Chapter A4

# Appendix 4 Recommendations Memo



To: Harry Freitas, Ben Aghegnehu, Santa Clara County Roads and Airports Department

From: Mauricio Hernández, Cole Peiffer, Alta Planning + Design

Date: July 31, 2024

Santa Clara County Active Transportation Plan – Task 5 Memorandum (REVISED) Re:

# Introduction

This memo summarizes the development and prioritization of recommendations to improve walking, biking, and rolling (e.g., wheeled mobility devices used by people with disabilities, strollers, scooters, skateboards, etc.) along roadways owned and operated by the Santa Clara County Roads and Airports Department. The document includes four sections, which describe the methodology and supporting guidance for the development and prioritization of recommendations:

• Section 1 – Introduction (Page 1) • Section 2 – Infrastructure Recommendations (Pages 2-31) • Section 3 – Programmatic Recommendations (Pages 32-39) Section 4 - Implementation and Funding (Pages 40-73)

This memo groups recommendations into two major sections: Infrastructure and Programs. Infrastructure recommendations are further prioritized to focus resources on projects that satisfy the greatest community needs. The final section of the memo identifies implementation strategies and funding opportunities which may be used for planning, design, or construction of the proposed improvements.

# **Addressing the Issues**

Improving walking, biking, and rolling (i.e., wheeled mobility devices used by people with disabilities, strollers, scooters, skateboards, etc.) across the transportation system requires a holistic approach to affect change. The transportation planning practice breaks down the typical strategies into five overarching categories referred to as the Six Es: Equity, Engineering, Encouragement, Education, Enforcement, and Evaluation.

These categories represent nearly all aspects of transportation that local governments can affect change on. The implementation of recommendations across these areas will provide a balanced approach to enhancing walking, biking, and rolling (i.e., wheeled mobility devices used by people with disabilities, strollers, scooters, skateboards, etc.) in Santa Clara County. This memo's recommendations are intended to further project goals and are based on relevant guidance, completed analyses, and public input received throughout the development of the Santa Clara County Active Transportation Plan. It is important to note that since 2020 there has been a greater emphasis placed on strategies outside of the Enforcement category to influence traffic safety without an overreliance on police officers as the primary agent of traffic safety. This mirrors a similar pivot away from Enforcement in the Safe Routes to School planning framework, which removed this category entirely. The Enforcement recommendations included in this memo are intended to improve community relationships and augment existing programs to help increase traffic safety education.

NOTE: Infrastructure recommendations relating to the Engineering category are included in the Infrastructure Recommendations section beginning on the next page. Programmatic recommendations related to the other Es are included in the Programmatic Recommendations section later in this document.

# Infrastructure Recommendations

The proposed active transportation network presented in this section provides a set of recommended infrastructure improvements for enhancing connectivity, safety, and comfort for people biking, walking, and rolling (i.e., wheeled mobility devices used by people with disabilities, strollers, scooters, skateboards, etc.) on Santa Clara County expressways and roadways in unincorporated areas. The proposed network includes linear corridor improvements as well as spot improvements.

The recommendations in this section are for planning purposes only. Recommendations may be altered depending on opportunities, constraints, and/or roadway geometrics. Feasibility determination, final design, accessibility, funding, and implementation of any recommended improvements will be undertaken in future feasibility studies and addressed at the individual project level.

## **Development of Recommendations and Applicable Guidance**

Recommended improvements were developed in accordance with the most recent local, state, and federal guidance on facility selection and design based on the roadway and land use contexts.

Facility selection is a context-sensitive decision that involves an analytical process based on planning and engineering. This process accounts for the broader network and roadway context and then drills down on a specific corridor. It starts with the identification of a desired facility and then gets refined based on real-world conditions such as available right-of-way and projected budget. Guidance used to inform recommendations included the following documents:

- Caltrans Guidance
  - o 7th Edition Highway Design Manual Chapter 1000 Bicycle Transportation Design<sup>1</sup>
  - Design Information Bulletin Number 89-02 Class IV Bikeway Guidance<sup>2</sup>
  - Caltrans District 4 Bike Plan<sup>3</sup> (currently under update)
- Federal Highway Administration (FHWA) Guidance
  - o Bikeway Selection Guide, 2019<sup>4</sup>
  - o Small Town and Rural Multimodal Networks, 2016<sup>5</sup>
  - o Safe Transportation for Every Pedestrian (STEP)<sup>6</sup>
  - Proven Safety Countermeasures<sup>7</sup>

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<sup>&</sup>lt;sup>1</sup> Chapter 1000, *Highway Design Manual*, Caltrans, 2015, https://dot.ca.gov/-/media/dot-media/programs/design/documents/chp1000.pdf

<sup>&</sup>lt;sup>2</sup> Design Information Bulletin Number 89-02, Caltrans, 2022, https://dot.ca.gov/-/media/dot-media/programs/design/documents/dib-89-02-final-a11y.pdf

<sup>&</sup>lt;sup>3</sup> Caltrans District 4 Bike Plan, Caltrans, 2018, https://dot.ca.gov/-/media/dot-media/district-4/documents/d4-bike-plan/caltransd4bikeplan report lowres-r6.pdf

<sup>&</sup>lt;sup>4</sup> Bikeway Selection Guide, FHWA, 2019, https://highways.dot.gov/sites/fhwa.dot.gov/files/2022-07/fhwasa18077.pdf

<sup>&</sup>lt;sup>5</sup> Small Town and Rural Multimodal Networks, FHWA, 2016, https://www.fhwa.dot.gov/environment/bicycle\_pedestrian/publications/small\_towns/fhwahep17024\_lg.pdf

<sup>&</sup>lt;sup>6</sup> Safe Transportation for Every Pedestrian (STEP), FHWA, 2021, https://highways.dot.gov/safety/pedestrian-bicyclist/step

<sup>&</sup>lt;sup>7</sup> Proven Safety Countermeasures, FHWA, https://highways.dot.gov/safety/proven-safety-countermeasures

Bicycle recommendations were informed by the need to develop an interconnected network to improve safety and comfort for all users and access for bicyclists as highlighted in current Caltrans guidance (Caltrans Highway Design Manual, Chapter 1001.4.2). The context of the roadway was also a key determining factor for recommendations. Caltrans and the FHWA highlight roadway context as a key element when selecting bicycle facility types. As noted in Figure 1, the FHWA Bikeway Selection Guide provides a set of considerations for the selection of a bicycle facility based on the roadway speed (i.e., posted speed limit) and total volume of vehicles (i.e., total number of vehicles on the roadway in an average day) for both urban and rural contexts. The graph on the left presents the urban context and provides contextual guidance for when a roadway should have a separated bike lane/shared-use path, bike lane, or a mixed traffic environment with a shared lane or bike boulevard. The graph on the right provides contextual guidance for bicycle facilities in more rural environments, which include shared lanes and varying widths of roadway shoulders.

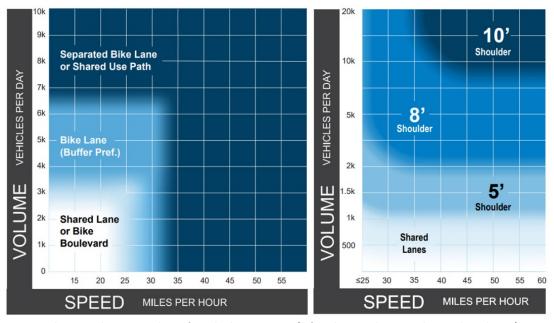


Figure 1. FHWA Bikeway Selection Guide Preferred Bikeway Types (left: urban roadways; right: rural roadways)

This contextual guidance was applied to roadways within urban and suburban areas. In rural areas and within the southern portion of the county, the FHWA *Small Town and Rural Multimodal Networks* guidance was applied to be sensitive to the specific land use. Recommendations were further informed by national best practices and countermeasures that have demonstrated safety benefits from across the country through FHWA's Safe Transportation for Every Pedestrian (STEP) and Proven Safety Countermeasures programs.

# **Bicycle Recommendations**

The Santa Clara County Roads and Airports Department developed the existing *County Expressway Bicycle Accommodation Guidelines*<sup>8</sup> in 2003 to provide design guidance on the implementation of bicycle facilities along county expressways, as there was no definitive design guidance at the time.

To allow for further design flexibility based on existing roadway and land use contexts (i.e., rural vs. urban), it is recommended that the county sunset the guidelines and follow recent state and federal guidance for facility selection and design, highlighted in the prior section.

The County's proposed improvements to the existing bicycle network focus on providing increased connectivity between destinations through low-stress bicycle facilities that are comfortable for all ages and abilities. The proposed improvements include shared-use paths (Class I), bicycle lanes (Class II), buffered bike lanes (Class II buffered), bicycle routes (Class III), bicycle boulevards (Class IIIB), and separated bikeways (Class IV). The proposed network focuses on providing increased connectivity, safety, and comfort to areas surrounding schools, transit stations (e.g., Valley Transportation Authority [VTA] light rail, and BART), and other regional destinations.

The recommendations included in this section were developed through an iterative process with County staff, the community, and local stakeholders that included workshops and an online interactive map. The recommendations are based on the needs, opportunities, and challenges identified through the existing conditions analysis. The improvements were also developed to account for differences in land uses (i.e., rural vs. urban) and to provide improved safety and comfort for people of all ages and abilities. It is important to note that the proposed improvements may influence local traffic patterns, and local jurisdictions may have part ownership on the existing right-of-way. To this end, coordination with local jurisdictions will be required to successfully implement the proposed improvement.

This section provides an overview of the proposed bicycle facility improvements and describes the recommended projects through a series of maps and tables. The proposed improvements serve as a foundation to create successful, well-used, and safe spaces for people to bike and roll (e.g., wheeled mobility devices used by people with disabilities, strollers, scooters, and skateboards).

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<sup>&</sup>lt;sup>8</sup> County Expressway Bicycle Accommodation Guidelines, Santa Clara County Roads and Airports Department, 2003.

#### **Bicycle Facility Toolbox**

This toolbox includes brief descriptions of the recommended bicycle facility types included in this memo.

#### Class I - Shared-Use Path



- Path shared by people walking and biking completely separated from motor vehicle traffic.
- Comfortable for people of all ages and abilities.
- Typically located within or along high-speed corridors such as expressways, parks, rail corridors, rivers, or other bodies of water.

Class II - Bike Lane



- Dedicated lane for bicycle travel adjacent to traffic.
- Separated from traffic or parking by painted lane line or buffer.

#### Class II Buffered - Buffered Bike Lane<sup>9</sup>



- Dedicated lane for bicycle travel adjacent to traffic
- Separated from traffic or parking by painted lane line or buffer.
- Buffer provides additional from motor vehicles and/or parking.

#### Class III - Signed Bike Route



- Signed bike route, sharing the roadway with motor vehicles.
- Can include pavement markings.
- Comfortable for people who are more confident biking
- Used when space for bike lane may not be feasible.

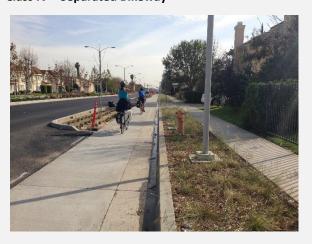
<sup>&</sup>lt;sup>9</sup> The Caltrans *Highway Design Manual* does not currently distinguish between buffered bike lanes and standard bike lanes; however, the County intends to designate them separately.

#### Class IIIB - Bicycle Boulevard



- Signed bike route, sharing the roadway with motor vehicles on quiet neighborhood streets.
- Includes shared roadway markings on pavement and additional traffic calming measures like speed bumps.
- Traffic calming features and lower traffic create a lower-stress facility for a wider range of biking abilities.

#### Class IV - Separated Bikeway



- On-street bike lane separated from motor vehicle traffic by curb, median, planters, parking, or another physical barrier.
- One- or two-way facility.
- More comfortable for people of all ages and abilities.

## **Conflict Zone Striping**



• Raises awareness for both bicyclists and motorists to potential conflict areas.

#### **Bike Box**



- Increases visibility of bicyclists.
- Facilitates bicyclist left-turn positioning at intersections during red signal indication.
- Facilitates the transition from a right-side bike lane to a left-side bike lane during red signal indication. This only applies to bike boxes that extend across the entire intersection.

#### **Protected Intersection**



- Designed to provide additional separation, comfort, and safety for people biking and walking.
- Ideal for locations with conflicts between people driving, walking, and biking.

#### **Paved Shoulder with Intermittent Rumble Strip**



- Serves as functional space for pedestrians and bicyclists in absences of other facilities with more separation.
- Improve bicyclist safety on rural roadways where right of way is constrained.
- Provides stable surface for bicyclists outside of shared vehicle lanes.
- Noise generation should be considered for locations near residences and businesses.

#### **Corridor Improvements**

Multiple factors influenced the development of recommended bicycle improvements for a specific corridor. For example, in areas near schools or with a high collision history, facilities that provide increased modal separation and traffic calming are recommended. The recommendations also consider other factors like traffic volumes and roadway widths, which negatively impact people bicycling.

This plan recommends over **189** miles of *new and upgraded* bicycle facilities throughout County roadways, building on the existing network as of July 2024. Providing a consistent facility will help people driving and people walking, biking, and rolling have more predictable interactions. Corridor recommendations are divided into expressways and non-expressway roadways due to the significant differences between roadway contexts. **Table 1** summarizes recommended facilities on expressways, and **Table 2** shows non-expressway recommendations. **Table 3** includes all bicycle improvements by corridor. **Figure 2** through **Figure 7** show the locations of recommendations. These improvements focus on closing existing gaps in the County's network by providing key access to local and regional community destinations (e.g., schools, parks, and transit) and improving Santa Clara County residents' health, equity, and safety.

Due to the high speeds and traffic volumes present on expressways, all recommended improvements along these roadways are Class I shared-use paths. This type of facility tends to provide the greatest comfort and safety benefits for people biking; however, these improvements will require additional design considerations at intersections and when transitioning from one facility type to another. As shown in **Table 1**, this memo recommends a total of **56.5** miles of new Class I – Shared-use Paths for implementation along expressways.

Table 1. Recommended Bicycle Facilities on Expressways

Expressways			
Facility	Existing (mi.)	Proposed (mi.)	Total (mi.)
Class I - Shared-Use Path	1.7	56.5	58.2
Total	1.7	56.5	58.2

Corridor recommendations on non-expressway roads are intended to build on and complement existing facilities to the extent possible. These recommended improvements focus on creating a connected lower-stress network with facilities that serve people of all ages and abilities and complement plans from local jurisdictions where feasible.

Table 2. Recommended Bicycle Facilities on Non-Expressway Roadways

Non-Expressway Roadways			
Facility	Existing (mi.)	Proposed (mi.)	Total (mi.)
Class I - Shared-Use Path	0.0	33.5	33.5
Class II - Bike Lanes	5.2	0.0	5.2
Class IIB - Buffered Bike Lanes	0.0	2.1	2.1
Class III - Bike Route	0.0	39.3	39.3
Class IIIB - Bicycle Boulevard	0.0	13.9	13.9
Class IV - Separated Bikeway	0.0	3.8	3.8
Paved Shoulder with Intermittent Rumble Strip	0.0	39.9	39.9
Total	5.2	132.5	137.6

#### **Spot Improvements**

In addition to providing more comfortable and better-connected bikeway corridors, a well-functioning bicycle network addresses localized spot issues that would otherwise present network barriers. This plan identifies spot treatments that can be applied along a corridor during a larger corridor improvement feasibility study that would be identified on a project-by-project basis; spot improvements include i) conflict zone striping, ii) bike boxes, and iii) protected intersections. These spot improvements would complement the existing efforts from the County to enhance the bicycle network including adaptive bicycle signal timing and removal of existing slip lanes on projects following an engineering review that the County has been doing for some time now.

Recommended spot improvements may be applied along corridors to address areas with safety concerns and a history of bicycle collisions. Additionally, these improvement types reflect public feedback obtained as part of this planning process. Key improvements focus on enhancing visibility of people biking and reducing vehicle speeds at potential conflict points with bicyclists. The specific application of these treatments will require more detailed engineering analysis to identify the overall feasibility and implementation costs on a case-by-case basis.

Table 3. Bicycle Recommendations by Project (by corridor name)

# EXPRESSWAYS

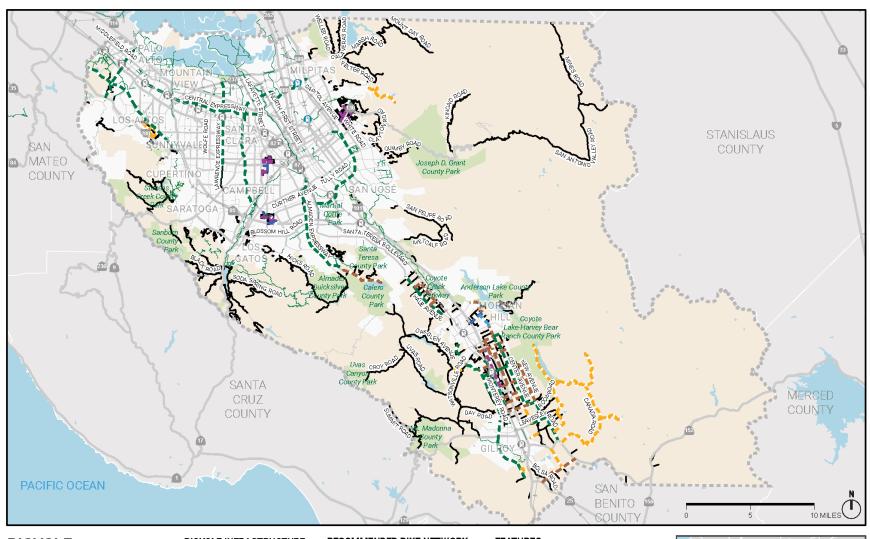
CORRIDOR	RECOMMENDED FACILITY	FROM	то	LENGTH (MI)
Almaden Expressway	Class I - Shared-Use Path	Harry Road	Guadalupe Parkway (Hwy 87)	8.84
<b>Capitol Expressway</b>	Class I - Shared-Use Path	Narvaez Avenue	E. San Antonio Street	8.22
Central Expressway	Class I - Shared-Use Path	De la Cruz Boulevard	San Antonio Road	9.71
Foothill Expressway	Class I - Shared-Use Path	Page Mill Road	Junipero Serra Freeway (Soutbound Off-Ramp)	7.23
Lawrence Expressway	Class I - Shared-Use Path	Mitty Way	Southbay Freeway	6.52
Montague Expressway	Class I - Shared-Use Path	Bayshore Freeway	I-680 (Northbound Ramps)	6.00
Oregon Expressway	Class I - Shared-Use Path	Bayshore Freeway	El Camino Real	1.78
San Tomas Expressway	Class I - Shared-Use Path	Bayshore Freeway	Camden Avenue	8.19
Alum Rock Avenue	Class I - Shared-Use Path	Crothers Rd	Fleming Ave	0.72
Alum Rock Falls Road	Class III - Bike Route	Alum Rock Park (County Boundary)	End of Road	3.43
Arbor Avenue	Class III - Bike Route	Frontero Avenue/Country Club Drive/Loyola Drive	Fairway Drive	0.71
Bascom Avenue	Class IV - Separated Bikeway	Elliott Street	Fruitdale Avenue	0.68
<b>Bloomfield Avenue</b>	Paved Shoulder with Intermittent Rumble Strip	State Highway 25	Pacheco Pass Highway	3.22
<b>Bowden Avenue</b>	Class III - Bike Route	Watsonville Road	Sycamore Drive	0.42
Branham Lane	Class IV - Separated Bikeway	Union Avenue	Sally Drive (0.74 E of Union)	0.74
<b>Buckner Drive</b>	Class IIIB - Bicycle Boulevard	Dale Drive	Roehampton Avenue	0.11
Buena Vista Avenue	Paved Shoulder with Intermittent Rumble Strip	Foothill Avenue	Monterey Highway	1.71
Buena Vista Avenue	Class I - Shared-Use Path	New Avenue	Foothill Avenue	0.53
California Avenue	Paved Shoulder with Intermittent Rumble Strip	Santa Teresa Boulevard	Monterey Highway	0.79
Camden Avenue	Class IV - Separated Bikeway	Esther Drive (west return)	Unincorporated Boundary (0.14 W Esther S Side)	0.15
Canada Road	Class III - Bike Route	Leavesley Road	Gilroy Hot Springs Road	8.80
Center Avenue	Class I - Shared-Use Path	San Martin	Buena Vista Avenue	5.60
Church Avenue	Paved Shoulder with Intermittent Rumble Strip	Monterey Highway	New Avenue	2.22
<b>Claremont Avenue North</b>	Class IIIB - Bicycle Boulevard	McKee Road	Mahoney Drive	0.97
Cochrane Road	Paved Shoulder with Intermittent Rumble Strip	Main Avenue	Coyote Creek	1.48
Coyote Reservoir Road	Class III - Bike Route	Gilroy Hot Springs Road	Coyote Creek	4.25

CORRIDOR	RECOMMENDED FACILITY	FROM	то	LENGTH (MI)
Crews Road	Class III - Bike Route	Ferguson Road	Leavesley Road	2.03
Dale Drive	Class IIIB - Bicycle Boulevard	Jerilyn Drive	Buckner Drive	0.17
De Witt Avenue	Class I - Shared-Use Path	Edmundson Avenue	Spring Avenue	0.99
<b>Dougherty Avenue</b>	Paved Shoulder with Intermittent Rumble Strip	Scheller Avenue	Live Oak Avenue	1.80
East Hills Drive	Class IIIB - Bicycle Boulevard	Laumer Avenue	South Cragmont Avenue (Northern Side Only)	0.13
Elliott Street	Class IIIB - Bicycle Boulevard	Rutland Avenue	Bradley Avenue	0.43
Escobar Avenue	Class IIIB - Bicycle Boulevard	Oleander Avenue	El Gato Lane	0.38
Esther Drive	Class IIIB - Bicycle Boulevard	Charmeran Avenue	Woodard Road	0.25
Fairway Drive	Class III - Bike Route	Arbor Avenue	Loyola Drive	0.96
Ferguson Road	Class I - Shared-Use Path	State Route 152	Leavesley Road	1.66
Fisher Avenue	Class IIIB - Bicycle Boulevard	Laumer Avenue	Claremont Avenue South	0.19
Fitzgerald Avenue	Paved Shoulder with Intermittent Rumble Strip	Santa Teresa Boulevard	Monterey Highway	0.67
Frazer Lake Road	Class III - Bike Route	Bloomfield Avenue	State Route 152	1.72
Gilman Road	Class III - Bike Route	Holsclaw Road	Camino Arroyo	0.76
<b>Gilroy Hot Springs Road</b>	Class III - Bike Route	Coyote Reservoir Road	Terminus (end of road)	6.01
<b>Gordon Avenue</b>	Class IIIB - Bicycle Boulevard	Kirk Avenue	Terminus (San Jose Country Club)	0.72
Hale Ave / Santa Teresa Blvd	Class I - Shared-Use Path	Tilton Ave	Laguna Ave	4.14
Herring Avenue	Class IIIB - Bicycle Boulevard	Charmeran Avenue	Charmeran Avenue	0.43
Hill Road	Class IIB - Buffered Bike Lane	Diana Avenue	Main Avenue	0.38
Hill Road	Class IIB - Buffered Bike Lane	Dunne Road	Diana Avenue	0.74
Hill Road	Paved Shoulder with Intermittent Rumble Strip	Tennant Avenue	Dunne Road	0.94
Hill Road	Class I - Shared-Use Path	Tennant Avenue	Maple Avenue	0.68
Hyland Avenue	Class IIIB - Bicycle Boulevard	Maro Drive	Kirk Avenue	0.33
<b>Hyland Avenue</b>	Class IIIB - Bicycle Boulevard	White Road	Maro Drive	0.29
Jamieson Road	Class III - Bike Route	Canada Road	Henry W Coe State Park (2.06 E of Canada)	2.07
Jerilyn Drive	Class IIIB - Bicycle Boulevard	Meadow Lane	Athene Drive	0.47

CORRIDOR	RECOMMENDED FACILITY	FROM	то	LENGTH (MI)
Junipero Serra Boulevard	Class I - Shared-Use Path	Page Mill Road	Sand Hill Road	2.43
Laumer Avenue	Class IIIB - Bicycle Boulevard	Fisher Avenue	Claremont Avenue South	0.31
Leavesley Road	Class I - Shared-Use Path	Marcella Avenue	Ferguson Road	1.44
Leavesley Road	Class III - Bike Route	Dryden Avenue	Gilroy Hot Springs Road	3.26
Leigh Avenue	Class IV - Separated Bikeway	Camden Avenue	Homerite Drive (0.12 S of Camden)	0.25
Live Oak Avenue	Paved Shoulder with Intermittent Rumble Strip	Hale Avenue	Dougherty Avenue	0.48
Llagas Avenue	Class IIIB - Bicycle Boulevard	Maple Avenue	Church Avenue	3.19
<b>Longwood Drive</b>	Class IIIB - Bicycle Boulevard	Los Gatos Almaden Road	Oleander Avenue	0.62
Los Coches Avenue	Class IIIB - Bicycle Boulevard	Bradley Avenue	Hodges Avenue	0.31
Loyola Drive	Class III - Bike Route	Fairway Drive	Terrace Drive	0.66
Magdalena Avenue	Class III - Bike Route	Hillview Road	Summerhill Avenue	0.08
Main Avenue	Class IV - Separated Bikeway	US 101 (74 E RR - 0.07 NE (N side))	Cochrane Road (0.72NE Laurel)	1.28
Maple Avenue	Paved Shoulder with Intermittent Rumble Strip	Railroad Avenue	Llagas Avenue	0.47
Maple Avenue	Class I - Shared-Use Path	Hill Road	Center Avenue	0.14
Maple Avenue	Paved Shoulder with Intermittent Rumble Strip	US 101	Hill Road	0.99
Maple Avenue	Paved Shoulder with Intermittent Rumble Strip	Center Avenue	Foothill Avenue	0.31
Marcella Avenue	Class III - Bike Route	Buena Vista Avenue	Leavesley Road	1.56
Masten Avenue	Paved Shoulder with Intermittent Rumble Strip	Monterey Highway	Center Avenue	1.38
Maywood Avenue	Class IIIB - Bicycle Boulevard	Thornton Way	Bascom Avenue	0.38
Mckean Road	Paved Shoulder with Intermittent Rumble Strip	Calfire Station	County Boundary (~2,100 ft east of Calero Lake Boat Launch)	3.35
Mesa Road	Class III - Bike Route	Santa Teresa Boulevard	Mesa Road	0.82
Middle Avenue	Paved Shoulder with Intermittent Rumble Strip	Foothill Avenue	UPRR Rail Corridor	1.83
Monterey Highway	Class I - Shared-Use Path	Rucker Avenue	Middle Avenue	3.93
Moorpark Avenue	Class IV - Separated Bikeway	Pfeffer Lane	~400 ft east of Leland Avenue	0.73
Murphy Avenue	Paved Shoulder with Intermittent Rumble Strip	Tennant Avenue	Middle Avenue	1.38
New Avenue	Class I - Shared-Use Path	Leavesley Road	Buena Vista Avenue	1.44
New Avenue	Paved Shoulder with Intermittent Rumble Strip	San Martin Avenue	Buena Vista Avenue	3.55
Olive Avenue	Class IIIB - Bicycle Boulevard	Bascom Avenue	Wabash Avenue	0.29

CORRIDOR	RECOMMENDED FACILITY	FROM	то	LENGTH (MI)
Page Mill Road	Class I - Shared-Use Path	Arastradero Road	El Camino Real	2.84
Porter Lane	Class IIIB - Bicycle Boulevard	Alum Rock Avenue	East Terminus	0.63
Roehamption Avenue	Class IIIB - Bicycle Boulevard	Buckner Drive	Story Road	0.19
Rucker Avenue	Paved Shoulder with Intermittent Rumble Strip	US 101	New Avenue	1.69
Rucker Avenue	Paved Shoulder with Intermittent Rumble Strip	Monterey Highway	US 101	0.45
San Martin Avenue	Class I - Shared-Use Path	Santa Teresa Boulevard	New Avenue	2.88
Santa Teresa Boulevard	Class I - Shared-Use Path	Castro Valley Road (Sections P & O1 maintained by Gilroy per agreement) 920 ft N of Longmeadow Dr	Watsonville Road to Day Road	10.39
Scheller Avenue	Paved Shoulder with Intermittent Rumble Strip	Santa Teresa Boulevard	Dougherty Avenue	0.57
Scott Street	Class IIIB - Bicycle Boulevard	Parkmoor Avenue	Clifton Avenue	0.79
<b>South Cragmont Avenue</b>	Class IIIB - Bicycle Boulevard	Fisher Avenue	East Hills Drive	0.36
Standish Drive	Class IIIB - Bicycle Boulevard	Branham Lane	Charmeran Avenue	0.44
Summerhill Avenue	Class III - Bike Route	Miraloma Way	Magdalena Avenue	0.64
Sycamore Avenue	Paved Shoulder with Intermittent Rumble Strip	Maple Avenue	Church Avenue	3.20
Sycamore Drive	Class III - Bike Route	Oak Glen Avenue	Sunnyside Avenue	1.11
<b>Tennant Avenue</b>	Class I - Shared-Use Path	Carey Avenue (0.14 E of Foothill Ave)	Hill Rd	0.75
<b>Tennant Avenue</b>	Paved Shoulder with Intermittent Rumble Strip	Hill Rd	Condit Road (0.1 E of Foothill)	0.91
Thornton Way	Class IIIB - Bicycle Boulevard	Downing Avenue (Sec B, C & C1 County has East side)	Moorpark Avenue	0.74
Union Avenue	Class I - Shared-Use Path	Camden Avenue (0.03 S Stratford)	Charmeran Ave (0.6 S Charmeran)	0.38
Wyrick Avenue	Class IIIB - Bicycle Boulevard	Bercaw Lane	150 East of Sutton Drive	0.83

Figure 2. Bicycle Recommendations (Corridor)



# BICYCLE RECOMMENDATIONS

SANTA CLARA COUNTY ACTIVE TRANSPORTATION PLAN



#### **BICYCLE INFRASTRUCTURE**

Existing Facilities

- --- Class I: Shared-Use Path
- Class II: Bicycle Lane

#### RECOMMENDED BIKE NETWORK

- Class I Shared-Use Path
- --- Class IIB Buffered Bike Lane
- Class III Bike Route
- Class IIIB Bicycle Boulevard
- -- Class IV Separated Bikeway
- Paved Shoulder With Intermittent Rumble Strip\*
- \*Noise considerations should be included as part of corridor level analysis during the design phase

#### **FEATURES**

- Caltrain Station
- BART Station
- —⊢ Rail Line
- County Maintained Roadway
- Roadways Maintained By Others
- Water
- Park City Box
- City Boundary
  Unincorporated Area
- Santa Clara County Border



Figure 3. Bicycle Recommendations (Corridor) (Northwest)

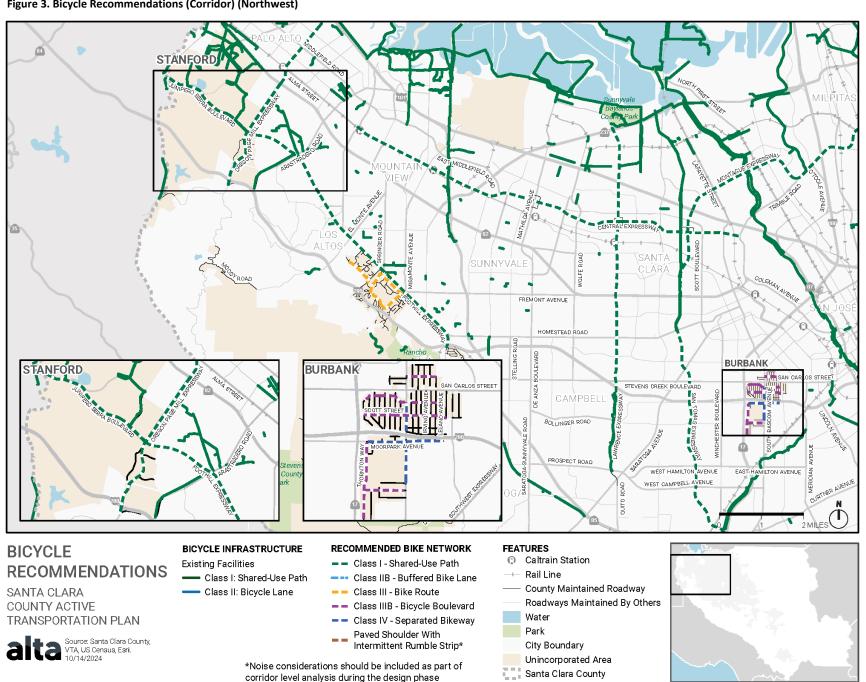
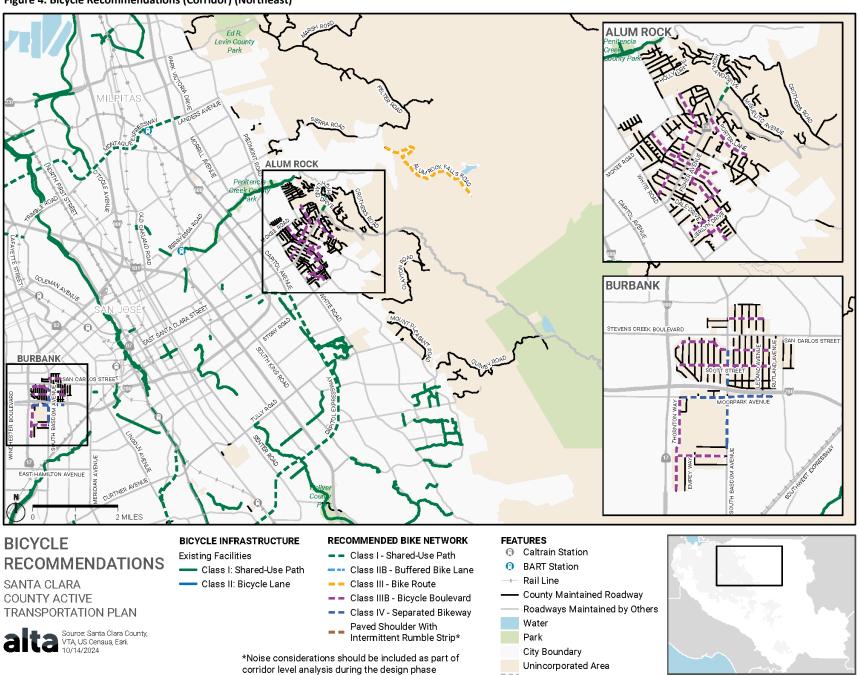


Figure 4. Bicycle Recommendations (Corridor) (Northeast)



Santa Clara County Border

SANTA TERESA BOULEVARD CAMBRIAN PARK Santa Teresa County **CAMBRIAN PARK** Quicksilver Calero

Figure 5. Bicycle Recommendations (Corridor) (Center West)

# **BICYCLE RECOMMENDATIONS**

SANTA CLARA COUNTY ACTIVE TRANSPORTATION PLAN



## **BICYCLE INFRASTRUCTURE**

**Existing Facilities** 

BLOSSOM HILL ROAD

- Class I: Shared-Use Path
- Class II: Bicycle Lane

# RECOMMENDED BIKE NETWORK

- Class I Shared-Use Path
- -- Class IIB Buffered Bike Lane
- -- Class III Bike Route
- Class IIIB Bicycle Boulevard - Class IV - Separated Bikeway
- Paved Shoulder With Intermittent Rumble Strip\*

\*Noise considerations should be included as part of corridor level analysis during the design phase

#### **FEATURES**

- Caltrain Station
- ── Rail Line
- --- County Maintained Roadway
  - Roadways Maintained by Others
- Water
- Park
- City Boundary





2 MILES

Figure 6. Bicycle Recommendations (Corridor) (Center East)

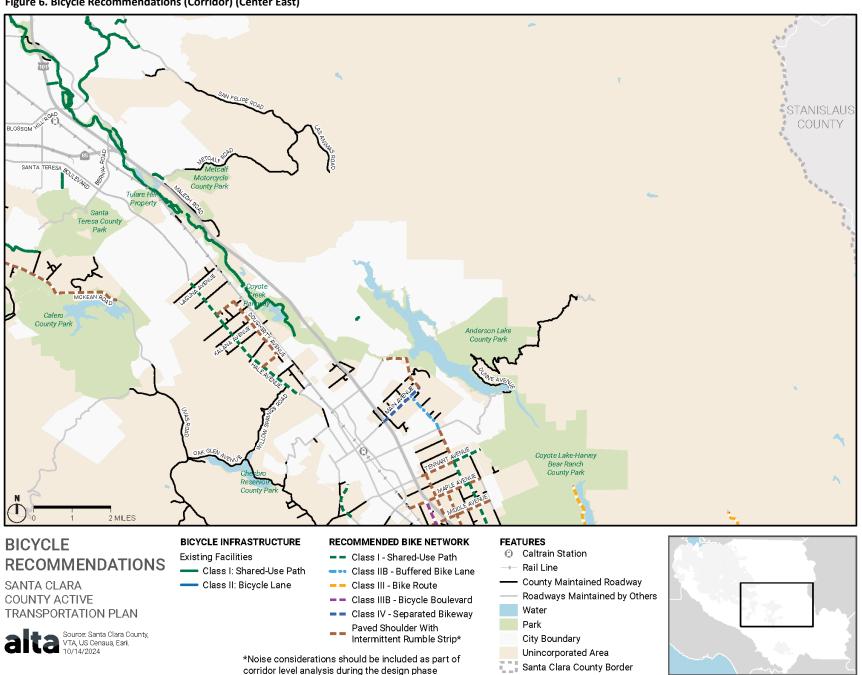
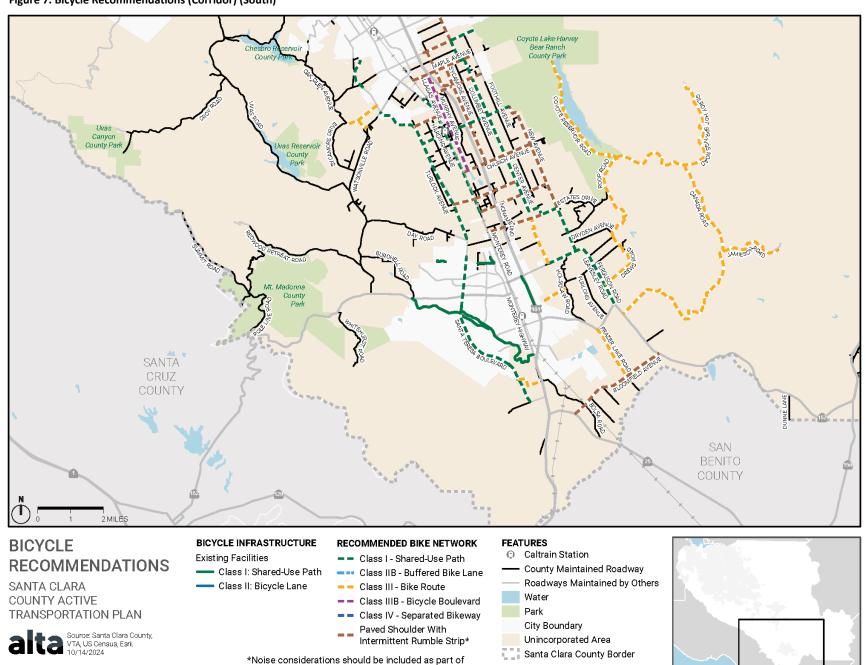


Figure 7. Bicycle Recommendations (Corridor) (South)



corridor level analysis during the design phase

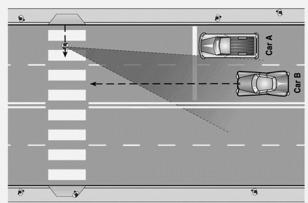
#### **Pedestrian Recommendations**

This section describes the recommended pedestrian projects and provides information describing the recommended infrastructure. The recommendations in this section are intended to serve as a foundation for creating successful, well-used, and safe spaces for people to walk and roll (e.g., wheeled mobility devices used by people with disabilities, strollers, scooters, and skateboards). The pedestrian improvement recommendations in this section were developed through an iterative process with the community and partner agencies that included workshops and an online interactive map.

#### **Pedestrian Facility Toolkit**

This toolkit provides brief descriptions of the recommended pedestrian facility types included in this memo. The types of pedestrian facilities described are not meant to provide an exhaustive list of solutions. Exact solutions for each location should be selected based on professional engineering and planning judgment and best practices to maximize safety and pedestrian accessibility.

#### Advance Stop Markings and Advance Yield Markings



- Increase distance that vehicles will stop away from the crosswalk.
- Can be accompanied with red curb to increase visibility.
- Reduce potential for "hidden threat" crash in marked crosswalks as demonstrated above.

#### **Sidewalks**



- Provide an area for people walking to travel separated from vehicle traffic.
- Typically constructed out of concrete and separated from the roadway by a curb or gutter and sometimes a landscaped buffer.

#### **Curb Ramp**



- Sloping ramp built into the curb of a sidewalk to ease passage to the street.
- Improves accessibility and crossing safety.
- Enhances Americans with Disabilities Act accessibility requirements and network connectivity.

#### **Pedestrian Refuge Island**



- Improves access for people walking by increasing visibility and allowing pedestrians to cross one direction of traffic at a time.
- Minimizes pedestrian exposure at mid-block crossings by shortening the crossing distance and increasing the number of available gaps for crossing.
- Not considered on expressways (pedestrian crossing sensors used instead).<sup>10</sup>

#### **Curb Extension**



- Minimizes exposure for people crossing the street by shortening crossing distance and giving them a better chance to see and be seen before committing to crossing.
- Particularly helpful at mid-block crossing locations.
- Should not impede bicycle travel in the absence of a bike lane.

#### **High Visibility Crosswalk**



- High-visibility crosswalks are marked with thick bars, drawing additional attention and awareness to the crossing.
- In school zones, these crossings are yellow instead of the standard white color.
- The County is currently installing high-visibility crosswalks with new/retrofit construction projects.

<sup>&</sup>lt;sup>10</sup> The County has continued to install pedestrian crossing sensors at signalized intersections on expressways to detect presence and provide appropriate time for people crossing expressways at marked intersections. More information available at: https://countyroads.sccgov.org/roads-traffic-info/maps-and-videos.

#### **Pedestrian Crosswalk Timing Sensors**





Source: MS Sedco

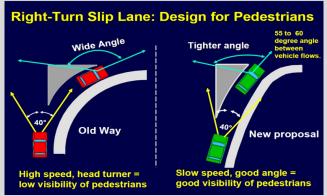
- Pedestrian focused sensors installed by the Roads and Airports Department at select signalized intersections to provide extended walk times for pedestrians.
- Provides increased walk times for pedestrians beyond the MUTCD required thresholds.

#### Pedestrian Hybrid Beacon (PHB)



- Used to improve unsignalized intersections or mid-block crossings of major streets.
- Consists of a signal head with two red lenses over a single yellow lens on the major street, and a pedestrian signal head for the crosswalk.
- Signal is only activated when a person walking or biking is present, resulting in minimal delay for motor vehicle traffic.

#### **Slip Lane Reconfiguration**



- Modifies the design of a free right turn to reduce the speeds of turning vehicles within the existing footprint of the current roadway.
- Applied at locations that require a right-turn lane to maintain traffic operations.
- Reduces vehicle turning speeds.
- Improves pedestrian visibility and safety.

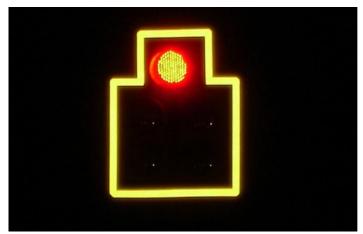
#### **Slip Lane Elimination**





- Removes the designated free right turn.
- Modifies intersection configuration to create slower vehicle turns.
- Improves pedestrian visibility and safety.

#### **Backplate with Retroreflective Borders**



- Used to improve traffic signal visibility, especially at nighttime. Advantageous during periods of power outages when the signals would otherwise be dark, providing a visible cue for motorists to stop at the intersection ahead.
- Consists of a signal head backplate framed with a 1- to 3inch yellow retroreflective border. The controlled-contrast background enhances the illuminated face of the signal.

#### Paved Shoulder with Intermittent Rumble Strip



- Serves as functional space for pedestrians and bicyclists in absences of other facilities with more separation.
- Reduces pedestrian "walking along roadway" crashes.
- Provides stable surface off the roadway for pedestrians.

#### **Curb Radius Reduction**



- Modifies intersection design to tighten vehicle's turning radius.
- Lowers right-turn speeds, improves pedestrian visibility, reduces pedestrian exposure, and reduces crossing time.
- Consists of a curb extension at block corners. The curb can be extended by installing a mountable curb, pavement markings, small rubber bumps, or flexible delineator posts.





- A type of active warning beacon used at unsignalized
- Designed to increase driver yielding compliance on multilane or high-volume roadways.
- Typically activated by people walking manually with a push button or can be actuated automatically with passive detection systems.

#### **Corridor Improvements**

This plan recommends pedestrian improvements along specific sections of County-controlled roadways to enhance trail and sidewalk safety, access, and comfort for people walking, biking, and rolling. Table 4 summarizes recommendations on expressways by type; Table 5 shows recommendations on non-expressways. Table 6 provides information on the specific corridor, type of improvement, and a brief description of recommended changes. Figure 8 through Figure 13 show the locations of recommendations.

Recommendations include adding sidewalks to roadways, developing Class I shared-use paths (also included in the bicycle recommendations section), and improving rural pedestrian access through paved shoulders and advisory markings. Recommendations complement the existing network and address existing gaps by extending or enhancing existing facilities where possible. For example, for corridors that connect to existing shared-use paths, this memo recommends continuing this facility type for regional continuity. Furthermore, for corridors with existing sidewalk gaps, this memo recommends improvements on either one or both sides of the corridor. A few locations would benefit from driveway consolidation in conjunction with an improved sidewalk to reduce potential conflicts.

**Table 4. Recommended Pedestrian Facilities on Expressways** 

Expressways	
Recommendation Type	Total (mi.)
Class I - Shared-use Path	56.5
Total	56.5

Table 5. Recommended Pedestrian Facilities on Non-Expressway Roadways

Non-Expressway Roadways	
Recommendation Type	Total (mi.)
Paved Shoulder	33.5
New/Improved Sidewalk - 1 Side	6.3
New/Improved Sidewalk - Both Sides	0.7
Sidewalk / Driveway Consolidation	0.2
Total	40.7

#### **Spot Improvements**

Improving the pedestrian network requires focused attention in areas that act as key barriers to pedestrian travel and potential safety concerns. Spot improvements in this plan include:

- Install/upgrade to high-visibility crosswalk
- Slip lane reconfigurations
- Curb ramps
- Reduced corner radii
- Pedestrian hybrid beacons/rectangular rapid flashing beacons
- Median refuge at unsignalized intersections
- Advanced stop bar
- Pedestrian sensors at signalized intersections
- Traffic signal backplates with retroreflective borders

The proposed improvements focus on enhancing safety for people walking and rolling at intersections and along County-controlled roadways by curbing vehicle speeds in potential conflict areas and enhancing visibility of people walking and rolling at intersections. Specific spot improvement recommendations and design for each of the proposed locations will require case-by-case development and engineering review and a further feasibility analysis.

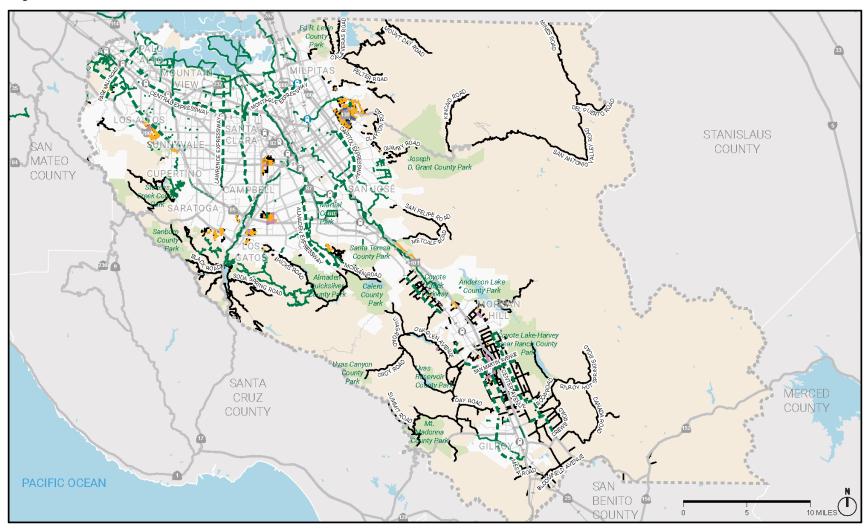
Table 6. Pedestrian Project Recommendations (by corridor name)

# EXPRESSWAYS

Corridor	Recommendation	From	То	Miles
Almaden Expressway	Class I - Shared-Use Path	Harry Road	Guadalupe Parkway (Hwy 87)	8.84
<b>Capitol Expressway</b>	Class I - Shared-Use Path	Narvaez Avenue	E. San Antonio Street	8.22
<b>Central Expressway</b>	Class I - Shared-Use Path	De la Cruz Boulevard	San Antonio Road	9.71
Foothill Expressway	Class I - Shared-Use Path	Page Mill Road	Junipero Serra Freeway (Soutbound Off-	7.23
			Ramp)	
<b>Lawrence Expressway</b>	Class I - Shared-Use Path	Mitty Way	Southbay Freeway	6.52
Montague	Class I - Shared-Use Path	Bayshore Freeway	I-680 (Northbound Ramps)	6.00
Expressway				
Oregon Expressway	Class I - Shared-Use Path	Bayshore Freeway	El Camino Real	1.78
San Tomas	Class I - Shared-Use Path	Bayshore Freeway	Camden Avenue	8.19
Expressway				0.70
Alum Rock Avenue	Class I - Shared-Use Path	Crothers Rd	Fleming Ave	0.72
Alum Rock Ave	Sidewalk - 1 Side	Oakmore Dr	Mckee Rd	0.10
Branham Lane	Sidewalk - 1 Side	Union Ave	Leigh Ave	0.49
Buena Vista Avenue	Class I - Shared-Use Path	New Avenue	Foothill Avenue	0.53
Burbank Avenue	Sidewalk - 1 Side	Sewell Avenue	Monterey Highway	0.10
Center Avenue	Class I - Shared-Use Path	San Martin	Buena Vista Avenue	5.60
Cherry Blossom Lane	Sidewalk - 1 Side	Los Gatos Almaden Road	Camellia Terrace	0.09
Chester Avenue	Sidewalk - 1 Side	Monterey Highway	Sewell Avenue	0.10
Colony Avenue	Sidewalk - 1 Side	California Ave	San Martin Ave	0.59
Cox Avenue	Sidewalk - 1 Side	Monterey Highway	Harding Avenue	0.38
Depot Avenue	Sidewalk - 1 Side	South Street	Oak St	0.50
Dewitt Avenue	Class I - Shared-Use Path	Edmundson Avenue	Spring Avenue	0.99
Ferguson Road	Class I - Shared-Use Path	State Route 152	Leavesley Road	1.66
Fleming Avenue	Sidewalk - Both Sides	Blue Gum Dr	Mcvay Ave	0.38
Hale Ave / Santa Teresa Blvd	Class I - Shared-Use Path	Tilton Ave	Laguna Ave	4.14
Hill Road	Sidewalk - 1 Side	Main Ave	Diana Avenue	0.37
Hill Road	Class I - Shared-Use Path	Tennant Avenue	Maple Avenue	0.68
Junipero Serra Boulevard	Class I - Shared-Use Path	Page Mill Road	Sand Hill Road	2.43
Kirk Avenue	Sidewalk - Driveway Consolidation	Summit Avenue	140ft S Of Mckee Rd	0.10

Corridor	Recommendation	From	То	Miles
Leavesley Road	Class I - Shared-Use Path	Marcella Avenue	Ferguson Road	1.44
Leigh Avenue	Sidewalk - 1 Side	BRAHAM LANE To Wyrick Ave	Weeth Dr To Camden Ave	0.29
Lincoln Avenue	Sidewalk - 1 Side	Spring Street	South Street	0.13
Llagas Avenue	Sidewalk - 1 Side	Middle Avenue	Spring St	1.38
Magdalena Avenue	Sidewalk - 1 Side	Foothill Expressway	I-280	0.70
Maple Avenue	Class I - Shared-Use Path	Hill Road	Center Avenue	0.14
Mckee Road	Sidewalk - Both Sides	Valley View Ave To Bayview Ave	Alum Rock Ave To St Laurent Ct	0.16
Meadow Lane	Sidewalk - Both Sides	East Hills Dr	Jerilyn Drive	0.16
Monterey Highway	Class I - Shared-Use Path	Rucker Avenue	Middle Avenue	3.93
Moorpark Avenue	Sidewalk - 1 Side	Central Way	Ginger Ln	0.12
New Avenue	Class I - Shared-Use Path	Leavesley Road	Buena Vista Avenue	1.44
Page Mill Road	Class I - Shared-Use Path	Arastradero Road	El Camino Real	2.84
Roosevelt Avenue	Sidewalk - 1 Side	Monterey Hwy	Harding Ave	0.38
San Martin Avenue	Class I - Shared-Use Path	Santa Teresa Boulevard	New Avenue	2.88
Santa Teresa Boulevard	Class I - Shared-Use Path	Castro Valley Road (Sections P & O1 Maintained By Gilroy Per Agreement) 920 Ft N Of Longmeadow Dr	Watsonville Road To Day Road	10.39
Sewell Avenue	Sidewalk - 1 Side	Chester Ave	Burbank Ave	0.11
South Bascom Avenue	Sidewalk - Driveway Consolidation	Scott St	Parkmoor Ave	0.15
South Street	Sidewalk - 1 Side	Lincoln Ave	Llagas Ave	0.07
Spring Street	Sidewalk - 1 Side	Llagas Ave	Depot Ave	0.14
Tennant Avenue	Class I - Shared-Use Path	Carey Avenue (0.14 E Of Foothill Ave)	Hill Rd	0.75
Union Avenue	Class I - Shared-Use Path	Camden Avenue (0 .03 S Stratford)	Charmeran Ave (0.6 S Charmeron)	0.38
Walter Bretton Drive	Sidewalk - 1 Side	Green Acres Lane	300 Ft From Walter Breton Drive	0.07
Water Avenue	Sidewalk - 1 Side	California Avenue	Easy Street	0.20

**Figure 8. Pedestrian Recommendations** 



# PEDESTRIAN RECOMMENDATIONS

SANTA CLARA COUNTY ACTIVE TRANSPORTATION PLAN



#### PEDESTRIAN INFRASTRUCTURE

Existing Facilities

— Class I: Shared-Use Path

— Class I: Shared-Use Path

— Sidewalk - 1 Side

— Sidewalk - Both Sides

— Sidewalk - Driveway

— Consolidation

— Sidewalk Gap Closure 
Local Road

Mixed-Use Improvements

Mixed-Use Improvements

- Class I - Shared-Use Path

#### **FEATURES**

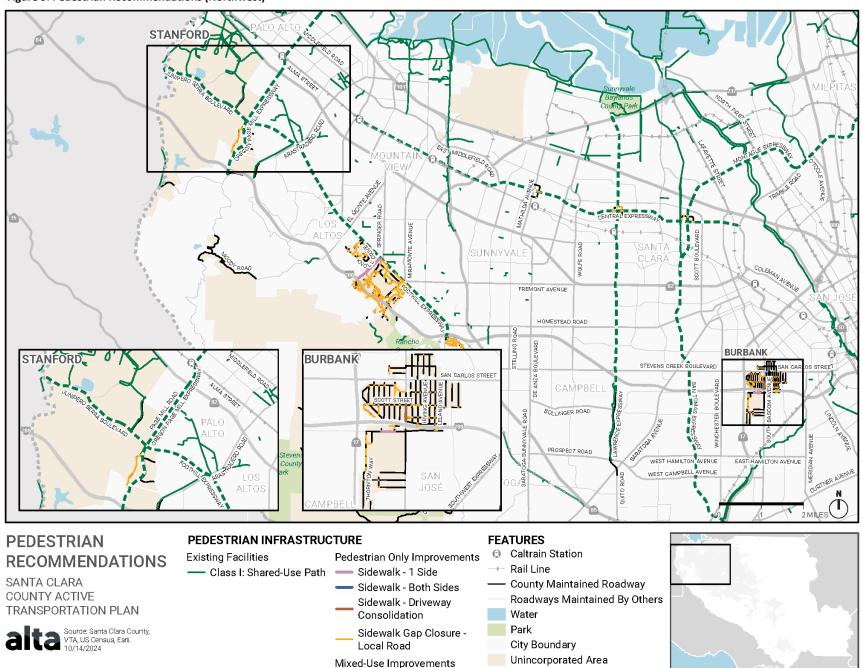
Caltrain Station
 BART Station
 Rail Line
 County Maintained Roadway
 Roadway Maintained By Other

Roadway Maintained By Others
Water
Park

City Boundary
Unincorporated Area
Santa Clara County Border



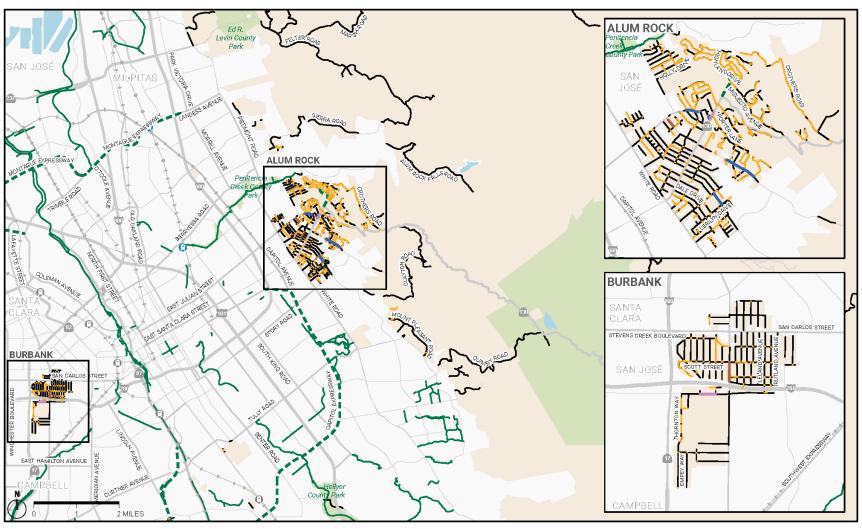
Figure 9. Pedestrian Recommendations (Northwest)



- Class I - Shared-Use Path

Santa Clara County Border

Figure 10. Pedestrian Recommendations (Northeast)



# PEDESTRIAN RECOMMENDATIONS

SANTA CLARA COUNTY ACTIVE TRANSPORTATION PLAN



#### PEDESTRIAN INFRASTRUCTURE

Existing Facilities Pedestrian Only Improvements

— Class I: Shared-Use Path
— Sidewalk - 1 Side
— Sidewalk - Both Sides

Sidewalk - Driveway
Consolidation

\_\_\_ Sidewalk Gap Closure -Local Road

Mixed-Use Improvements

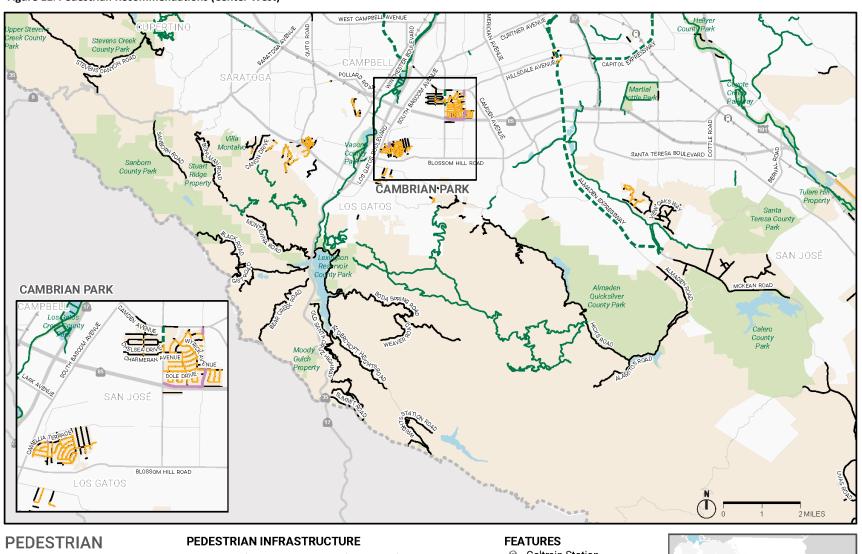
-- Class I - Shared-Use Path

#### **FEATURES**

- Caltrain Station
- BART Station
- → Rail Line
- County Maintained Roadway
- Roadways Maintained By Others
- City Boundary
- Unincorporated Area
- Santa Clara County Border



Figure 11. Pedestrian Recommendations (Center West)



# **RECOMMENDATIONS**

SANTA CLARA **COUNTY ACTIVE** TRANSPORTATION PLAN



**Existing Facilities** Pedestrian Only Improvements - Class I: Shared-Use Path - Sidewalk - 1 Side

Sidewalk - Both Sides

Sidewalk - Driveway Consolidation Sidewalk Gap Closure -

Mixed-Use Improvements

Local Road

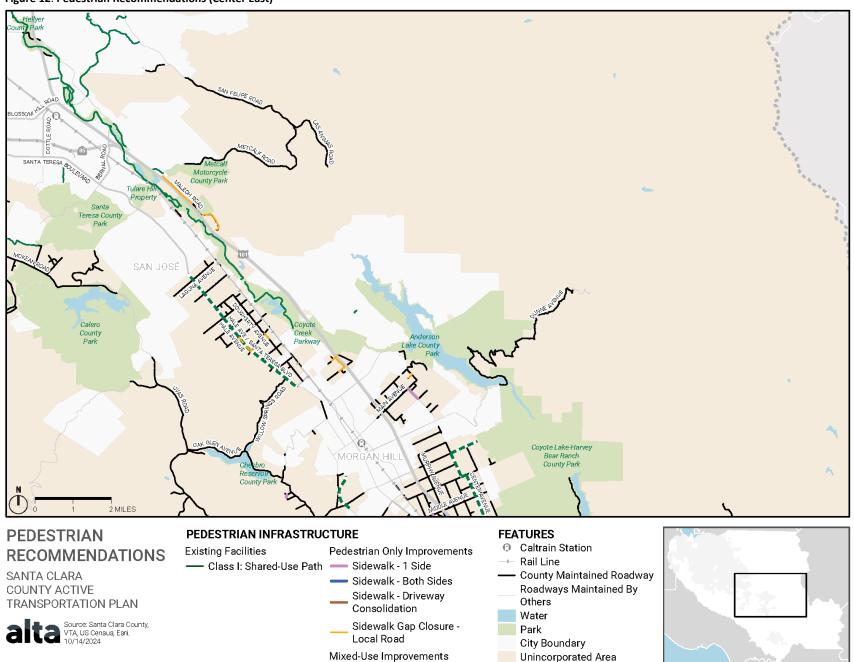
-- Class I - Shared-Use Path

- Caltrain Station
- → Rail Line
- County Maintained Roadway Roadways Maintained By
- Others
- Water
- Park
- City Boundary
- Unincorporated Area





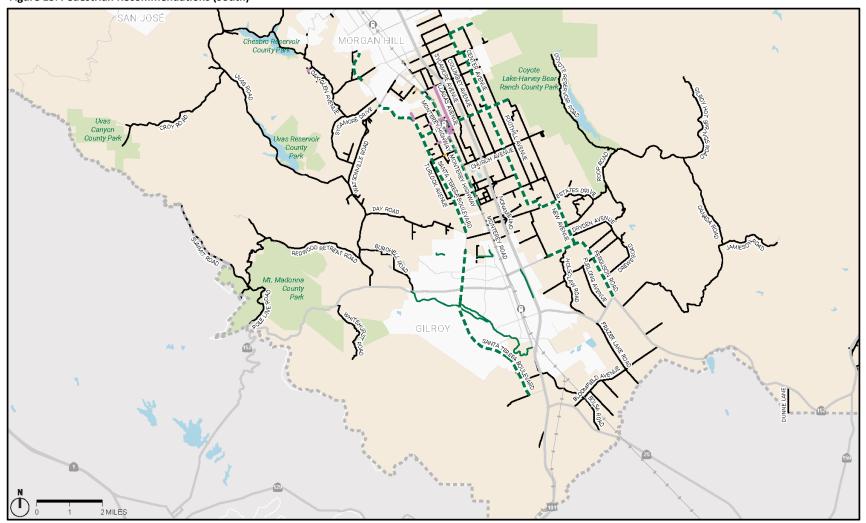
Figure 12. Pedestrian Recommendations (Center East)



- Class I - Shared-Use Path

Santa Clara County Border

Figure 13. Pedestrian Recommendations (South)



# **PEDESTRIAN RECOMMENDATIONS**

SANTA CLARA **COUNTY ACTIVE** TRANSPORTATION PLAN



#### PEDESTRIAN INFRASTRUCTURE

**Existing Facilities** 

- Class I: Shared-Use Path

Pedestrian Only Improvements

- Sidewalk 1 Side
- Sidewalk Both Sides
- Sidewalk Driveway Consolidation
- Sidewalk Gap Closure Local Road

Mixed-Use Improvements

-- Class I - Shared-Use Path

#### **FEATURES**

- Caltrain Station
- → Rail Line
- County Maintained Roadway
- Roadways Maintained By Others
- Water
- Park
- City Boundary
- Unincorporated Area





# **Programmatic Recommendations**

This section provides a summary of the recommended policies and support programs to enhance, support, and complement the recommended infrastructure improvements. This section includes a description of existing and proposed recommendations by each programmatic category (i.e., Engineering, Encouragement, Education, Enforcement, and Evaluation).

# **Equity**

As the County continues its commitment to Equity as a major component of this plan, the proposed programmatic recommendations included in this memo prioritize implementation within Equity Priority Communities <sup>11</sup> to support regional and local efforts for improving the County's active transportation network. For example, the County is focusing efforts and funding on Equity Priority Communities that are heavily dependent on transit, so that future projects can help facilitate that access. The ability to access transit by sidewalk or bike facility can be transformative for families in Santa Clara County that don't have other options. The recently instituted Office of Equity, Diversity and Belonging may provide additional guidance on strategies to help target implementation of proposed recommendations in areas with high equity needs.

# **Engineering and Infrastructure**

Bicycle and pedestrian support facilities provide increased comfort and ease for people who bike and walk. **Table 7** summarizes proposed engineering programs in the County that work in conjunction with existing infrastructure to improve user experience.

**Table 7. Recommended Engineering Policies and Programs** 

Support Program	Description	Plan Goal
Curb Extensions at Intersections	To reduce vehicle speeds through the intersection and improve overall transportation safety, the County may provide corner curb extensions at intersections, where feasible, with a focus on Equity Priority Communities in the unincorporated and southern portions of the county and along the High Injury Network. This type of improvement will require case-by-case development and engineering review and may not be appropriate for intersections along truck routes.	- Goal 1 - Equity and Social Justice - Goal 4 - Public Safety and comfort
Crossing Facilities	County is improving crossing facilities by implementing high-visibility crosswalks, advance stop or yield marking, and modified timings at signalized intersections with a Leading Pedestrian Interval where feasible. These enhancements would make pedestrians more visible to drivers at the intersection and give pedestrians a head start when crossing. These improvements should be prioritized within Equity Priority Communities and at high-collision intersections. It is County's plan to implement this at all County Expressway intersections.	- Goal 1 - Equity and Social Justice - Goal 2 - Health, Wellbeing and Sustainability - Goal 3 - Access, Connectivity and Multi- modal Consistency - Goal 4 - Public Safety and comfort

<sup>&</sup>lt;sup>11</sup> Equity Priority Communities, MTC. https://mtc.ca.gov/planning/transportation/access-equity-mobility/equity-priority-communities

Alta Planning + Design, Inc.

#### **Support Program Description Plan Goal** Sidewalk and The County may develop a sidewalk and curb cut improvement program - Goal 1 - Equity and Social **Curb Cut** with a dedicated funding stream for closing sidewalk gaps and adding **Justice** Improvement curb ramps at spot locations. This program would allow the County to be - Goal 2 - Health, **Program** more responsive to local citizen complaints for sidewalk and curb cut Wellbeing and enhancements. This type of gap closure should be prioritized in Equity Sustainability Priority Areas. - Goal 3 - Access, Connectivity and Multimodal Consistency - Goal 4 - Public Safety and Comfort Slip Lane Develop countywide roadway design program which considers proactive - Goal 1 - Equity and Social Retrofitting treatments for retrofitting right-turn slip lanes to reduce vehicle speeds, **Justice** Program shorten pedestrian crossing distances, improve pedestrian visibility, - Goal 2 - Health, improve crosswalk compliance, and improve overall intersection safety. Wellbeing and Program may address key considerations for slip lane retrofits and Sustainability metrics for evaluating the need for a retrofit treatment. The County - Goal 3 - Access, should prioritize retrofitting Slip Lanes within Equity Priority Connectivity and Multi-Communities and at locations on the High Injury Network. roadway modal Consistency traffic operations and vehicle mix would need to be evaluated prior to - Goal 4 - Public safety and implementation of this recommendation. comfort This type of improvement will require case-by-case traffic impact analysis and engineering review and may not be appropriate at all locations. Example: A Report on the Development of Guidelines for Applying Right-Turn Slip Lanes" Texas DOT (2015)

Quick-Build Project Implementation



Quick-build projects typically include less expensive materials such as paint, thermoplastic, and bollards/delineators (or other sturdy but removable materials). These improvements share many of the same safety benefits of their permanent counterparts, but can be implemented faster and cheaper, allowing the County to be more responsive to safety concerns while still planning for long-term funding and implementation. The County should prioritize quick-build projects in Equity Priority Communities. Quick-build projects may include slip lane retrofits and corner curb extensions. Example: Claxton, Kevin "Quick-Build Streets Design: What it is and why we need it." CalBike, May 28, 2020.

- Goal 1 Equity and Social Justice
- Goal 2 Health,
   Wellbeing and
   Sustainability
- Goal 3 Access,
   Connectivity and Multimodal Consistency
- Goal 4 Public safety and comfort

# **Encouragement**

Encouragement programs help to create lasting active transportation culture and can encourage overall mode share shifts. **Table 8** provides an overview of recommended bicycle and pedestrian encouragement programs.

**Table 8. Existing and Recommended Encouragement Programs** 

Support Program/Facility	Description	Plan Goal
Bike to Work / Wherever Days	The County may sponsor Bike to Work / Wherever Day events in support of regional efforts.  Example:  "Bike to Wherever Days" Silicon Valley Bicycle Coalition.	- Goal 2 - Health, Wellbeing and Sustainability - Goal 5 - Collaboration and Community Partnership
Bicycle Friendly Designation	The Bicycle Friendly America program sponsored by the League of American Cyclists provides a roadmap, hands-on assistance, and recognition for communities around the US that have made strides on the implementation of infrastructure, policy, and programmatic improvements to enhance bicycling around their community. The County may seek the Bicycle Friendly Designation.  Example:  "Community" The League of American Bicyclists.	- Goal 4 - Public Safety and comfort - Goal 5 - Collaboration and Community Partnership
Pedestrian Friendly Community Designation	Walk Friendly Communities program designates Cities, Counties, and local communities with various degrees of Walk Friendliness based on existing programs and infrastructure. Designations range from Honorable Mention to Platinum. The County may seek the Walk Friendly Community designation.  Example:  "Apply" Walk Friendly Communities.	- Goal 4 - Public Safety and comfort - Goal 5 - Collaboration and Community Partnership
Bicycle Friendly Business Program	Similar to the Bicycle Friendly Community designation, the Bicycle Friendly Business program recognizes businesses for their efforts to encourage a more bicycle friendly atmosphere. This requires businesses to implement different strategies to accommodate the different needs of customers and employees.  Example:  "Business" The League of American Bicyclists.	- Goal 4 - Public Safety and comfort - Goal 5 - Collaboration and Community Partnership

Support Program/Facility	Description	Plan Goal
Open Streets	Open Street events promote and celebrate bicycling and walking and encourage participation from neighborhoods. The City of San José Viva Calle Program has shown successful encouragement, as has the smaller-scale Morgan Hill Open Streets Program.  Examples: San Francisco County Transportation Authority "Slow Streets Program" City and County of San Francisco. Open Streets Santa Cruz County "Over 10,000 attended Open Streets Santa Cruz, 2022" Bike Santa Cruz County.	- Goal 4 - Public Safety and comfort - Goal 5 - Collaboration and Community Partnership
Partnerships with Bicycle Organizations	The formation of strong relationships with local bicycle advocates and bicycle clubs will encourage mutually beneficial collaboration and help the County reach its goals, including those around equity. The County should consider partnering with organizations across the county with an emphasis on organizations within the southern and unincorporated areas of the county. This could also include a variety of other organizations, such as Santa Clara County Libraries, which held multi-lingual bicycle events in May 2023.  Example: CalBike "Our Partners" California Bicycle Coalition.	- Goal 5 - Collaboration and Community Partnership
Partnerships and Coordination with County Agencies	A team of representatives from various County agencies including County Public Health and VTA to coordinate project implementation throughout the county.	- Goal 5 - Collaboration and Community Partnership
Wayfinding	Wayfinding signage provides important destination, distance, and navigation information to roadway users. Specific wayfinding signs designed for people walking and bicycling should be implemented at key locations across the county to further support active transportation, with a focus on areas with high pedestrian and bicyclist traffic such as trail junctions and high-speed and high-stress roadways with existing or proposed pedestrian and/or bicycle facilities. Pending funding, the County should coordinate on a comprehensive wayfinding program with local jurisdictions and VTA. Wayfinding improvements should be prioritized in Equity Priority Communities in areas with high demand for walking and biking, and can include multiple languages or universal iconography.  Example:  Urban Bikeway Design Guide "Bike Route Wayfinding Signage and Markings System" National Association of City Transportation Officials.	- Goal 1 - Equity and Social Justice - Goal 2 - Health, Wellbeing and Sustainability - Goal 3 - Access, Connectivity and Multi-modal Consistency - Goal 4 - Public Safety and Comfort

## **Education**

Bicycle and pedestrian education programs help those who are interested in active transportation to feel more comfortable, safe, and confident navigating streets and shared-use paths. **Table 9** outlines potential program expansions for existing educational programs in the County.

**Table 9. Recommended Education Programs** 

Support Program/ Facility	Description	Plan Goal
Bike Trains to School and Walking School Buses	Bike Trains and walking school buses are organized groups of students walking or biking to school under the supervision of a guardian/adult volunteer. These groups follow predetermined routes and can operate occasionally or daily depending on interest from families. The Santa Clara County, Public Health Department, continues to provide educational training on bicycle trains and walking groups as part of the existing Safe Routes to School Program and a Gilroy Moves, Safe Routes to Community Hubs Initiative, as well as Bicycle Rodeos, Active and Safe Transportation that include Juvenile Traffic Diversion Program, Data Reports, Traffic Safety Resources, Traffic Safe Communities Network and Walk and Bike Events. Other cities with existing Safe Routes to School City Coordinators also provide this support to their schools as part of their Safe Routes encouragement activities. In addition, the City of San José Walk N' Roll Program organizes Viva EscuelaSJ events, which consist of closing the street in front of schools so families can use the entire street to walk and bike to school. These unique events should be prioritized in Equity Priority Communities.  Examples:  "Walking School Bus & Bike Train" Alameda County Safe Routes to Schools.  "Viva EscuelaSJ," City of San José Walk N' Roll Program.  More info at "Santa Clara County Public Health Department" Active and Safe Transportation.	- Goal 1 - Equity and Social Justice - Goal 4 - Public Safety and comfort - Goal 5 - Collaboration and Community Partnership
"New Infrastructure" Education Campaign	This education campaign would focus on providing materials for local residents regarding traffic control devices and active transportation improvements which may be new to the area and residents may not be familiar with. For example, this would provide greater messaging to increase awareness about how to use and travel through a roundabout, two-staged turn box, or a protected intersection. This information may help reduce collisions around new infrastructure and help identify overarching benefits and logic behind various infrastructure choices.	- Goal 1 - Equity and Social Justice - Goal 4 - Public Safety and comfort - Goal 5 - Collaboration and Community Partnership
Bicycle and Pedestrian Safety Campaign	Create a County-sponsored outreach campaign to encourage all Rd users to abide by local laws and be courteous to other users. This campaign may be targeted at just one user type (e.g., motorists) or at multiple users. Local stakeholders may assist in developing goals that are rooted in community concerns and issues. Campaigns should be deployed at regular intervals throughout the year to promote an attitude of safety awareness. Safety campaigns should be prioritized in Equity Priority Communities.	- Goal 1 - Equity and Social Justice - Goal 4 - Public Safety and comfort

## **Engagement**

Engagement is a foundational part of building active and connected communities. It creates opportunities for people to work together on issues that they care about. **Table 10** provides an overview of recommended bicycle and pedestrian engagement programs.

**Table 10. Recommended Engagement Programs** 

Support Program/Facility	Description	Plan Goal
Tactical Urbanism and Slow Streets/School Streets	Tactical Urbanism Projects are short-term, temporary bicycle facility installations that allow the jurisdiction and community to "test out" different roadway configurations/infrastructure treatments prior to detailed design and permanent construction. These can last anywhere from one week to several months depending on the objectives and data collection/observation needs of the project. Slow Streets and School Streets are streets with either limited or closed access to motor vehicle traffic to provide more space (and social distancing if necessary) and safety for bicyclists and pedestrians. Slow Streets that front schools can be considered School Streets and can be designed with school/student-specific treatments. These projects should be prioritized around pedestrian activity generators in Equity Priority Communities such as schools and commercial districts. These types of projects may require enforcement support and Board of Supervisors approval for speed limit changes. The county may utilize existing relationships with community based organizations and leaders to help recruit community members to serve as in advisory roles and help with the implementation of tactical urbanism and quick build projects.  Example: OakDOT "Oakland's Slow Streets & Essential Places" City of Oakland, February 21, 2023.	Goal 1 – Equity and Social Justice  Goal 2 – Health, Well-Being, and Sustainability  Goal 3 – Access, Connectivity, and Multimodal Consistency  Goal 4 – Public Safety and Comfort  Goal 5 – Collaboration and Community Partnership
Partnerships with CBOs	Utilize existing relationships with Community Based Organizations started through the development of this plan for ongoing engagement with hard-to-reach communities.	Goal 1 – Equity and Social Justice  Goal 2 – Health, Well-Being, and Sustainability  Goal 3 – Access, Connectivity, and Multimodal Consistency  Goal 4 – Public Safety and Comfort  Goal 5 – Collaboration and Community Partnership

Support Program/Facility	Description	Plan Goal
Implement a Promotoras model to increase outreach in hard- to-reach communities	Los Angeles Walks' implementation worked with Spanish-speaking Promotoras, mostly women from predominantly low-income communities, by empowering, training, and employing them to advocate for creating safer and more walkable streets in Los Angeles. Advocating for equitable mobility systems within their neighborhoods has enabled Promotores to attain infrastructure safety improvements in their communities, has empowered them to join the City of Los Angeles Pedestrian Advisory Committee, and has presented new professional opportunities in transportation spaces.  Example: Los Angeles Walks Promotoras Program website	Goal 1 – Equity and Social Justice  Goal 2 – Health, Well-Being, and Sustainability  Goal 3 – Access, Connectivity, and Multimodal Consistency  Goal 4 – Public Safety and Comfort  Goal 5 – Collaboration and
Online Information and Service Requests	The County currently operates an online Service Request system which allows residents to submit an issue or request for a specific service for traffic signals, roadway issues, or streetlight problems. This system should be expanded to include a reporting system for pedestrian and bicycle issues such as sidewalk gaps or missing curb ramps.  Example: Santa Clara County Roads and Airports Department "Service Requests".	Community Partnership  Goal 4 - Public safety and Comfort Goal 5 - Collaboration and Community Partnership

## **Evaluation**

Programs to help evaluate and track progress towards reaching the plan's goals are important for long-term success and project implementation. **Table 11** lists proposed programs that help identify what is working, what is not, and where additional efforts are needed following the completion of the plan.

**Table 11. Recommended Evaluation Programs** 

Support Program/Facility	Description	Plan Goal
Annual Bicycle and Pedestrian Collision Reports	Annual reviews of bicycle collisions will help assess traffic safety issues and track progress towards a safer community for bicyclists and pedestrians.  Example:  SFMTA "San Francisco 2012-2015 Collisions Report" City and County of San Francisco. November 3, 2016.	- Goal 1 - Equity and Social Justice - Goal 4- Public Safety and Comfort - Goal 5 - Collaboration and Community Partnership
Bicycle and Pedestrian Count Program	Conducting regular bicycle and pedestrian counts is important to understand how travel behavior is changing throughout the county. Counting methodology should be consistent with other regional metrics. Counting technology may be incorporated into signal maintenance activities depending on available equipment.  Example:  "Counting and Estimating Volumes" Pedestrian and Bicycle Information Center.	- Goal 1 – Equity and Social Justice
Active Transportation Online Portal	Create and maintain a GIS portal showing recent and ongoing active transportation project planning and status, and quarterly bicycle and pedestrian-involved collision statistics. This portal may also include links to projects with specific benefits for active transportation and other active transportation resources throughout the county such as the VTA Countywide Bicycle Map.  Example:  City of Oakland Existing Bikeways online portal.	- Goal 4- Public Safety and Comfort - Goal 5 - Collaboration and Community Partnership
School Safety Assessment	In partnership with the County's existing Safe Routes to Schools program, conducting safety assessments at each school will help identify specific barriers and challenges for students who bike to/from school and help develop countermeasures to improve identified deficiencies. School safety assessments should prioritize schools within Equity Priority Communities.  Example: "School Safety Assessments" Alameda County Transportation Commission.	- Goal 1 - Equity and Social Justice - Goal 2 - Health, Wellbeing and Sustainability - Goal 4 - Public Safety and Comfort

## **Implementation and Funding**

This section summarizes the proposed strategy for implementing the projects and programs contained in previous sections of this document. It also provides an overview of the metrics and methodology used to weigh projects to develop a planning level assessment for the prioritization of projects and programs.

## **Prioritization: Targeting the Greatest Needs**

The approach to enhancing and expanding the County's active transportation network must consider what is realistic given historic and anticipated funding, while also providing the County with flexibility to respond to changing conditions and opportunities that may arise. The prioritization of proposed projects helps formulate a strategic list to guide project implementation. Prioritization results are flexible concepts that serve as guidelines. It is recommended that the County re-evaluate the proposed projects and rankings **every five years**. Over time as development occurs or changes to existing land uses and Santa Clara County's transportation network take place, this framework can be used to re-evaluate remaining projects and continue pursuing implementation of the recommended improvements. For example, a low-priority spot improvement may be completed ahead of a high-priority corridor project due to immediate funding opportunities as part of a redevelopment or larger project. Similarly, a high-priority project may require additional study and funding making it take longer to implement.

#### Methodology

Focusing public investments into areas with the greatest needs helps to leverage the greatest public benefits from scarce public dollars for improving transportation access, connectivity, and project sustainability. This plan prioritized pedestrian and bicycle improvements based on the following goals: **Safety, Health and Equity, Connectivity,** and **Feasibility**. To achieve each goal, a set of criteria was used to identify metrics that facilitated the ranking of each project.

- For safety, collision history and roadway stress levels were used as the criteria. The following metrics were used to analyze collision history: the number of cyclists killed or seriously injured along the roadway, whether the roadway is considered a high-injury segment, and the number of high-collision intersections along the roadway. To analyze stress levels, a bicycle level of traffic stress as well as a pedestrian level of traffic stress were completed and the corridors/intersections receiving the highest scores (i.e., most stressful) were highlighted for these criteria. The safety metric was a higher criterion that was used to focus infrastructure investments on intersections and segments exhibiting the highest number of collisions for people walking and biking.
- Health and equity analyses were completed as part of this project. Data derived from County Health Department, CalEnviroScreen and Metropolitan Transportation Commission (MTC) Equity Priority Communities data was used to identify areas of the county where historic disinvestment and highest need still exists. Roadway segments bordering or contained within areas of the county exhibiting high CalEnviroScreen, MTC EPC, or County Health Data scores were highlighted to develop this combined metric. This methodology placed a high-priority on projects located in high- equity and health need areas. These areas have historically had under-investment in public infrastructure. To address historical inequities, projects in these areas are prioritized for improvements as part of this plan.
- Connectivity was measured by a combined metric that included the existence and proximity to transit,
  potential demand, and existing city and regional active transportation networks. The number of transitstops along the roadway was used as the metric to analyze transit connectivity. Roadway active trip
  potential demand analysis was used as the metric for demand. And whether a project closed a pedestrian
  or facility gap within a segment.
- Existing Right-of-way and whether right-of-way acquisition was needed, was used as a proxy metric for understanding the **feasibility of** the proposed improvement.

#### **Interpreting Prioritization Results**

The overall prioritization reflects an order of which projects may provide the greatest community benefit by improving safety and connectivity. The projects were sorted into high, medium, and opportunity-priority categories. Implementation for high-priority projects is recommended for a timeframe of 0-2 years. Medium-priority projects should be considered for implementation between 3-5 years. Opportunity projects should be considered for implementation after 5 years or when funding and other opportunities like repaving or development projects occur.

Overall project prioritization can help select projects for Active Transportation Program (ATP) grant applications or for projects to add to the County's next Capital Improvement Plan. For example, County staff could sort projects by order of the "safety" to find the best projects for the Highway Safety Improvement Program or the California Office of Traffic Safety grants. The rankings are not intended to be a hardened list but rather a guide for staff to select projects based on a variety of factors that present opportunities to move projects forward.

#### **Cost Estimates**

The generalized cost estimates (see **Table 12** and **Table 13**) prepared for this document are based on the basic understanding of certain roadway infrastructure elements that would need to be added, removed, and/or modified to implement the proposed bike facility improvement. For example, the installation of new pavement markings and signing are relatively easily installed if other existing infrastructure is not impacted nor requires additional modifications. However, improvements that require modifying existing street widths can require the removal and replacement of curb/ gutter, drainage infrastructure, utilities, and landscaping/ trees. These types of improvements may also require the purchase of additional right-of-way or establishment of an easement – all of which can increase the cost of a bike facility improvement substantially.

It is important to note that the costs presented below do not include estimates for ongoing maintenance such as sweeping, which may add to the cost of implementation. Until a specific street or intersection is identified for a particular improvement, costs for new infrastructure can only be estimated at a general level. Considering these factors, the following tables summarize the generalized planning level cost ranges for the project types.

Table 12. Generalized Planning Level Costs – Bikeways (per mile)<sup>12</sup>

Bikeway Classification	Cost Per Mile*	Assumptions
Class I—Shared-use Path <sup>13</sup>	\$\$\$-\$\$\$\$	Cost includes asphalt path, minor crossing improvements, and signal modification. Cost does not include right- of-way acquisition. Assumes 10' width and 4" asphalt section.
Class II – Bicycle Lane	\$-\$\$\$	Cost assumes signage and striping. Cost ranged depends on green conflict marking, and traffic signal modification, including bike signal detection. Does not include pavement remediation or striping removal.
Class IIB – Buffered Bicycle Lane	\$-\$\$	Cost assumes signage, striping, and a painted buffer. Cost range depends on green conflict marking, traffic signal modification (including bike signal detection), and wayfinding signage. Does not include pavement remediation or striping removal.
Class III Bicycle Route	\$	Cost includes signage and striping. Does not include pavement remediation or striping removal.
Class IIIB – Bicycle Boulevard	\$	Cost assumes signage, striping, and minor traffic calming (such as speed humps and up to three other elements such as medians, diverters, or a raised crosswalk). Cost range depends on low-cost items plus traffic circles, curb extensions, traffic signal modification (including bike signal detection), and wayfinding signage.
Class IV – Separated Bikeway <sup>14</sup>	\$\$\$-\$\$\$\$	Cost assumes signage, striping, and a painted buffer with flexible delineators. Cost range depends on green conflict marking, traffic signal modification (including bike signal detection), and a raised concrete buffer.

<sup>\*</sup>Costs are estimated in the same way but placed into three bins of either Low (\$ = \$2M), Medium (\$\$\$ = \$2M - 5M), High costs (\$\$\$\$ = \$5M+)

<sup>&</sup>lt;sup>12</sup> Costs are based on values obtained from Bid Documents of local (i.e., Contra Costa, Alameda, Santa Clara, and San Mateo counties) projects from 2019 to present, or historic planning level costs generated for local (i.e., Contra Costa, Alameda, Santa Clara, and San Mateo counties) planning efforts from 2018 to present. Values derived from Bid documents were multiplied by a planning-level contingency factor (25%) to account for additional project needs not explicitly stated in the descriptions. Costs include the cost of materials, labor and administration of the identified facilities and items, and do not include design fees, public outreach efforts, or inter-agency coordination.

<sup>13</sup> May require additional considerations (compared to Class II or III Bikeways) at signalized intersections including

<sup>&</sup>lt;sup>13</sup> May require additional considerations (compared to Class II or III Bikeways) at signalized intersections including detection, signal timing adjustments, and geometric adjustments.

<sup>&</sup>lt;sup>14</sup> May require additional considerations (compared to Class II or III Bikeways) at signalized intersections including detection, signal timing adjustments, and geometric adjustments.

To help illustrate the magnitude of costs for pedestrian improvements, a generalized list of costs was developed and is included in **Table 13**. Costs identified in this table are for illustrative purposes and require engineering review for final feasibility and final cost determination based on context-dependent findings.

Table 13. Generalized Planning Level Costs – Spot Improvements

Proposed Improvement	Generalized Cost*
Pedestrian Hybrid Beacon (PHB)	\$\$\$ -\$\$\$\$
Construct Median Refuge	\$\$\$
Install / Upgrade Curb Ramps	\$\$\$
New / Enhanced Crosswalks	\$
Paved Shoulder with Intermittent Rumble Strip 15	\$\$\$
Provide Advanced Stop Bar	\$
Reduce Turning Radius	\$\$\$
Sidewalk (new) <sup>16</sup>	\$\$\$
Slip Lane Reconfiguration	\$\$\$\$

<sup>\*</sup>Low (\$ = <\$2M) Medium (\$\$\$ = \$2M-5M) High costs (\$\$\$\$ = \$5M+)

Prioritized lists of corridor improvements are included in **Table 14** (bicycle projects) and **Table 15** (pedestrian projects). **Figures 14** to **19** show the prioritized bicycle projects, and **Figures 20** to **25** show the prioritized pedestrian projects.

NOTE: The costs included in these tables are for planning purposes only. Costs and recommendations may be altered depending on opportunities, constraints, and/or roadway changes. Final project costs will need to be determined based on engineering review on a case-by-case basis.

<sup>&</sup>lt;sup>15</sup> Per mile

<sup>16</sup> Ibid

Table 14. Prioritized Bicycle Recommendations (by prioritization tier)



CORRIDOR	RECOMMENDED FACILITY	FROM	то	PRIORITIZATION TIER	COST ESTIMATE	LENGTH (MI)
Almaden Expressway	Class I - Shared-Use Path	Harry Road	Guadalupe Parkway (Hwy 87)	Highest Priority	\$\$\$-\$\$\$\$	8.84
<b>Capitol Expressway</b>	Class I - Shared-Use Path	Narvaez Avenue	E. San Antonio Street	Highest Priority	\$\$\$ - \$\$\$\$	8.22
Foothill Expressway	Class I - Shared-Use Path	Page Mill Road	Junipero Serra Freeway (Soutbound Off-Ramp)	Highest Priority	\$\$\$-\$\$\$\$	7.23
San Tomas Expressway	Class I - Shared-Use Path	Bayshore Freeway	Camden Avenue	Highest Priority	\$\$\$-\$\$\$	8.19
Central Expressway	Class I - Shared-Use Path	De la Cruz Boulevard	San Antonio Road	Higher Priority	\$\$\$-\$\$\$	9.71
Lawrence Expressway	Class I - Shared-Use Path	Mitty Way	Southbay Freeway	Higher Priority	\$\$\$ - \$\$\$\$	6.52
Montague Expressway	Class I - Shared-Use Path	Bayshore Freeway	I-680 (Northbound Ramps)	Higher Priority	\$\$\$-\$\$\$\$	6.00
Oregon Expressway	Class I - Shared-Use Path	Bayshore Freeway	El Camino Real	High-Priority	\$\$\$-\$\$\$	1.78
Page Mill Road	Class I - Shared-Use Path	Arastradero Road	El Camino Real	Highest Priority	\$\$\$-\$\$\$	2.84
Alum Rock Avenue	Class I - Shared-Use Path	Crothers Rd	Fleming Ave	Highest-Priority	\$\$\$\$	0.72
Bascom Avenue	Class IV - Separated Bikeway	Elliott Street	Fruitdale Avenue	Highest-Priority	\$\$\$-\$\$\$	0.68
Junipero Serra Boulevard	Class I - Shared-Use Path	Page Mill Road	Sand Hill Road	Highest-Priority	\$\$\$-\$\$\$\$	2.43
Scott Street	Class IIIB - Bicycle Boulevard	Parkmoor Avenue	Clifton Avenue	Highest-Priority	\$	0.79
Center Avenue	Class I - Shared-Use Path	San Martin	Buena Vista Avenue	Higher-Priority	\$	5.60
Cochrane Road	Paved Shoulder with Intermittent Rumble Strip	Main Avenue	Coyote Creek	Higher-Priority	\$	1.48
De Witt Avenue	Class I - Shared-Use Path	Edmundson Avenue	Spring Avenue	Higher-Priority	\$\$\$-\$\$\$	0.99
Elliott Street	Class IIIB - Bicycle Boulevard	Rutland Avenue	Bradley Avenue	Higher-Priority	\$	0.43
Hill Road	Class IIB - Buffered Bike Lane	Diana Avenue	Main Avenue	Higher-Priority	\$\$\$-\$\$\$	0.38
Hill Road	Class IIB - Buffered Bike Lane	Dunne Road	Diana Avenue	Higher-Priority	\$-\$\$	0.74
Hill Road	Paved Shoulder with Intermittent Rumble Strip	Tennant Avenue	Dunne Road	Higher-Priority	\$\$\$-\$\$\$\$	0.94
Hill Road	Class I - Shared-Use Path	Tennant Avenue	Maple Avenue	Higher-Priority	\$\$\$-\$\$\$	0.68
Main Avenue	Class IV - Separated Bikeway	US 101 (74 E RR - 0.07 NE (N side))	Cochrane Road (0.72NE Laurel)	Higher-Priority	\$\$\$-\$\$\$\$	1.28
Maple Avenue	Class I - Shared-Use Path	Hill Road	Center Avenue	Higher-Priority	\$\$\$-\$\$\$\$	0.14
Masten Avenue	Paved Shoulder with Intermittent Rumble Strip	Monterey Highway	Center Avenue	Higher-Priority	\$	1.38

CORRIDOR	RECOMMENDED FACILITY	FROM	то	PRIORITIZATION TIER	COST ESTIMATE	LENGTH (MI)
Moorpark Avenue	Class IV - Separated Bikeway	Pfeffer Lane	~400 ft east of Leland Avenue	Higher-Priority	\$\$\$-\$\$\$\$	0.73
Olive Avenue	Class IIIB - Bicycle Boulevard	Bascom Avenue	Wabash Avenue	Higher-Priority	\$	0.29
San Martin Avenue	Class I - Shared-Use Path	Santa Teresa Boulevard	New Avenue	Higher-Priority	\$\$\$-\$\$\$	2.88
Santa Teresa Boulevard	Class I - Shared-Use Path	Castro Valley Road (Sections P & O1 maintained by Gilroy per agreement) 920 ft N of Longmeadow Dr	Watsonville Road to Day Road	Higher-Priority	\$\$\$-\$\$\$\$	10.39
Hale Ave / Santa Teresa Blvd	Class I - Shared-Use Path	Tilton Ave	Laguna Ave	High-Priority	\$	4.14
Maywood Avenue	Class IIIB - Bicycle Boulevard	Thornton Way	Bascom Avenue	High-Priority	\$	0.38
Union Avenue	Class I - Shared-Use Path	Camden Avenue (0.03 S Stratford)	Charmeran Ave (0.6 S Charmeran)	High-Priority	\$\$\$-\$\$\$\$	0.38
Buena Vista Avenue	Paved Shoulder with Intermittent Rumble Strip	Foothill Avenue	Monterey Highway	Medium-Priority	\$	1.71
Alum Rock Falls Road	Class III - Bike Route	Alum Rock Park (County Boundary)	End of Road	Opportunity Project	\$	3.43
Arbor Avenue	Class III - Bike Route	Frontero Avenue/Country Club Drive/Loyola Drive	Fairway Drive	Opportunity Project	\$	0.71
Bloomfield Avenue	Paved Shoulder with Intermittent Rumble Strip	State Highway 25	Pacheco Pass Highway	Opportunity Project	\$	3.22
Bowden Avenue	Class III - Bike Route	Watsonville Road	Sycamore Drive	Opportunity Project	\$	0.42
Branham Lane	Class IV - Separated Bikeway	Union Avenue	Sally Drive (0.74 E of Union)	Opportunity Project	\$	0.74
<b>Buckner Drive</b>	Class IIIB - Bicycle Boulevard	Dale Drive	Roehampton Avenue	Opportunity Project	\$	0.11
<b>Buena Vista Avenue</b>	Class I - Shared-Use Path	New Avenue	Foothill Avenue	Opportunity Project	\$\$\$-\$\$\$	0.53
California Avenue	Paved Shoulder with Intermittent Rumble Strip	Santa Teresa Boulevard	Monterey Highway	Opportunity Project	\$	0.79
Camden Avenue	Class IV - Separated Bikeway	Esther Drive (west return)	Unincorporated Boundary (0.14 W Esther S Side)	Opportunity Project	\$	0.15
Canada Road	Class III - Bike Route	Leavesley Road	Gilroy Hot Springs Road	Opportunity Project	\$	8.80

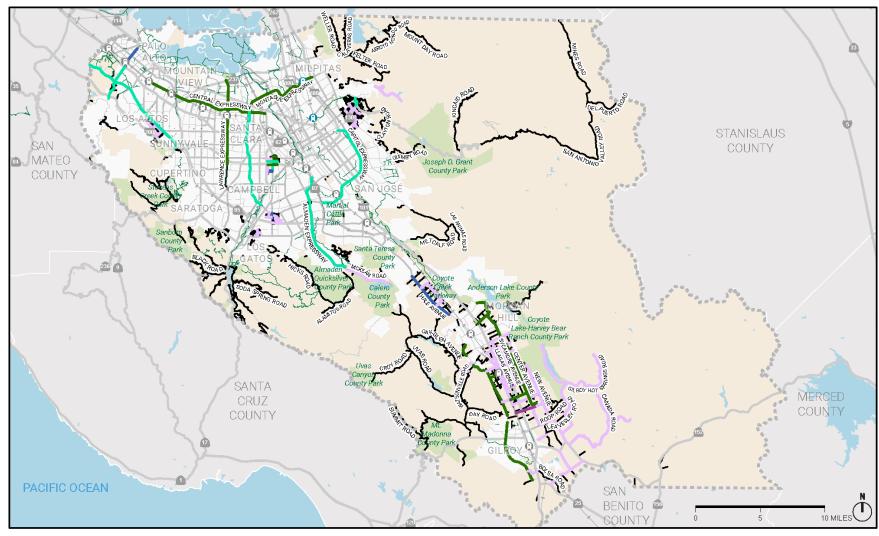
CORRIDOR	RECOMMENDED FACILITY	FROM	то	PRIORITIZATION TIER	COST ESTIMATE	LENGTH (MI)
Church Avenue	Paved Shoulder with Intermittent Rumble Strip	Monterey Highway	New Avenue	Opportunity Project	\$	2.22
Claremont Avenue North	Class IIIB - Bicycle Boulevard	McKee Road	Mahoney Drive	Opportunity Project	\$	0.97
<b>Coyote Reservoir Road</b>	Class III - Bike Route	Gilroy Hot Springs Road	Coyote Creek	Opportunity Project	\$	4.25
Crews Road	Class III - Bike Route	Ferguson Road	Leavesley Road	Opportunity Project	\$	2.03
Dale Drive	Class IIIB - Bicycle Boulevard	Jerilyn Drive	Buckner Drive	Opportunity Project	\$	0.17
Dougherty Avenue	Paved Shoulder with Intermittent Rumble Strip	Scheller Avenue	Live Oak Avenue	Opportunity Project	\$	1.80
East Hills Drive	Class IIIB - Bicycle Boulevard	Laumer Avenue	South Cragmont Avenue (Northern Side Only)	Opportunity Project	\$	0.13
Escobar Avenue	Class IIIB - Bicycle Boulevard	Oleander Avenue	El Gato Lane	Opportunity Project	\$	0.38
Esther Drive	Class IIIB - Bicycle Boulevard	Charmeran Avenue	Woodard Road	Opportunity Project	\$	0.25
Fairway Drive	Class III - Bike Route	Arbor Avenue	Loyola Drive	Opportunity Project	\$	0.96
Ferguson Road	Class I - Shared-Use Path	State Route 152	Leavesley Road	Opportunity Project	\$\$\$-\$\$\$\$	1.66
Fisher Avenue	Class IIIB - Bicycle Boulevard	Laumer Avenue	Claremont Avenue South	Opportunity Project	\$	0.19
Fitzgerald Avenue	Paved Shoulder with Intermittent Rumble Strip	Santa Teresa Boulevard	Monterey Highway	Opportunity Project	\$	0.67
Frazer Lake Road	Class III - Bike Route	Bloomfield Avenue	State Route 152	Opportunity Project	\$	1.72
Gilman Road	Class III - Bike Route	Holsclaw Road	Camino Arroyo	Opportunity Project	\$	0.76
Gilroy Hot Springs Road	Class III - Bike Route	Coyote Reservoir Road	Terminus (end of road)	Opportunity Project	\$	6.01
Gordon Avenue	Class IIIB - Bicycle Boulevard	Kirk Avenue	Terminus (San Jose Country Club)	Opportunity Project	\$	0.72
Herring Avenue	Class IIIB - Bicycle Boulevard	Charmeran Avenue	Charmeran Avenue	Opportunity Project	\$	0.43
Hyland Avenue	Class IIIB - Bicycle Boulevard	Maro Drive	Kirk Avenue	Opportunity Project	\$	0.33
<b>Hyland Avenue</b>	Class IIIB - Bicycle Boulevard	White Road	Maro Drive	Opportunity Project	\$	0.29
Jamieson Road	Class III - Bike Route	Canada Road	Henry W Coe State Park (2.06 E of Canada)	Opportunity Project	\$	2.07
Jerilyn Drive	Class IIIB - Bicycle Boulevard	Meadow Lane	Athene Drive	Opportunity Project	\$	0.47
Laumer Avenue	Class IIIB - Bicycle Boulevard	Fisher Avenue	Claremont Avenue South	Opportunity Project	\$	0.31
Leavesley Road	Class I - Shared-Use Path	Marcella Avenue	Ferguson Road	Opportunity Project	\$-\$\$\$	1.44
Leavesley Road	Class III - Bike Route	Dryden Avenue	Gilroy Hot Springs Road	Opportunity Project	\$	3.26

CORRIDOR	RECOMMENDED FACILITY	FROM	то	PRIORITIZATION TIER	COST ESTIMATE	LENGTH (MI)
Leigh Avenue	Class IV - Separated Bikeway	Camden Avenue	Homerite Drive (0.12 S of Camden)	Opportunity Project	\$	0.25
Live Oak Avenue	Paved Shoulder with Intermittent Rumble Strip	Hale Avenue	Dougherty Avenue	Opportunity Project	\$	0.48
Llagas Avenue	Class IIIB - Bicycle Boulevard	Maple Avenue	Church Avenue	Opportunity Project	\$-\$\$\$	3.19
Longwood Drive	Class IIIB - Bicycle Boulevard	Los Gatos Almaden Road	Oleander Avenue	Opportunity Project	\$	0.62
Los Coches Avenue	Class IIIB - Bicycle Boulevard	Bradley Avenue	Hodges Avenue	Opportunity Project	\$	0.31
Loyola Drive	Class III - Bike Route	Fairway Drive	Terrace Drive	Opportunity Project	\$	0.66
Magdalena Avenue	Class III - Bike Route	Hillview Road	Summerhill Avenue	Opportunity Project	\$	0.08
Maple Avenue	Paved Shoulder with Intermittent Rumble Strip	Railroad Avenue	Llagas Avenue	Opportunity Project	\$	0.47
Maple Avenue	Paved Shoulder with Intermittent Rumble Strip	US 101	Hill Road	Opportunity Project	\$	0.99
Maple Avenue	Paved Shoulder with Intermittent Rumble Strip	Center Avenue	Foothill Avenue	Opportunity Project	\$	0.31
Marcella Avenue	Class III - Bike Route	Buena Vista Avenue	Leavesley Road	Opportunity Project	\$	1.56
Mckean Road	Paved Shoulder with Intermittent Rumble Strip	Calfire Station	County Boundary (~2,100 ft east of Calero Lake Boat Launch)	Opportunity Project	\$	3.35
Mesa Road	Class III - Bike Route	Santa Teresa Boulevard	Mesa Road	Opportunity Project	\$	0.82
Middle Avenue	Paved Shoulder with Intermittent Rumble Strip	Foothill Avenue	UPRR Rail Corridor	Opportunity Project	\$	1.83
<b>Monterey Highway</b>	Class I - Shared-Use Path	Rucker Avenue	Middle Avenue	Opportunity Project	\$\$\$-\$\$\$	3.93
Murphy Avenue	Paved Shoulder with Intermittent Rumble Strip	Tennant Avenue	Middle Avenue	Opportunity Project	\$	1.38
New Avenue	Class I - Shared-Use Path	Leavesley Road	Buena Vista Avenue	Opportunity Project	\$\$\$-\$\$\$	1.44
New Avenue	Paved Shoulder with Intermittent Rumble Strip	San Martin Avenue	Buena Vista Avenue	Opportunity Project	\$	3.55
Porter Lane	Class IIIB - Bicycle Boulevard	Alum Rock Avenue	East Terminus	Opportunity Project	\$	0.63
<b>Roehampton Avenue</b>	Class IIIB - Bicycle Boulevard	Buckner Drive	Story Road	Opportunity Project	\$	0.19
Rucker Avenue	Paved Shoulder with Intermittent Rumble Strip	US 101	New Avenue	Opportunity Project	\$	1.69

CORRIDOR	RECOMMENDED FACILITY	FROM	то	PRIORITIZATION TIER	COST ESTIMATE	LENGTH (MI)
Rucker Avenue	Paved Shoulder with Intermittent Rumble Strip	Monterey Highway	US 101	Opportunity Project	\$	0.45
Scheller Avenue	Paved Shoulder with Intermittent Rumble Strip	Santa Teresa Boulevard	Dougherty Avenue	Opportunity Project	\$	0.57
South Cragmont Avenue	Class IIIB - Bicycle Boulevard	Fisher Avenue	East Hills Drive	Opportunity Project	\$	0.36
Standish Drive	Class IIIB - Bicycle Boulevard	Branham Lane	Charmeran Avenue	Opportunity Project	\$	0.44
Summerhill Avenue	Class III - Bike Route	Miraloma Way	Magdalena Avenue	Opportunity Project	\$	0.64
Sycamore Avenue	Paved Shoulder with Intermittent Rumble Strip	Maple Avenue	Church Avenue	Opportunity Project	\$	3.20
Sycamore Drive	Class III - Bike Route	Oak Glen Avenue	Sunnyside Avenue	Opportunity Project	\$	1.11
Tennant Avenue	Class I - Shared-Use Path	Carey Avenue (0.14 E of Foothill Ave)	Hill Rd	Opportunity Project	\$	0.75
Tennant Avenue	Paved Shoulder with Intermittent Rumble Strip	Hill Rd	Condit Road (0.1 E of Foothill)	Opportunity Project	\$	0.91
Thornton Way	Class IIIB - Bicycle Boulevard	Downing Avenue (Sec B, C & C1 County has East side)	Moorpark Avenue	Opportunity Project	\$	0.74
Wyrick Avenue	Class IIIB - Bicycle Boulevard	Bercaw Lane	150 East of Sutton Drive	Opportunity Project	\$	0.83

NOTE: The costs included in this table are for planning purposes only. Costs and recommendations may be altered depending on opportunities, constraints, and/or roadway changes. Costs identified in this table are for illustrative purposes and require engineering review for final feasibility and final cost determination based on context-dependent findings.

Figure 14. Prioritized Bicycle Recommendations (Countywide)



# RECOMMENDED BICYCLE IMPROVEMENTS (BY PRIORITY)

SANTA CLARA COUNTY ACTIVE TRANSPORTATION PLAN



## BICYCLE INFRASTRUCTURE

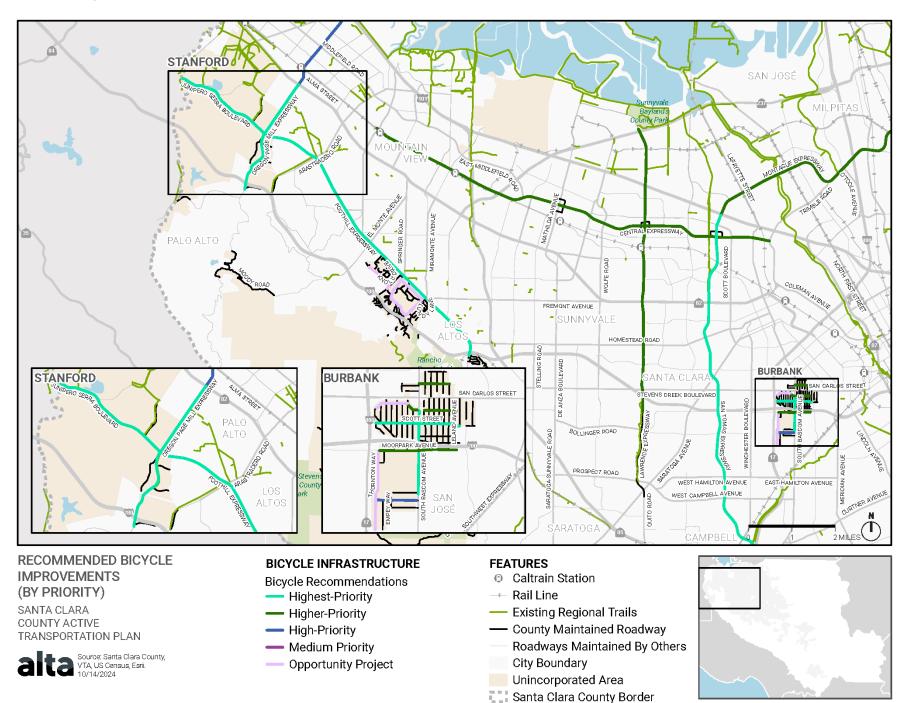
Bicycle Recommendations

- Highest-Priority
- Highest-Phonic
- Higher-Priority
- High-Priority
- Medium PriorityOpportunity Project

- Caltrain Station
- BART Station
- → Rail Line
- Existing Regional Trails
- County Maintained Roadway
- Roadways Maintained By Others
- City Boundary
- Unincorporated Area
- Santa Clara County Border



Figure 15. Prioritized Bicycle Recommendations (Northwest)



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Figure 16. Prioritized Bicycle Recommendations (Northeast)



RECOMMENDED BICYCLE IMPROVEMENTS (BY PRIORITY)

SANTA CLARA COUNTY ACTIVE TRANSPORTATION PLAN



## BICYCLE INFRASTRUCTURE

Bicycle Recommendations

- Highest-Priority
- Higher-Priority
- High-Priority
- Medium Priority
- Opportunity Project

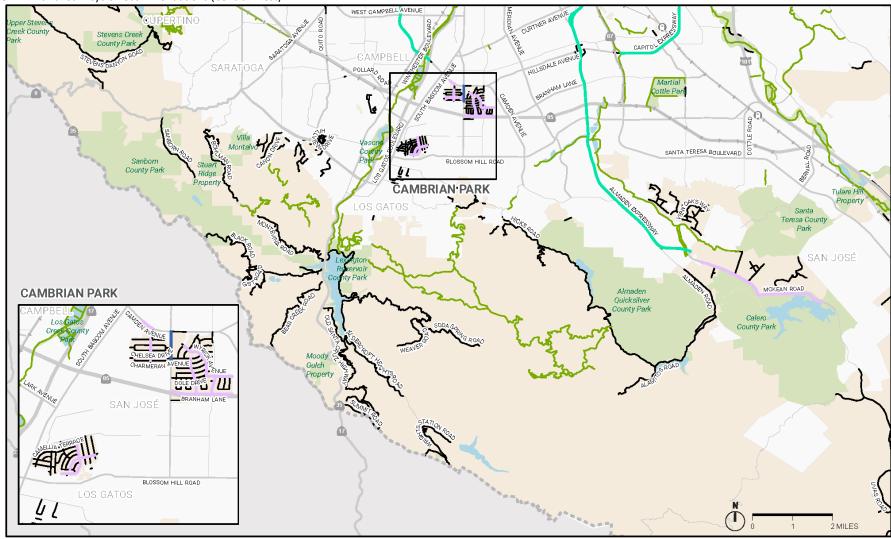
#### **FEATURES**

- Caltrain Station
- BART Station
- → Rail Line
- Existing Regional Trails
- County Maintained Roadway
- Roadways Maintained By Others
- City Boundary
- Unincorporated Area
- Santa Clara County Border



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Figure 17. Prioritized Bicycle Recommendations (Central West)



## RECOMMENDED BICYCLE IMPROVEMENTS (BY PRIORITY)

SANTA CLARA COUNTY ACTIVE TRANSPORTATION PLAN



#### **BICYCLE INFRASTRUCTURE**

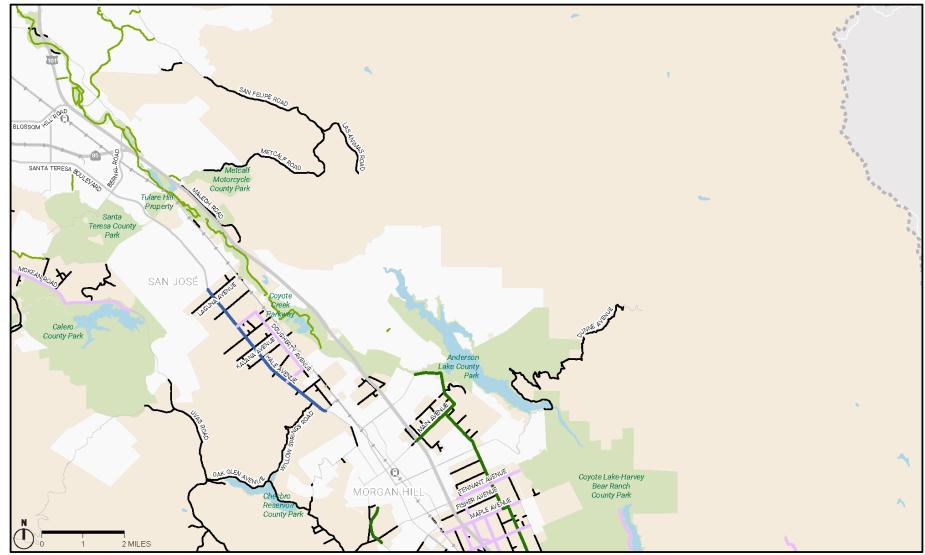
Bicycle Recommendations

- Highest-Priority
- Higher-Priority
- High-Priority
- Medium Priority
- Opportunity Project

- Caltrain Station
- → Rail Line
- Existing Regional Trails
- County Maintained Roadway
- Roadways Maintained By Others
- City Boundary
- Unincorporated Area
- Santa Clara County Border



Figure 18. Prioritized Bicycle Recommendations (Central East)



# RECOMMENDED BICYCLE IMPROVEMENTS (BY PRIORITY)

SANTA CLARA COUNTY ACTIVE TRANSPORTATION PLAN



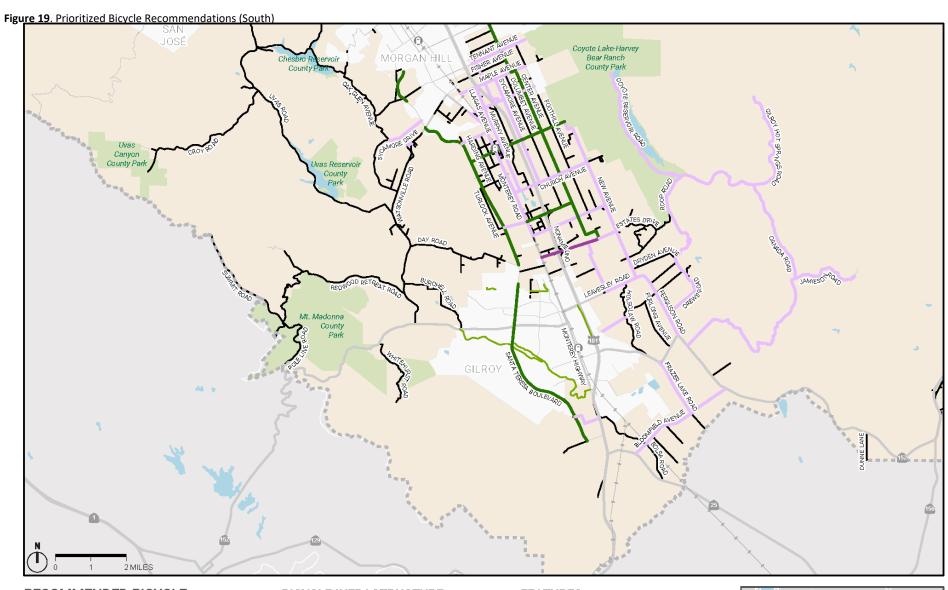
## **BICYCLE INFRASTRUCTURE**

Bicycle Recommendations

- Highest-Priority
- Higher-Priority
- High-Priority
- Medium Priority
- Opportunity Project

- Caltrain Station
- → Rail Line
- Existing Regional Trails
- County Maintained Roadway
- Roadways Maintained By Others
- City Boundary
- Unincorporated Area
- Santa Clara County Border





# RECOMMENDED BICYCLE IMPROVEMENTS (BY PRIORITY)

SANTA CLARA COUNTY ACTIVE TRANSPORTATION PLAN



## **BICYCLE INFRASTRUCTURE**

Bicycle Recommendations

- Highest-Priority
- Higher-Priority
- High-Priority
- Medium Priority
- Opportunity Project

- Caltrain Station
- → Rail Line
- Existing Regional Trails
- County Maintained Roadway
- Roadways Maintained By Others
- City Boundary
- Unincorporated Area
- Santa Clara County Border



**EXPRESSWAYS** 

Table 15. Pedestrian Recommendations – Corridor (by prioritization tier)

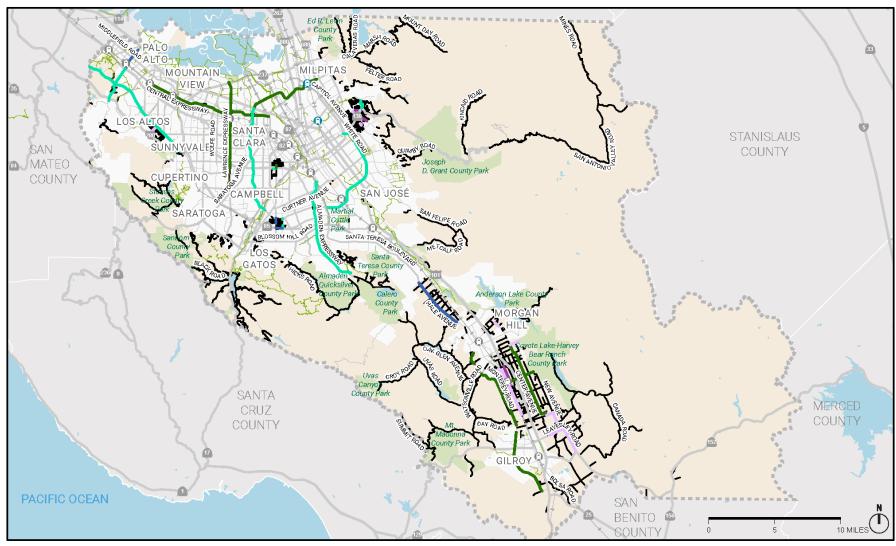
CORRIDOR	RECOMMENDED FACILITY	FROM	то	PRIORITIZATION TIER	COST ESTIMATE	LENGTH
Almaden Expressway	Class I - Shared-Use Path	Harry Road	Guadalupe Parkway (Hwy 87)	Highest-Priority	\$\$\$-\$\$\$\$	6.0
Capitol Expressway	Class I - Shared-Use Path	Narvaez Avenue	E. San Antonio Street	Highest-Priority	\$\$-\$\$\$\$	2.9
Foothill Expressway	Class I - Shared-Use Path	Page Mill Road	Junipero Serra Freeway (Southbound Off-Ramp)	Highest-Priority	\$\$\$-\$\$\$\$	10.4
Page Mill Road	Class I - Shared-Use Path	Arastradero Road	El Camino Real	Highest-Priority	\$\$\$-\$\$\$\$	0.5
San Tomas Expressway	Class I - Shared-Use Path	Bayshore Freeway	Camden Avenue	Highest-Priority	\$\$\$-\$\$\$\$	4.1
Central Expressway	Class I - Shared-Use Path	De La Cruz Boulevard	San Antonio Road	Higher-Priority	\$\$\$-\$\$\$\$	8.2
Lawrence Expressway	Class I - Shared-Use Path	Mitty Way	SouthBay Freeway	Higher-Priority	\$\$\$-\$\$\$\$	1.5
Montague Expressway	Class I - Shared-Use Path	Bayshore Freeway	I-680 (Northbound Ramps)	Higher-Priority	\$\$\$-\$\$\$\$	0.7
Oregon Expressway	Class I - Shared-Use Path	Bayshore Freeway	El Camino Real	High-Priority	\$\$\$-\$\$\$\$	2.4
Junipero Serra Boulevard	Class I - Shared-Use Path	Page Mill Road	Sand Hill Road	Highest-Priority	\$\$\$-\$\$\$\$	0.2
<b>Dewitt Avenue</b>	Class I - Shared-Use Path	Edmundson Avenue	Spring Avenue	Higher-Priority	\$\$\$-\$\$\$\$	5.6
Hill Road	Class I - Shared-Use Path	Tennant Avenue	Maple Avenue	Higher-Priority	\$\$\$-\$\$\$\$	9.7
Maple Avenue	Class I - Shared-Use Path	Hill Road	Center Avenue	Higher-Priority	\$\$\$-\$\$\$\$	1.0
San Martin Avenue	Class I - Shared-Use Path	Santa Teresa Boulevard	New Avenue	Higher-Priority	\$\$\$-\$\$\$\$	6.5
Santa Teresa Boulevard	Class I - Shared-Use Path	Castro Valley Road (Sections P & O1 Maintained By Gilroy Per Agreement) 920 ft N Of Longmeadow Dr	Watsonville Road to Day Road	Higher-Priority	\$\$\$-\$\$\$\$	0.1
South Bascom Avenue	Sidewalk - Driveway Consolidation	Scott Street	Parkmoor Avenue	Higher-Priority	\$\$\$	1.4
Branham Lane	Sidewalk - 1 Side	Union Avenue	Leigh Avenue	High-Priority	\$\$\$	8.8
Leigh Avenue	Sidewalk - 1 Side	Braham Lane To Wyrick Avenue	Weeth Drive to Camden Avenue	High-Priority	\$\$\$	8.2
Moorpark Avenue	Sidewalk - 1 Side	Central Way	Ginger Lane	High-Priority	\$\$\$	7.2

CORRIDOR	RECOMMENDED FACILITY	FROM	то	PRIORITIZATION TIER	COST ESTIMATE	LENGTH
Union Avenue	Class I - Shared-Use Path	Camden Avenue (0.03 S of Stratford)	Charmeran Avenue (0.6 mi S of Charmeran)	High-Priority	\$\$\$-\$\$\$\$	2.8
Burbank Avenue	Sidewalk - 1 Side	Sewell Avenue	Monterey Highway	Medium-Priority	\$\$\$	0.3
Fleming Avenue	Sidewalk - Both Sides	Blue Gum Drive	Mcvay Avenue	Medium-Priority	\$\$\$	0.4
Lincoln Avenue	Sidewalk - 1 Side	Spring Street	South Street	Medium-Priority	\$\$\$	0.1
Llagas Avenue	Sidewalk - 1 Side	Middle Avenue	Spring St	Medium-Priority	\$\$\$	1.4
Mckee Road	Sidewalk - Both Sides	Valley View Avenue To Bayview Avenue	Alum Rock Avenue to Saint Laurent Court	Medium-Priority	\$\$\$	0.5
Alum Rock Avenue	Class I - Shared-Use Path	Crothers Road	Fleming Avenue	Opportunity Project	\$\$\$\$	0.7
Alum Rock Avenue	Sidewalk - 1 Side	Oakmore Drive	Mckee Road	Opportunity Project	\$\$\$	0.5
Cherry Blossom Lane	Sidewalk - 1 Side	Los Gatos Almaden Road	Camellia Terrace	Opportunity Project	\$\$\$	1.0
Chester Avenue	Sidewalk - 1 Side	Monterey Highway	Sewell Avenue	Opportunity Project	\$\$\$	0.3
<b>Colony Avenue</b>	Sidewalk - 1 Side	California Avenue	San Martin Avenue	Opportunity Project	\$\$\$	3.3
Cox Avenue	Sidewalk - 1 Side	Monterey Highway	Harding Avenue	Opportunity Project	\$\$\$	0.2
<b>Depot Avenue</b>	Sidewalk - 1 Side	South Street	Oak Street	Opportunity Project	\$\$\$	1.8
Ferguson Road	Class I - Shared-Use Path	State Route 152	Leavesley Road	Opportunity Project	\$\$\$-\$\$\$\$	3.9
Hill Road	Sidewalk - 1 Side	Main Avenue	Diana Avenue	Opportunity Project	\$\$\$	1.4
Kirk Avenue	Sidewalk - Driveway Consolidation	Summit Avenue	140 ft S of Mckee Road	Opportunity Project	\$\$\$	5.0
Leavesley Road	Class I - Shared-Use Path	Marcella Avenue	Ferguson Road	Opportunity Project	\$-\$\$\$	0.4
Magdalena Avenue	Sidewalk - 1 Side	Foothill Expressway	I-280	Opportunity Project	\$\$\$	1.7
Meadow Lane	Sidewalk - Both Sides	East Hills Drive	Jerilyn Drive	<b>Opportunity Project</b>	\$\$\$	0.4
Monterey Highway	Class I - Shared-Use Path	Rucker Avenue	Middle Avenue	Opportunity Project	\$\$\$-\$\$\$	0.6
New Avenue	Class I - Shared-Use Path	San Martin Avenue	Leavesley Road	Opportunity Project	\$\$\$-\$\$\$\$	0.1

CORRIDOR	RECOMMENDED FACILITY	FROM	то	PRIORITIZATION TIER	COST ESTIMATE	LENGTH
Roosevelt Avenue	Sidewalk - 1 Side	Monterey Highway	Harding Avenue	Opportunity Project	\$\$\$	0.1
Sewell Avenue	Sidewalk - 1 Side	Chester Avenue	Burbank Avenue	Opportunity Project	\$\$\$	0.1
South Street	Sidewalk - 1 Side	Lincoln Avenue	Llagas Avenue	Opportunity Project	\$\$\$	3.2
Spring Street	Sidewalk - 1 Side	Llagas Avenue	Depot Avenue	Opportunity Project	\$\$\$	1.7
Walter Bretton Drive	Sidewalk - 1 Side	Green Acres Lane	300 ft from Walter Breton Drive	Opportunity Project	\$\$\$	0.1
Water Avenue	Sidewalk - 1 Side	California Avenue	Easy Street	Opportunity Project	\$\$\$	0.2

NOTE: The costs included in this table are for planning purposes only. Costs and recommendations may be altered depending on opportunities, constraints, and/or roadway changes. Costs identified in this table are for illustrative purposes and require engineering review for final feasibility and final cost determination based on context-dependent findings.

Figure 20. Prioritized Pedestrian Recommendations (Countywide)



## RECOMMENDED PEDESTRIAN IMPROVEMENTS (BY PRIORITY)

SANTA CLARA COUNTY ACTIVE TRANSPORTATION PLAN



## PEDESTRIAN INFRASTRUCTURE

Pedestrian Recommendations

- Highest-Priority
- Higher-Priority
- High-Priority
- Medium Priority
- Opportunity Project

- Caltrain Station
- BART Station
- Rail Line
- Existing Regional Trails
- County Maintained Roadway
- Roadways Maintained By Others
- City Boundary
- Unincorporated Area
- Santa Clara County Border



Figure 21. Prioritized Pedestrian Recommendations (Northwest)

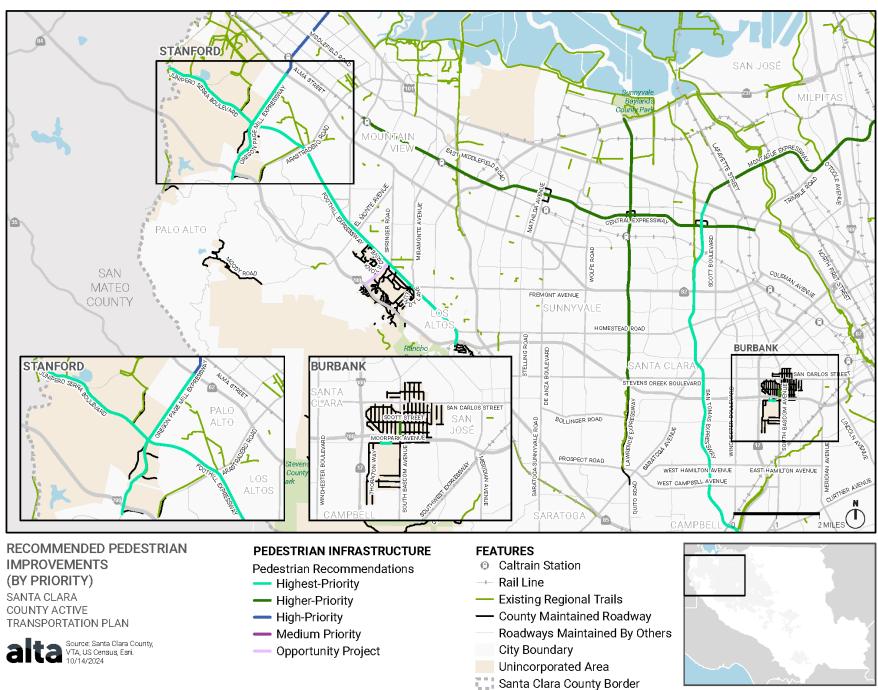
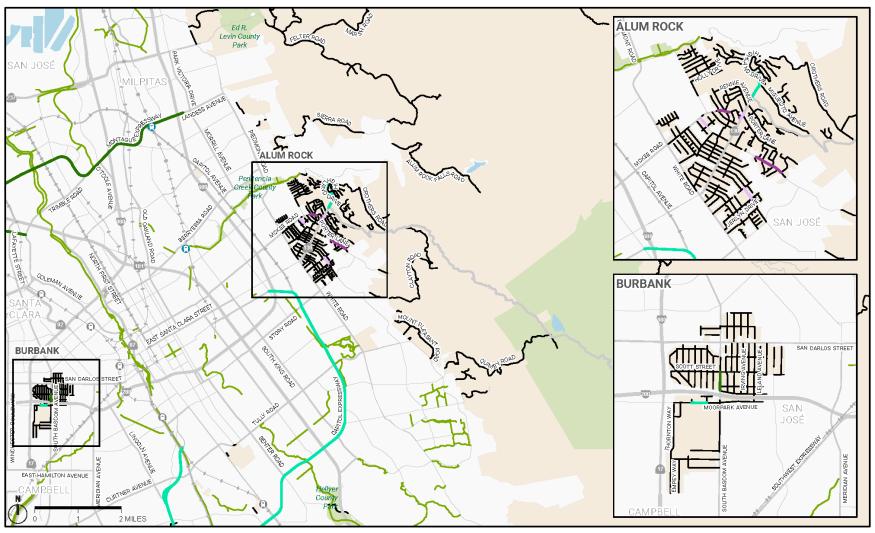


Figure 22. Prioritized Pedestrian Recommendations (Northeast)



## RECOMMENDED PEDESTRIAN IMPROVEMENTS (BY PRIORITY)

SANTA CLARA COUNTY ACTIVE TRANSPORTATION PLAN



## PEDESTRIAN INFRASTRUCTURE

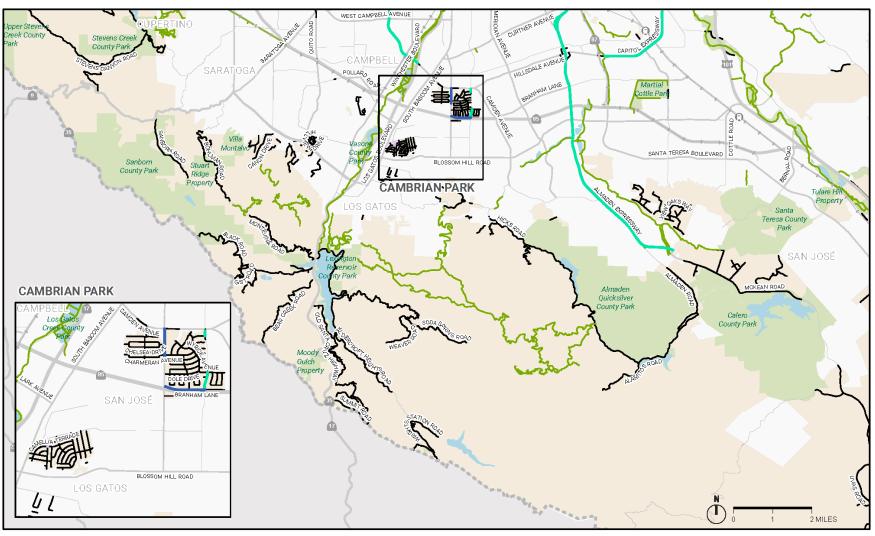
Pedestrian Recommendations

- Highest-Priority
- Higher-Priority
- High-Priority
- Medium Priority
- Opportunity Project

- Caltrain Station
- BART Station
- Rail Line
- Existing Regional Trails
- --- County Maintained Roadway
- Roadways Maintained By Others
- Park
- City Boundary
- Unincorporated Area
- Santa Clara County Border



Figure 23. Prioritized Pedestrian Recommendations (Central West)



## **RECOMMENDED PEDESTRIAN IMPROVEMENTS** (BY PRIORITY)

SANTA CLARA COUNTY ACTIVE TRANSPORTATION PLAN



## **PEDESTRIAN INFRASTRUCTURE**

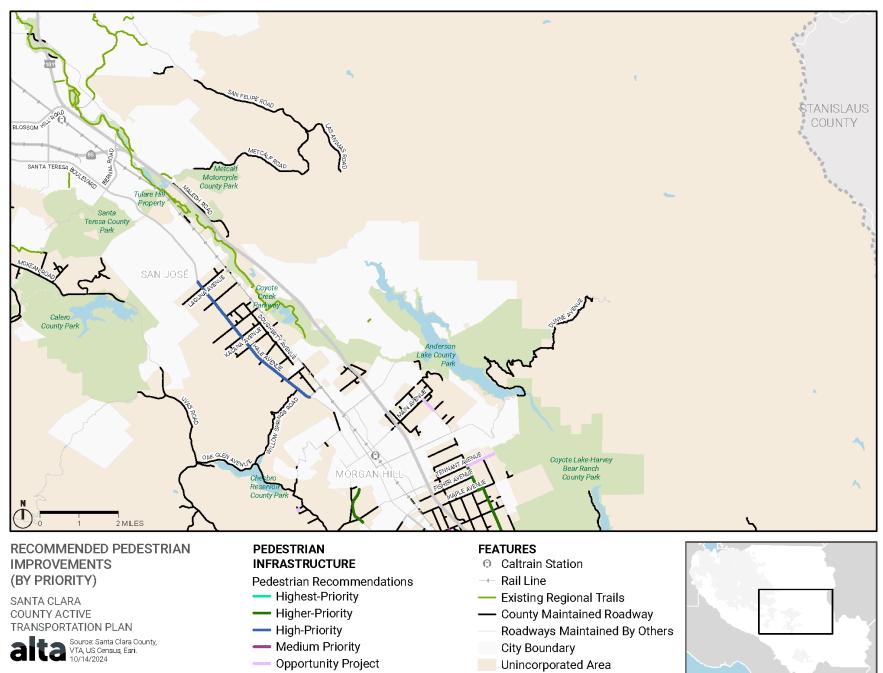
Pedestrian Recommendations

- Highest-Priority
- Higher-Priority
- High-Priority
- Medium Priority Opportunity Project

- Caltrain Station
- → Rail Line
- Existing Regional Trails
- County Maintained Roadway
- Roadways Maintained By Others
- City Boundary
- Unincorporated Area
- Santa Clara County Border

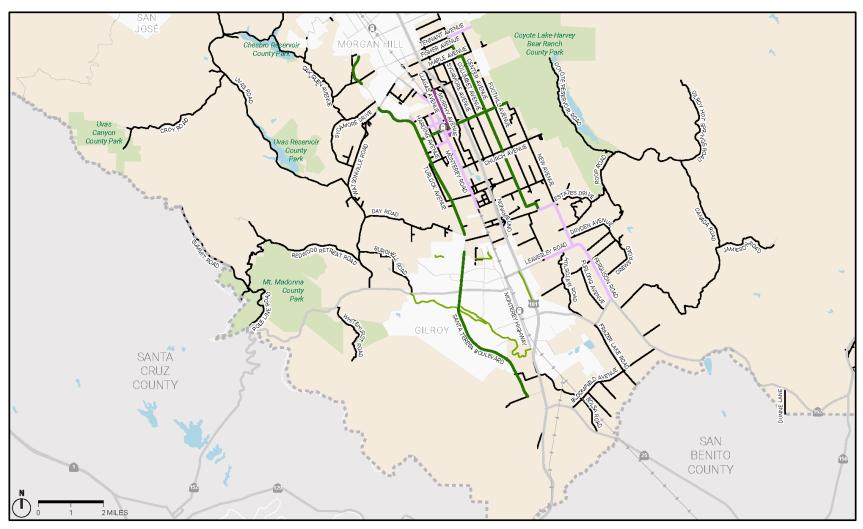


Figure 24. Prioritized Pedestrian Recommendations (Central East)



Santa Clara County Border

Figure 25. Prioritized Pedestrian Recommendations (South)



# RECOMMENDED PEDESTRIAN IMPROVEMENTS (BY PRIORITY)

SANTA CLARA COUNTY ACTIVE TRANSPORTATION PLAN



## PEDESTRIAN INFRASTRUCTURE

Pedestrian Recommendations

- Highest-Priority
- riighteet i hent
- Higher-Priority
- High-PriorityMedium Priority
- Opportunity Project

- Caltrain Station
- → Rail Line
- Existing Regional Trails
- County Maintained Roadway
- Roadways Maintained By Others
- City Boundary
- Unincorporated Area
- Santa Clara County Border



## **Implementation Strategies**

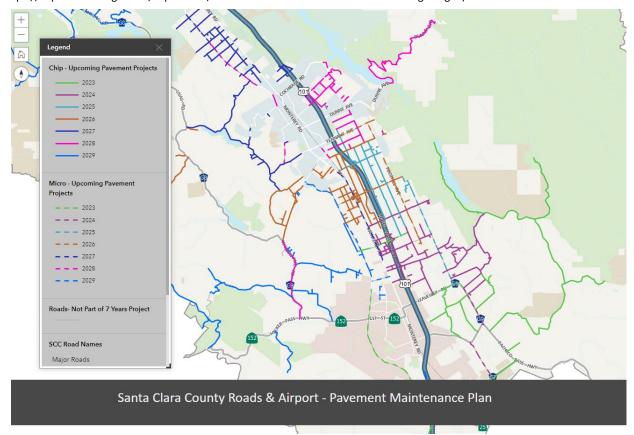
The Santa Clara County Roads and Airports Department has numerous avenues to implement the proposed roadway improvements. Based on the recommended improvement's size, scope, and priority, some may be implemented as part of regularly scheduled maintenance programs, and others will require additional regional, state, and federal funding.

While this plan helps to identify the projects which have the highest priority, the County is responsible for programming projects into existing programs or obtaining grant funding for larger-scale improvements. The descriptions below highlight options for implementation that the County can use based on the scale, scope, and priority of the recommended improvement. This includes working within existing funding streams and consideration of a potential new funding stream for safety improvements in the 'Dedicated Safety Program'.

#### **Pavement Preservation and Rehabilitation Programs**

Improvements that require adjustments of the curb line but are outside of high-priority projects may be addressed through an existing Pavement Preservation/Pavement Rehabilitation program (see **Figure 26**). This program may help address existing gaps in crossing infrastructure as well as improvements in bicycle facilities within the roadway. The County regularly repaves and maintains the roadway pavement on roads throughout the county. This presents a major opportunity to implement improvements at a lower overall cost due to project efficiencies.

**Figure 26.** Santa Clara County Roads and Airports Department Pavement Preservation Online Projects Map (Source: https://experience.arcgis.com/experience/c6c6ce5dab604a898ddbadc9e2e0971a?org=sccgov)



## **Programmed Projects**

High-priority improvements may be programmed directly as standalone projects into Santa Clara County's budget. This strategy may rely on existing funding streams and may be augmented by state or federal grant funding. Collaboration with regional and local partners will be most focused on these projects.

#### **Dedicated Safety Program**

For the improvements identified in this plan, the County may dedicate a specific amount of its annual funding to closing minor pedestrian and bicycle gaps with construction of sidewalks, crosswalks, and other intersection modifications. The goal of this recommended program would be to address small issues in a systematic way. This strategy would rely on existing funding streams and may be augmented by state or federal grant funding. Collaboration with regional and local partners will be most focused on these projects.

#### **Development Funded Improvements**

Private developers help to construct the transportation network based on the existing standard roadway typologies. Adjusting the facilities which developers are required to construct in connection with a specific development will help address system gaps across the county as development occurs. This strategy should not be applied to high- or medium-priority projects as the speed of implementation may not be sufficient with private land development timeframes.

## **Maintenance and Operations**

As the County expands the active transportation network, consideration must be given to ongoing maintenance and operations costs. The County would be well served to proactively leverage efficiencies in maintenance whenever possible to stretch maintenance funding to accommodate a large network. While increased maintenance costs are associated with greater levels of separation between vehicles and active transportation users, considering how the facilities will be swept during the design of proposed facilities will help the County to reduce potential increases in maintenance costs for specialized street sweeping and pavement preservation.

#### **Street Sweeping and Maintenance Vehicles**

A key consideration while considering facility design is the type of maintenance vehicle that can be used to maintain the facility. Sweeping bikeways free of debris may need to be accomplished with specialized maintenance equipment (see Figure 27) unless the facility is wide enough to accommodate more standard maintenance vehicles such as light-duty pickup trucks.



Figure 27. Specialized Sweeper Example (Source: Multihog)

A light-duty pick-up truck with a sweeper attachment is typically an efficient option for maintenance when a separated bikeway or shared-use path is wide enough (seven feet or wider between the curb and vertical buffer element)<sup>17</sup>. A front-facing maintenance attachment may be angled to fit within a bikeway of this width.

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<sup>&</sup>lt;sup>17</sup> FHWA Separated Bike Lane Guide, 2015, pg. 77

For separated bikeways, while AASHTO allows for vertical delineators to be placed at the edge of the buffer space to provide a greater level of operational space for maintenance vehicles (as depicted on **Figure 28**), DIB 89-02 requires that flexible bikeway separator posts be placed in the center of a marked buffer that is 3 feet wide preferred, with 2 feet being the minimum width. <sup>18</sup> It is important to note however, that seven (7) feet represents the absolute minimum width for a pick-up mounted sweeper to maintain a separated bikeway lane and this may require angling of the sweeper attachment. Ten feet is the preferred minimum width for bikeways to accommodate pick-up trucks with mounted sweepers.

Constructing a connected network of separated bikeways may also provide maintenance efficiencies by allowing specialized sweeping equipment to avoid being loaded onto a trailer and transported to the next separated bikeway. The additional staff hours and equipment for maintaining bikeways may be provided through the

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TURNING

TURNING

TOWNS

**Figure 28.** Vertical Buffer Alignment Placement to Accommodate Wide Bikeway Sweepers (Source: Google (Imagery - August 2019), W. Kinzie Street looking east at N. Jefferson Street)

general fund or through a focused special assessment for a specific area of the county.

Beyond separated bikeways, the addition of paved shoulders in the rural context provides multiple benefits<sup>19</sup> including reduced maintenance requirements<sup>20</sup>.

#### **Facility Materials**

Selecting the correct barrier type for providing people bicycling a vertical separation also has a maintenance impact: painted buffers must be restriped each time the roadway is resurfaced compared to a shared-use path or curb-protected bike lane which can be resurfaced independently from the vehicle travel lanes. Furthermore, the installation of robust barriers often increases initial capital costs, but these costs may be offset by reduced maintenance of that facility.

It is important to note that the County may elect to use permeable pavement treatments on bikeways to help reduce ongoing maintenance needs and improve stormwater management; this treatment has higher initial capital costs but results in lower maintenance and operations costs.

<sup>&</sup>lt;sup>18</sup> Caltrans Design Information Bulletin (DIB) 89-02. Section 3.3.2

<sup>&</sup>lt;sup>19</sup> AASHTO Bike Guide 2012, p. 4-7

<sup>&</sup>lt;sup>20</sup> AASHTO Flexibility Guide 2004, p. 66

## **Funding**

Identifying funding sources for active transportation projects within Santa Clara County is a key focus of this plan. Strategically selecting specific projects for different funding streams will help the County efficiently leverage local and regional funds to affect a significant and beneficial change on the transportation network. The funding programs described below are also included in **Table 16**, which identifies the phase and the project elements that funds may be used for on a project.

#### **Federal and State Programs**

#### Safe Streets and Roads for All

Established under the Bipartisan Infrastructure Law, this discretionary program funds regional, local, and tribal initiatives to prevent roadway deaths and serious injuries. Grant types include Planning and Demonstration Grants as well as Implementation Grants. Eligible activities include pilot and demonstration projects, data analytics, creating safe routes to school, promotional and education materials, and expanding bicycle networks. An eligible Safety Action Plan must be developed prior to applying for Implementation Grants under this program. *Funds are awarded by the US Department of Transportation*.

#### **Reconnecting Communities Pilot Program**

This federal program provides funds to local, regional, and state entities to reconnect communities that were previously cut off from economic opportunities by transportation facilities such as a rail line or highway. This funding supports planning, design, and implementation for addressing identified barriers. *Funds are awarded by the US Department of Transportation*.

#### **Carbon Reduction Program**

Under this program, the FHWA provides funds for projects designed to reduce transportation emissions from on-Rd highway sources through a variety of strategies including constructing active transportation facilities. *State funds are programmed by Caltrans, local Carbon Reduction Program funds are programmed by MTC.* 

#### **RAISE Grants**

The Rebuilding America Infrastructure with Sustainability and Equity (RAISE) program supports projects that improve transportation system safety, accessibility, and sustainability. Eligible projects must have quantifiable environmental benefits, serve disadvantaged communities, and address equity concerns in the project's design. Eligible projects range between \$5 million and \$25 million. RAISE grants can fund both planning and capital projects. A 20% local match is required except in rural areas. Funds are programmed by the United States Department of Transportation.

#### Congestion Mitigation and Air Quality Improvement (CMAQ) Program

CMAQ funding supports projects that reduce congestion and help jurisdictions meet National Ambient Air Quality Standards for ozone, carbon monoxide, or particulate matter. Projects must be included in the local Metropolitan Planning Organization's transportation improvement plan. *Funds are programmed by Caltrans and the MTC*.

## **Surface Transportation Block Grants**

These grants are used to maintain and improve the performance on any federal-aid highway, bridges, and tunnel projects on any public Rd, pedestrian and bicycle infrastructure, and transit capital projects. Additional Transportation Alternatives set aside funds for active transportation, and active transportation access to transit improvements are also available. *Funds are programmed by Caltrans and the MTC*.

#### **California Active Transportation Program**

California's Active Transportation Program (ATP) funds infrastructure and programmatic projects that support the program goals of shifting trips to walking and bicycling, reducing greenhouse gas emissions, and improving public health. Competitive application cycles occur every one to two years, typically in the spring or early summer. Eligible projects include construction of bicycling and walking facilities, new or expanded programmatic activities, or projects that include a combination of infrastructure and non-infrastructure components. Typically, no local match is required, though extra points are awarded to applicants who do identify matching funds. Funds are programmed by the California Transportation Commission (CTC).

#### **Affordable Housing and Sustainable Communities Program**

The Affordable Housing and Sustainable Communities Program funds land use, housing, transportation, and land preservation projects that support infill and compact development that reduces greenhouse gas (GHG) emissions. Projects must fall within one of three project area types: transit-oriented development, integrated connectivity project, or rural innovation project areas. Fundable activities include affordable housing developments, sustainable transportation infrastructure, transportation-related amenities, and program costs. Funds are programmed by the Strategic Growth Council and implemented by the Department of Housing and Community Development

#### **Urban Greening Grants**

Urban Greening Grants support the development of green infrastructure projects that reduce GHG emissions and provide multiple benefits. Projects must include one of three criteria, most relevantly: reduce commute vehicle miles traveled by constructing bicycle paths, bicycle lanes or pedestrian facilities that provide safe routes for travel between residences, workplaces, commercial centers, and schools. Eligible projects include green streets and alleyways and non-motorized urban trails that provide safe routes for travel between residences, workplaces, commercial centers, and schools. Funds are programmed by the California Natural Resources Agency.

#### **Highway Safety Improvement Program**

Caltrans offers Highway Safety Improvement Program grants every one to two years. Projects on any publicly owned Rd or active transportation facility are eligible, including bicycle and pedestrian improvements. The program focuses on projects that explicitly address documented safety challenges through proven countermeasures, are implementation-ready, and demonstrate cost-effectiveness. *Funds are programmed by Caltrans*.

#### **Sustainable Transportation Planning Grants**

Caltrans Sustainable Transportation Planning Grants are available to communities for planning, study, and design work to identify and evaluate projects, including conducting outreach or implementing pilot projects. Communities are typically required to provide an 11.47 percent local match, but staff time or in-kind donations are eligible to be used for the match provided the required documentation is submitted. Funds are programmed by Caltrans.

#### **Solutions for Congested Corridors Program**

Funded by SB1, the Congested Corridors Program strives to reduce congestion in highly traveled and congested roads through performance improvements that balance transportation improvements, community impacts, and environmental benefits. This program can fund a wide array of improvements including bicycle facilities and pedestrian facilities. Eligible projects must be detailed in an approved corridor-focused planning document. These projects must include aspects that benefit all modes of transportation using an array of strategies that can change travel behavior, dedicate right-of-way for bikes and transit, and reduce vehicle miles traveled. *Funds are programmed by the CTC*.

#### Office of Traffic Safety

Under the Fixing America's Surface Transportation (FAST) Act, five percent of Section 405 funds are dedicated to addressing non-motorized safety. These funds may be used for law enforcement training related to pedestrian and bicycle safety, enforcement campaigns, and public education and awareness campaigns. Funds are programmed by the California Office of Traffic Safety.

#### **Recreational Trails Program**

The Recreational Trails Program helps provide recreational trials for both motorized and non-motorized trail use. Eligible products include trail maintenance and restoration, trailside and trailhead facilities, equipment for maintenance, new trail construction, and more. Funds are programmed by the California Department of Parks and Recreation.

#### **Habitat Conservation Fund**

The Habitat Conservation Fund Program supports projects that bring urban residents into park and wildlife areas, protect plant and animal species, and acquire and develop wildlife corridors and trails. Funds are programmed by the California Department of Parks and Recreation.

#### **Additional State Funds**

#### **Local Partnership Program**

This program provides SB1 funds to local and regional agencies that have passed sales tax measures, developer fees, or other transportation-imposed fees to fund road maintenance and rehabilitation, sound walls, and other transportation improvement projects. Jurisdictions with these taxes or fees are eligible for a formulaic annual distribution of no less than \$100,000. These jurisdictions are also eligible for a competitive grant program. Local Partnership Program funds can be used for a wide variety of transportation purposes including roadway rehabilitation and construction, transit capital and infrastructure, bicycle and pedestrian improvements, and green infrastructure. Funds are programmed by the CTC.

#### **Road Maintenance and Rehabilitation Program**

Senate Bill 1 (SB1) created the Road Maintenance and Rehabilitation Program to address deferred maintenance on state highways and local Rd systems. Program funds can be spent on both design and construction efforts. Onstreet active transportation-related maintenance projects are eligible if program maintenance and other thresholds are met. Funds are allocated to eligible jurisdictions. Funds are programmed by the State Controller's Office with guidance from the CTC.

#### **Local and Regional Programs**

#### 2016 Measure B

Santa Clara voters approved a half-cent sales tax in 2016 to fund transportation infrastructure investments including bicycle, pedestrian, and complete streets projects. Funding priority will go to walking projects that connect to schools, transit, and employment centers; complete gaps in the existing pedestrian network; cross major barriers; and make walking a safe, convenient form of transportation. Supported projects must be identified in city, county, or regional planning documents. Measure B is expected to raise \$6.3 billion (2017 dollars) over 30 years; \$250 million of that has been allocated for bicycle and pedestrian improvements. Funds are programmed by VTA.

### **Transportation Fund for Clean Air County Program Manager Fund**

The Bay Area Air Quality Management District administers funds to the VTA for projects that reduce vehicle emissions including bicycle projects. These funds come from a \$4 vehicle registration surcharge in Bay Area counties and can be used as a match for competitive state or federal programs. *Funds are programmed by VTA*.

#### **One Bay Area Grant**

The One Bay Area grant program (OBAG) emphasizes funding for projects within Priority Development Areas (PDAs) in the region that are in-line with housing and land use goals. Projects that are within or provide access to these PDAs could qualify for OBAG grants. Funds are programmed by the MTC and the VTA.

#### **Transportation Development Act Article 3**

Transportation Development Act Article 3 (TDA 3) provides funding annually for bicycle and pedestrian projects. Two percent of TDA 3 funds collected within the county are used for TDA 3 projects. MTC policies require that all projects be reviewed by a Bicycle and Pedestrian Advocacy Commission or similar body before approval. *Funds are programmed by VTA*.

#### **Transportation for Livable Communities Program**

Designed to support community-based transportation projects that bring "new vibrancy" to downtown areas, commercial cores, neighborhoods, and transit corridors. The projects resulting from these grants are intended to provide for a range of transportation choices including bicycling, should support connections between transportation and land use, and should be developed through an inclusive community planning process. *Funds are programmed by MTC*.

#### **Vehicle Emissions Reduction Based at Schools Program**

The Vehicle Emissions Reduction Based at Schools program receives funds from MTC's Climate Initiative Safe Routes to Schools Program. The goals of this include reducing greenhouse gases by promoting walking, biking, transit, and carpooling to school. These federal CMAQ funds are allocated to each county based on school enrollment. The program places an additional focus on safety and reducing collisions. *Funds are programmed by VTA*.

#### **Bicycle Facilities Grant Program**

Throughout the nine-county Bay Area, the Bicycle Facilities Grant program strives to reduce emissions from on-Rd vehicles and improve air quality by helping residents and commuters shift to bicycling and walking as alternatives to driving for short distances and first- and-last mile trips. The Bay Area Air Quality Management District has grant programs that fund both on-street facilities and bicycle parking facilities. Funding comes from the district's Transportation Fund for Clean Air. Funds are programmed by Bay Area Air Quality Management District or the VTA.

#### **Climate Initiatives Innovative Grants Fund**

MTC's Climate Initiatives Program promotes innovative ways to reduce greenhouse gas emissions in the Bay Area; and taps federal funding for a pair of competitive grant programs. Innovative grants of \$1 million and up are used to support high-impact projects that can be replicated around the region. *Funds Programmed by MTC.* 

#### **Lifeline Transportation Program**

Uses both state and federal funds to provide Lifeline grants for projects that meet mobility and accessibility needs in low-income communities across the Bay Area. MTC establishes new guidelines for each cycle of Lifeline grants, but the goal is the same each time: fund community-based transportation projects developed through a collaborative and inclusive process. Lifeline projects must address transportation gaps or barriers identified in community-based transportation plans or other local planning efforts in low-income neighborhoods. *Funds programmed by MTC*.

Table 16. Funding Matrix

Funding Source	Planning (P) / Design (D)/ Construction (C)	On-Street Bikeways / End-of-Trip Facilities	Trails	Safe Routes to School	Safe Routes to Transit	Crossings / Intersections	Programs	Studies
Sī	TATE and FEDERA	L FUNDING						
Safe Streets and Roads for All	P/D/C	x		X	х	x		x
Reconnecting Communities Pilot Program	D/C					x		
Carbon Reduction Program	D/C	x		x	х	x		
RAISE Grants	P/D/C	x	х	X	х	x		x
Congestion Mitigation and Air Quality (CMAQ) Program	С	x	х	х	х	x		
Surface Transportation Block Grants (STBG)	С	x	х	х	х	x		
California Active Transportation Program	P/D/C	x	x	х	х	x	х	x
Affordable Housing and Sustainable Communities Program	С	x			х		x	
Urban Greening Grants	С	x	x	х	х			
Highway Safety Improvement Program	D/C	x		х	х	x		
Sustainable Transportation Planning Grants	Р							x
Solutions for Congested Corridors Program	С	x	х			x		
Office of Traffic Safety	-						х	
Recreational Trails Program	С		х					
Habitat Conservation Fund	С		х					
A	DDITIONAL STAT	E FUNDING						
Local Partnership Program	С	х		х	х	х		
Rd Maintenance and Rehabilitation Program	D/C	x		х	х			
	LOCAL FUNE	DING						
2016 Measure B	P/D/C	х	х	х	х	x	х	х
Transportation Fund for Clean Air County Program Manager Fund	С	x	х	X	х			
One Bay Area Grant	D/C	x	x		х			
Transportation Development Act Article 3	D/C	x	x	X	х	x		
Transportation for Livable Communities Program	D/C	x	x	х	х			
Vehicle Emissions Reduction Based at Schools Program	D/C	x	x	X	х	x		
Bicycle Facilities Grant Program	С	х						
Climate Initiatives Program	-					x		
Lifeline Transportation Program	D/C			х	х			

# **Regional Collaboration**

Implementation of large-scale transportation improvements in a complex environment such as Santa Clara County requires close collaboration between regional partners. Recommendations included in this plan will require close coordination with the following regional partners to help facilitate project funding, programming, and implementation:

- Valley Transportation Authority (VTA)
- Metropolitan Transportation Commission (MTC)
- Santa Clara County Various Departments

#### **Local Partners**

Santa Clara County has numerous local jurisdictions and unincorporated communities within its borders. Collaborating closely with each will be a key component to the successful implementation of the recommendations included herein. This plan was developed following close involvement from city staff and community-based organizations across the county. Santa Clara County will continue to partner with these groups to facilitate open communication and collaboration on project implementation moving forward.

- Cities
  - o Campbell
  - o Cupertino
  - o Gilroy
  - Los Altos
  - Los Altos Hills
  - o Los Gatos
  - o Milpitas
  - o Monte Sereno

- Morgan Hill
- o Mountain View
- Palo Alto
- o San José
- Santa Clara
- o Saratoga
- o Sunnyvale

- Unincorporated Communities
  - o Alum Rock
  - o San Martin
  - Burbank
  - Stanford
- Community-Based Organizations The County will continue to build upon the working relationships established through this planning effort with a select number of community-based organizations as projects arise. This initial work helped establish the foundation for continued collaboration and relationships. The County collaborated with the following groups through this project:
  - Cambrian Community Council
  - Veggielution
  - Community Services Agency
  - WeHope Dignity on Wheels
  - Community Agency for Resources, Advocacy, and Services (CARAS)
  - o Silicon Valley Bicycle Coalition