and MAP-21. Grants are used to establish new traffic safety programs, expand ongoing programs or address deficiencies in current programs. Bicycle safety is included in the list of traffic safety priority areas. 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; however, all items in the proposal must be justified to meet the objectives of the proposal.

More information: http://www.ots.ca.gov/Grants/Apply/default.asp

E.2.8. ENVIRONMENTAL ENHANCEMENT AND MITIGATION FUNDS

The Environmental Enhancement Mitigation Program (EEMP) provides grant opportunities for projects that indirectly mitigate environmental impacts of new transportation facilities. Projects should fall into one of the following three categories: highway landscaping and urban forestry, resource lands projects, or roadside recreation facilities. Funds are available for land acquisition and construction. The local Caltrans district must support the project. The average award amount is $250,000.

More information: http://www.dot.ca.gov/hq/LocalPrograms/EEM/homepage.htm

E.2.9. LAND AND WATER CONSERVATION FUND

The Land and Water Conservation Fund is a federal program that provides grants for planning and acquiring outdoor recreation areas and facilities, including trails. The fund is administered by the California State Parks Department. Cities, counties, and districts authorized to acquire and develop park and recreation space are eligible for grant funding. While non-profits are ineligible, they are allowed to apply in partnerships with eligible agencies. Applicants must fund the project entirely and will be reimbursed for half of the cost. The next round of applications are due in February 2016. Grant requests up to $2 million are encouraged..

More Information: http://www.parks.ca.gov/?Page_id=21360

E.2.10. CALIFORNIA STRATEGIC GROWTH COUNCIL

The Strategic Growth Council is a state agency that manages the Sustainable Communities Planning Grant and Incentives Program. The program provides grants for development and implementation of plans that lead to significant reductions in greenhouse gas emissions, improve air and water quality, promote public health, promote equity, increase housing affordability, increase infill and compact development, revitalize urban and community centers, protect natural resources and agricultural lands, reduce automobile usage and fuel consumption, improve infrastructure systems, promote water conservation, promote energy efficiency and conservation, and strengthen the economy.

More information: http://sgc.ca.gov/planning_grants.html

E.2.11. CLIMATE READY GRANT PROGRAM - CALIFORNIA STATE COASTAL CONSERVANCY

Climate Ready grants are intended to encourage local governments and non-governmental organizations to advance planning and implementation of on-the-ground actions that reduce greenhouse gas emissions and lessen the impacts of climate change on California's coastal communities. The grant program makes eligible "development of multi-use trails with clearly identified greenhouse gas (GHG) reduction goals; (and) protecting and managing open space lands with clearly identified GHG reduction goals." A total of $1,500,000 is available on a competitive basis, with a minimum award of $50,000 and a maximum of $200,000. The size of awarded grants will be based on each project's needs, its overall benefits, and the extent of competing demands for funds. Applications were due November 17, 2014. It is not clear whether additional application solicitations will be made.

More information: http://scc.ca.gov/webmaster/pdfs/Climate_Ready_Announcement3.pdf

E.3. REGIONAL & LOCAL SOURCES

E.3.1. 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.

E.3.2. 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's 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

E.3.3. 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.

E.3.4. 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.

E.4. PRIVATE SOURCES

Private funding sources can be acquired by applying through the advocacy groups such as the League of American Bicyclists and the Bikes Belong Coalition. Most of the private funding comes from foundations seeking to enhance and improve bicycle facilities and advocacy. Grant applications will typically be through the advocacy groups as they leverage funding from federal, state and private sources. Following are several examples of private funding opportunities available.

E.4.1. PEOPLEFORBIKES COMMUNITY GRANT PROGRAM

PeopleForBikes (FKA Bikes Belong) is a coalition of bicycle suppliers and retailers that has awarded $2.5 million in grants and leveraged an additional $650.0 million since its inception in 1999. The program funds small corridor improvements, mountain bike trails, BMX parks, trails, and park access. PeopleForBikes also administers the Green Lane Project, which is a technical support and peer exchange program for U.S. cities working on the installation of protected bicycle lanes and cycle tracks. PeopleForBikes is funded through private donations.

More information: http://www.peopleforbikes.org/pages/community-grants

E.4.2. BANK OF AMERICA CHARITABLE FOUNDATION, INC.

The Bank of America Charitable Foundation is one of the largest in the nation. The primary grant program is called Neighborhood Excellence, which seeks to identify critical issues in local communities. Another program that applies to greenways is the Community Development Program, and specifically the Program Related Investments subcategory. This program targets low- and moderate-income communities and seeks to encourage entrepreneurial business development.

More information: http://www.bankofamerica.com/foundation

E.4.3. THE ROBERT WOOD JOHNSON FOUNDATION

The Robert Wood Johnson Foundation was established as a national philanthropy in 1972, and today, it is the largest U.S. foundation devoted to improving the health and health care of all Americans. Grant making is concentrated in four areas:

- To assure that all Americans have access to basic health care at a reasonable cost
- To improve care and support for people with chronic health conditions
- To promote healthy communities and lifestyles
- To reduce the personal, social and economic harm caused by substance abuse: tobacco, alcohol, and illicit drugs

More information: http://www.rwjf.org/applications/

E.4.4. THE WAL-MART FOUNDATION

The Wal-Mart Foundation offers a Local, State, and National Giving Program. The Local Giving Program awards grants of $250 to $5,000 through local Wal-Mart and Sam's Club Stores. Application opportunities are announced annually in February with a final deadline for applications in December. The State Giving Program provides grants of $25,000 to $250,000 to 501c3 nonprofits working within one of five focus areas: Hunger Relief & Nutrition, Education, Environmental Sustainability,

Women's Economic Empowerment, or Workforce Development. The program has two application cycles per year: January through March and June through August. The Wal-Mart Foundation's National Giving Program awards grants of $250,000 and more, but does not accept unsolicited applications.

More information: http://foundation.walmart.com/apply-for-grants

E.4.5. THE KODAK AMERICAN GREENWAYS PROGRAM

The Conservation Fund's American Greenways Program has teamed with the Eastman Kodak Corporation and the National Geographic Society to award small grants ($250 to $2,000) to stimulate the planning, design and development of greenways. These grants can be used for activities such as mapping, conducting ecological assessments, surveying land, holding conferences, developing brochures, producing interpretive displays, incorporating land trusts, and building trails. Grants cannot be used for academic research, institutional support, lobbying or political activities.

More information: http://www.conservationfund.org

E.4.6. COMMUNITY ACTION FOR A RENEWED ENVIRONMENT (CARE)

CARE is a competitive grant program that offers an innovative way for a community to organize and take action to reduce toxic pollution in its local environment. Through CARE, a community creates a partnership that implements solutions to reduce releases of toxic pollutants and minimize people's exposure to them. By providing financial and technical assistance, EPA helps CARE communities get on the path to a renewed environment. Transportation and "smart-growth" types of projects are eligible. Grants range between $90,000 and $275,000.

More information: http://www.epa.gov/care/

E.4.7. CORPORATE DONATIONS

Corporate donations are often received in the form of liquid investments (i.e. cash, stock, bonds) and in the form of land. Employers recognize that creating places to bike and walk is one way to build community and attract a quality work force. Bicycling and outdoor recreation businesses often support local projects and programs. Municipalities typically create funds to facilitate and simplify a transaction from a corporation's donation to the given municipality. Donations are mainly received when a widely supported capital improvement program is implemented. Such donations can improve capital budgets and/or projects.

E.4.8. OTHER SOURCES

Local sales taxes, fees and permits may be implemented as new funding sources for pedestrian and bicycle projects. However, any of these potential sources would require a local election. Volunteer programs may be developed to substantially reduce the cost of implementing some routes, particularly multi use paths. For example, a local college design class may use such a multi-use route as a student project, working with a local landscape architectural or engineering firm. Work parties could be formed to help clear the right of way for the route. A local construction company may donate or discount services beyond what the volunteers can do. A challenge grant program with local businesses may be a good source of local funding, in which the businesses can "adopt" a route or segment of one to help construct and maintain it.

APPENDIX F - ATP COMPLIANCE CHECKLIST

TABLE F-1 ACTIVE TRANSPORTATION PROGRAM COMPLIANCE CHECKLIST		
Subject	**Requirement**	**Location in Plan**
Future Trip Estimates	The estimated number of existing bicycle trips and pedestrian trips in the Plan area, both in absolute numbers and as a percentage of all trips, and the estimated increase in the number of bicycle trips and pedestrian trips resulting from implementation of the Plan.	3.4. Estimated Commuter and Utilitarian Bicyclists 5.8. Monitoring
Collision Report	The number and location of collisions, serious injuries, and fatalities suffered by bicyclists and pedestrians 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.	3.6. Bicycle Collisions 5.8. Monitoring
Land Use Patterns	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 destinations.	Appendix B - 2030 General Plan Land Use Maps
Existing and Propose Bikeways	A map and description of existing and proposed bicycle transportation facilities.	1.3. Engineering, 4.1. Recommended Bikeway Network Improvements, 4.2. Recommended Bikeway Spot Improvements
End-of-Trip Bicycle Parking	A map and description of existing and proposed end-of-trip bicycle parking facilities.	4.4. Bike Parking Improvements
Bicycle Parking Policy	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.	Appendix D - Bicycle Parking Recommendations
Bicycle Connections to other Modes	A map and description of existing and proposed bicycle transport and parking facilities for connections with and use of other transportation modes. These must 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 bicyclists and bicycles on transit or rail vehicles or ferry vessels.	3.2. Bicycle Attractors and Generators 4.5. Bike-Related Policy Improvements
Pedestrian Connections to other Modes	A map and description of existing and proposed pedestrian facilities at major transit hubs. These must include, but are not limited to, rail and transit terminals, and ferry docks and landings.	See Mountain View Pedestrian Master Plan Updated 2014
Wayfinding	A description of proposed signage providing wayfinding along bicycle and pedestrian networks to designated destinations.	4.3. Recommended Wayfinding Signage Improvements

TABLE F-1 ACTIVE TRANSPORTATION PROGRAM COMPLIANCE CHECKLIST		
Subject	**Requirement**	**Location in Plan**
Maintenance	A description of the policies and procedures for maintaining existing and proposed bicycle and pedestrian 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.	5.7. Maintenance
Education Programs	A description of bicycle and pedestrian safety, education, and encouragement 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 and pedestrian safety, and the resulting effect on accidents involving bicyclists and pedestrians.	1.4. Encouragement Programs 1.5. Education Programs 1.6. Enforcement Programs 1.7. Evaluation Programs
Community Involvement	A description of the extent of community involvement in development of the Plan, including disadvantaged and underserved communities.	3.8. Community Identified Needs
Regional Plan 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.	2 Policy and Plan Review Appendix C - Plans and Policies
Project List	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.	Chapters 4-5
Past Expenditures and Future Financial Needs	A description of past expenditures for bicycle and pedestrian facilities and programs, and future financial needs for projects and programs that improve safety and convenience for bicyclists and pedestrians in the Plan area. Include anticipated revenue sources and potential grant funding for bicycle and pedestrian uses.	5 Implementation and Funding Appendix E - Funding
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.	5.8. Monitoring
Adoption Resolution	A resolution showing adoption of the Plan by the city, county or district. If the active transportation plan was prepared by a county transportation commission, regional transportation planning agency, MPO, school district or transit district, the Plan should indicate the support via resolution of the city(s) or county(s) in which the proposed facilities would be located.	Appendix H - Adoption Resolution

APPENDIX G - BICYCLE DESIGN GUIDELINES

The design guidelines presented in this appendix are a combination of minimum standards outlined by the California Highway Design Manual's design guidelines and recommended standards prescribed by the NACTO Urban Bikeway Design Guide, which was endorsed by Caltrans in April 2014. Caltrans supports NACTO's use in the decision-making process by City staff and recommends that engineers properly document engineering judgments made in approving the design of projects prior to construction. More information about the Caltrans endorsement can be found here:

http://www.dot.ca.gov/hq/oppd/design/2014-9-Design-Flexibility-FAQ.pdf

This appendix is an amended version originally created by the Pedestrian and Bicycle Information Center for the USDOT Federal Highway Administration. The current version is based on information available as of March 2, 2015. This appendix is not intended to replace existing state or national mandatory or advisory standards, nor the exercise of engineering judgment by licensed professionals.

- California Manual on Uniform Traffic Control Devices (2014):

  http://www.dot.ca.gov/hq/traffops/engineering/mutcd/ca_mutcd2014.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

- National Association of City Transportation Officials Urban Bikeway Design Guide (endorsed by Caltrans, April 2014):

  http://nacto.org/cities-for-cycling/design-guide /

TABLE G-1 ON-STREET BIKE DESIGN GUIDELINES*

Treatment		Caltrans CA Manual on Uniform Traffic Control Devices (2014)	NACTO Urban Bikeway Design Guide (2014)
A. General Roadway Design			
A1	Guidance of appropriate use/ typical application of bicycle facilities	Section 9A.02, Chapter 9C	Throughout entire document
B. General Roadway Design			
B1	Bicycle route signs	Sections 9B.20, 9B.21	Page 139
B2	Shared lane markings	Section 9C.07, Figure 9C-9	Page 133
B3	Shared lane signage	Sections 9B.06, 9B.19, 9B.20	*N/A*
B4	Bicycle boulevards/neighborhood greenways	*N/A*	Pages 147-214
B5	Bicycle accommodations related to traffic calming	*N/A*	Pages 167-214
B6	Bicycle accommodations on bridges/ tunnels	Sections 9B.19, 9B.06	*N/A*
B7	Bicycle treatments at railroad crossings	Section 9B.19	*N/A*
B8	Colored bicycle facilities	Interim approval (CA adopted in August 2011)[IA]	Page 119
C. Bicycle Lanes			
C1	Bicycle lane signs and pavement markings	Sections 9B.04, 9C.04	Page 3

TABLE G-1 ON-STREET BIKE DESIGN GUIDELINES*			
Treatment		**Caltrans CA Manual on Uniform Traffic Control Devices (2014)**	**NACTO Urban Bikeway Design Guide (2014)**
C2	Bicycle lane design	Section 9C.04	Page 3
C3	Bicycle lanes on one-way streets (left or right side)	*N/A*	Page 21
C4	Buffered bicycle lanes	Section 9C.04, 9C-104(CA)	Page 9
C5	Contra-flow bicycle lanes	Figure 9C-105(CA), Section 9C.04	Page 15
C6	Bicycle lanes adjacent to on-street parking (parallel or diagonal)	Section 9C.04, 9C-102(CA)	Page 3
C7	Advisory bicycle lanes*	Experimental status (2014)[ES]	*N/A*
C8	Bicycle lanes adjacent to transit stops	Figure 9C-6	*N/A*
D. Cycle Track / Protected Bicycle Lanes			
D1	One-way separated bicycle lanes	Section 9C.04	Pages 29, 35
D2	Two-way separated bicycle lanes	Section 9C.04	Page 41
D3	Separated bicycle lane design at transit stops	*N/A*	Page 32
E. Bicycle Routes			
E1	Bike route design	Sections 9C.04, 9B.20, 9B.21, 9B.22	Page 139
F. Bicycle Boulevards			
F1	Signs and Pavement Markings	*N/A*	Pages 161-166
G. Intersection Design			
G1	Bicycle detection	Sections 9B.13, 9C.05, Figure 9C-7	Page 99
G2	Signal timing for bicycle clearances	Table 4D-109(CA), Section 9D.02	Page 97
G3	Bicycle signalheads	Figure 4D-112(CA), Interim Approval pending CTCDC recommendation (IA-16)	Page 93
G4	Bicycle push buttons	Section 9B.11	Pages 96, 100
G5	Bicycle lane intersection approaches	Figures 9C-1, 9C-4, 9C-5, 9C-6	Page 73
G6	Combined bicycle lane/ turn lane	Sections 9C.07, 9B.06	Page 79
G7	Bicycle boxes**	Experimental status (2014)[ES]	Page 49
G8	Bicycle crossing markings	Section 9C.04, Figure 9C-106(CA)	Page 55
G9	Two-stage queue boxes**	Experimental status (2014)[ES]	Page 61
G10	Separated bicycle lane intersection approaches	*N/A*	Page 85
G11	Bicycle design treatments at roundabouts	Section 9C.04	*N/A*

**For off-street, shared-use path design, please see the California Highway Design Manual (2014)*

***For status reports on ongoing experiments, visit: http://www.dot.ca.gov/hq/traffops/engineering/ctcdc/status.htm*

[IA] *Interim Approval*

[ES] *Experimental Status*

APPENDIX H - ADOPTION RESOLUTION

CITY OF MOUNTAIN VIEW
RESOLUTION NO. 18007
SERIES 2015

A RESOLUTION ADOPTING THE MOUNTAIN VIEW
BICYCLE TRANSPORTATION PLAN UPDATE

WHEREAS, improving bicycle and pedestrian mobility is, and has been, a major focus for the City of Mountain View; and

WHEREAS, in support of this effort, more than $3.5 million has been programmed into the City's capital improvement planning process since 2013 to improve the bicycle and pedestrian environment in Mountain View, including funding to update the City's 2008 Bicycle Transportation Plan; and

WHEREAS, a new Bicycle Transportation Plan Update was drafted for City Council review and adoption which identifies and prioritizes more than 180 recommended projects, programs, and policies to improve and encourage bicycle travel in and through the City of Mountain View; and

WHEREAS, the Bicycle Transportation Plan update process has included a robust outreach strategy to engage the community, including community workshops; meetings with various City advisory bodies and stakeholder groups; a joint meeting with staff from the cities of Palo Alto, Sunnyvale, and Los Altos; and the ability for members of the public to provide input throughout the update process through an interactive project website; and

WHEREAS, the City's Bicycle/Pedestrian Advisory Committee (B/PAC) reviewed and provided input on the draft content of the Bicycle Transportation Plan Update at six Committee meetings, providing the public additional opportunities to comment on the development and content of the document; and

WHEREAS, the Bicycle Transportation Plan Update has been drafted to satisfy the guidelines of the California Active Transportation Program to ensure the City maintains its eligibility to compete for, and receive, State/Federal active transportation and other grant funding; and

WHEREAS, the City Council reviewed the Public Draft of the Bicycle Transportation Plan Update on July 7, 2015, and conducted a public meeting at which public comment was invited; and

WHEREAS, on November 17, 2015, the City Council held a public meeting to consider adoption of the Bicycle Transportation Plan Update; and

WHEREAS, the development and adoption of the Bicycle Transportation Plan Update document is exempt from California Environmental Quality Act (CEQA) review pursuant to Section 21080.20 of the California Public Resources Code; and

WHEREAS, the Bicycle Transportation Plan Update is consistent with and supports the mobility goals of the City of Mountain View 2030 General Plan;

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Mountain View hereby approves and adopts the Bicycle Transportation Plan Update, a copy of which is on file in the City Clerk's Office.

The foregoing Resolution was regularly introduced and adopted at a Special Meeting of the City Council of the City of Mountain View, duly held on the 17th day of November 2015, by the following vote:

AYES:	Councilmembers Inks, Kasperzak, Rosenberg, Siegel, Vice Mayor Showalter, and Mayor McAlister
NOES:	None
ABSENT:	Councilmember Clark
NOT VOTING:	None

ATTEST:

LORRIE BREWER, MMC
CITY CLERK

APPROVED:

JOHN McALISTER
MAYOR

I do hereby certify that the foregoing resolution was passed and adopted by the City Council of the City of Mountain View at a Special Meeting held on the 17th day of November 2015, by the foregoing vote.

City Clerk
City of Mountain View

LF/7/RESO
901-11-17-15r-E