

## Appendix G. Project Sheets

This appendix presents the project description sheets for the following projects:

1. Downtown Bike Parking
2. Hillsdale Overcrossing
3. Bay to Transit Feasibility Study
4. Wayfinding Signage Program
5. San Mateo Drive Bicycle Lane Outreach and Implementation
6. Humboldt Street at Fourth Avenue Bike Box and Green Bike Lane
7. Laurelwood / Sugarloaf Park Path
8. On-Street Bicycle Facilities
9. 25<sup>th</sup> Avenue at S Delaware Street Bike Box and Green Bike Lane
10. Delaware Street at Pacific Boulevard Bicycle Left-Turn Pocket Feasibility Study

## G.1. Downtown Bike Parking

### G.1.1. Project Purpose

- a. The Downtown Bike Parking project proposes installation of 54 bicycle racks throughout Downtown San Mateo and 36 electronic lockers at the San Mateo Caltrain Station, which is located in Downtown San Mateo. Two-thirds of bicycle racks are proposed within the public right-of-way in the sidewalk furnishing zone. One-quarter of all new racks are proposed to be installed in bicycle parking corrals within the roadway.
- b. Bicycle parking is an essential element of any bikeway network. Bicycle parking Downtown is especially important to San Mateo for a number of reasons. Downtown San Mateo is a community destination with many visitors, including bicyclists, but it has limited right-of-way available for bicycle parking. There are currently ten bicycle parking racks Downtown. When there are no bicycle racks, bicyclists will park or lock their bikes at inappropriate locations, using street signs, trees near bus stops, or parking meters. Use of these street fixtures is problematic for a variety of reasons including pedestrian accessibility and stability of the locked bicycle. As San Mateo continues to build its bikeway network and more residents bicycle, bicycle parking will become increasingly important issue. Installation of bicycle parking will not only prevent bicyclists from locking to street fixtures, attractive and well placed bicycle parking can encourage bicycling activity.

### G.1.2. Project Background

- a. In 2008, the Peninsula Corridor Joint Powers Board adopted the *Caltrain Bicycle Access and Parking Plan*, which proposes to increase the number of passengers who bicycle to Caltrain stations by making improvements to access and bike parking at the top 10 stations which account for 75 percent of the systems cyclist-passenger volumes, including the San Mateo Station.
- b. Community members identified the need for bicycle parking at the community workshop for the *Bicycle Master Plan* (2011) by marking specific locations for proposed racks on workshop maps of Downtown.
- c. The City of San Mateo *Bicycle Master Plan* identifies Downtown bicycle parking as a high priority project.
- d. The Downtown Bicycle Parking Plan (Appendix B) was identified as high priority by the Bicycle Plan Steering Committee, community-at-large and numerous important stakeholders involved with preparation of the *Bicycle Master Plan*.
- e. The City's Downtown Bike Parking Plan identifies key locations citywide for bicycle parking installation, a bike parking plan for Downtown, and a recommended bicycle parking ordinance. The recommended locations and layouts were chosen based on available right-of-way, proximity to businesses that attract bicyclists, and impacts to pedestrian activity and automobile parking.
- f. The project is supported by numerous adopted goals, policies and implementation strategies included in the *City of San Mateo General Plan* (2010), *Sustainable Initiatives Plan* (2010), *Bicycle Master Plan* (2011), and the *Caltrain Bicycle Access and Parking Plan* (2008). A complete summary of these policies is included in this project sheet.

### G.1.3. Project Scope

- a. **Complete Public Outreach.** The City will continue with its outreach efforts to adjacent property owners and the Downtown San Mateo Association.
- b. **Complete Final Design.** The Downtown Bike Parking project proposes to install 54 bicycle racks throughout the Downtown Area. The racks will be round tubing. The racks will be powder coat black (preferably with a primer layer) in order to be consistent with the downtown aesthetic and existing street furniture. Of the 54 racks, 36 will be installed in the public right-of-way in the sidewalk furnishing zone. Three (3) of these racks will be installed in Central Park. The remaining 18 racks will be installed in bicycle parking corrals within the roadway, outside the travel area. Installation of the bicycle parking corrals will include:
  - i. Conversion of four auto parking stalls to bicycle parking corrals
  - ii. Repurposing of one red zone adjacent to a curb extension to a bicycle parking corral
  - iii. Installation of bollards, wheel stops, and striping to delineate the corrals

In addition to the bicycle racks, 36 electronic lockers will be installed at the Downtown Caltrain Station.

Final design will involve coordination with the Peninsula Corridor Joint Powers Board and utility and public service providers potentially impacted by the proposed bike parking.

- c. **Issue Work Order.** The City will explore the use of City crews to install new bicycle parking facilities in the Downtown.

### G.1.4. Project Costs

- a. Costs to complete the Downtown Bicycle Parking project are estimated at \$147,495.

Table G-1: Downtown Bike Parking Cost Estimate

	Quantity	Cost Per Unit	Installation	Equipment Costs	Labor Costs	Total Costs
Racks	52	\$180	\$150	9720	\$8,100	\$17,160
Electronic Lockers at Caltrain	44	\$2,700	\$0	\$118,800	\$0	\$118,800
Bollards	13	\$450	\$150	\$5,850	\$1,950	\$7,800
Wheel Stops	15	\$35	\$150	\$525	\$2,250	\$2,775
Striping	100	\$3	--	\$300	\$0	\$300
<b>Project Total</b>				\$111,929	\$12,750	<b>\$146,835</b>

### G.1.5. Project Outcomes

- a. The Downtown Bicycle Parking project will include community consensus building, final design, and installation of bicycle parking in Downtown San Mateo, including at the San Mateo Caltrain Station.

### G.1.6. Supporting Adopted Policies

- a. *Caltrain Bicycle Access and Parking Plan* San Mateo Station bicycle parking recommendations.
- b. City of San Mateo *Vision 2030 General Plan* Policies:

C4.10: Bikeway Systems. Review the City's planned bikeways systems for adequacy, consistency and connectivity throughout the City to facilitate ease of use and safety for the users including adequate parking for bicycles.

C6.1: Modal Share. Increase mode share from pedestrian and bicycle travel, for trips of one mile or less, from three percent in 2005 to 30 percent by 2020 by introducing paid parking in other commercial areas outside of the downtown, improving pedestrian walkways and amenities within commercial areas and residential neighborhoods and by providing adequate, secure, covered parking for bicycles in city garages for new multifamily and commercial development. Additional potential supportive actions to increase mode share are detailed in the SIP, Appendix T of the General Plan.

c. City of San Mateo *Sustainable Initiatives Plan* Strategies:

T1: Increase mode share for pedestrian and bicycle travel to 30% for trips of one mile or less by 2020.

d. City of San Mateo *Bicycle Master Plan* Goals and Objectives:

Goal 1: Develop and maintain a comprehensive bicycle and pedestrian circulation network which provides safe recreation opportunities and an alternative to automobile travel. (GP Goal C4)

Goal 2: Increase mode share for pedestrian and bicycle travel to 30% for trips of one mile or less by 2020. Bicycle and pedestrian travel currently represents about 3% of all travel (SIP Recommendation T.1).

Goal 4: Ensure plentiful, high quality support facilities to complement the bicycle network.

Objective 4.2: Develop and adopt a Downtown Bicycle Parking Plan.

e. City of San Mateo *Bicycle Master Plan* High Priority project: Downtown Bicycle Parking.

f. Community identified need for bicycle parking.

### G.1.7. Project Graphic



Figure G-1: Recommended Downtown Bicycle Parking Locations

## G.2. Hillsdale Overcrossing

### G.2.1. Project Purpose

- a. The Hillsdale Overcrossing project envisions development of a grade-separated bicycle and pedestrian crossing of US Highway 101 (US 101) at Hillsdale Boulevard in southeastern San Mateo.
- b. The *Hillsdale Boulevard US 101 Bicycle and Pedestrian Over Crossing Final Study* (2007) identifies the need for improved bicyclist and pedestrian access across US 101. The Hillsdale Highway 101 overcrossing would allow pedestrians and bicyclists coming from eastern San Mateo and Foster City to access the Hillsdale Caltrain Station, schools, shopping opportunities, and employment west of US 101. The project would also improve access between the neighborhoods of San Mateo and recreational destinations such as the San Francisco Bay Trail via bicycle and on foot.
- c. Bicyclists and pedestrians in San Mateo have consistently indicated that US 101 is one of the major barriers for walking and bicycling in southeastern San Mateo. A gap closure project, the Hillsdale Overcrossing would connect with:
  - i. Existing sidewalks along East Hillsdale Court that connect with the other pedestrian facilities along Hillsdale Boulevard, Saratoga Drive, points further west, Norfolk Street, and points further east. The City of San Mateo generally requires five-foot sidewalks, and the sidewalk network in the vicinity of the Hillsdale Boulevard US 101 Interchange is generally in good repair.
  - ii. An existing Bike Route along Hillsdale Boulevard, existing Multi-Use path along the inner curve of Franklin Parkway at Highway 101, existing and proposed bikeways along South Norfolk Street, and proposed bike lanes along Hillsdale Boulevard (east of South Norfolk Street) connecting Hillsdale Boulevard to Foster City and the Bay Trail over Marina Lagoon.
- d. Good bicycle and pedestrian access to the Hillsdale Caltrain Station would reduce parking demand and reduce vehicle trips on Hillsdale Boulevard, which has an existing vehicle Level of Service of "C" at the intersection of Hillsdale Boulevard and Saratoga Drive.
- e. The project will include Caltrans coordination, Project Study Report/Project Report (PSR/PR) preparation, environmental review, easement acquisition, design, and permitting.

### G.2.2. Project Background

- a. Caltrans has jurisdiction over the US 101 right-of-way and the Hillsdale Boulevard on- and off-ramps. Caltrans' right-of-way extends to the intersection approaches of Norfolk Street and Saratoga Drive along Hillsdale Boulevard. At the time of the reconfiguration of the Hillsdale Boulevard 101 Interchange, Caltrans designed the overcrossing to accommodate pedestrians with 5-foot sidewalks and unprotected crosswalks at each ramp. Hillsdale Boulevard is the only pedestrian accessible crossing of US 101 between 19th Avenue in San Mateo and Ralston Avenue in Belmont. Hillsdale Boulevard is designated a bicycle route at this location, and no additional accommodations for bicyclists were implemented as part of the reconfiguration. Caltrans does not currently have any roadway improvement projects in the vicinity of the project area.

- b. The history of the project began shortly after the reconstruction of the Hillsdale Boulevard US 101 interchange in 2001 as a mitigation measure for the Bay Meadows Redevelopment project. The San Mateo Bicycle and Pedestrian Advisory Committee identify the project as a high priority for the 2005-2006 TDA Article III grant cycle and received a grant of \$100,000 for the alignment study and preliminary design.
- c. The *Hillsdale Boulevard US 101 Bicycle and Pedestrian Over Crossing Final Study* established a preferred option for a bicycle and pedestrian bridge alignment and identified potential environmental, engineering, operational and permit issues. The proposed Hillsdale Overcrossing alignment is located south of the existing Hillsdale Boulevard US 101 overcrossing and consists of an independent structure that connects with East Hillsdale Court and South Norfolk Street. In order to provide the best access for bicyclists and pedestrians to the new overcrossing, improvements are necessary to two of the neighboring intersections: the Hillsdale Boulevard/Saratoga Drive intersection and the Franklin Parkway/Saratoga Drive intersection. Improvements at these intersections are identified in the San Mateo Bicycle Master Plan and will be implemented separately from the Hillsdale Overcrossing project.
- d. The project is supported by numerous adopted goals, policies, and implementation strategies included in the *Draft San Mateo County Comprehensive Bicycle and Pedestrian Master Plan* (2011), *San Mateo Countywide General Plan* (1986), *City of San Mateo Vision 2030 General Plan* (2010), *Sustainable Initiatives Plan* (2010), and *San Mateo Bicycle Master Plan* (2011). A complete summary of these policies is included in this project sheet.

### **G.2.3. Project Scope**

- a. **Caltrans Coordination.** The project is within Caltrans right-of-way, therefore reviewing the preferred alternative and conducting field review is necessary before continuing. To date, the project has been presented to Caltrans and the agency supports proceeding with the next steps.
- b. **Project Study Report/Project Report (PSR/PR) Preparation.** The project is within Caltrans right-of-way, making a PSR/PR necessary for state approval.
- c. **Environmental Review.** An environmental analysis will be conducted per NEPA and CEQA requirements. The public will have several opportunities to review and comment on the potential impacts associated with project implementation and operation in this process.
- d. **Easement Acquisition.** The easement acquisition process with Green Valley Enterprises will be initiated for 0.2 acres providing for the west touchdown.
- e. **Design.** The design process will proceed at the same time the environmental work is being completed. Next steps include title searches, surveying, review of “as-built” drawings, and soil borings. A contract for full design and engineering services will be let out once the environmental process indicates there are no fatal environmental flaws.
- f. **Permitting.** An encroachment permit from Caltrans will be completed.
- g. **Project Construction.** Following completion of the above items, construction of bicycle/pedestrian overcrossing south of the Hillsdale Boulevard/US 101 interchange will commence.

#### G.2.4. Project Costs

- a. The estimated cost for the project is \$10.7 million.

Table G-2: Hillsdale Overcrossing Cost Estimate

Item	Costs
Soft Costs (Project Approval/Environmental, PS&E, R/W Engineering, Management)	\$3,000,000
Estimated Easement Acquisition	\$571,000
Construction	\$7,100,000
<b>Project Total</b>	<b>\$10,671,000</b>

Source: *Hillsdale Boulevard US 101 Bicycle and Pedestrian Over Crossing Final Study, 2007*

\* 8.8% inflation applied to 2007 estimate of \$10.7 M

#### G.2.5. Project Outcomes

- a. Approval of the *Hillsdale Boulevard US 101 Bicycle and Pedestrian Over Crossing Final Study* established the preferred alternative overcrossing alignment. The Hillsdale Overcrossing project will result in Caltrans coordination, PSR/PR preparation and review, CEQA compliance, detailed design, easement acquisition, permitting, and construction of a pedestrian and bicycle overcrossing of US 101 at Hillsdale Boulevard.

#### G.2.6. Supporting Adopted Policies

- a. Draft San Mateo County Comprehensive Bicycle and Pedestrian Master Plan Tier 1 project.
- b. San Mateo Countywide General Plan policies:
  - 12.3 Provide for a balanced and integrated transportation system in the County which allows for transportation by various modes and easy transfer between modes.
  - 12.34 Bicycle Routes: Encourage the cities to develop local bikeway plans, obtain funding and construct and maintain a system of local bikeways that is consistent with the County Bikeways Plan.
  - 12.39 Pedestrian Paths: Encourage the provision of safe and adequate pedestrian paths in new development connecting to activity centers, schools, transit stops and shopping centers.
  - 12.40 Pedestrian Bridges: Encourage Caltrans to provide pedestrian bridges and connections in areas where State highways have divided communities.
- c. City of San Mateo Vision 2030 General Plan Policies:
  - C4.9 Pedestrian and Bikeway Connections. Implement an area-wide pedestrian and bicycle circulation plan which will result in convenient and direct connections throughout San Mateo. Implementing connections in the Rail Corridor Transit-Oriented Development Plan (Corridor Plan) area and into adjacent neighborhoods and districts is a priority.
  - C4.12 Hillsdale Bicycle and Pedestrian Overcrossing. Construct a bicycle and pedestrian overcrossing in the vicinity of Hillsdale Boulevard over US 101.

C6.1: Modal Share. Increase mode share from pedestrian and bicycle travel, for trips of one mile or less, from three percent in 2005 to 30 percent by 2020 by introducing paid parking in other commercial areas outside of the downtown, improving pedestrian walkways and amenities within commercial areas and residential neighborhoods and by providing adequate, secure, covered parking for bicycles in city garages for new multifamily and commercial development. Additional potential supportive actions to increase mode share are detailed in the SIP, Appendix T of the General Plan.

C6.3 Travel to Schools. Reduce private automobile school trips by 50% before 2020 by working with private and public schools to increase the number of students walking or bicycling to school, implementing “walking pools” to schools, increasing carpooling for students, and making flexible local transit available for student travel.

d. City of San Mateo *Sustainable Initiatives Plan* Strategies:

T1: Increase mode share for pedestrian and bicycle travel to 30% for trips of one mile or less by 2020.

e. City of San Mateo Bay Meadows Specific Plan Amendment (3. Transportation):

The Specific Plan Amendment includes discussion of the project goals, including the goal to “reduce reliance on the private automobile by enhancing opportunities for transit ridership, walking and biking.”

f. Rail Corridor Transit-Oriented Development Plan Policies:

4.10: Establish safe and convenient pedestrian and bicycle routes where existing barriers currently prohibit connections.

g. City of San Mateo *Bicycle Master Plan* Goals and Objectives:

Goal 1: Develop and maintain a comprehensive bicycle and pedestrian circulation network which provides safe recreation opportunities and an alternative to automobile travel. (GP Goal C4)

Objective 1.5: Pedestrian and Bicycle Mobility Needs. Balance pedestrian mobility and bicycle accessibility and safety with vehicular congestion when considering intersection improvements to address level of service degradation. (GP Policy 4.8)

Objective 1.6: construct a bicycle and pedestrian overcrossing in the vicinity of Hillsdale Boulevard over US 101.

Goal 2: Increase mode share for pedestrian and bicycle travel to 30% for trips of one mile or less by 2020. Bicycle and pedestrian travel currently represents about 3% of all travel (SIP Recommendation T.1).

Goal 3: Increase mode share of bicycle travel to schools.

h. City of San Mateo *Bicycle Master Plan* High Priority project: Hillsdale Overcrossing.

i. Community identified need for a bicycle crossing over US 101 near Hillsdale Boulevard.

### G.2.7. Project Graphic

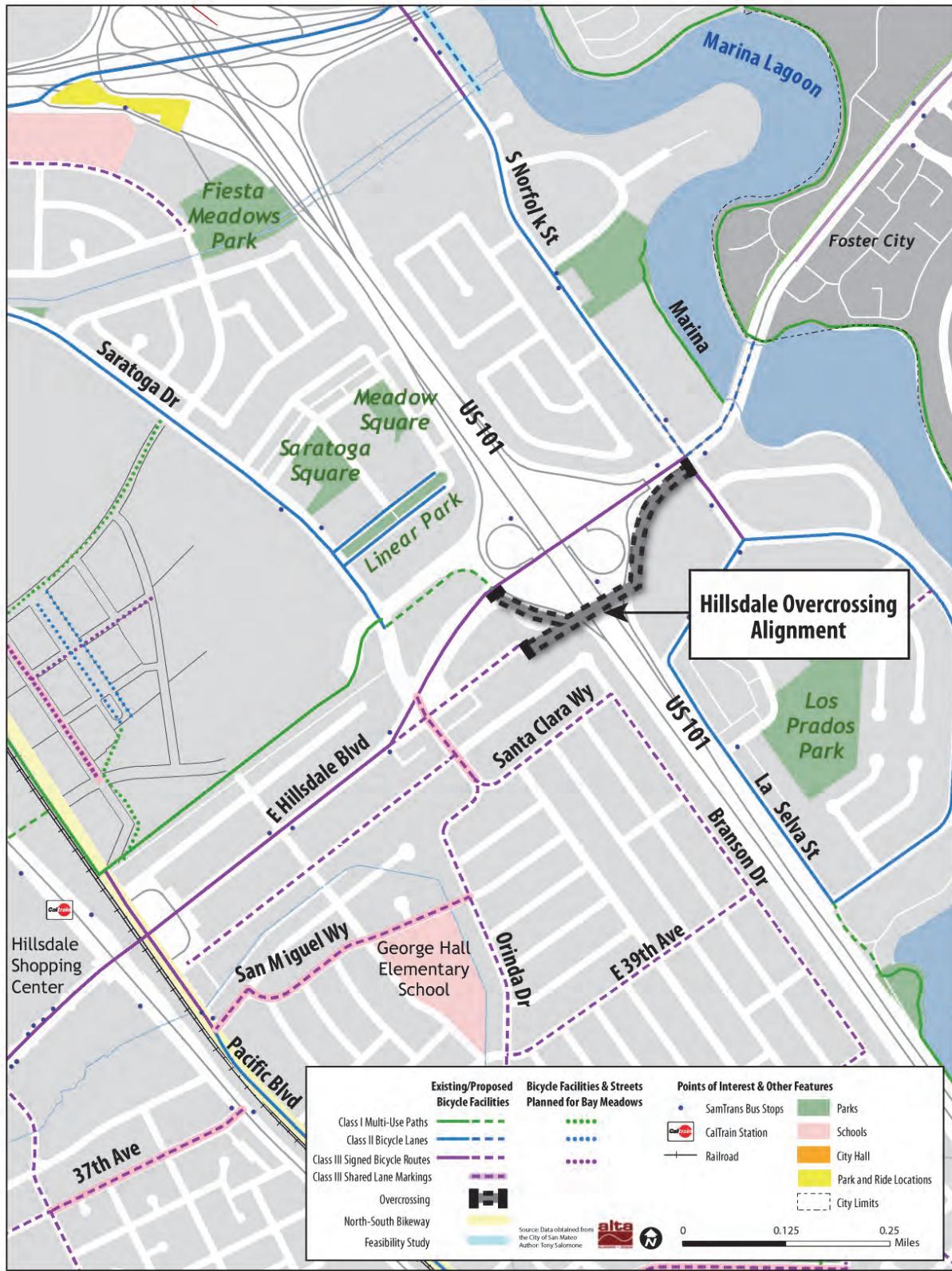


Figure G-2: Proposed Hillsdale Overcrossing Alignment

## G.3. Bay to Transit Trail Feasibility Study

### G.3.1. Project Purpose

- a. The Bay to Transit Trail project envisions development of a paved two-mile pedestrian and bicycle pathway along the existing city-owned creek drainage channel from the Hayward Park Caltrain Station to the regional San Francisco Bay Trail.
- b. The Bicycle Master Plan (2011) identifies the need for a feasibility study for this project in order to address right-of-way, site engineering, safety, security, privacy, delivery of emergency services, maintenance and operations, community interests and needs, and other unknowns associated with the development of a trail in this location.
- c. This project will include multi-use pathway feasibility analysis, preliminary design analysis of design options for a Highway 101 pedestrian-bicycle grade-separated crossing, and community consensus building for the proposed Bay to Transit Trail.

### G.3.2. Project Background

- a. The Bay to Transit Trail is identified as a priority project (Tier 1) in the City of San Mateo Bicycle Master Plan; 16th Avenue Channel Multi-Use Path.
- b. The project is supported by numerous adopted goals, policies and implementation strategies included in the City of San Mateo General Plan (2010), Sustainable Initiatives Plan (2010), Rail Corridor Transit-Oriented Development Plan (2005), and Bicycle Master Plan (2011). A complete summary of these policies is included in this project sheet.

### G.3.3. Project Scope

- a. **Right-of-Way.** The feasibility study will identify right-of-way availability and ownership, investigate need to development of additional access points, and identify requirements for property acquisition and/or modification to any existing easements.
- b. **Conceptual Design Development and Feasibility.** The conceptual design development component of this study will identify requirements for pathway cross sections, setbacks, roadway crossing treatments, fencing and barrier requirements, and potential for compliance with applicable local, state, and federal pathway design standards. The conceptual design will further identify pathway features including fencing, lighting, landscape, entry control, mile markers, emergency call boxes, and other standard pathway elements.
- c. **Safety, Security, Management, and Maintenance.** This feasibility study will involve public works engineering and all emergency services agencies with jurisdiction over the project site in identification of trail user safety, general public safety, and adjacent property security considerations. The study will include identification and evaluation of safety, security, management, and maintenance of the project. A plan will be developed to address emergency access, paving, public access, backyard privacy and maintenance concerns identified during the feasibility analysis.
- d. **Environmental Scoping.** The environmental scoping component of this study will include identification of environmental issues influencing design and environmental clearance of the facility

including but not limited to biological habitat impacts (including identification of Sensitive and Endangered Species); air and noise impacts, hydrologic and drainage impacts (with a preliminary assessment of flood control impacts), visual and aesthetic impacts to adjacent properties, and traffic and circulation impacts.

#### **G.3.4. Project Costs**

- a. Costs to complete the Bay to Transit Trail Feasibility Study are estimated at \$150,000.

#### **G.3.5. Project Outcomes**

- a. The Feasibility Study will identify right-of-way; conceptual design and feasibility; safety, security, management and maintenance; and environmental issues related to project implementation. Should issues identified in this study arise that cannot be reasonably addressed or a reasonable solution cannot be found, the project will not be considered for construction.

#### **G.3.6. Supporting Adopted Policies**

- a. City of San Mateo General Plan Policies:

C4.9: Pedestrian and Bicycle Connections. Implement an area-wide pedestrian and bicycle circulation plan which will result in convenient and direct connections throughout the Rail Corridor Transit-Oriented Development Plan (Corridor Plan) area and into adjacent neighborhoods and districts.

C6.1: Modal Share. Increase mode share from pedestrian and bicycle travel, for trips of one mile or less, from three percent in 2005 to 30 percent by 2020 by introducing paid parking in other commercial areas outside of the downtown, improving pedestrian walkways and amenities within commercial areas and residential neighborhoods and by providing adequate, secure, covered parking for bicycles in city garages for new multifamily and commercial development. Additional potential supportive actions to increase mode share are detailed in the SIP, Appendix T of the General Plan.

C6.3: Travel to Schools. Reduce private automobile school trips by 50 percent before 2020 by working with private and public schools to increase the number of students walking or bicycling to school, implementing "walking pools" to schools, increasing carpooling for students, and making flexible local transit available for student travel.

C/OS 14.3: Active Use Facilities. Provide sufficient active use facilities to support current needs and future trends including at least three new multi-use athletic turf areas; an evaluation of existing turf fields for possible conversion to synthetic turf; a tennis complex that optimizes revenue generation; and a system of pedestrian and bike trails that will provide interconnectivity between parks.

- b. City of San Mateo Sustainable Initiatives Plan Strategies:

T1: Increase mode share for pedestrian and bicycle travel to 30% for trips of one mile or less by 2020.

T3: Reduce single purpose school trips by private automobile by 50% by 2020.

c. Rail Corridor Transit-Oriented Development Plan Policies:

- 4.9: Develop an area-wide pedestrian and bicycle circulation network which will result in convenient and direct connections throughout the plan area and into adjacent neighborhoods and districts.
- 4.10: Establish safe and convenient pedestrian and bicycle routes where existing barriers currently prohibit connections.

d. City of San Mateo Bicycle Master Plan Goals and Objectives:

Goal 1: Develop and maintain a comprehensive bicycle and pedestrian circulation network which provides safe recreation opportunities and an alternative to automobile travel. (GP Goal C4)

Objective 1.5: Pedestrian and Bicycle Mobility Needs. Balance pedestrian mobility and bicycle accessibility and safety with vehicular congestion when considering intersection improvements to address level of service degradation. (GP Policy 4.8)

Goal 2: Increase mode share for pedestrian and bicycle travel to 30% for trips of one mile or less by 2020. Bicycle and pedestrian travel currently represents about 3% of all travel (SIP Recommendation T.1).

Goal 3: Increase mode share of bicycle travel to schools.

- e. City of San Mateo Bicycle Master Plan Tier 1 project: 16th Avenue Channel Multi-Use Path (MUP) (1.41 miles).
- f. Community identified need for improved crossings over Highway 101, improved connections to the Bay Trail and schools, and a bike path along the 16th Avenue Channel.

### G.3.7. Project Graphic

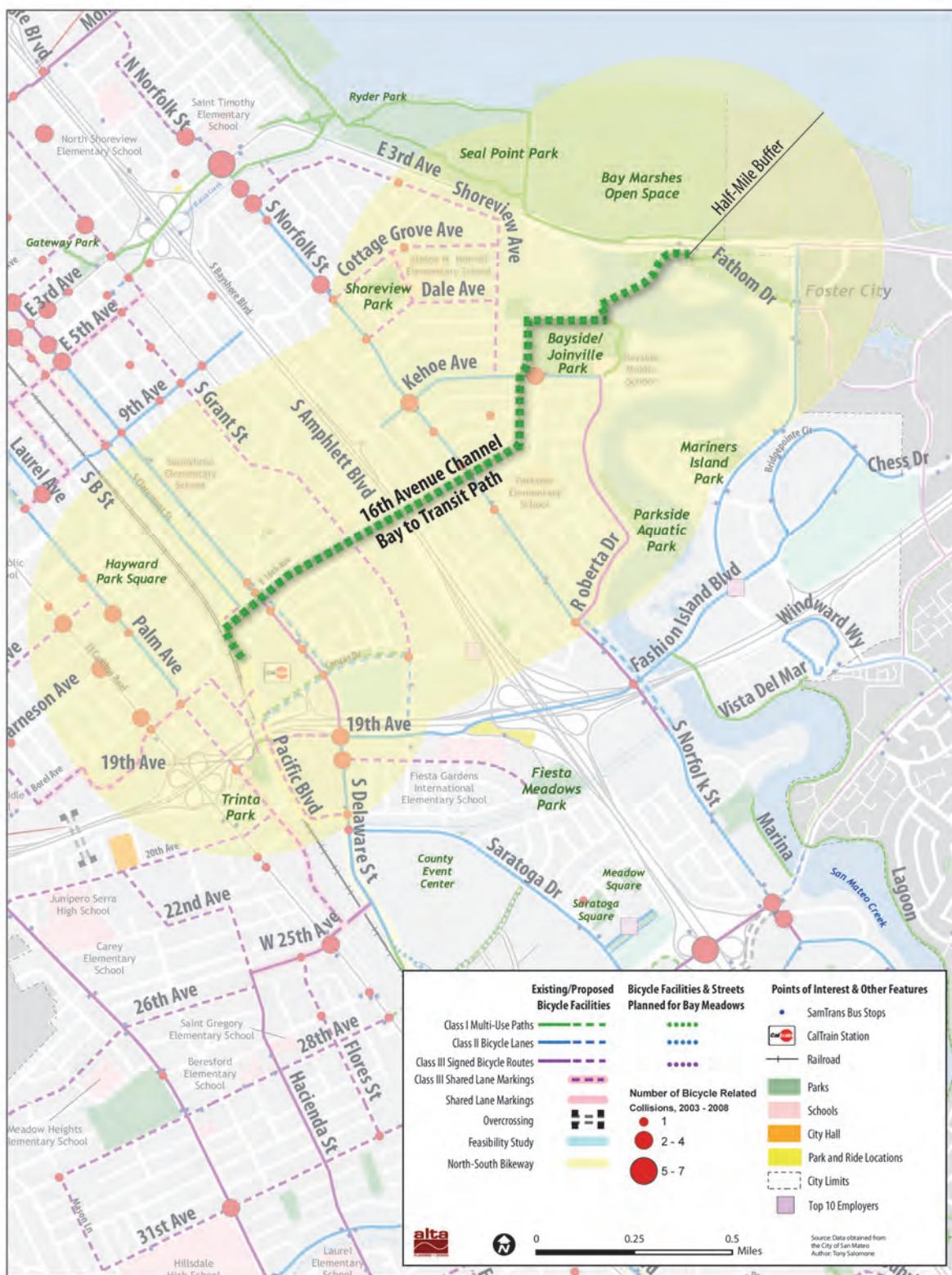


Figure G-3: Bay to Transit Path Alignment Feasibility Study

## G.4. Wayfinding Signage Program

### G.4.1. Project Purpose

- a. The City of Mateo proposes a citywide wayfinding signage program for bicyclists to direct them to Caltrain stations, City and County parks and trails, and Downtown San Mateo. Improving the legibility of Mateo's non-motorized transportation network will reduce vehicle trips and congestion and catalyze increased use of bikeways by commuters and recreational riders.
- b. The Citywide Wayfinding Program will develop an informative and visible signage system on existing and planned bicycle routes that will provide destination, direction and distance information to local and regional nodes. The program will be comprehensive. It will begin with a design phase that includes community participation to identify optimal sign locations and signage protocol and layout. Signs will then be developed, ordered, installed and field checked.
- c. Wayfinding is an important tool in a vehicle demand reduction strategy. Wayfinding signage programs orient and guide bicyclists along their journey to help them efficiently reach their destinations. Signs improve the convenience of biking and walking to regional transit hubs, reducing the number of regional automobile trips. One reason people choose not to use a non-motorized form of transportation is due to a lack of information about how to use the network and where it leads. Providing destination, direction and distance information to Caltrain stations and regional trip generators through signs will greatly improve the clarity of the network, empowering residents to have trust in an alternative transportation system.
- d. In 2011, the City of San Mateo adopted its Bicycle Master Plan, which identifies the need for a wayfinding system for the City's bicycle network. An extensive public outreach program was conducted for the Bicycle Master Plan. The community identified wayfinding signage as a priority. As San Mateo's bikeway network is developed, a distinctive wayfinding signage program will help bicyclists travel on bicycle priority streets. San Mateo's Citywide Wayfinding Signage Program for bicyclists will be a vehicle for influencing travel behavior and increasing the number of people who ride to transit, Downtown, and recreational facilities. Investment in wayfinding can greatly increase the transparency and visibility of the existing bicycle network as demonstrated by many Bay Area cities.

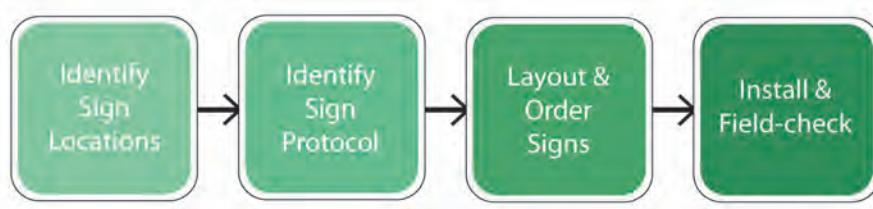
### G.4.2. Project Background

- a. Community members identified the need for wayfinding signage during preparation of the City Bicycle Master Plan.
- b. The project is supported by numerous adopted goals, policies and implementation strategies included in the City of San Mateo General Plan (2010), Sustainable Initiatives Plan (2010), Bicycle Master Plan (2011), and the Metropolitan Transportation Commission Regional Bicycle Plan (2009). A complete summary of these policies is included in this project sheet.

### **G.4.3. Project Scope**

The Wayfinding Signage Program will design and install signs that will provide destination, direction and distance information along existing and planned bicycle facilities within in the City of San Mateo. The Program includes the following steps:

1. **Identify Sign Locations.** The program's approach is to work with the community to identify the specific appropriate locations to place the signs in order to direct residents to regional transit and trip generators. Public input identifying the sign locations and signage protocol is an important element of a successful signage plan and will be emphasized in the San Mateo Wayfinding Program.
2. **Identify Signing Protocol.** A comprehensive signing protocol will be developed. It will establish standard types of signs for bicyclists, the frequency of sign placement, and sign layout principles. The signs will build upon readily recognizable standard highway guide signs and meet the requirements of the Manual on Uniform Traffic Control Devices (MUTCD) and the California MUTCD.
3. **Layout and Order Signs.** The City will lay out the individual signs based on the signage protocol and purchase signs.
4. **Install and Field-Check.** The signs will subsequently be installed and field-checked to ensure the accuracy of each directional and distance sign.



### **G.4.4. Project Costs**

- Costs to complete the Wayfinding Signage Program are estimated at \$50,000.

### **G.4.5. Project Outcomes**

- The citywide wayfinding signage program will direct bicyclists to Caltrain stations, City and County parks and trails, and Downtown San Mateo using the City's bikeway network. Improving the legibility of San Mateo's non-motorized transportation network will reduce vehicle trips and congestion and catalyze increased use of bikeways by commuters and recreational riders.
- People desire predictability when commuting to work or making regionally-based trips. They want to know how far and how long it is going to take to get to a destination. In order to modify people's travel choices, encouraging them to bike to public transit instead of driving, travel details must be clear and abundant. Commuters need to be able to assess the feasibility of making it to their destinations in a specific amount of time. Wayfinding removes the unpredictability of traveling by bike. The signage adds the confidence necessary for cyclists to shift their mode choice and reduce vehicle trips.

### **G.4.6. Supporting Adopted Policies**

- City of San Mateo General Plan Policies:

C2.12: Transportation Demand Management (TDM) Downtown. Establish and implement a TDM program, a Transportation Management Association (TMA), and other measures to reduce vehicle trips and encourage transit use and promote bicycle and pedestrian accessibility for development within the Downtown Core.

C4.9: Pedestrian and Bicycle Connections. Implement an area-wide pedestrian and bicycle circulation plan which will result in convenient and direct connections throughout the Rail Corridor Transit-Oriented Development Plan (Corridor Plan) area and into adjacent neighborhoods and districts.

C6.1: Modal Share. Increase mode share from pedestrian and bicycle travel, for trips of one mile or less, from three percent in 2005 to 30 percent by 2020 by introducing paid parking in other commercial areas outside of the downtown, improving pedestrian walkways and amenities within commercial areas and residential neighborhoods and by providing adequate, secure, covered parking for bicycles in city garages for new multifamily and commercial development. Additional potential supportive actions to increase mode share are detailed in the SIP, Appendix T of the General Plan.

b. City of San Mateo Sustainable Initiatives Plan Strategies:

T1: Increase mode share for pedestrian and bicycle travel to 30% for trips of one mile or less by 2020.

c. City of San Mateo Bicycle Master Plan Goals and Objectives:

Goal 1: Develop and maintain a comprehensive bicycle and pedestrian circulation network which provides safe recreation opportunities and an alternative to automobile travel. (GP Goal C4)

Goal 2: Increase mode share for pedestrian and bicycle travel to 30% for trips of one mile or less by 2020. Bicycle and pedestrian travel currently represents about 3% of all travel (SIP Recommendation T.1).

Objective 4.3: Develop and implement an informative bicycle wayfinding signage program.

d. City of San Mateo Bicycle Master Plan project.

e. Community-identified need for wayfinding signage.

f. Providing wayfinding signage to all City parks would help to implement the Parks and Recreation Strategic Planning policy of designing pedestrian and bicycle trails that connect parks and recreational facilities.

g. Metropolitan Transportation Commission Regional Bicycle Plan Policies:

2.5: Encourage coordination of cross jurisdictional bicycle way-finding signage.

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.

**G.4.7. Project Graphic**

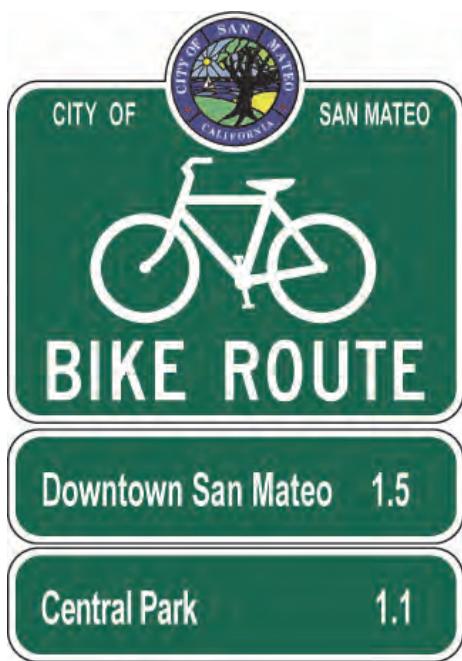


Figure G-4: Wayfinding Distance Sign

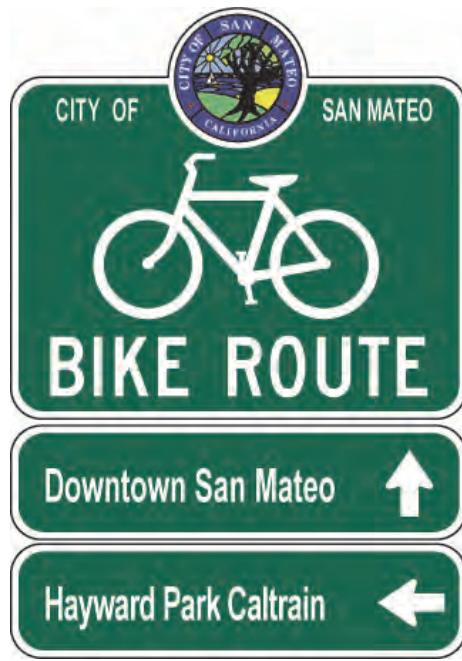


Figure G-5: Wayfinding Direction Sign

## **G.5. San Mateo Drive Bicycle Lane Outreach and Implementation**

### **G.5.1. Project Purpose**

- a. The San Mateo Drive Bicycle Lane Outreach and Implementation project includes proposed Class II bicycle lanes on San Mateo Drive between Peninsula Avenue and West Poplar Avenue. The outreach and implementation project will include outreach to stakeholders regarding travel lane reduction and bicycle lane implementation.
- b. The project will include coordination and collaboration with the City of Burlingame.

### **G.5.2. Project Background**

- a. San Mateo Drive is an important north-south connecting bikeway. It is one of the few direct streets that provide connectivity between the City of San Mateo and the City of Burlingame.
- b. It is part of the County North-South Bike Route.
- c. Community members identified a need for bicycle lanes on this roadways segment.
- d. The proposed project will connect to existing bike lanes on San Mateo Drive in Burlingame.
- e. Traffic analysis of travel lane reduction found impacts to be less than significant. This segment of San Mateo Drive has two lanes in each direction, no center turn lane, and on-street parking. Bike lanes could be added by reducing the number of through lanes to one in each direction and adding a center turn lane. On-street parking would remain. The traffic capacity would be somewhat reduced by the elimination of through lanes, but that would be partially restored by provision of the center turn lane. Under existing conditions, left turn vehicles can block the through lanes. It should be noted that south of Poplar Avenue, San Mateo Drive has only one lane in each direction plus turn lanes at intersections. The traffic volume on San Mateo Drive is about 12,000 vehicles per day, which is within the capacity of a two-lane street. Therefore, a reduction in through lanes from four to two would result in a less-than-significant traffic impact. At the intersection of San Mateo Drive and Peninsula Avenue, bike lanes could be added by removing the northbound right-turn lane. The space currently taken by the right turn lane could be reallocated to two bike lanes. The intersection would need to be restriped on San Mateo Drive to get the through lanes to line up. The level of service would remain at LOS B with removal of the right turn lane.
- f. A landscaped median and pedestrian improvements may be considered as part of the project.

### **G.5.3. Project Scope**

- a. **Public Outreach.** The proposed project will affect a diverse group of stakeholders and the City anticipates active stakeholder and community participation. Stakeholder outreach will seek to fulfill the following objectives: increased and improved access to Downtown San Mateo and Burlingame. The City will seek input from residents, business owners, and other stakeholders directly affected in the project area.

- b. **Implementation.** Project implementation will include:
  - i. Travel lane reduction from four to two travel lanes and one center turn lane. On-street parking will remain.
  - ii. At the intersection of San Mateo Drive and Peninsula Avenue, bike lanes could be added by removing the northbound right-turn lane. The space currently taken by the right turn lane could be reallocated to two bike lanes. The intersection would be restriped on San Mateo Drive to get the through lanes to line up.
  - iii. Installation of bike lanes in both the north and south direction.

#### **G.5.4. Project Costs**

- a. Costs to complete the San Mateo Drive Outreach and Implementation Project is estimated at \$42,000.

Table G-3: San Mateo Drive Bicycle Lane Outreach and Implementation Cost Estimate

Item	Costs
Outreach	\$20,000
Implementation	\$22,000
<b>Project Total</b>	<b>\$42,000</b>

#### **G.5.5. Project Outcomes**

- a. The San Mateo Drive Outreach and Implementation Project will result in community outreach with identified stakeholders to gather input on the proposed project.
- b. The project includes removal of two travel lanes and implementation of bicycle lanes between Peninsula Avenue and West Poplar Avenue.

#### **G.5.6. Supporting Adopted Policies**

- a. City of San Mateo General Plan Policies:
  - C4.8: Pedestrian and Bicycle Mobility Needs. Balance pedestrian mobility and bicycle accessibility and safety with vehicular congestion when considering intersection improvements to address level of service degradation.
  - C6.1: Modal Share. Increase mode share from pedestrian and bicycle travel, for trips of one mile or less, from three percent in 2005 to 30 percent by 2020 by introducing paid parking in other commercial areas outside of the downtown, improving pedestrian walkways and amenities within commercial areas and residential neighborhoods and by providing adequate, secure, covered parking for bicycles in city garages for new multifamily and commercial development. Additional potential supportive actions to increase mode share are detailed in the SIP, Appendix T of the General Plan.
- b. City of San Mateo Sustainable Initiatives Plan Strategies:

TI: Increase mode share for pedestrian and bicycle travel to 30% for trips of one mile or less by 2020.

c. City of San Mateo Bicycle Master Plan Goals and Objectives:

Goal 1: Develop and maintain a comprehensive bicycle and pedestrian circulation network which provides safe recreation opportunities and an alternative to automobile travel. (GP Goal C4)

Objective 1.5: Pedestrian and Bicycle Mobility Needs. Balance pedestrian mobility and bicycle accessibility and safety with vehicular congestion when considering intersection improvements to address level of service degradation. (GP Policy 4.8)

Goal 2: Increase mode share for pedestrian and bicycle travel to 30% for trips of one mile or less by 2020. Bicycle and pedestrian travel currently represents about 3% of all travel (SIP Recommendation T.1).

### G.5.7. Project Graphic

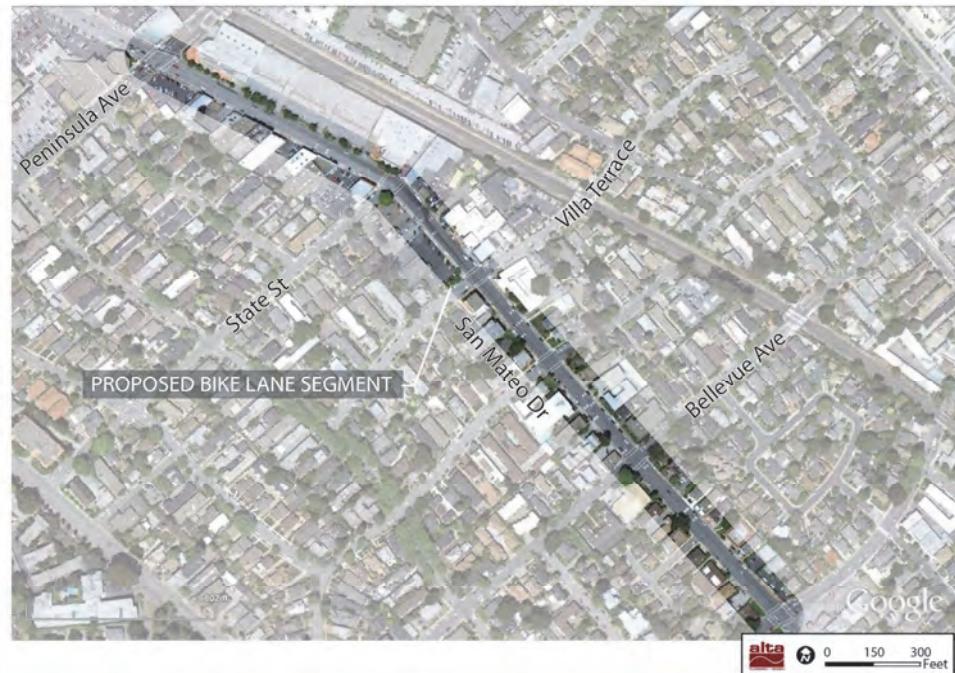


Figure G-6: San Mateo Drive Project Area

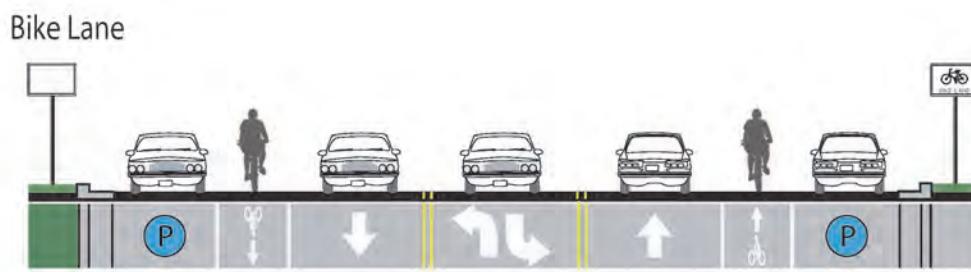


Figure G-7: San Mateo Drive Project Typical Roadway Section

## **G.6. Humboldt Street and 4<sup>th</sup> Avenue Bike Box and Green Bike Lane**

### **G.6.1. Project Purpose**

- a. The Humboldt Bike Box and Green Bike Lane project envisions development of a bike box at the southeast corner of the Humboldt Street/4<sup>th</sup> Avenue intersection and a green bike lane to guide bicyclists through the intersection and along 4th Avenue, connecting with the 3<sup>rd</sup> Avenue Median Path, which crosses Highway 101.
- b. The Humboldt Street/4<sup>th</sup> Avenue intersection geometry is problematic for the following reasons:
  - i. Northbound Humboldt Street at 4th Avenue has double right turn lanes where bicyclist positioning is not clear.
  - ii. Access to the 3rd Avenue Median Path from 4th Avenue east of Humboldt Street requires bicyclists to travel on the left side of the roadway.
  - iii. Vehicle speeds along 4<sup>th</sup> Avenue are high and motorists do not expect bicyclists to be on the left side of the roadway and nor do bicyclists expect that left side positioning is required.
- c. The Bicycle Master Plan (2011) identifies the need for intersection improvements at 4<sup>th</sup> Avenue and Humboldt Street.

### **G.6.2. Project Background**

- a. The Humboldt Bike Box and Green Bike Lane project is identified as a high priority project in the City of San Mateo Bicycle Master Plan: 4<sup>th</sup> Avenue and Humboldt Street Intersection Improvements.
- b. The project is supported by numerous adopted goals, policies and implementation strategies included in the City of San Mateo General Plan (2010), Sustainable Initiatives Plan (2010), and Bicycle Master Plan (2011). A complete summary of these policies is included in this project sheet.

### **G.6.3. Project Scope**

- a. **Construction.** Project construction will include:
  - a. Installation of a bike box at the intersection to direct bicyclists to the proper positioning for travel on the left side of 4<sup>th</sup> Avenue.
  - b. Installation of a green bike lane through the intersection directing bicyclists to the recommended path of travel to the left side of 4<sup>th</sup> Avenue.
  - c. Installation of a green bike lane on 4<sup>th</sup> Avenue between Humboldt Street and the 3<sup>rd</sup> Avenue Median Path entrance.
  - d. Installation of an angled ramp from 4<sup>th</sup> Avenue to the 3<sup>rd</sup> Avenue Median Path to facilitate bicyclist access to the path.
  - e. Installation of signage in advance and at the colored bike lane to direct motorists.

- b. Study Prohibition of Right Turns on Red Along Northbound Humboldt Avenue. The City may consider a study to prohibit right turns on red to further protect bicyclists.

#### **G.6.4. Project Costs**

- a. Costs to complete the Humboldt Bike Box and Green Bike Lane project are estimated at \$15,000.

#### **G.6.5. Project Outcomes**

- a. The Humboldt Bike Box and Green Bike Lane project will result in development of a bike box at the southeast corner of the Humboldt Street/4<sup>th</sup> Avenue intersection and a green bike lane through the intersection and along 4th Avenue, connecting with the 3<sup>rd</sup> Avenue Median Path. This project will direct bicycle travel through the intersection and onto the path, improve motorist awareness of bicyclists traveling through the intersection, and facilitate bicycle travel over Highway 101.

#### **G.6.6. Supporting Adopted Policies**

- b. City of San Mateo General Plan Policies:

C4.8: Pedestrian and Bicycle Mobility Needs. Balance pedestrian mobility and bicycle accessibility and safety with vehicular congestion when considering intersection improvements to address level of service degradation.

C6.1: Modal Share. Increase mode share from pedestrian and bicycle travel, for trips of one mile or less, from three percent in 2005 to 30 percent by 2020 by introducing paid parking in other commercial areas outside of the downtown, improving pedestrian walkways and amenities within commercial areas and residential neighborhoods and by providing adequate, secure, covered parking for bicycles in city garages for new multifamily and commercial development. Additional potential supportive actions to increase mode share are detailed in the SIP, Appendix T of the General Plan.

- c. City of San Mateo Sustainable Initiatives Plan Strategies:

T1: Increase mode share for pedestrian and bicycle travel to 30% for trips of one mile or less by 2020.

- d. City of San Mateo Bicycle Master Plan Goals and Objectives:

Goal 1: Develop and maintain a comprehensive bicycle and pedestrian circulation network which provides safe recreation opportunities and an alternative to automobile travel. (GP Goal C4)

Objective 1.5: Pedestrian and Bicycle Mobility Needs. Balance pedestrian mobility and bicycle accessibility and safety with vehicular congestion when considering intersection improvements to address level of service degradation. (GP Policy 4.8)

Goal 2: Increase mode share for pedestrian and bicycle travel to 30% for trips of one mile or less by 2020. Bicycle and pedestrian travel currently represents about 3% of all travel (SIP Recommendation T.1).

- e. City of San Mateo Bicycle Master Plan high priority project: 4<sup>th</sup> Avenue and Humboldt Street Intersection Improvements.

### G.6.7. Project Graphic



Figure G-8: Proposed Humboldt Street and 4th Avenue Bike Box and Green Bike Lane

## G.7. Laurelwood / Sugarloaf Park Path Project

### G.7.1. Project Purpose

- a. The Laurelwood / Sugarloaf Park Path project is a proposed Class I multiuse path that serves as an important connector between the Cities of Belmont and San Mateo. The Path passes through the Sugarloaf Mountain Open Space and will provide recreational opportunities from both cities

### G.7.2. Project Background

- a. The Laurelwood Park and Sugarloaf Management Plan provides management policies for the 37-acre Laurelwood Park and the adjoining 188-acre Sugarloaf Mountain Open Space, located south of Hillsdale Boulevard between Arthur Younger Freeway (State Route 92) and Alameda De Las Pulgas in San Mateo. The Management Plan includes the site plans that identify site improvements and management zones, estimated implementation costs, and costs for operations and maintenance activities over a fifteen year period.

The parks include a hierarchy of trails from single-tracks to trails that double as maintenance/fire access roads. City of San Mateo policies currently discourage biking within Sugarloaf Mountain Open Space. During the planning process, the public and City staff members identified opportunities for making regional trail connections for both pedestrians and bicyclists. Connecting new trails at Sugarloaf Mountain with other neighborhoods, City parks, and open spaces is a goal of the Parks and Recreation Department's Green Scheme Strategic Initiative. Nearly ten percent of participants in Discovery Day reported that they traveled to Laurelwood Park via bicycle. The Management Plan encourages increased recreational biking to and through Sugarloaf Mountain Open Space. The Laurelwood / Sugarloaf Park Path project is one of two trails within the project site designated as a multiuse trail.

- b. The project is supported by numerous adopted goals, policies and implementation strategies included in the City of San Mateo General Plan (2010), Sustainable Initiatives Plan (2010), Rail Corridor Transit-Oriented Development Plan (2005), and Bicycle Master Plan (2011). A complete summary of these policies is included in this project sheet.

### G.7.3. Project Scope

- a. **Conceptual Design Development and Feasibility.** The conceptual design and development component of this project will identify requirements for pathway cross sections, setbacks, roadway crossing treatments, fencing and barrier requirements, and potential for compliance with applicable local, state, and federal pathway design standards. The conceptual design will further identify pathway features including fencing, lighting, landscape, entry control, mile markers, emergency call boxes, and other standard pathway elements.
- b. **Safety, Security, Management, and Maintenance.** This feasibility study component of the project will involve public works engineering and all emergency services agencies with jurisdiction over the project site in identification of trail user safety, general public safety, and adjacent property security considerations. The study will include identification and evaluation of safety, security, management,

and maintenance of the project. A plan will be developed to address emergency access, paving, public access, backyard privacy and maintenance concerns identified during the feasibility analysis.

- c. **Environmental Scoping.** The environmental scoping component of the project will include identification of environmental issues influencing design and environmental clearance of the facility including but not limited to biological habitat impacts (including identification of Sensitive and Endangered Species); air and noise impacts, hydrologic and drainage impacts (with a preliminary assessment of flood control impacts), visual and aesthetic impacts to adjacent properties, and traffic and circulation impacts.
- d. **Project Implementation.** The project will comprise of a 0.88-mile long multiuse path passing through Sugarloaf Mountain Park. The project will require coordination between the Cities of Belmont and San Mateo.

#### **G.7.4. Project Costs**

- a. Costs to complete the Laurelwood / Sugarloaf Park Path are estimated at \$567,900.

#### **G.7.5. Project Outcomes**

- a. The project will construct a Class I multiuse path that is accessible for both pedestrians and bicyclists. The path will pass through the Sugarloaf Mountain Open Space and connect the Cities of Belmont and San Mateo.

#### **G.7.6. Supporting Adopted Policies**

- a. City of San Mateo General Plan Policies:

C4.9: Pedestrian and Bicycle Connections. Implement an area-wide pedestrian and bicycle circulation plan which will result in convenient and direct connections throughout the Rail Corridor Transit-Oriented Development Plan (Corridor Plan) area and into adjacent neighborhoods and districts.

C6.1: Modal Share. Increase mode share from pedestrian and bicycle travel, for trips of one mile or less, from three percent in 2005 to 30 percent by 2020 by introducing paid parking in other commercial areas outside of the downtown, improving pedestrian walkways and amenities within commercial areas and residential neighborhoods and by providing adequate, secure, covered parking for bicycles in city garages for new multifamily and commercial development. Additional potential supportive actions to increase mode share are detailed in the SIP, Appendix T of the General Plan.

C6.3: Travel to Schools. Reduce private automobile school trips by 50 percent before 2020 by working with private and public schools to increase the number of students walking or bicycling to school, implementing "walking pools" to schools, increasing carpooling for students, and making flexible local transit available for student travel.

C/OS 14.3: Active Use Facilities. Provide sufficient active use facilities to support current needs and future trends including at least three new multi-use athletic turf areas; an evaluation of existing turf fields for possible conversion to synthetic turf; a tennis complex that optimizes

revenue generation; and a system of pedestrian and bike trails that will provide interconnectivity between parks.

a. City of San Mateo Sustainable Initiatives Plan Strategies:

T1: Increase mode share for pedestrian and bicycle travel to 30% for trips of one mile or less by 2020.

T3: Reduce single purpose school trips by private automobile by 50% by 2020.

b. Rail Corridor Transit-Oriented Development Plan Policies:

4.9: Develop an area-wide pedestrian and bicycle circulation network which will result in convenient and direct connections throughout the plan area and into adjacent neighborhoods and districts.

4.10: Establish safe and convenient pedestrian and bicycle routes where existing barriers currently prohibit connections.

c. City of San Mateo Bicycle Master Plan Goals and Objectives:

Goal 1: Develop and maintain a comprehensive bicycle and pedestrian circulation network which provides safe recreation opportunities and an alternative to automobile travel. (GP Goal C4)

Objective 1.5: Pedestrian and Bicycle Mobility Needs. Balance pedestrian mobility and bicycle accessibility and safety with vehicular congestion when considering intersection improvements to address level of service degradation. (GP Policy 4.8)

Goal 2: Increase mode share for pedestrian and bicycle travel to 30% for trips of one mile or less by 2020. Bicycle and pedestrian travel currently represents about 3% of all travel (SIP Recommendation T.1).

Goal 3: Increase mode share of bicycle travel to schools.

Policy C/OS 9.4: Interjurisdiction Coordination. Support the coordination of adjacent jurisdictions in the development of bicycle and pedestrian trails, the connection of trails in San Francisco watershed lands, the development of the Bay Trail and Ridge Trail systems, and potential connections into the City of Belmont in the development of a trail system with Sugarloaf Mountain.

d. Community identified need for improved crossings over Highway 101, improved connections to the Bay Trail and schools, and a bike path along the 16th Avenue Channel.

### G.7.7. Project Graphic

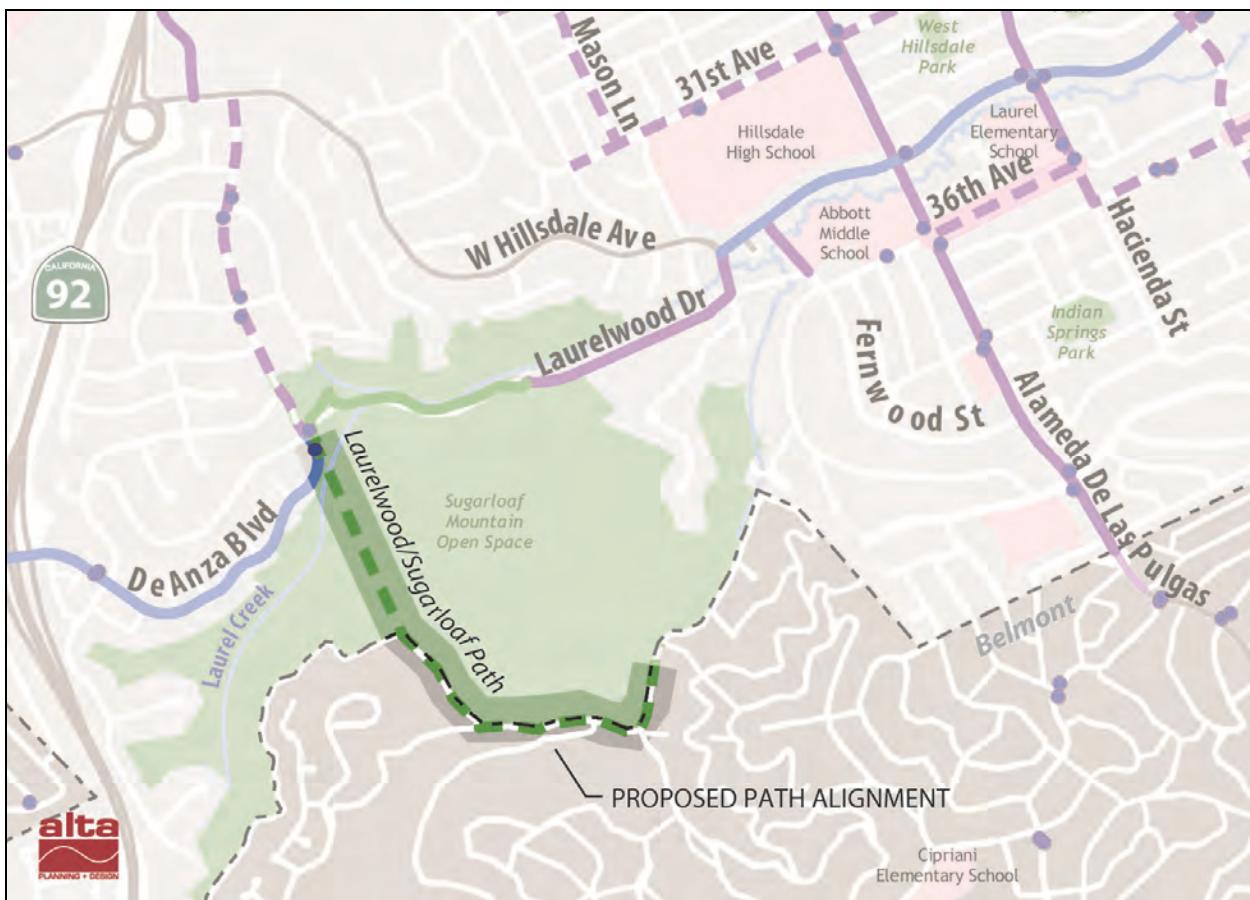


Figure G-9: Proposed Laurelwood Path Improvements

## G.8. On-Street Bicycle Facilities Project

### G.8.1. Project Purpose

The On-Street Bicycle Facilities project encompasses all proposed on-street bicycle facilities contained in the City of San Mateo Bicycle Master Plan, i.e. Class II, Class III and Class III facilities, without and with shared lane bicycle markings (also referred to as “sharrows”).

The project purpose is to implement adopted policies and objectives regarding Citywide bicycle access in the City of San Mateo, particularly for fulfilling community identified needs through on-street facilities.

### G.8.2. Project Background

- The On-Street Bicycle Facilities project includes all on-street projects in Tier 1, 2, and 3 of the City of San Mateo Bicycle Master Plan.
- The project is supported by numerous adopted goals, policies and implementation strategies included in the City of San Mateo General Plan (2010), Sustainable Initiatives Plan (2010), and Bicycle Master Plan (2011). A complete summary of these policies is included in this project sheet.

### G.8.3. Project Scope

The On-Street Bicycle Facilities project will include the following elements:

- Class II Bike Lanes will include
  - Bike lane signs and wayfinding signs
  - Automobile lane striping removal for lane narrowing, where needed
  - Bike lane striping and stenciling
- Class III Bike Routes will include
  - Bike route signs and wayfinding signs
  - Shared Lane Bicycle Markings (“sharrow” markings), where specified

### G.8.4. Project Costs

Table G-4: On-Street Facilities Cost Estimate

Facility type	Mileage	Total Costs
Class II Bike Lanes	3.03	\$129,000
Class III Bike Routes	22.17	\$66,400
Class III Bike Routes + Shared Lane Markings	10.25	\$82,000
<b>Project Total</b>	<b>37.45</b>	<b>\$277,400</b>

### G.8.5. Project Outcomes

- The On-Street Bicycle Facilities project will double the total mileage of the City’s on-street bicycle network to over 60 miles. It will in-fill network gaps, provide important connections to community destinations, and improve bicyclists safety.

### **G.8.6. Supporting Adopted Policies**

a. City of San Mateo General Plan Policies:

C4.9: Pedestrian and Bicycle Connections. Implement an area-wide pedestrian and bicycle circulation plan which will result in convenient and direct connections throughout the Rail Corridor Transit-Oriented Development Plan (Corridor Plan) area and into adjacent neighborhoods and districts.

C6.1: Modal Share. Increase mode share from pedestrian and bicycle travel, for trips of one mile or less, from three percent in 2005 to 30 percent by 2020 by introducing paid parking in other commercial areas outside of the downtown, improving pedestrian walkways and amenities within commercial areas and residential neighborhoods and by providing adequate, secure, covered parking for bicycles in city garages for new multifamily and commercial development. Additional potential supportive actions to increase mode share are detailed in the SIP, Appendix T of the General Plan.

C6.3: Travel to Schools. Reduce private automobile school trips by 50 percent before 2020 by working with private and public schools to increase the number of students walking or bicycling to school, implementing "walking pools" to schools, increasing carpooling for students, and making flexible local transit available for student travel.

C/OS 14.3: Active Use Facilities. Provide sufficient active use facilities to support current needs and future trends including at least three new multi-use athletic turf areas; an evaluation of existing turf fields for possible conversion to synthetic turf; a tennis complex that optimizes revenue generation; and a system of pedestrian and bike trails that will provide interconnectivity between parks.

b. City of San Mateo Sustainable Initiatives Plan Strategies:

T1: Increase mode share for pedestrian and bicycle travel to 30% for trips of one mile or less by 2020.

T3: Reduce single purpose school trips by private automobile by 50% by 2020.

c. City of San Mateo Bicycle Master Plan Goals and Objectives:

Goal 1: Develop and maintain a comprehensive bicycle and pedestrian circulation network which provides safe recreation opportunities and an alternative to automobile travel. (GP Goal C4)

Objective 1.5: Pedestrian and Bicycle Mobility Needs. Balance pedestrian mobility and bicycle accessibility and safety with vehicular congestion when considering intersection improvements to address level of service degradation. (GP Policy 4.8)

Goal 2: Increase mode share for pedestrian and bicycle travel to 30% for trips of one mile or less by 2020. Bicycle and pedestrian travel currently represents about 3% of all travel (SIP Recommendation T.1).

Goal 3: Increase mode share of bicycle travel to schools.

d. Community identified need for improved crossings over Highway 101, improved connections to the Bay Trail and schools, and a bike path along the 16th Avenue Channel.

## G.8.7. Project Graphic



Figure G-10: Proposed On-Street Bicycle Facility Improvements

## **G.9. 25th Avenue at S Delaware Street Bike Box and Green Bike Lane Project**

### **G.9.1. Project Purpose**

- a. The 25th Avenue / S Delaware Street Bike Box project envisions development of a bike box at the southwest corner of the 25th Avenue / S Delaware Street intersection and a dashed green bike lane to guide bicyclists through the intersection toward northbound Delaware Street.
- b. The 25th Avenue / S Delaware Street intersection geometry is problematic for the following reasons:
  - i. Eastbound access to S. Delaware Street from 25th Avenue is problematic because 25th Avenue has a dedicated right turn lane, an optional right/left turn lane and a left turn lane. This configuration does not direct bicyclists to proper lane positioning and does not inform drivers to expect bicyclists in the optional right/left turn lane.
  - ii. Access to northbound Delaware Street from northbound East 25<sup>th</sup> Avenue requires bicyclists to position themselves in the center shared left-right turn lane.
  - iii. Southbound access to 25<sup>th</sup> Avenue to Delaware Street is problematic because Delaware Street has two dedicated right turn lanes and through lane separated by a bike lane. This configuration does not direct southbound bicyclists turning right onto 25<sup>th</sup> Avenue to proper lane positioning. Drivers do not expect bicyclists to leave the bicycle lane and merge through the right turn lanes to turn right onto 25<sup>th</sup> Avenue.
- c. The Bicycle Master Plan (2011) identifies the need for intersection improvements at 25th Avenue at S Delaware Street.

### **G.9.2. Project Background**

- a. The 25th Avenue / S Delaware Street Bike Box and Green Bike Lane project is identified as a high priority project in the City of San Mateo Bicycle Master Plan: Delaware Street/ East 25<sup>th</sup> Avenue Intersection Improvements.
- b. The project is supported by numerous adopted goals, policies and implementation strategies included in the City of San Mateo General Plan (2010), Sustainable Initiatives Plan (2010), and Bicycle Master Plan (2011). A complete summary of these policies is included in this project sheet.

### **G.9.3. Project Scope**

**Construction.** Project construction will include:

- a. Installation of a bike box at the intersection to direct bicyclists to the proper positioning for a left-turn onto northbound S Delaware Street from northbound 25<sup>th</sup> Avenue.
- b. Installation of a green bike lane through the intersection directing bicyclists to the recommended path of travel to the right side of northbound S Delaware Street.
- c. Installation of signage in advance and at the colored bike lane to direct motorists.

- d. Installation of a bike box on the southbound approach of Delaware Street to direct bicyclists to the proper positioning for a right-turn onto westbound 25<sup>th</sup> Avenue.

#### **G.9.4. Project Costs**

- a. Costs to complete the 25th Avenue / S Delaware Street Bike Boxes and Green Bike Lane project are estimated at \$20,000.

#### **G.9.5. Project Outcomes**

- b. The 25th Avenue / S Delaware Street project will result in development of a bike box at the southwest corner of the 25th Avenue / S Delaware Street intersection and a green bike lane through the intersection onto northbound S Delaware Street. This project will direct bicycle travel through the intersection and improve motorist awareness of bicyclists traveling through the intersection.

#### **G.9.6. Supporting Adopted Policies**

- a. City of San Mateo General Plan Policies:

C4.8: Pedestrian and Bicycle Mobility Needs. Balance pedestrian mobility and bicycle accessibility and safety with vehicular congestion when considering intersection improvements to address level of service degradation.

C6.1: Modal Share. Increase mode share from pedestrian and bicycle travel, for trips of one mile or less, from three percent in 2005 to 30 percent by 2020 by introducing paid parking in other commercial areas outside of the downtown, improving pedestrian walkways and amenities within commercial areas and residential neighborhoods and by providing adequate, secure, covered parking for bicycles in city garages for new multifamily and commercial development. Additional potential supportive actions to increase mode share are detailed in the SIP, Appendix T of the General Plan.

- b. City of San Mateo Sustainable Initiatives Plan Strategies:

T1: Increase mode share for pedestrian and bicycle travel to 30% for trips of one mile or less by 2020.

- c. City of San Mateo Bicycle Master Plan Goals and Objectives:

Goal 1: Develop and maintain a comprehensive bicycle and pedestrian circulation network which provides safe recreation opportunities and an alternative to automobile travel. (GP Goal C4)

Objective 1.5: Pedestrian and Bicycle Mobility Needs. Balance pedestrian mobility and bicycle accessibility and safety with vehicular congestion when considering intersection improvements to address level of service degradation. (GP Policy 4.8)

Goal 2: Increase mode share for pedestrian and bicycle travel to 30% for trips of one mile or less by 2020. Bicycle and pedestrian travel currently represents about 3% of all travel (SIP Recommendation T.1).

- d. City of San Mateo Bicycle Master Plan high priority project: 25th Avenue / S Delaware Street Intersection Improvements.

### G.9.7. Project Graphic



Figure G-11: Proposed 25th Avenue / S Delaware Street Improvements

## **G.10. Delaware Street at Pacific Boulevard Bicycle Left-Turn Pocket Feasibility Study**

### **G.10.1. Project Purpose**

- a. The Delaware Street / Pacific Boulevard Bicycle Left-Turn Pocket project envisions development of a bicycle left-turn pocket on northbound Delaware Street at its intersection with Pacific Boulevard.
- b. The Delaware Street / Pacific Boulevard intersection geometry is problematic for the following reasons:
  - i. Northbound Delaware Street does not provide a left-turn pocket for bicyclists turning onto Pacific Boulevard. Delaware Street uses the entire center turn lane to provide a southbound left-turn lane for automobiles turning onto Saratoga Drive.
  - ii. Northbound Delaware Street bicyclists waiting for a gap in oncoming southbound traffic have nowhere to queue, and must wait either in the number one northbound Delaware Street lane or in the southbound Delaware Street left-turn lane, which is against the legal flow of traffic.
  - iii. Northbound Delaware Street motorists do not expect bicyclists to be on the left side of the roadway and left-turning bicyclists may be reluctant to position on the left side of the roadway without a protected area to queue when waiting for a gap in southbound traffic.

### **G.10.2. Project Background**

- a. The project is supported by numerous adopted goals, policies and implementation strategies included in the City of San Mateo General Plan (2010), Sustainable Initiatives Plan (2010), and Bicycle Master Plan (2011). A complete summary of these policies is included in this project sheet.

### **G.10.3. Project Scope**

Study and Construction.

Study will include:

- a. Feasibility of shortening of southbound Delaware Street left-turn lane at Saratoga Drive intersection.
- b. Feasibility of including northbound Delaware Street left-turn lane on to Pacific Boulevard.

Project construction will include:

- c. Shortening the southbound Delaware Street / Saratoga Drive left-turn pocket
- d. Installation of a bike box and left-turn pocket at the Delaware Street / Pacific Boulevard intersection to providing a queuing area for left-turning bicyclists. Additional analysis and study needed to determine facility design.
- e. Installation of signage in advance to direct bicyclists to queue for left-turns in the bicycle left-turn pocket.

#### **G.10.4. Project Costs**

- a. Costs to complete the Delaware Street / Pacific Boulevard Bicycle Left-Turn Pocket project are estimated at \$30,000.

#### **G.10.5. Project Outcomes**

- a. The Delaware Street / Pacific Boulevard Bicycle Left-Turn Pocket project will result a shortened southbound left-turn pocket at the Delaware Street / Saratoga Drive intersection.
- b. The Delaware Street / Pacific Boulevard Bicycle Left-Turn Pocket project will result in development of a bicycle left-turn pocket at the northbound approach of Delaware Street at Pacific Boulevard. This project will direct bicyclists where to queue when waiting for gaps in southbound Delaware Street traffic and improve motorist awareness of bicyclists traveling through the intersection.

#### **G.10.6. Supporting Adopted Policies**

- a. City of San Mateo General Plan Policies:

C4.8: Pedestrian and Bicycle Mobility Needs. Balance pedestrian mobility and bicycle accessibility and safety with vehicular congestion when considering intersection improvements to address level of service degradation.

C6.1: Modal Share. Increase mode share from pedestrian and bicycle travel, for trips of one mile or less, from three percent in 2005 to 30 percent by 2020 by introducing paid parking in other commercial areas outside of the downtown, improving pedestrian walkways and amenities within commercial areas and residential neighborhoods and by providing adequate, secure, covered parking for bicycles in city garages for new multifamily and commercial development. Additional potential supportive actions to increase mode share are detailed in the SIP, Appendix T of the General Plan.

- b. City of San Mateo Sustainable Initiatives Plan Strategies:

T1: Increase mode share for pedestrian and bicycle travel to 30% for trips of one mile or less by 2020.

- c. City of San Mateo Bicycle Master Plan Goals and Objectives:

Goal 1: Develop and maintain a comprehensive bicycle and pedestrian circulation network which provides safe recreation opportunities and an alternative to automobile travel. (GP Goal C4)

Objective 1.5: Pedestrian and Bicycle Mobility Needs. Balance pedestrian mobility and bicycle accessibility and safety with vehicular congestion when considering intersection improvements to address level of service degradation. (GP Policy 4.8)

Goal 2: Increase mode share for pedestrian and bicycle travel to 30% for trips of one mile or less by 2020. Bicycle and pedestrian travel currently represents about 3% of all travel (SIP Recommendation T.1).

- d. City of San Mateo Bicycle Master Plan high priority project: 4<sup>th</sup> Avenue and Humboldt Street Intersection Improvements.

#### G.10.7. Project Graphic



Figure G-12: Proposed Delaware Street / Pacific Boulevard Improvements

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