MADERA
ACTIVE TRANSPORTATION PLAN

ADOPTED
MAY 23, 2018

MADERA CTC
Madera County Transportation Commission

Madera County Transportation Commission
Active Transportation Plan

ADOPTED

May 23, 2018

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1. INTRODUCTION

PLAN OVERVIEW

The Madera County Active Transportation Plan (ATP) envisions a comprehensive bicycle and pedestrian network across Madera County. As the region's Metropolitan Planning Organization (MPO), the Madera County Transportation Commission (MCTC) is responsible for the adoption of the County's Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS) and Transportation Improvement Program (TIP) as required by State and Federal law. The ATP supports these processes by providing a long-range vision for the bicycle and pedestrian network across the county. At the time of writing, no member jurisdiction in Madera County had adopted an ATP. As such, the ATP also supports local planning processes by providing a vision and guidance for the creation of active transportation facilities across the county. The plan simultaneously considers countywide connections as well as local networks for the City of Madera, the City of Chowchilla, and selected unincorporated communities.

PLAN ORGANIZATION

The Madera County ATP is organized to be useful as discrete sections as well as a comprehensive planning document. The plan begins with an overview of:

- **Existing Conditions:** This chapter describes current baseline conditions across the county as it relates to the active transportation network. This includes a description of demographics, existing facilities, and current policies.
- **City and County Active Transportation Networks:** This document presents plans for the active transportation networks for the City of Madera, the City of Chowchilla, and Unincorporated Madera County. In each of these chapters, the plan presents a prioritization of active transportation facilities, including multi-use recreational trails.
- **Educational Programs and Safe Routes to School:** This chapter contains guidance on Safe Routes to School and other active transportation programs that facilitate travel to local schools.
- **Available Funding Report:** This chapter describes current and anticipated funding streams for active transportation projects.
- **Performance Measures:** This chapter defines key measures for the prioritization of unfunded projects.
- **Appendices (Including Prioritized Projects List):** The plan contains appendices on the Americans with Disabilities Act and Active Transportation as well as Design Guidelines that provide best practice design guidance for a variety of active transportation facilities. Importantly,

the appendices include the prioritized projects lists. This describes the methodology used to prioritize projects in all jurisdictions within the Madera region, lists the priority bikeway projects by corridor, presents the prioritization scoring for bikeway projects, and presents the prioritization scoring for pedestrian projects.

2. EXISTING CONDITIONS

The following provides a brief overview of baseline conditions in Madera County. A more extensive study of the existing conditions of Madera County is included as **Appendix A.**

ABOUT MADERA COUNTY

Madera County is located in the geographic center of California, in the heart of the Central Valley and the Central Sierras as shown in **Figure 1**. Encompassing 2,137 square miles, it is one of the fastest growing counties in California. The county is situated along State Route (SR) 99, approximately 18 miles north of Fresno. The San Joaquin River forms the south and west boundaries with Fresno County. To the north, the Fresno River forms a portion of the boundary with Merced County. Mariposa County forms the remainder of the northern boundary. The crest of the Sierra Nevada Mountains forms the eastern boundary with Mono County. Generally, the county can be divided into three broad geographic regions—the Valley area on the west; the Foothills area between Madera Canal and the 3,500-foot elevation contour; and the Mountains area from the 3,500-foot contour to the crest of the Sierra Nevada Mountains.

The Valley area is generally flat and ranges in elevation from 45 to 1,000 feet. This area contains approximately two-thirds of the county's population and includes the incorporated cities of Chowchilla and Madera, as well as unincorporated communities of Fairmead, Bonadelle Ranchos, and Madera Ranchos. **Figure 2** highlights the incorporated cities of Madera and Chowchilla in relation to Madera County as a whole. The Foothills area contains the remaining one-third of the county population residing in the unincorporated communities of Oakhurst, Ahwahnee, North Fork, Coarsegold, Raymond, and Yosemite Lakes. The county also contains part of the Sierra and Inyo National Forests and Yosemite National Park.

The American Community Survey (2011-2015) estimates Madera County has a population of 153,187, with 78% residing in the incorporated cities of Madera and Chowchilla and 22% residing in unincorporated communities. **Table 1** provides an overview of population change from 2010 to 2015.

TABLE 1: MCTC REGION POPULATION AND LAND AREA

City/County	2010 Census Population	ACS 2015 Population	Percent Change	Land Area (sq. miles)
City of Madera	92,437	96,610	4.5%	223
City of Chowchilla	23,371	23,476	0.4%	156
Unincorporated	35,057	33,101	-5.6%	1,758
Madera County (total)	**150,865**	**153,187**	**1.5%**	**2,137**

County in the San Joaquin Valley

Figure 1

San Joaquin Valley Counties

CITY OF MADERA

AVE 17
AVIATION DR
AVE 16
AVE 16
W CLEVELAND AVE
RIVERVIEW DR
N WESTBERRY BLVD
N SCHNOOR ST
SUNSET AVE
W 4TH ST
S OST
S LST
HOWARD RD
GRANADA DR
ALMOND AVE
W PECAN AVE
STADIUM RD
COUNTRY CLUB DR
N LAKE ST
SHERWOOD WAY
E CLEVELAND AVE
E LINCOLN AVE
CENTRAL AVE
E YOSEMITE AVE
SUNRISE AVE
OLIVE AVE
MADERA AVE
CALIFORNIA 99
CALIFORNIA 145
CALIFORNIA 145
CALIFORNIA 99

CITY OF CHOWCHILLA

AVE 26
HOWELL RD
VENTURA AVE
RIVERSIDE AVE
S 5TH ST
S 11TH ST
CHOWCHILLA BVD
WASHINGTON RD
RD 16
RD 15 1/2
AVE 24
RD 17 1/2
CALIFORNIA 99
CALIFORNIA 233
CALIFORNIA 152

CITY OF CHOWCHILLA
CITY OF MADERA

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Figure 2
Cities of Madera County

DEMOGRAPHICS OF WALKING AND BIKING

Madera County features a diverse population with varying access to transportation options. In Madera County, the two major languages spoken at home are English (58.5% of households) and Spanish (37.7%). For all languages spoken at home, 9.4% of households have a limited English proficiency. Madera County has a significant Hispanic/Latino population, with 44.3% of the population Hispanic or Latino, 46.6% White (not Hispanic or Latino), 3.8% Black or African-American, 1.4% American Indian or Alaska Native, 1.2% Asian, 0.1% Native Hawaiian, 0.2% some other race, and 2.3% two or more races. In terms of age, in 2015, 27.9% of the county population was under 18 years old, 59.6% between 18 to 65, and 12.5% over 65 years of age or older. While approximately 3.5% of the population in California does not have access to a motor vehicle, a higher number of residents at 6.6% of the population of Madera County do not own a car. Only 0.4% of the working population over 16 years old bikes to work. **Table 2** below shows the means of commute in Madera County.

TABLE 2: MEANS OF COMMUTE IN MADERA COUNTY

	Madera County	City of Madera	City of Chowchilla	Unincorporated Areas
Workers 16 Years and Over	**44,208**	18,525	2,916	22,767
Drove Alone	**77%**	72%	71%	82%
Carpooled	**13%**	17%	19%	9%
Public Transportation	**0%**	1%	1%	0%
Bicycle	**0%**	1%	1%	0%
Walked	**3%**	4%	3%	2%
Other Means	**2%**	2%	0%	1%
Worked at Home	**5%**	3%	5%	6%

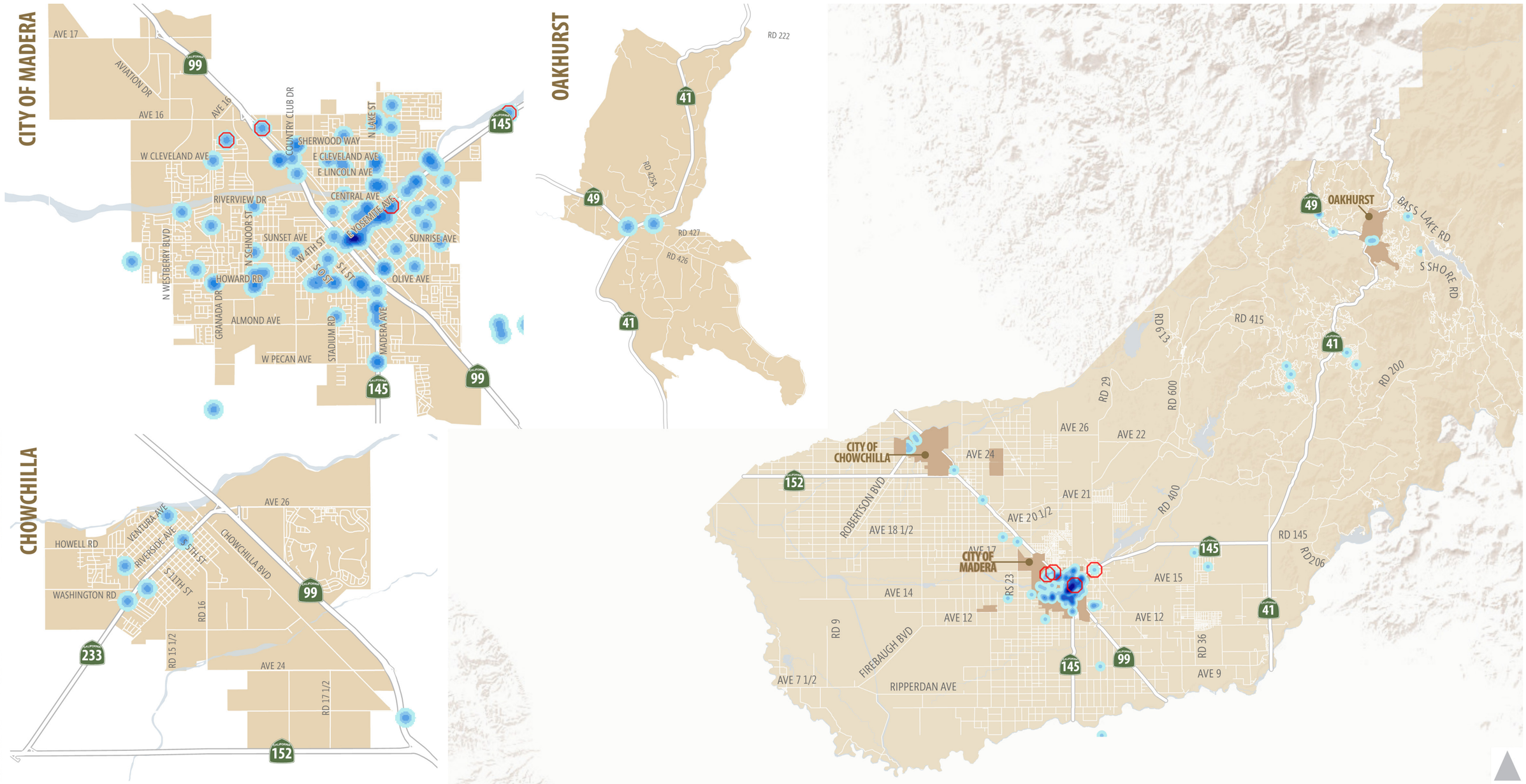
Sources: ACS 2011 – 2015 (5-year estimates)

BICYCLE AND PEDESTRIAN CRASH DATA

Bicycle collision data is reported from the California Highway Patrol (Statewide Integrated Traffic Records System [SWITRS] Bicycle Collision Data) and data from the past seven years (2006 – 2013) was analyzed to reveal trends and patterns regarding bicyclist safety. The analysis shows high concentrations of collisions and fatalities within the downtown and midtown areas of both the City of Chowchilla and the City of Madera, as well as along many of the major arterials in neighborhoods surrounding urban cores. Between 2006 and 2013, 147 reported vehicle-bicyclist collisions occurred within Madera County. Of these collisions, six were fatal and 14 were classified as severe injuries. Data regarding the cause, type, and severity of vehicle-bicycle collisions in Madera County is limited and incomplete. A large proportion of collisions are uncategorized by type and cause, and data often falls short of capturing the nuance of how collisions occurred. Between 2006 and 2013, 247 vehicle-pedestrian collisions occurred within Madera County. Of these collisions, 32 were fatal and 37 involved severe injuries. Pedestrian-involved collisions accounted for approximately five percent of all traffic collisions. The City of Madera is overrepresented within the county in terms of vehicle-pedestrian collisions. Despite being signalized with pedestrian call buttons and having adequate sidewalks and curbs, the intersection of D Street and Yosemite Avenue in the City of Madera still ranks first for most pedestrian collisions. The intersection of 6th Street and Lake Street in the City of Madera is the second highest-ranked intersection, tied with Gateway Drive and Madera Avenue connecting the off-ramps from SR 99 to downtown Madera. **Table 3** summarizes the highest occurrences of pedestrian and bicycle collisions by intersection. **Figure 3** and **Figure 4** on the following pages detail bicycle and pedestrian collision densities in a heatmap format, respectively.

TABLE 3: HIGHEST PEDESTRIAN AND BICYCLE COLLISIONS BY INTERSECTION

Bicycle Collisions			Pedestrian Collisions		
Rank	**Intersection**	**Collisions**	**Rank**	**Intersection**	**Collisions**
1	G ST & YOSEMITE AVE	3	1	D ST & YOSEMITE AVE	5
2	FIG ST & YOSEMITE AVE	2	2	6TH ST & LAKE ST	3
2	A ST & YOSEMITE AVE	2	2	GATEWAY DR & MADERA AVE	3
2	CLEVELAND AVE & LAKE ST	2	4	FAIRVIEW AVE & HOWARD RD	2
2	CLEVELAND AVE & RAYMOND RD	2	4	11TH ST & HOSPITAL DR & VENTURA AVE	2
2	COUNTRY CLUB DR & SHERWOOD ST	2	4	CENTRAL AVE & D ST	2
2	EL DORADO DR & MADERA AVE	2	4	D ST & SOUTH ST	2
2	4TH ST & B ST	2	4	5TH ST & ROBERTSON BLVD	2
2	11TH ST & GATEWAY DR	2	4	FAIRVIEW AVE & SUNSET AVE	2
2	FLUME ST & YOSEMITE AVE	2	4	15TH ST & ROBERTSON BLVD	2
2	GRANADA DR & HOWARD RD	2	4	FLUME ST & YOSEMITE AVE	2
2	LAKE ST & SOUTH ST	2	4	G ST & YOSEMITE AVE	2
2	MADERA AVE & PECAN AVE	2	4	6TH ST & D ST	2
2	VINEYARD AVE & YOSEMITE AVE	2	4	JAMES WAY & LAKE ST	2



Collision involving a bicyclist with a fatality

Collision Density

Low ⟶ High

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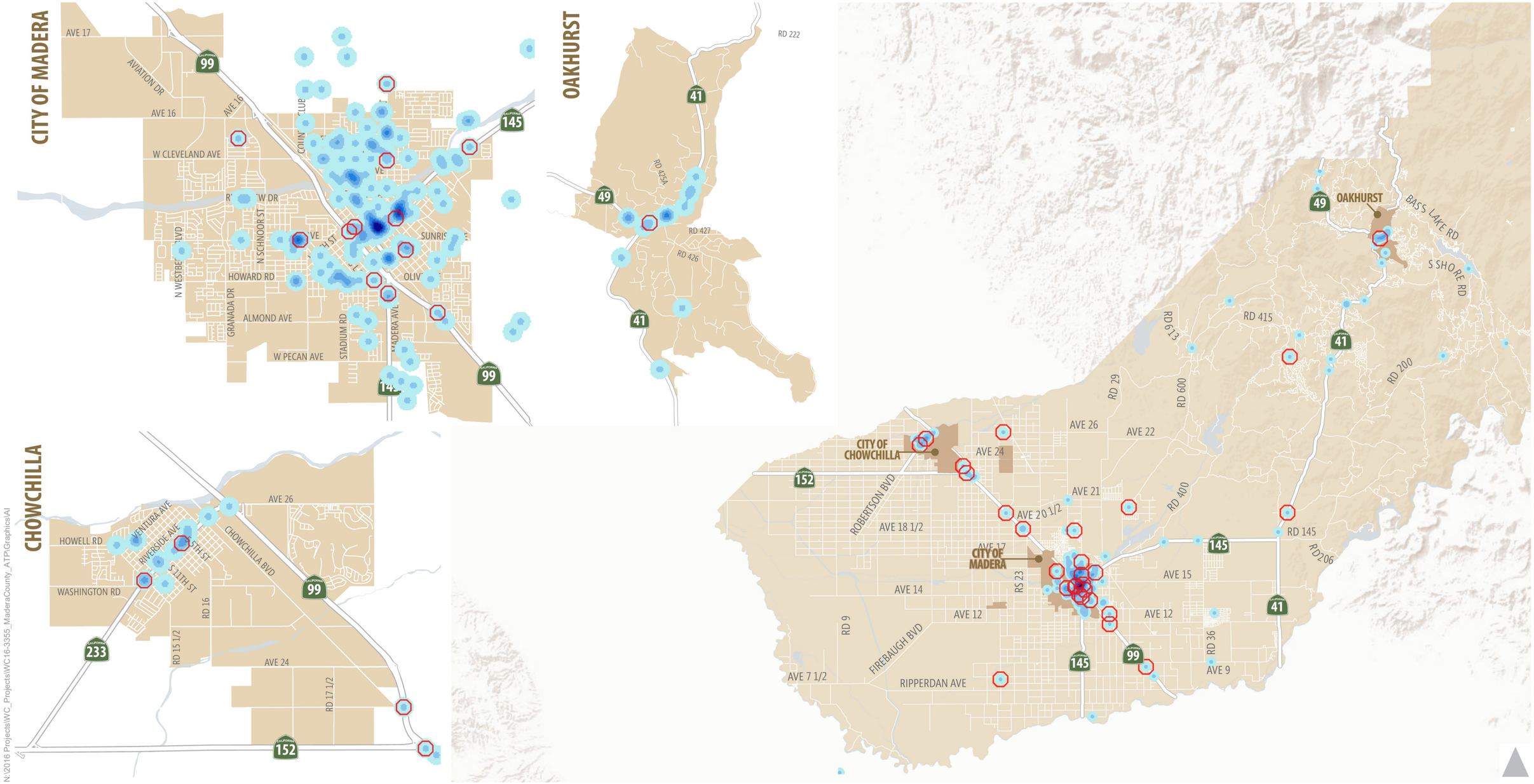
Figure 3

Bicyclist Collision Density (2006 – 2013)



Collision involving a pedestrian with a fatality

Collision Density

Low ⟶ High

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Figure 4

Pedestrian Collision Density (2006 – 2013)

HEALTH AND ACTIVE TRANSPORTATION SNAPSHOT

As outlined by the 2017 ATP Guidelines, active transportation plans should extend to and serve disadvantaged and underserved communities. To reflect this, the ATP considers the burden to which populations across Madera County are affected by public health concerns. In comparison to the rest of California, residents of Madera County are more likely to be obese, have limited access to exercise opportunities, and be physically inactive. **Figure 5** summarizes findings related to public health in Madera County.

Madera County **Health & Active Transportation** Snapshot

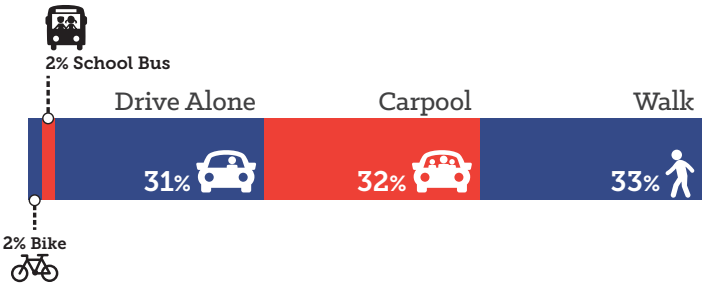
Health (Madera **vs.** California)

Obesity
+17%

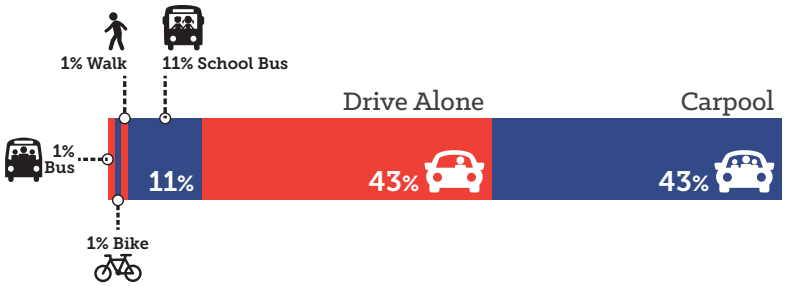
Physical Inactivity
+5%

Access to Exercise Opportunities
−16%

Mode Split



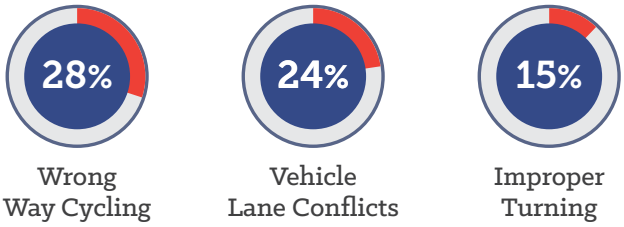
Trips **One** Mile or Less



Trips **Three** Miles or Less

Collisions

Top 3 Causes of All Bicycle Collisions



Top 3 Causes of All Pedestrian Collisions

Safety

When **pedestrian** volumes increase **10%**

individual **accident** risk declines **5%**

When **bicycle** volumes increase **5%**

individual **accident** risk declines **3%**

REGIONAL REGULATORY FRAMEWORK

MCTC has produced policy and regulatory documents that guide regional transportation in Madera County. A summary of major documents guiding the bicycle and pedestrian network are included below.

REGIONAL TRANSPORTATION PLAN

Like all MPOs, MCTC is required to develop a Regional Transportation Plan (RTP). The RTP is a long-range transportation plan providing a vision for regional transportation investments over at least a 20-year period. The RTP deals with all modes, and must identify reasonably available funding sources for recommended capital and operational improvements. Highlights from the RTP are included below.

Non-Motorized Systems

The RTP emphasized improving bicycle and pedestrian access to intermodal facilities (rail stations and transit centers). The provision of new or improved access to such facilities could be made by bicycle or pedestrian modes and replace short automobile trips. To increase the bicycle mode share, significant publicity and marketing efforts are necessary, as well as a new approach by transportation agencies to planning facilities for both bicyclists and pedestrians.

RTP Bicycle and Trail Improvements

The RTP dictates that regional decision makers should continue to promote the integration of non-motorized modes into the transportation planning process. The Madera region should continue to implement the County Bikeway Plan and agencies should work together to continue implementation of the Fresno River Trail. All responsible agencies within the Madera region should take steps to move beyond conceptual planning and development to implementation of plans and strategies.

Pedestrian Improvements

The 2014 RTP recommends several strategies that will collectively improve conditions for existing pedestrians and cyclists. In general, all new roadway projects and all reconstruction projects should be constructed to provide increased safety and mobility for all users, including people who walk and bicycle. In addition, local agencies have identified general streetscape projects within their jurisdictions to promote walkability within activity centers, especially in downtown areas and along major corridors.

MADERA COUNTY 2004 BICYCLE TRANSPORTATION PLAN

The Madera County 2004 Regional Bicycle Transportation Plan (RBTP) was created by MCTC to address the needs of both commuting and recreational cyclists throughout the Madera region, identify safe and convenient routes to key locations throughout the county, and suggest needed improvements and additions to the bikeway routes and facilities. The network identified in the RBTP served as the starting point for the ATP bikeway network update.

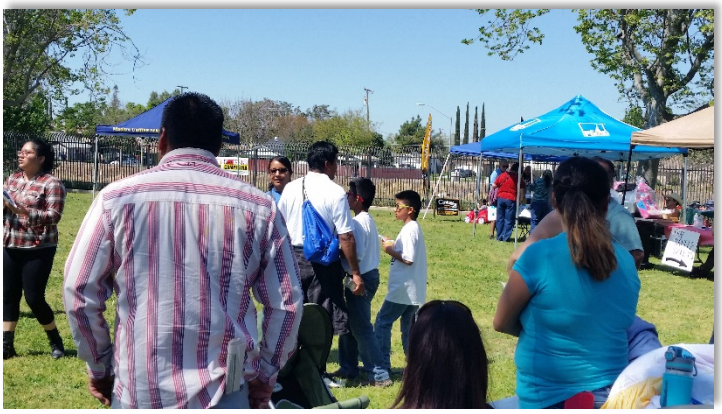
GENERAL PLANS

General plans for communities within Madera County include plans and policy related to active transportation. Each of the incorporated jurisdictions and the County have a General Plan that provides the blueprint for development within each area. Other specific documents such as area or specific plans may also guide development within these jurisdictions. A summary of these documents is included below:

- **Madera County General Plan:** Section 2 of the Madera County General Plan focuses on transportation and circulation within the unincorporated areas of the Madera region. It contains Complete Streets policies and encourages the construction of pedestrian ways and bikeway. No bikeway or pedestrian network maps are provided.
- **City of Madera General Plan:** Chapter 4 of the City of Madera's General Plan focuses on Circulation and Infrastructure. This chapter includes policies supportive to the expansion of active transportation facilities. While the document identifies the lack of existing pedestrian and bikeway facilities as a major hurdle to active transportation, the General Plan does not identify any priority routes for pedestrians or a bicycle network. The Community Design chapter does encourage new development to prioritized pedestrian-oriented design over automobile-oriented design.
- **City of Chowchilla General Plan:** The City of Chowchilla General Plan Circulation Element does have a circulation map and a trails and bikeways map.

3. PUBLIC ENGAGEMENT & STAKEHOLDER OUTREACH

In preparing the Madera County Active Transportation Plan (ATP), MCTC is looking to increase active transportation use through an improved, expanded, and community driven bicycle and pedestrian network. Public engagement and input is an essential part of creating a strong Active Transportation Plan that guides funding, planning, and implementation of the existing and future active transportation network. Public input helps planners understand current mobility patterns, multimodal connections, and also identifies areas within the existing bike and pedestrian networks that function well, or are in need of improvements.



Comprehensive public engagement from community members and agency stakeholders is the backbone of a successful Active Transportation Plan. The planning team preparing the ATP collected data through a variety of methods including: a Stakeholder Advisory Committee, a stakeholder survey, an interactive web map, and attendance at three information booths and five pop-up events located throughout the Madera County region. A brief synopsis of each method is discussed below. Information booths and pop-up events allowed the planning team to engage stakeholders in short, but meaningful interactions at already established events. Additional information, including materials can be found in **Appendix E.**

ACTIVE TRANSPORTATION PLAN WEBPAGE

The planning team designed an Active Transportation Plan webpage (http://www.maderactc.org/planning/active-transportation/) that was housed on the MCTC website. The webpage provided an overview of the ATP planning effort as well as access to project materials including the interactive online mapping tool and online stakeholder survey. Website information was included on the handout materials allowing for stakeholders and the public to easily find additional information.

STAKEHOLDER ADVISORY COMMITTEE

The purpose of the Stakeholder Advisory Committee (SAC) was to provide both policy and technical guidance to MCTC and the planning team during development of the ATP. MCTC identified a list of local organizations, which were invited to participate and provide input and feedback to show how the ATP can serve the residents of Madera County and encourage a greater number of them to walk and bike on the region's trails, sidewalks, and streets. SAC membership included representatives from the following organizations:

- County of Madera
- City of Madera
- City of Chowchilla
- California Department of Transportation
- North Fork Rancheria of Mono Indians
- Picayune Rancheria of Chukchansi Indians
- Madera County Office of Education
- Leadership Counsel for Justice and Accountability
- Madera Coalition for Community Justice
- Fairmead Community and Friends
- Lideres Campesinas
- General Public

Members of the SAC were responsible for:

- Representing key issues and concerns and distributing project and public workshop information to their constituency
- Assisting MCTC in developing context sensitive plan components and prioritization criteria
- Meeting with MCTC and other key stakeholders during development of the ATP
- Reviewing and commenting on technical work products

Two SAC meetings were held during development of the ATP. The first meeting provided an introduction to the ATP, defined overall project vision and goals and prepared a Vision Statement for the project, requested available data from participating organizations, generated ideas on how to engage the community, and prepared for outreach activities. Draft pedestrian and bicycle networks and prioritization criteria were reviewed at the second SAC meeting. The second meeting was followed by a Complete Streets Workshop and Training that included review of best practice Complete Streets strategies and policy language allowing the planning team to create a Complete Streets Policy for the Madera region.

SAC members were invited to participate through an invitation distributed via email. Meeting notices and reminders were also distributed via email. Spanish translation services were provided, as requested, at the second meeting.

STAKEHOLDER SURVEY

The planning team created an online stakeholder survey to receive input from community members and residents in the Madera County region. The survey consisted of both multiple choice and open-ended discussion questions in both English and Spanish. A total of 77 surveys were completed. Responses included:

- More than 50% of respondents walk or bike for exercise or recreational purposes
- 12% of respondents feel unsafe while biking and 17% feel that lack of bike lanes and adequate shoulders create barriers to biking
- 9% of respondents feel unsafe while walking and 17% feel that a lack of sidewalks creates a barrier to walking while 15% noted that a lack of adequate shoulders creates a barrier to walking
- 39% of respondents noted that improved conditions on existing streets would make both biking and walking more appealing

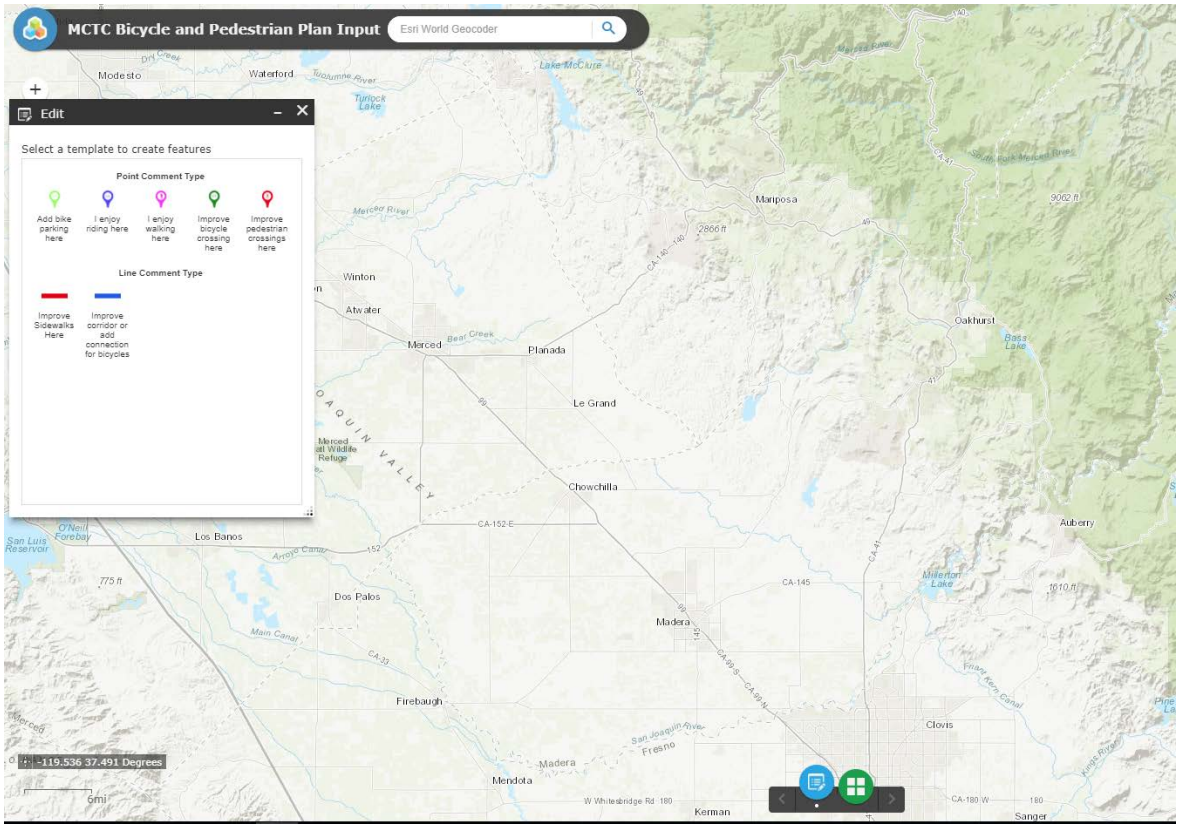
Noticing for the stakeholder survey was completed by a series of Eblast to a stakeholder database prepared for the ATP effort.

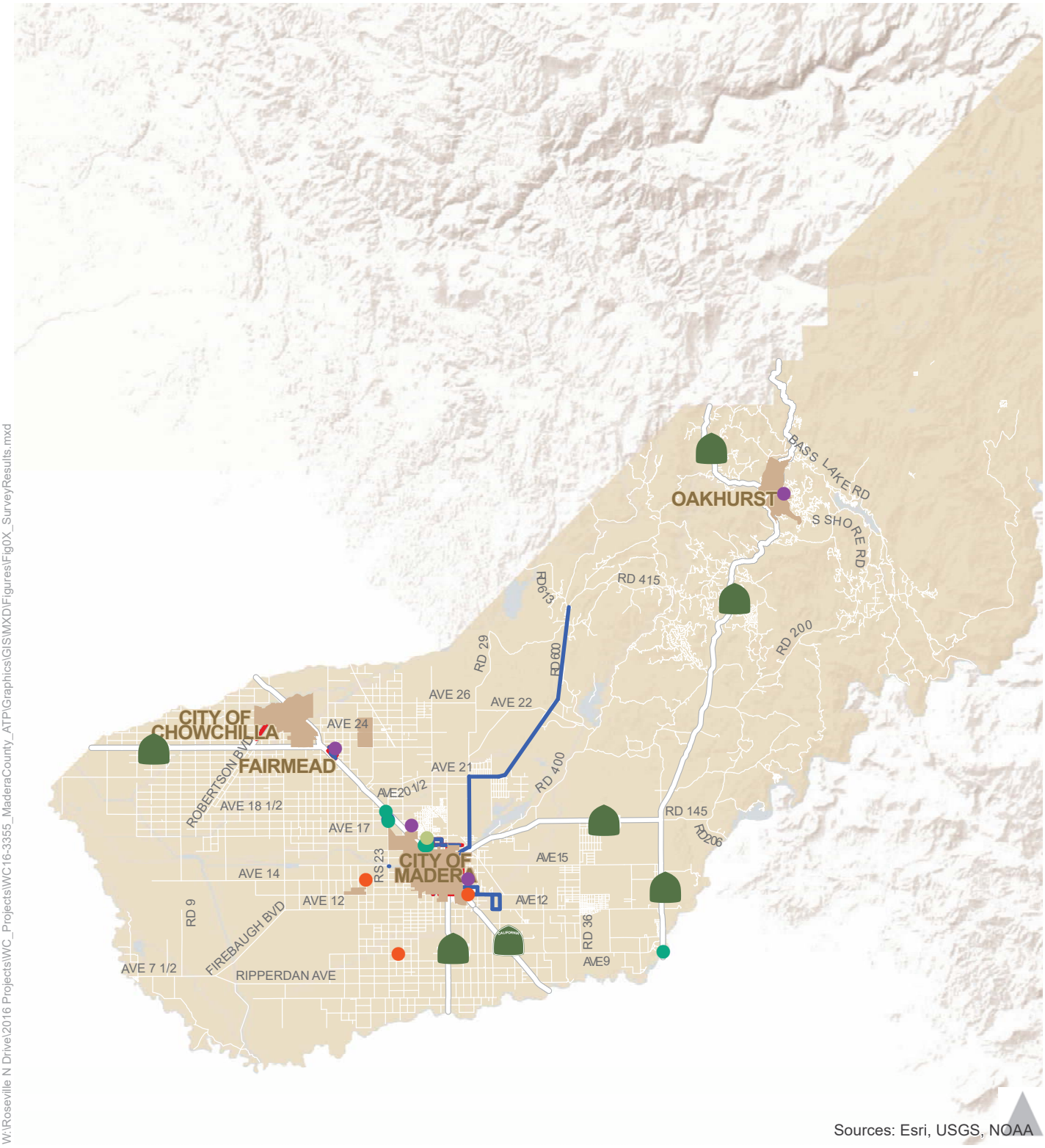
INTERACTIVE WEB-BASED MAPPING SURVEY

As part of the outreach process, Madera County Transportation Commission created an interactive web map that allowed visitors to give feedback on potential bicycle and pedestrian improvements. The results from this tool are summarized in **Figure 6A and 6B** on the following page. In total, there were 65 page views with 214 individual inputs.

The snapshot of the interactive web-based mapping survey below that was posted on MCTC's website allowed respondents to identify specific locations for the following categories throughout the Madera region:

- Add bike parking here
- I enjoy riding here
- I enjoy walking here
- Improve bicycle crossing here
- Improve pedestrian crossing here
- Improve sidewalks here
- Improve corridor or add connection for bicycles





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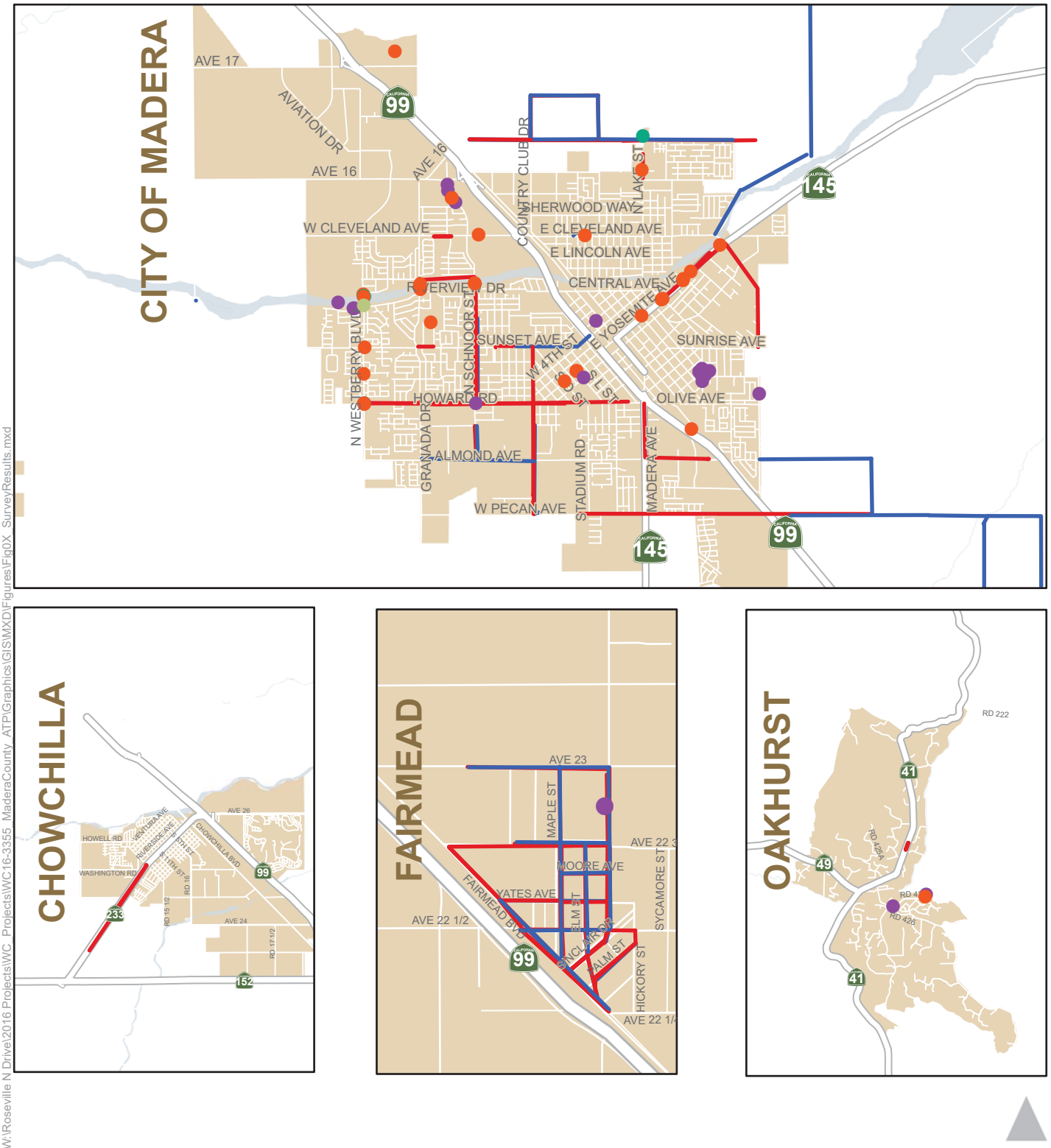
- Add bike parking here
- I enjoy riding here
- I enjoy walking here
- Improve bicycle crossing here
- Improve pedestrian crossings here
- Improve Sidewalks Here
- Improve corridor or add connection for bicycles

Figure 6.A

Unincorporated Madera County Survey Results



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- Add bike parking here
- I enjoy riding here
- I enjoy walking here
- Improve bicycle crossing here
- Improve pedestrian crossings here
- Improve Sidewalks Here
- Improve corridor or add connection for bicycles

Figure 6.B

Madera County Communities Survey Results

INFORMATION BOOTHS

Information booths were available at two town hall meetings conducted by a Madera County Supervisor and one workshop conducted by MCTC for the 2014 and 2018 Regional Transportation Plans. All events were held in an open house, presentation, and question and answer style format. A short overview of the ATP planning process was provided and attendees were invited to visit the ATP information booth. At the booth, attendees were able to review materials and provide their comments on ATP mapping related to where they currently walk or bike and where they would like to see future pedestrian and bicycle facilities. Planning team members were available to answer questions and handed out an introductory fact sheet and a flier containing webpage addresses for the interactive web mapping tool and stakeholder survey. Information booths were held at:

- District 5 Supervisor's Raymond Town Hall Meeting on Thursday, February 23, 2017, from 6:00 PM to 8:00 PM at the Raymond Knowles Elementary School Cafeteria, 31828 Road 600, Raymond. 20 members of the general public were in attendance with 7 agency staff from the County of Madera, CAL Fire, the Sheriff's Office, and VRPA Technologies, Inc.

- District 5 Supervisor's Yosemite Lakes Town Hall Meeting on Wednesday, February 28, 2017, from 6:00 PM to 8:00 PM at the Yosemite Lakes Park Clubhouse, 30250 Yosemite Springs Parkway, Coarsegold, CA. 25 members of the general public were in attendance with 9 agency staff from the County of Madera, CAL Fire, the Sheriff's Office, and VRPA Technologies, Inc.
- MCTC's Regional Transportation Plan/Sustainable Communities Strategy workshop for the 2014 and 2018 Regional Transportation Plans held at the Webster Elementary School Cafeteria on Thursday, March 9, 2017, from 5:30 PM to 7:30 PM. There were a total of 9 attendees with 6 agency staff from MCTC, the cities of Chowchilla and Madera, and VRPA Technologies and 3 members of the general public.

MAPPING ACTIVITY FEEDBACK

Mapping activity feedback at the information booth sessions centered on the following themes:

- Develop existing railroad easements as walking and biking paths

- Meet with bike groups that use Roads 600-613-Ben Hur as competitive biking route
- Develop walking path through town – historic sites and museum, cemetery – gold rush era
- Horse trail from Ray Community Park to Hensley Lake
- Expand existing trails and facilities from Raymond Bridge
- Bike from Hensley Lake to Raymond using the railroad easements

POP-UP EVENTS

Incorporating the use of pop-up events allowed the planning team to engage stakeholders in locations where they already planned on being such as Walk to School events, Relay for Life, and Week of the Young Child events. Two members of the planning team, including a bilingual public engagement specialist, attended five events in the Madera County region.

At each event, the planning team set-up an informational area where attendees were able to review Plan materials and provide comments on ATP mapping related to where they currently walk or bike and where they would like to see future pedestrian and bicycle facilities. Comment cards were also available for additional feedback. Planning team members answered questions and handed out an introductory fact sheet and a flier containing webpage addresses for the interactive web mapping tool and the stakeholder survey. Planning team attended events at:

- Cesar Chavez Day Celebration held at Centennial Park, 701 E. 5th Street, Madera on Sunday, April 2, 2017, from 2:00 PM to 4:00 PM. 25 members of the general public visited with the planning team.
- Cesar Chavez Elementary School – Walk to School Day held at Parksdale Village II, Community Center, 13549 Wood Street, Madera on Wednesday, April 5, 2017 from 6:45 AM to 8:30 AM. 40 members of the general public visited with the planning team.

- First 5 Madera County Week of the Young Child held on Wednesday, April 26, 2017 from 3:00 PM to 5:00 PM at Veteran's Memorial Park 145 Robertson Boulevard, Chowchilla. 15 members of the general public visited with the planning team.
- Millview Elementary School – Walk to School Day held at the Millview Sports Complex, 1609 Clinton Street, Madera on Thursday, April 27, 2017, from 6:45 AM to 8:30 AM. 25 members of the general public visited with the planning team.
- Madera Relay for Life held on Saturday, May 6, 2017, from 9:00 AM to 5:00 PM at Lions Town and County Park 2300 Howard Road, Madera. 30 members of the general public visited with the planning team.

MAPPING ACTIVITY FEEDBACK

Mapping activity feedback at the pop-up events centered on the following themes:

- Focused on the City of Madera
- Safer walking area near E. Street, sidewalks/crossings
- Need safe crossing going to the DD shopping center, very unsafe – have to run to cross
- Almond Avenue and Avenue 13 needs some kind of traffic light or stop sign, it is dangerous during the early work hours/school traffic
- Need bike trail/lanes at W Cleveland
- See high speed traffic on Lion Street and Clinton Avenue

COMMENT CARD FEEDBACK

Participants who filled out comment cards to provide feedback identified the following themes:

- Need light signal/crosswalk at Riverside Avenue near Bridge Store
- Avenue 13 and Road 29 (Cesar Chavez Elementary) drivers do not look out for the kids
- Need stop lights at the corner of Pecan Avenue and Road 29
- Need sidewalks so the children will be safe walking to school
- Need stop lights at school intersections
- Have more "nature" bike and walking trails that are not along a street
- Need bike lanes on Robertson Boulevard overpass and Highway 99 crossing
- Need bike lanes on Ventura Avenue

4. VISION AND GOALS

To support the Madera Region Active Transportation Plan, this Plan also includes a Complete Streets Policy to set the overall framework for the future implementation of projects identified within this ATP. This policy supports the creation of a multimodal, accessible transportation network across Madera County. As part of the creation and promotion of a multimodal vision for the Madera region's future, the policy specifically supports the expansion of active transportation facilities while encouraging the assessment of transportation user needs. The Complete Streets Policy, therefore, provides a wider context and vision for the Active Transportation Plan. This section includes the larger regional Complete Streets Policy and the vision and goals for the ATP itself. Together, local agencies will be able to show consistency with the complete streets and active transportation visions through support of this document.

MADERA REGION COMPLETE STREETS POLICY

The Madera County Transportation Commission is the regional transportation planning agency and designated MPO for Madera County. This includes the cities of Madera and Chowchilla as well as unincorporated areas of the county. MCTC leads the development and passage of the County's Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP) as required by State and Federal law. The MCTC Complete Streets Policy provides a key framework that will help MCTC leverage benefits from the transportation system for all Madera County residents. The Complete Streets policy will help provide clear directives on project prioritization for MCTC while giving local jurisdictions flexibility in the design of specific programs or projects. The MCTC Complete Streets Policy will complement the California Complete Streets Act of 2008 which requires the adoption of Complete Streets policies in the circulation element of General Plans.

VISION STATEMENT

The Madera County Transportation Commission (MCTC) may consider and incorporate all transportation modes and users in the planning and design of its Active Transportation Plan. In doing so, MCTC encourages the greater Madera region to accommodate a transportation system that encourages active transportation; supports independent mobility and accessibility for all citizens; acknowledges the fiscally constrained nature of transportation investments; improves safety and public health; reduces environmental impacts and greenhouse gas emissions; and supports greater social interaction and community identity by providing safe and convenient travel. An integrated, layered, and comprehensive transportation network will support people of all ages and abilities through safe, well-planned facilities for all modes including pedestrians, transit, bicyclists, drivers, freight, and equestrians. This may be accomplished in the Madera region, including unincorporated and disadvantaged communities, through the prioritization of complete streets that reflect the needs of all users and the unique contexts of the surrounding built and natural environments.

APPLICABILITY

The Complete Streets Policy will assist in guiding planning and projects in the Madera region. As such, Complete Streets principles and performance measures will be part of funding applications to MCTC and the adoption and prioritization process for projects. Local jurisdictions are, therefore, encouraged to adopt Complete Streets policies or principles into their work in anticipation of applications for available active transportation funding.

COMPLETE STREETS PERFORMANCE MEASURES

MCTC will evaluate the effectiveness of its Complete Streets Policy through selected performance measures. This should complement future iterations of the RTP. Additionally, local jurisdictions can use these to set their own benchmarks and goals. These performance measures are included below in **Table 4**.

TABLE 4: COMPLETE STREETS PERFORMANCE MEASURES

Focus Area	Measures	Description
Multimodal Performance	Proximity to Transit	The proximity of active transportation infrastructure to transit within Madera County.
Equity	Proximity to Vulnerable Populations	The proximity of active transportation infrastructure to communities of concern within the region.
Access	Facility Miles	The miles of active transportation facilities in a geographic area.
Access	Facilities for School Access	The amount of active transportation infrastructure in proximity to schools in a region.
Infrastructure	Quality of Supportive Bike Parking	A measurement of the bike parking available nearby active transportation facilities.
Economic Development	Sales Revenue	Sales revenue for a commercial district or larger area. As data on local sales revenue can be difficult to gather, surveys can be used to gather information from merchants.
Health and Safety	Number of Collisions	Collision data can be used to understand baseline conditions as well as the performance of active transportation projects in terms of its effect on safety. Analyses can consider the number of collisions, the types of collisions, and the location of collisions to understand trends and impacts.
Multimodal Performance	Mode Split	Mode split measures the distribution of trips within a geographic area by mode.

CONTEXT SENSITIVITY

In prioritizing projects across Madera County for the Active Transportation Plan, MCTC will be sensitive to local contexts and restraints. This includes considering a range of projects that address all users and modes of the transportation system as they occur in urban, suburban, and rural contexts across the county.

EXEMPTIONS

Plans or projects that seek exemptions from incorporating Complete Streets design principles must provide a written explanation of why accommodations for all modes were not included in the project when seeking funding for active transportation projects. Potential scenarios leading to exemption from the Complete Streets policy include 1) specific modes of travel are prohibited on subject transportation facilities; 2) inclusion of Complete Streets design principles would create a burdensome cost to a project; and/or 3) adverse effects outweigh the potential benefits of implementing Complete Streets elements. Exemptions should be approved by local agency Transportation Managers, Director of Public Works, or an equivalent position prior to requests for funding.

IMPLEMENTATION STEPS

- **Review current policy documents for consistency:** MCTC shall create a list of policy documents across the agency to review for consistency with the Complete Streets Policy including guidance, standards, manuals, and other documents that guide decision making.
- **Education for key staff and stakeholders:** MCTC shall facilitate education for key MCTC staff as well as representatives from Madera County jurisdictions on Complete Streets principles and approaches.
- **Set timeline and benchmarks for performance measures:** MCTC shall use the previously described performance measures to track progress through regular reporting on a schedule to be determined by the agency.

ACTIVE TRANSPORTATION PLAN VISION

The Active Transportation Plan will support the Madera County Complete Streets Policy by providing a vision for a cohesive network of bicycle and pedestrian facilities across the county. The Active Transportation Plan will support the Complete Streets Policy's goals of creating a more equitable, healthy, and safe environment for Madera County residents and visitors. The following outlines major goals related to the Active Transportation Plan with supportive sub-level policies.

GOALS

1. **Expand pedestrian and bicycle access throughout Madera County for both visitors and residents**
   - 1.1. Build a connected pedestrian and bicycle network over the next two decades through connections within and between cities, towns, and other destinations in Madera County
   - 1.2. Improve safety and access to schools across Madera County
   - 1.3. Increase the miles of pedestrian and bicycle facilities across Madera County
   - 1.4. Connect active transportation to other modes of transportation to encourage first/last mile connections
2. **Improve and maintain existing bicycle and pedestrian facilities across Madera County**
   - 2.1. Improve the quality of facilities whenever possible, particularly when these facilities provide critical links between important destinations
   - 2.2. Regularly inventory condition of active transportation facilities in Madera County
   - 2.3. Maintain good quality of active transportation facilities in Madera County through repairs and maintenance
3. **Increase walking and bicycling in Madera County**
   - 3.1. Increase the number of commute trips made by walking or bicycle across Madera County
   - 3.2. Increase recreational use of bicycle and pedestrian facilities across Madera County
4. **Improve safety and accessibility across Madera County through active transportation facilities**
   - 4.1. Improve safety at high injury intersections across the county
   - 4.2. Adopt new design guidelines that facilitate safe travel for pedestrians and bicyclists
   - 4.3. Promote accessible design across the county through the adoption of design guidelines that consider all users, including the elderly and individuals with disabilities
   - 4.4. Promote Safe Routes to School programming across Madera County
5. **Increase awareness and appreciation of active transportation through public engagement**
   - 5.1. Create context-sensitive programming to promote active transportation across Madera County
   - 5.2. Support programming at schools across Madera County to increase awareness of benefits and safe practices related to active transportation

A NEW VISION FOR THE MADERA REGION

The development of the ATP was guided by the following vision statement and should be used for the further implementation of projects at the local level:

> *The Madera County Transportation Commission (MCTC) may consider and incorporate all transportation modes and users in the planning and design of its Active Transportation Plan. In doing so, MCTC encourages the greater Madera region to accommodate a transportation system that encourages active transportation; supports independent mobility and accessibility for all citizens; acknowledges the fiscally constrained nature of transportation investments; improves safety and public health; reduces environmental impacts and greenhouse gas emissions; and supports greater social interaction and community identity by providing safe and convenient travel. An integrated, layered, and comprehensive transportation network will support people of all ages and abilities through safe, well-planned facilities for all modes including pedestrians, transit, bicyclists, drivers, and equestrians. This may be accomplished in the Madera region, including unincorporated and disadvantaged communities, through the prioritization of complete streets that reflect the needs of all users and the unique contexts of the surrounding built and natural environments.*

The vision statement above is meant to highlight the changing needs of resident demographics and the changing landscape of health concerns in communities that can be directly influenced by increases in active transportation. Ensuring this planning effort addresses both spatial and socio-economic disparities in the recommendation of bicycle facilities and programs is essential. The ATP addresses accessibility and equity for all ages, abilities, and means by ensuring low-stress, safe facilities are implemented and prioritized in all areas of the county.

A NEW REGIONAL BIKEWAY NETWORK WITH LOCAL FOCUS

To implement the vision of the all ages and abilities network and address the barriers to access formed by the high-stress arterials and rural roads, the ATP proposes a network of bicycle facilities that creates a unified countywide network while enhancing local connectivity. Bicyclists in the Madera region are already familiar with the paths, routes, and bicycle lanes implemented in parts of the county. However, new bicycle facilities are recommended in this Plan:

Separated Bikeways (Class IV) are bicycle lanes that are fully protected from auto traffic through raised elements such as curbs, plastic bollards, landscaping, or parking. They are a key element of the all ages and abilities network due to their comfort and safety benefits. They are also known as protected bike lanes or cycle tracks.

Bicycle Boulevards (Class III) are similar to bicycle routes, where bicyclists and drivers share the travel lane; however, they are always located on low auto volume and low speed residential streets. They typically include traffic calming measures to create safe, comfortable streets, together with enhanced signage and pavement markings. They are an important element of the all ages and abilities network and often provide important safe routes to school connections for children.

Buffered Bicycle Lanes (Class II) are similar to standard bicycle lanes except they are enhanced with a striped area between the bicycle lane and the vehicular travel lane. These facilities provide increased separation along medium volume collectors or arterials. These are often used in locations where full

Example separated bikeway (top), bicycle boulevard (middle), and buffered bicycle lanes (bottom). .

vertical separation is not feasible: e.g., areas that necessitate increased driveway or on-street parking that would block visibility of cyclists.

Enhanced Bicycle Routes (Class III) are similar to standard Class III Bicycle Routes but are used primarily in rural locations where greater separation of bicyclists is needed. These facilities are often used along higher speed roadways to facilitate long distance travel. They typically include wide shoulders, intermittent rumble strips within the shoulder striping, and bicycle route signage or wayfinding.

For more information on these and other bicycle treatments refer to **Appendix A** Bicycle Design Guidelines.

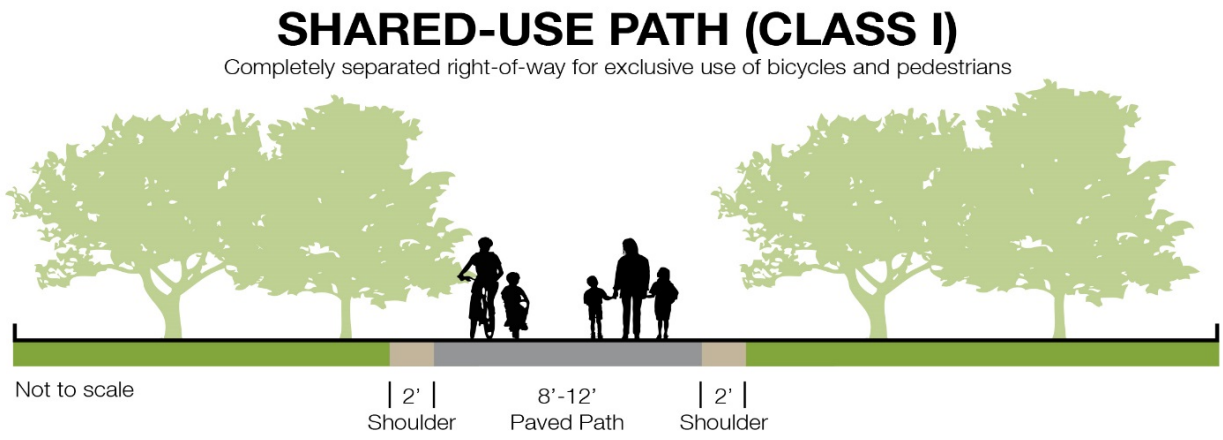
Example Enhanced Bicycle Route in Coarsegold with wide multi-use shoulders. Upgrades could include intermittent rumble strips.

BIKEWAY FACILITY CLASSIFICATIONS

The bikeway facilities described in the ATP are approved by the California Department of Transportation (Caltrans) in the *Highway Design Manual* (Chapter 1000: Bikeway Planning and Design) and California Assembly Bill 1193 which codify four distinct classifications of bikeways. Each bikeway class is intended to provide bicyclists with enhanced riding conditions. Bikeways offer various levels of separation from traffic based on traffic volume and speed, among other factors. The four bikeway classifications in California and appropriate contexts for each are detailed below with descriptions of variations that can occur within each bikeway class. These facility types were used to develop the Madera region bikeway network.

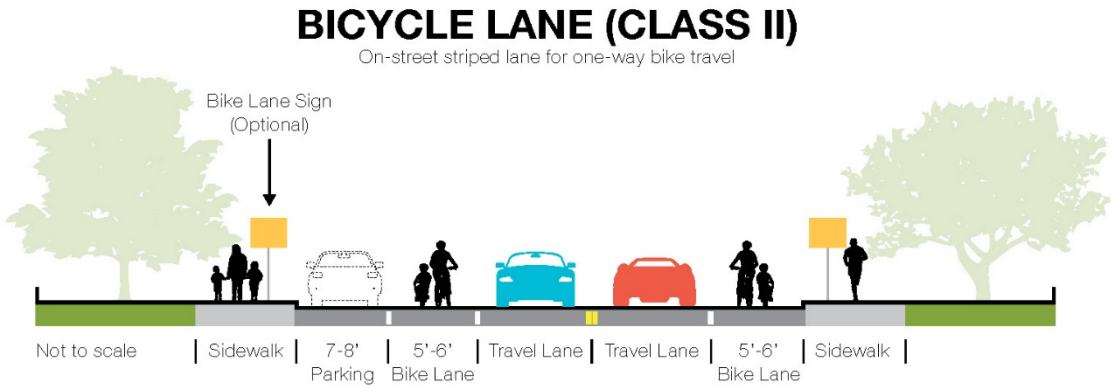
CLASS I BIKEWAY (SHARED-USE PATH)

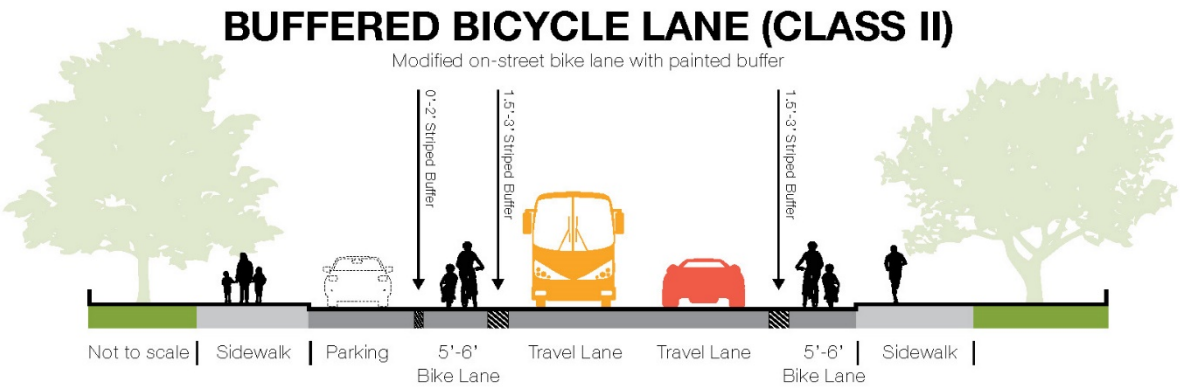
Shared-use paths provide a completely separate right-of-way and are designated for the exclusive use of people riding bicycles and walking with minimal cross-flow traffic. Such paths can be well-situated along creeks, canals, and rail lines. Class I Bikeways can also offer opportunities not provided by the road system by serving as both recreational areas and/or desirable commuter routes.



CLASS II BIKEWAY (BIKE LANE)

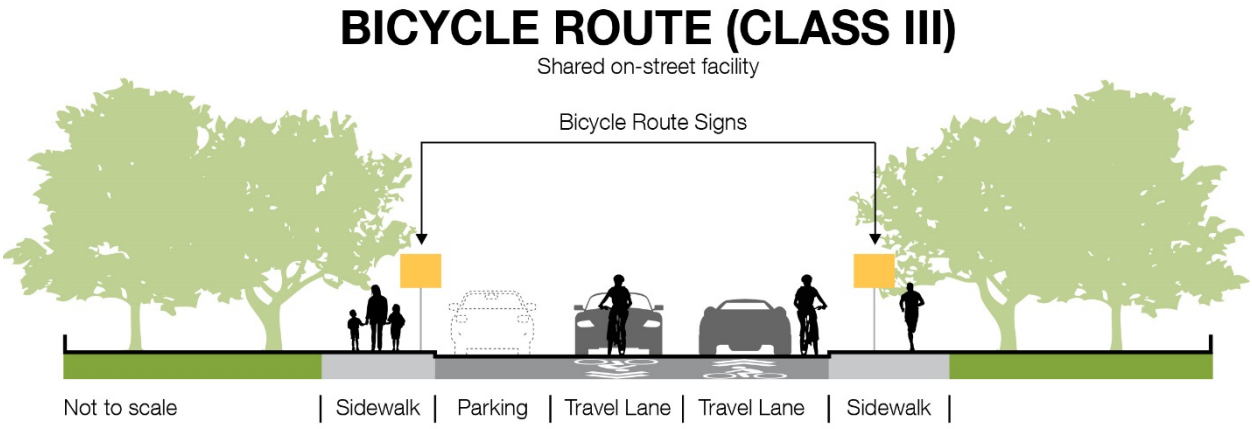
Bike lanes (Class II.A) provide designated street space for bicyclists, typically adjacent to the outer vehicle travel lanes. Bike lanes include special lane markings, pavement legends, and signage. Bike lanes may be enhanced with painted buffers (Class II.B) between vehicle lanes and/or parking, and green paint at conflict zones (such as driveways or intersections). At a minimum, buffer striping should be provided between the bicycle lane and the vehicle travel lanes. To further enhance the bikeway, a buffer can be striped between the parking lane and the bicycle lane to prevent door jam.



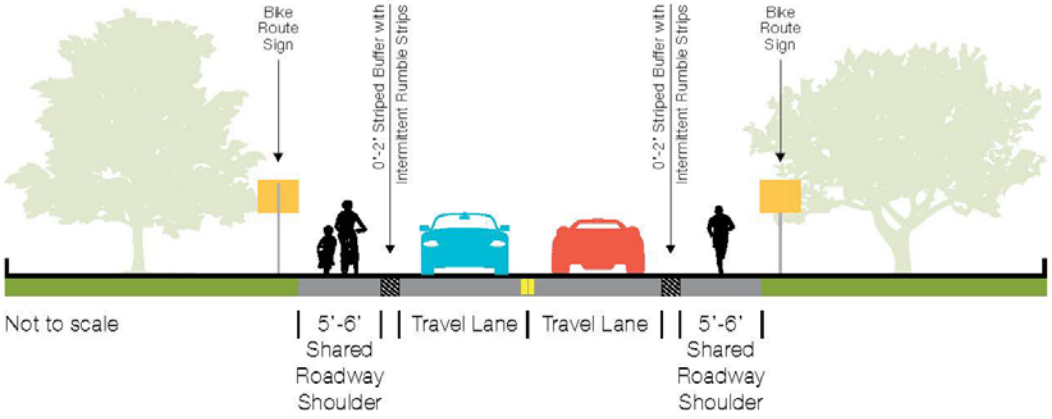


CLASS III BIKEWAY (BIKE ROUTE)

Bike routes (Class III.A) provide enhanced mixed-traffic conditions for bicyclists through signage, striping, and/or traffic calming treatments, and provide continuity to a bikeway network. Bike routes are typically designated along gaps between bike trails or bike lanes, or along low-volume, low-speed streets. The Enhanced Bike Route (Class III.A Enhanced) design is specifically relevant to rural conditions where bicyclists frequently share the road with commercial vehicles. Bicyclists use widened road shoulders in this design. Intermittent rumble strips help facilitate the separation of modes. Bicycle boulevards (Class III.B) provide further enhancements to bike routes to encourage slow speeds and discourage non-local vehicle traffic via traffic diverters, chicanes, traffic circles, and/or speed tables. Bicycle boulevards can also feature special wayfinding signage to nearby destinations or other bikeways.

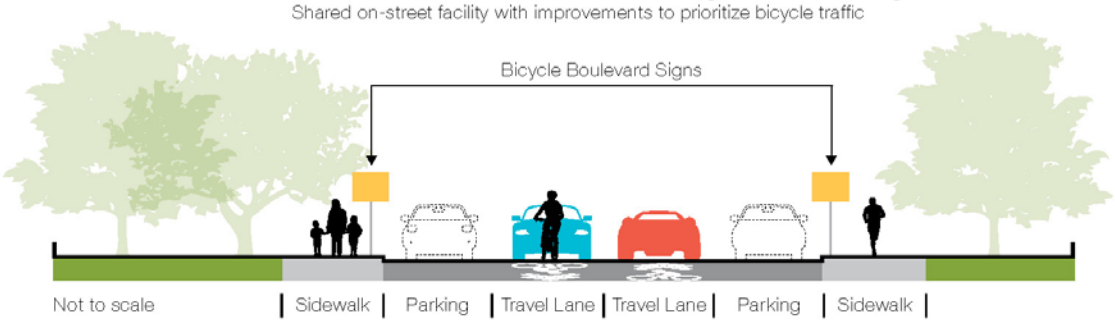


ENHANCED BICYCLE ROUTE



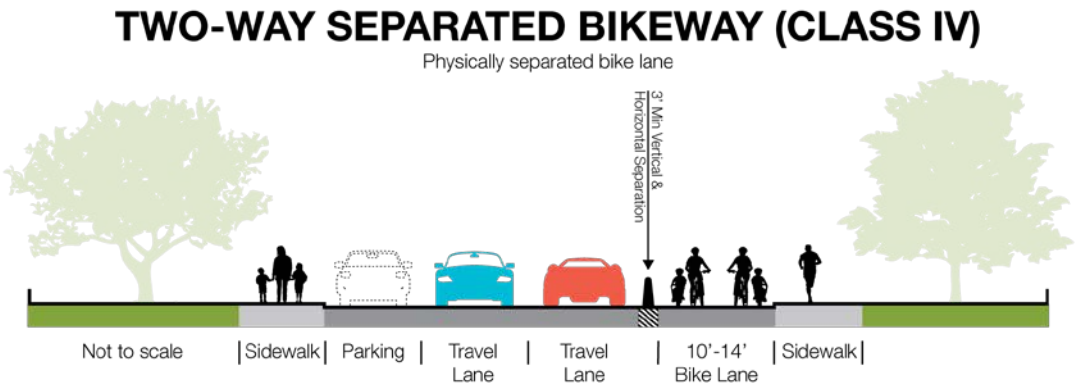
BICYCLE BOULEVARD (CLASS III)

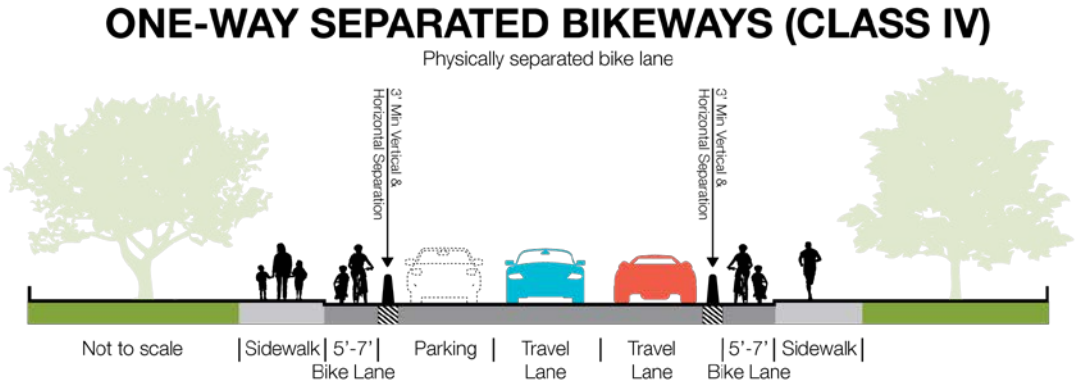
Shared on-street facility with improvements to prioritize bicycle traffic



CLASS IV BIKEWAY (SEPARATED BIKEWAY)

Separated Bikeways, also referred to as cycle tracks or protected bikeways, are bikeways for the exclusive use of bicycles, which are physically separated from vehicle traffic. Separated Bikeways were recently adopted by Caltrans in 2015. Types of separation may include, but are not limited to, grade separation, flexible posts, physical barriers such as curbs, planters, and delineators, or on-street parking.





A NEW VISION FOR PEDESTRIAN SAFETY AND CONNECTIVITY

The pedestrian network is much more than facilities used for walking along a corridor to reach a destination. Pedestrian facilities need to facilitate safe and comfortable connections or crossings to allow users to reach their intended destinations. This can include transit stops, shopping centers, downtowns, schools, and other major regional attractions. While improvements to the pedestrian network often focus significant attention on filling in gaps in sidewalk infrastructure, other treatments are also recommended to enhance crossings and increase visibility of pedestrians. Sidewalk gap completion remains a priority of this ATP but each local jurisdiction has varying needs. However, locations that access schools, major commercial centers, or transit should be prioritized.

New types of treatments included in the pedestrian project recommendations are described briefly below (but are not limited to):

Curb Extensions / Bulb-outs
An extension of the sidewalk into the street to create a shorter pedestrian crossing distance and make pedestrians more visible to vehicles.

High Visibility Crosswalk Striping
This type of striping enables the crosswalk to be better defined to automobiles and can include ladder striping or triple-four striping.

Leading Pedestrian Interval (LPI)
A signal timing strategy that allows people walking to proceed during an all-red phase in order to give them a head start during the signal cycle.

Pedestrian Hybrid Beacon (PHB)
Pedestrian-activated signal heads at mid-block crosswalks used to notify oncoming motorists to stop.

Pedestrian-Scale Lighting
Lighting specifically oriented toward pedestrians that is often lower in height and spaced closer together than traditional roadway lighting.

Rectangular Rapid Flashing Beacon (RRFB)
Pedestrian-activated warning signs at mid-block crosswalks used to notify oncoming motorists to yield.

Speed Feedback Sign
A commonly used device that utilizes radar to measure and display the speed of passing vehicles.

Wayfinding Signage
A network of signs that highlight nearby amenities and services that are accessible from a given location.

5. CITY OF MADERA ACTIVE TRANSPORTATION NETWORK

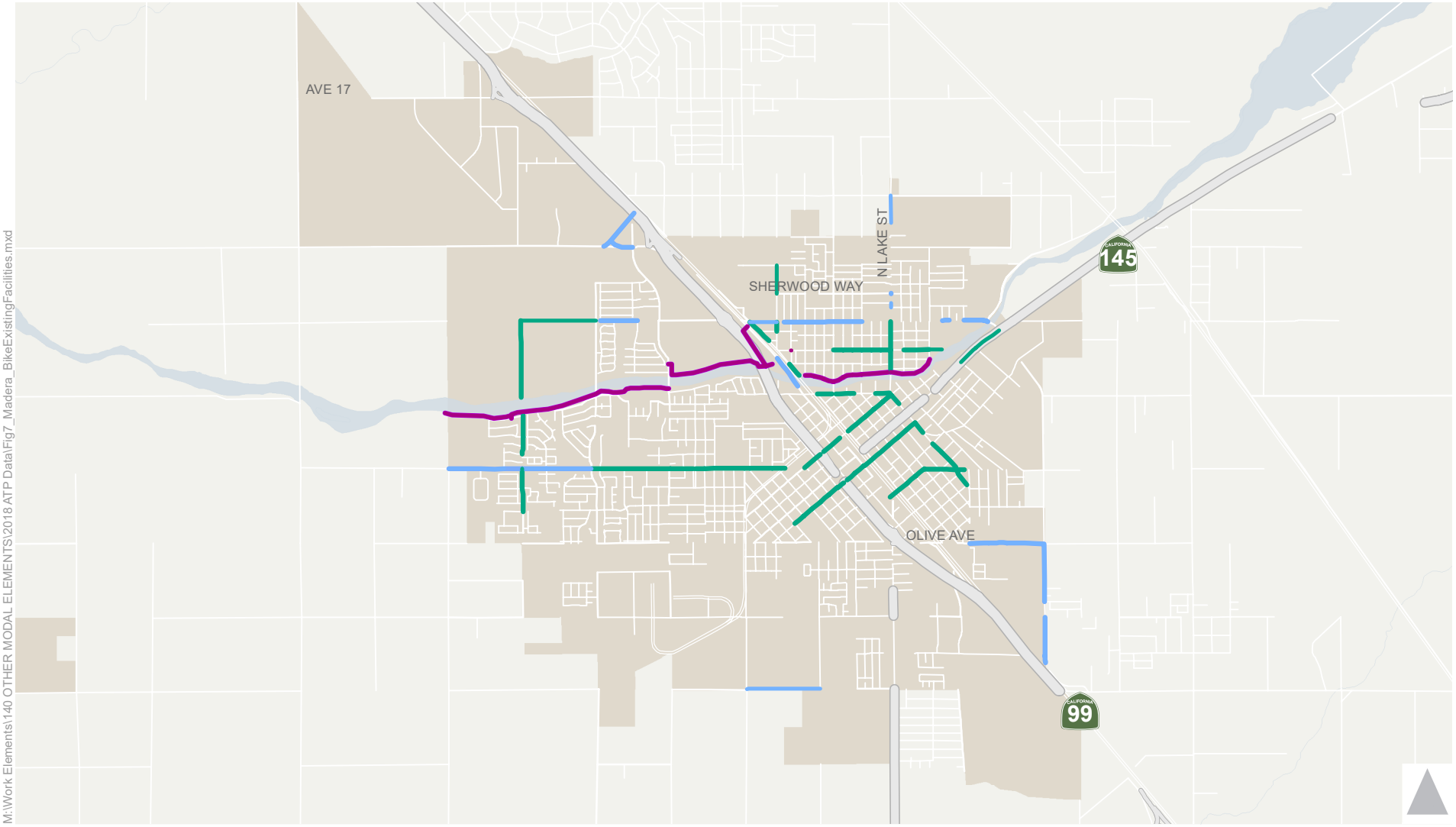
The City of Madera has a compact, grid street system with low-density residential surrounding a commercial and office urban core. SR 145 bisects the city's downtown and follows sections of the arterial street system between the south city limits (along Madera Avenue), via Gateway Drive and Yosemite Avenue to the east city limits. Traditional residential neighborhoods built around the time of World War II surround the commercial and industrial heart of downtown. These neighborhoods are generally built on a grid pattern with narrow, tree-lined streets. Contemporary residential subdivisions have been designed and priced for moderate income-level households throughout the city. These have typically incorporated the use of cul-de-sac streets, decreasing the connectivity between uses while providing traffic calmed residential streets.

CITY OF MADERA BIKEWAY NETWORK

This section provides an overview of the existing bikeways facilities in the City of Madera and identifies the proposed future network for the City of Madera.

CITY OF MADERA EXISTING BIKEWAY NETWORK

A limited number of dedicated bicycle facilities are present within the City of Madera on 6th Street, eastbound Olive Avenue, and southbound Tozer Street. On-street bicycle lanes are striped along Cleveland Avenue, Sunset Avenue, and southbound Lake Street. While many streets may have lower volumes, and be comfortable for cyclists, they are not consistently striped or signed to indicate such streets as the preferred bicycle routes. Many of the existing bicycle facilities are located in the northern part of the city while the southern part has limited connectivity. The Vern McCullough Fresno River Trail is a recognized feature of the city and provides recreation, access and mobility opportunities for pedestrians, runners, and bicyclists. It runs along the dry river in Madera and is approximately 3.5 miles long. The trail is divided in two by active railroad tracks and Gateway Drive, but the city is working on constructing a new undercrossing to bridge the gap. **Figure 7** on the following page shows the existing City of Madera bikeway network.



Existing Bike Facilities

- Class I - Bike Path
- Class II - Bike Lane
- Class III - Bike Route

Figure 7

Existing Bicycle Facilities - City of Madera

CITY OF MADERA PROPOSED BIKEWAY NETWORK

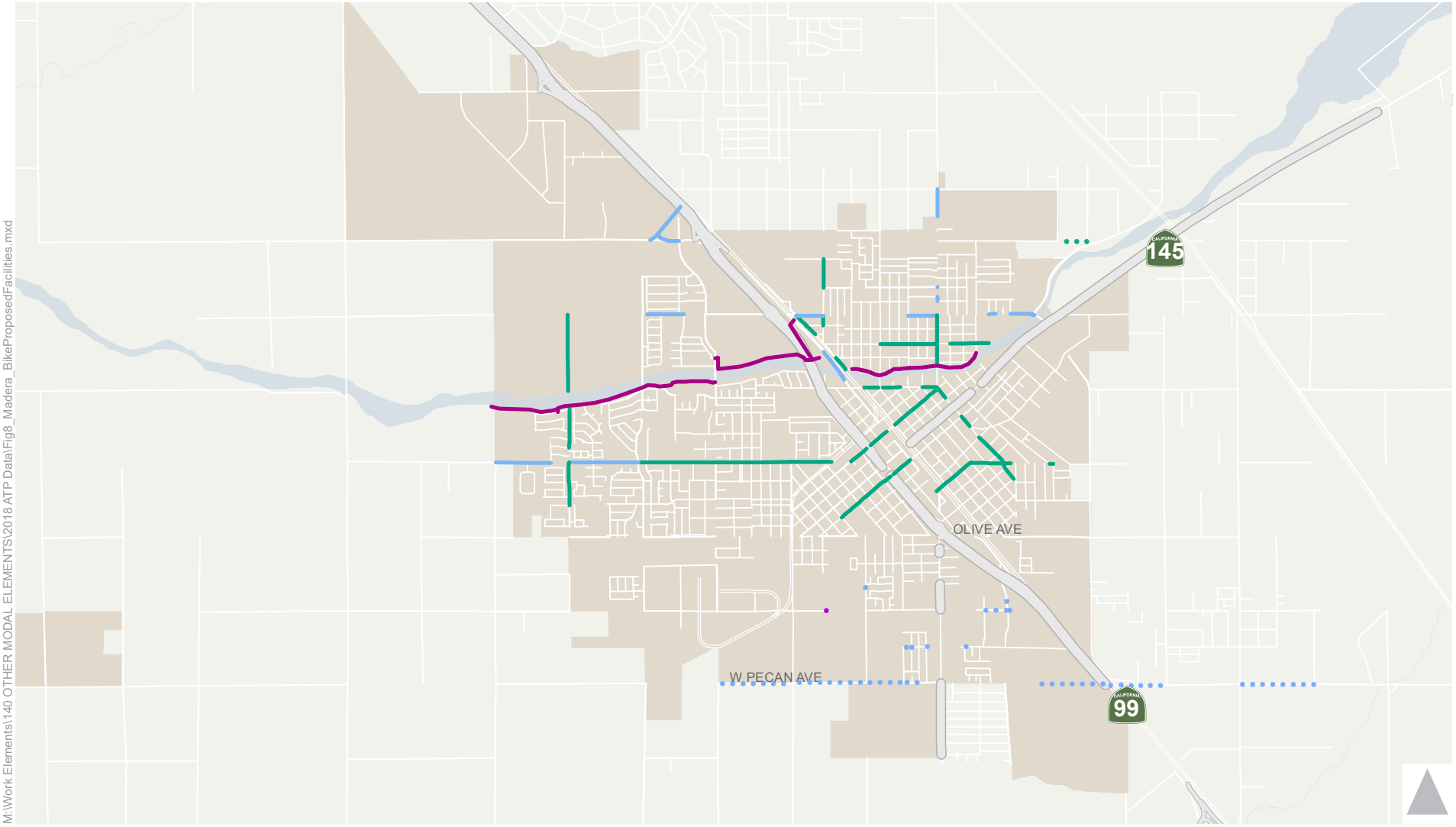
The proposed bicycle network builds on the existing facilities in the City of Madera to facilitate crosstown travel. This includes the upgrade of existing facilities on important crosstown routes such as Sunset Avenue and 4th Street. New proposed facilities will provide access to sites across the city including commercial districts, schools, and residential neighborhoods. Additionally, new bicycle and pedestrian overpasses/underpasses provide connectivity across the Fresno River and between other barriers within the city limits. Connections on the edge of the city anticipate further development in Madera. **Figure 8** shows proposed bikeway facilities for the City of Madera while **Table 6** shows the complete list of City of Madera bikeway network projects.

Priority Bikeway Network Projects

Using the prioritization criteria described in Chapter 9 of the ATP, the top priority bikeway corridors for the City of Madera include the following:

TABLE 5: CITY OF MADERA PRIORITY BIKEWAY PROJECTS

Rank	Corridor Number	Corridor Name
0	16.B	Granada Drive Pedestrian/Bicycle Overcrossing at Fresno River
0	1.A	SR 145 (Yosemite Avenue)
0	28.A-28.B	Crosstown Bike Boulevard (Pine Street)
1	5.A	6th Street
2	2.A	Elm Street
2	9.A	Clinton Street
3	25.A – 25.C	Lake Street



Existing Bike Facilities
- Class I - Bike Path
- Class II - Bike Lane
- Class III - Bike Route

Proposed Bike Facilities
- Class I - Bike Path
- Class II - Bike Lane
- Class III - Bike Route
- Class II.B - Buffered Bike Lane
- Class III.B - Bike Boulevard
- Class IV -Separated Bikeway

Proposed Pedestrian/Bicycle Bridges

Figure 8

Proposed Bicycle Facilities - City of Madera

TABLE 6: CITY OF MADERA BICYCLE PROJECT LIST

Corridor Number	Corridor Name	Extent	Existing Facilities	Proposed Facilities	Implementation	Length (ft.)	Cost Estimate
1.A	SR 145 (Yosemite Ave)	Storey Road to Gateway Drive	Class III.A Bike Route	Class IV Separated Bikeways	Complete Streets Corridor Study	7,400	$4,972,800
1.B	SR 145 (Yosemite Ave)	Gateway Drive to Howard Road	Class III.A Bike Route	Class II.B Buffered Bike Lanes	Road Diet	5,000	$350,000
2.A	Elm Street	Yosemite Avenue to Clinton Street	None	Class III.B Bike Boulevard	Traffic Calming, Signing, and Striping	1,500	$89,148
3.A	Sunset Avenue	Granada Drive to 4th Street	Class III.A Bike Route	Class II.A Bike Lanes	Signing and Striping - Narrow lanes, remove parking on one-side	7,500	$487,500
4.A	Gateway Drive	Almond Avenue to Olive Avenue (SR-99 Interchange)	Class III.A Bike Route	Class II.A Bike Lanes	Capital Improvements - Widen SR-99 Interchange	-	Further Analysis Required
4.B	Gateway Drive	W Central Avenue to Olive Avenue	Class III.A Bike Route	Class II.A Bike Lanes	Signing and Striping	7,000	$455,000
4.C	Gateway Drive	Fresno River Bridge	Class III.A Bike Route	Class III.A Bike Route	Signing and Striping	760	$1,520
4.D	Gateway Drive	W Central Avenue to Cleveland Avenue	Class III.A Bike Route	Class II.B Buffered Bike Lanes	Road Diet, parking removal one-side Alternative: Two-way Separated Bikeway on eastern side Gateway Drive with new bridge	3,500	$245,000
5.A	6th Street	Olive Avenue to N Street	None	Class II.A Bike Lanes	Signing and Striping	900	$55,575
5.B	6th Street	N Street to Lake Street	None	Class II.A Bike Lanes	Signing and Striping	5,200	$333,450

TABLE 6: CITY OF MADERA BICYCLE PROJECT LIST

Corridor Number	Corridor Name	Extent	Existing Facilities	Proposed Facilities	Implementation	Length (ft.)	Cost Estimate
5.C	6th Street	Lake Street to Magnolia Street	None	Class II.A Bike Lanes	Signing and Striping	2,450	$166,725
6.A	N Westberry Boulevard	Howard Road (Avenue 14) to Fresno River	Class III.A Bike Route	Class IV Separated Bikeways	Signing and Striping	4,550	$341,250
6.B	N Westberry Boulevard	Fresno River Bicycle & Pedestrian Bridge	None	Pedestrian/Bicycle Overcrossing	Capital Improvements	-	Further Analysis Required
6.C	N Westberry Boulevard	Fresno River to Cleveland Avenue	Class III.A Bike Route	Class IV Separated Bikeways	Signing and Striping	2,550	$191,250
6.D	N Westberry Boulevard	Cleveland Avenue to Avenue 16	None	Class IV Separated Bikeways	Capital Improvements	3,100	$2,083,200
7.A	Schnoor Street	Almond Avenue to 100' North of Industrial Avenue	Class III.A Bike Route	Class II.A Bike Lanes	Signing and Striping - Remove parking on one-side, keep one wide lane of parking for trucks	1,680	$109,200
7.B	Schnoor Street	100' North of Industrial Avenue to Howard Road	Class III.A Bike Route	Class III.A Bike Route	Signing and Striping - Add Sharrows	940	$1,880
7.C	Schnoor Street	Howard Road to Sunset Avenue	Class III.A Bike Route	Class II.A Bike Lanes	Signing and Striping - Remove parking on one-side	2,650	$172,250
7.D	Schnoor Street	Sunset Avenue to Jefferson Avenue	Class III.A Bike Route	Class II.A Bike Lanes	Signing and Striping - Narrow lanes, remove parking on one-side	2,300	$149,500

TABLE 6: CITY OF MADERA BICYCLE PROJECT LIST

Corridor Number	Corridor Name	Extent	Existing Facilities	Proposed Facilities	Implementation	Length (ft.)	Cost Estimate
7.E	Schnoor Street	Jefferson Avenue to Avenue 16	Class III.A Bike Route	Class IV Separated Bikeways	Road Diet	5,950	$446,250
8.A	D Street	Adell Street to Clark Street	Class III.A Bike Route	Class II.A Bike Lanes	Capital Improvements	1,000	$640,000
8.B	D Street	Clark Street to Cleveland Avenue	Class III.A Bike Route	Class II.A Bike Lanes	Signing and Striping	2,030	$131,950
8.C	D Street	Cleveland Avenue to Riverside Drive	Class III.A Bike Route	Class II.A Bike Lanes	Signing and Striping - Narrow lanes, remove parking on one-side Alternative: Remove TWLTL, maintain parking where turning movements not necessitated	2,170	$141,050
8.D	D Street	Riverside Drive to 2nd Street	Class III.A Bike Route	Class II.A Bike Lanes	Signing and Striping	920	$59,800
8.E	D Street	2nd Street to Yosemite Avenue	Class III.A Bike Route	Class II.A Bike Lanes	Signing and Striping - Narrow lanes, remove parking on one-side Alternative: Remove TWLTL, maintain parking where turning movements not necessitated	1,750	$113,750
8.F	D Street	Yosemite Avenue to 7th Street	Class III.A Bike Route	Class III.A Bike Route	Signing, Striping, and Wayfinding	1,120	$2,240

TABLE 6: CITY OF MADERA BICYCLE PROJECT LIST

Corridor Number	Corridor Name	Extent	Existing Facilities	Proposed Facilities	Implementation	Length (ft.)	Cost Estimate
8.G	D Street	7th Street to Olive Avenue	Class III.A Bike Route	Class II.A Bike Lanes	Signing and Striping	3,550	$230,750
9.A	Clinton Street	Tozer Street to S E Street	Class III.A Bike Route	Class III.B Bike Boulevard	Traffic Calming, Signing, and Striping.	6,500	$455,000
10.A	Howard Road	Westberry Boulevard to Granada Drive	Class III.A Bike Route	Class II.A Bike Lanes	Capital Improvements	2,660	$1,702,400
10.B	Howard Road	Granada Drive to Schnoor Street	Class III.A Bike Route	Class II.B Buffered Bike Lanes	Road Diet Alternative: Remove parking on both sides	2,620	$183,400
10.C	Howard Road	Schnoor Street to Q Street	Class III.A Bike Route	Class II.B Buffered Bike Lanes	Road Diet	3,320	$232,400
11.A	Olive Avenue (West)	6th Street/Grove Street to Madera Avenue	Class III.A Bike Route	Class II.B Buffered Bike Lanes	Road Diet Alternative: Class IV - Remove parking on both sides	4,120	$288,400
11.B	Olive Avenue (West)	Yosemite Avenue to 6th Street	Class III.A Bike Route	Class III.A Bike Route	Signing and Striping - Add Sharrows	630	$44,100
12.A	Country Club Drive (Road 26)	Clark Street to Cleveland Avenue	None	Class IV Separated Bikeways	Road Diet	1,770	$132,750
13.A	Cleveland Ave	Road 23 to Westberry Boulevard	Class III.A Bike Route	Class II.B Buffered Bike Lanes	Capital Improvements	7,940	$5,335,680
13.B	Cleveland Ave	Westberry Boulevard to Granada Drive	Class III.A Bike Route	Class II.B Buffered Bike Lanes	Signing and Striping	2,650	$185,500

TABLE 6: CITY OF MADERA BICYCLE PROJECT LIST

Corridor Number	Corridor Name	Extent	Existing Facilities	Proposed Facilities	Implementation	Length (ft.)	Cost Estimate
13.C	Cleveland Ave	Granada Drive to Sharon Boulevard	Class III.A Bike Route	Class II.B Buffered Bike Lanes	Complete Streets Corridor Study - Analyze Road Diet, Overpass, and Tie-in with Country Club, Gateway, and Cleveland	5,600	$3,763,200
13.D	Cleveland Ave	Sharon Boulevard to Raymond Road	Class II.A Bike Lanes	Class II.A Bike Lanes	Signing and Striping - Upgrade intersection bikeway designs to address crossings	8,500	$552,500
14.A	Olive Avenue (East)	Gateway Drive to Roosevelt Avenue	None	Class II.A Bike Lanes	Capital Improvements	1,450	$928,000
14.B	Olive Avenue (East)	Roosevelt Avenue to Tozer Street	Class II.A Eastbound Bike Lanes	Class II.A Bike Lanes	Signing and Striping - Add Westbound Bike Lane	2,640	$171,600
15.A	Fairmead Connector (Avenue 17)	Road 23 to Airport Drive	None	Class II.A Bike Lanes	Capital Improvements	6,540	$4,185,600
15.B	Fairmead Connector (Airport Drive/Yeager Drive)	Avenue 17 to Condor Road	None	Class II.A Bike Lanes	Signing, Striping, and Wayfinding	2,380	$154,700
15.C	Fairmead Connector (Airport Path)	Yeager Drive to Avenue 16	None	Class I Multi-use Path	Capital Improvements	6,930	$831,600
16.A	Granada Drive	Avenue 16 to Pamela Drive	Class III.A Bike Route	Class II.B Buffered Bike Lanes	Signing and Striping	750	$52,500

TABLE 6: CITY OF MADERA BICYCLE PROJECT LIST

Corridor Number	Corridor Name	Extent	Existing Facilities	Proposed Facilities	Implementation	Length (ft.)	Cost Estimate
16.B	Granada Drive	Pedestrian/Bicycle Overpass - Connection from Pamela Drive to Riverview to use new bridge	Class III.A Bike Route	Pedestrian/Bicycle Overcrossing	Capital Improvements Alternative - Widen Existing Automobile Bridge	-	Further Analysis Required
16.C	Granada Drive	Riverview Drive to Sunset Avenue	Class III.A Bike Route	Class II.B Buffered Bike Lanes	Signing and Striping	2,580	$180,600
16.D	Granada Drive	Sunset Avenue to Howard Road	Class III.A Bike Route	Class II.B Buffered Bike Lanes	Signing and Striping - Remove Parking One-side Alternative - Class II.A	2,680	$187,600
16.E	Granada Drive	Howard Road to Almond Avenue	Class III.A Bike Route	Class II.B Buffered Bike Lanes	Signing and Striping	2,650	$185,500
16.F	Granada Drive	Almond Avenue to Pecan Avenue	Class III.A Bike Route	Class II.B Buffered Bike Lanes	Capital Improvement	2,610	$1,753,920
17.A	Industrial Boulevard	Granada Drive to Schnoor Avenue	None	Class III.B Bike Boulevard	Traffic Calming, Signing, and Striping	2,600	$176,288
18.A	Almond Avenue	Granada Drive to Pine Street	Class III.A Bike Route	Class II.B Buffered Bike Lanes	Signing and Striping - Remove TWLTL or Parking on One-side	5,280	$369,600
18.B	Almond Avenue	Stadium Road to Monterey Street	None	Class II.A Bike Lanes	Signing and Striping	1,320	$85,800
18.C	Almond Avenue	Monterey Street to Golden State Boulevard	None	Class II.A Bike Lanes	Capital Improvements	5,200	$3,328,000

TABLE 6: CITY OF MADERA BICYCLE PROJECT LIST

Corridor Number	Corridor Name	Extent	Existing Facilities	Proposed Facilities	Implementation	Length (ft.)	Cost Estimate
19.A	Pecan Avenue	Road 25 to Golden State Boulevard	None	Class II.A Bike Lanes	Capital Improvements	15,770	$10,092,800
19.B	Pecan Avenue	SR-99 Interchange Widening - Golden State Boulevard to Road 28	None	Class II.A Bike Lanes	Capital Improvements	1,650	$1,056,000
19.C	Pecan Avenue	Road 28 to Road 29 1/2	None	Class II.A Bike Lanes	Capital Improvements	6,490	$4,153,600
20.A	Canal Trail Connector	Pine Street to Stadium Road	None	Class I Multi-use Path	Capital Improvements	3,690	$442,800
21.A	Barnett Way	Almond Avenue to Macadamia Avenue	None	Class II.A Bike Lanes	Capital Improvements	2,150	$1,376,000
22.A	Sharon Boulevard	Cleveland Avenue to Riverside Drive	None	Class II.A Bike Lanes	Signing and Striping	2,980	$193,700
23.A	W/E Lincoln Ave	Sharon Avenue to Tulare Street	None	Class II.A Bike Lanes	Signing and Striping	5,400	$351,000
24.A	Tozer Street (Road 28)	Yosemite Avenue to Clinton Street	None	Class II.B Buffered Bike Lanes	Road Diet Alternative: Remove on-street parking	1,220	$85,400
24.B	Tozer Street (Road 28)	Clinton Street to Sunrise Avenue	None	Class II.B Buffered Bike Lanes	Capital Improvements	4,250	$2,856,000
24.C	Tozer Street (Road 28)	Sunrise Avenue to South A Street	None	Class II.A Bike Lanes	Capital Improvements	1,300	$832,000
24.D	Tozer Street (Road 28)	South A Street to Avenue 14	None	Class II.A Bike Lanes	Signing and Striping	1,300	$84,500

TABLE 6: CITY OF MADERA BICYCLE PROJECT LIST

Corridor Number	Corridor Name	Extent	Existing Facilities	Proposed Facilities	Implementation	Length (ft.)	Cost Estimate
25.A	Lake Street	Avenue 17 to Ellis Street	None	Class II.A Bike Lanes	Capital Improvement	3,420	$2,188,800
25.B	Lake Street	Ellis Street to Cleveland Avenue	None	Class II.A Bike Lanes	Road Diet Northbound to add Bike Lane and keep parking Alternative: Remove Northbound parking lane.	4,520	$293,800
25.C	Lake Street	Cleveland to Sunrise Boulevard		Class II.A Bike Lanes	Signing and Striping	6,130	$398,450
26.A	Kennedy Street	Lake Street to Raymond Road	None	Class III.A Bike Route	Signing, Striping, and Wayfinding	5,850	$11,700
27.A	Raymond Road	Kennedy Street to Cleveland Avenue	None	Class II.B Buffered Bike Lanes	Capital Improvements	3,780	$2,540,160
28.A	Crosstown Bike Boulevard (4th Street)	Lake Street to Pine Street	Class III.A Bike Route	Class III.B Bike Boulevard	Traffic Calming, Signing, and Striping.	6,800	$476,000
28.B	Crosstown Bike Boulevard (Pine Street)	4th Street to Pecan Avenue	Class III.A Bike Route	Class III.B Bike Boulevard	Traffic Calming, Signing, and Striping.	6,190	$433,300
29.A	Madera Avenue	Gateway Drive to G Street	Class III.A Bike Route	Class II.A Bike Lanes	Signing and Striping - Remove TWLTL or Parking on One-side	625	$40,625
29.B	Madera Avenue	G Street to Avenue 13	Class III.A Bike Route	Class II.A Bike Lanes	Signing and Striping - Narrow lanes or Road Diet	6,130	$398,450

TABLE 6: CITY OF MADERA BICYCLE PROJECT LIST

Corridor Number	Corridor Name	Extent	Existing Facilities	Proposed Facilities	Implementation	Length (ft.)	Cost Estimate
30.A	Avenue 16	Westberry Boulevard to Gateway Drive Interchange	None	Class I Multi-use Path	Capital Improvements	5,225	$627,000
31.A	Riverview Park Bike Boulevard	Riverview Drive from Schnoor Street to Central Place, Central Place from Riverview Drive to Central Avenue, Central Avenue from Central Place to North I Street, N I Street from Central Avenue to 4th Street	None	Class III.B Bike Boulevard	Traffic Calming, Signing, and Striping.	7,170	$486,148
32.A	Cleveland to Sunset Trail	Cleveland Avenue to Granada Drive	None	Class I Multi-use Path	Capital Improvements - Provide neighborhood connections	2,710	$325,200
32.B	Cleveland to Sunset Trail	Pedestrian/Bicycle Overpass - Crossing east of Granada Drive	None	Pedestrian/Bicycle Overcrossing	Capital Improvements	-	Further Analysis Required
32.C	Cleveland to Sunset Trail	Fresno River to Sunset Avenue	None	Class I Multi-use Path	Capital Improvements	2,560	$307,200
33.A	Fresno River Trail Extension	Pedestrian/Bicycle Overcrossing - Tulare Street to Yosemite Avenue	None	Pedestrian/Bicycle Overcrossing	Capital Improvements	-	Further Analysis Required

TABLE 6: CITY OF MADERA BICYCLE PROJECT LIST

Corridor Number	Corridor Name	Extent	Existing Facilities	Proposed Facilities	Implementation	Length (ft.)	Cost Estimate
33.B	Fresno River Trail Extension	South Side of Fresno River from proposed Tulare Street Crossing to Cleveland Avenue/Tozer Street	None	Class I Multi-use Path	Capital Improvements	2,680	$321,600
34.A	Magnolia Street Bike Boulevard	Yosemite Avenue to Irrigation Canal Trail (south of Clinton Street)	None	Class III.B Bike Boulevard	Traffic Calming, Signing, and Striping.	2,000	$135,606
35.A	Irrigation Canal Trail (North)	Lilly Street to Millview Park	None	Class I Multi-use Path	Capital Improvements	4,630	$555,600
35.B	Irrigation Canal Trail (North)	Pedestrian/Bicycle Overcrossing - Connection to Magnolia Bike Boulevard	None	Pedestrian/Bicycle Overcrossing	Capital Improvements	-	Further Analysis Required
36.A	Stadium Road	Howard Road to Pecan Avenue	None	Class II.A Bike Lanes	Signing and Striping - Remove one-side of parking if necessary	5,630	$365,950
37.A	Gary Lane	Stadium Road to Emily Way	None	Class II.A Bike Lanes	Capital Improvements	4,200	$2,688,000
Total City of Madera Proposed Bikeway Project List Cost							**$71,555,064**

CITY OF MADERA PEDESTRIAN NETWORK

Walking has always been a big part of the transportation system in Madera. Automobiles were not widely available when the city was founded, and for many years the city remained compact enough for people to walk easily from one edge of the city to the other. Madera's downtown grid of roadways reflects these early days—its short blocks are easy to walk. Major downtown intersections experience heavy traffic volumes and are surrounded by commercial and office uses. This area is generally more pedestrian accessible with complete sidewalks, standard curb ramps, signalized crossings, and marked crosswalks.

Outside of the core downtown area marked crosswalks become spaced farther apart on Yosemite Avenue and crossings are not signalized, making it difficult for pedestrians to cross this busy roadway. Sidewalk gaps begin to appear on SR 145 and East Yosemite Avenue, especially toward outer lying rural areas. Select intersections in the northwest retail portion of Madera have visible brick-colored crosswalks. Crosswalks marked at signalized intersections generally feature standard crosswalk striping.

CITY OF MADERA PROPOSED PEDESTRIAN FACILITIES

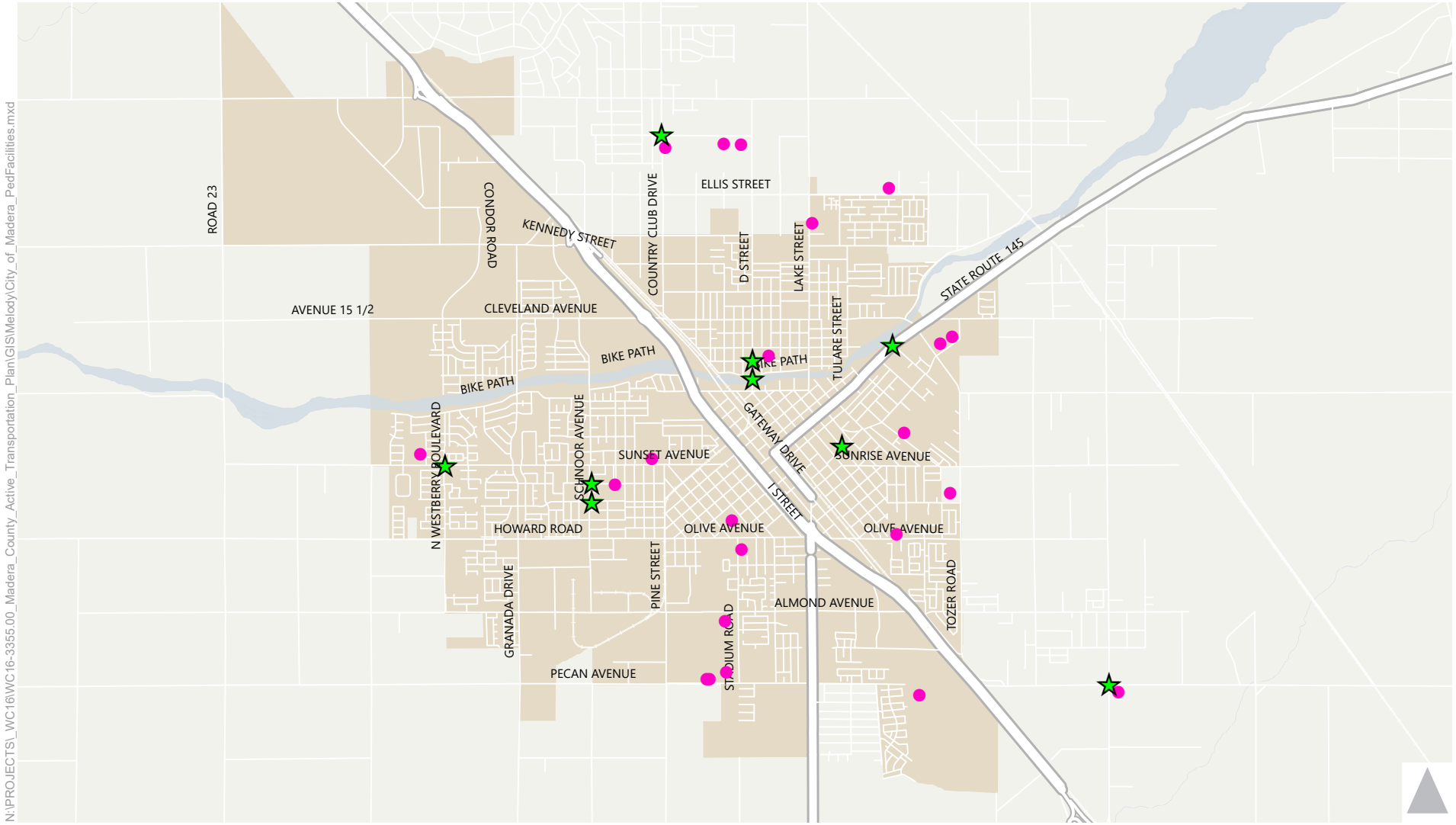
Proposed facilities in the City of Madera prioritize important pedestrian connections to commercial districts, safe routes to schools (SRTS), and other important activity sites. The City of Madera provided mapped sidewalk gap information that was used to help create the list of proposed projects. The proposed projects address gaps in the sidewalk network, intersection design, crossings, and other elements of the pedestrian realm. **Figure 9** depicts the proposed pedestrian projects while **Table 8** summarizes the list of pedestrian projects for the City of Madera. Cost estimates are not provided due to the varying construction costs and the ability for projects to be included as components of larger streetscape projects.

Priority Pedestrian Projects

Using the prioritization criteria described in Chapter 9 of the ATP, the top priority pedestrian projects for the City of Madera include the following:

TABLE 7: CITY OF MADERA PRIORITY PEDESTRIAN PROJECTS

Rank	Corridor Number	Project Name
0	11 - 13	Sidewalk Gaps for John Adams, Thomas Jefferson (#11), James Madison (#12), Washington (#13) Schools
0	14	Sidewalk Gaps for Alpha Elementary and Madera South High School
0	17 - 18	Multiple Corridors Priority Sidewalk Gap Improvements
1	3	Sunset Ave & N Westberry Blvd
1	4	National Avenue & N. Schnoor Street
1	6	N. D Street & E South Street
1	16	Northwest Downtown Pedestrian Access



Intersection Improvement

Schools

Figure 9

City of Madera
Pedestrian Facility Improvements

TABLE 8: CITY OF MADERA PEDESTRIAN PROJECT LIST

Corridor Number	Corridor/ Intersection Name	Extent	Existing Facilities	Proposed Facilities	SRTS
1	SR 145 (E Yosemite Ave)	From Elm Street to Tozer Street	Sidewalks only on SB side	Sidewalks on NB side.	
2	Yosemite Ave & Elm Street	Intersection Improvement	None	Stripe a high-visibility crosswalk across eastbound approach with a Pedestrian Hybrid Beacon and median Island Refuge for two-stage crossings. Consider the removal of the Eastbound right-turn lane to reduce the number of auto-pedestrian conflicts.	
3	Sunset Ave & N Westberry Blvd	Intersection Improvement	All-way stop control intersection with crosswalks on three approaches	Stripe high-visibility crosswalks on all approaches.	Yes
4	National Avenue & N Schnoor Street	Intersection Improvement	Standard Crosswalk on two approaches	Stripe high-visibility crosswalks on all approaches.	Yes
5	W 3rd Street & N Schnoor Street	Intersection Improvement	Standard Crosswalk on one approach	Stripe high-visibility crosswalks on all approaches.	Yes
6	N D Street & E South Street	Intersection Improvement	Standard school zone crosswalks at the all-way stop controlled intersection.	Stripe high-visibility crosswalks on all approaches. Install curb extensions to reduce the pedestrian crossing distance.	Yes
7	N D Street & Riverside Drive	Intersection Improvement	Yellow pedestrian sign; only one crosswalk	Install high-visibility crosswalks along D Street to provide better access to the trail. Enhance the trail crossing with a Rapid Rectangular Flashing Beacon across D Street. Install a northbound left-turn lane. Install curb extensions to reduce the pedestrian crossing distances on the north/south crossings and calm traffic by tightening the intersection.	Yes

TABLE 8: CITY OF MADERA PEDESTRIAN PROJECT LIST

Corridor Number	Corridor/ Intersection Name	Extent	Existing Facilities	Proposed Facilities	SRTS
8	Clinton Street Crossings	Intersection Improvements at C Street and B Street	No crosswalks	Stripe high-visibility crosswalks on all approaches.	
9	Pecan Avenue & Road 29	Intersection Improvement	Crosswalks	Install sidewalk and curb returns with ADA-compliance on all four corners. Minimize curb radii depending on design vehicles. Investigate the potential to reduce the number of vehicle lanes to minimize pedestrian crossing distances.	Yes
10	Sunset Avenue & Fairview Avenue	Intersection Improvement	Standard School zone crosswalk	Stripe a high-visibility crosswalk and install a median pedestrian refuge island with Rapid Rectangular Flashing Beacons.	Yes
11	John Adams Elementary/Thomas Jefferson Middle SRTS Pedestrian Improvements	Schnoor Avenue from Sunset Avenue to Howard Avenue, National Avenue from Schnoor Avenue to Pine Street, and Willis/Pine from Roberts Avenue to Howard Avenue.	Varies (one side of roadway or none)	Safe Routes to School Priority Sidewalk Gap Closure	Yes
12	James Madison Elementary School SRTS Pedestrian Improvements	Maple Street from Maple Court to Monterrey; residential streets between Olive, Maple Court, Maple Street, and Monterey Street	Varies (one side of roadway or none)	Safe Routes to School Priority Sidewalk Gap Closure	Yes
13	Washington Elementary SRTS Pedestrian Improvements	South Street from D Street to Lake Street; residential streets between Cleveland, Lincoln, D, and Austin	Varies (one side of roadway or none)	Safe Routes to School Priority Sidewalk Gap Closure	Yes

TABLE 8: CITY OF MADERA PEDESTRIAN PROJECT LIST

Corridor Number	Corridor/ Intersection Name	Extent	Existing Facilities	Proposed Facilities	SRTS
14	Alpha Elementary School & Madera South High School SRTS Pedestrian Improvements	Pine Street from Olive Avenue to Pecan Avenue and Stadium Road from Olive Avenue to Pecan Avenue	Varies (one side of roadway or none)	Safe Routes to School Priority Sidewalk Gap Closure	Yes
15	Gateway Drive Pedestrian Access	9th Street from Gateway to D Street, E Street from 6th to 14th Street, Clinton from E to D Street	Varies (one side of roadway or none)	Commercial District Priority Sidewalk Gap Closure	
16	Northwest Downtown Pedestrian Access	All missing segments between Central Avenue, H Street, and 4th Street	Varies (one side of roadway or none)	Commercial District Priority Sidewalk Gap Closure	
17	Multiple Corridors Priority Sidewalk Gap Improvements	Select corridors within 1/4-mile of schools or commercial districts	Varies (one side of roadway or none)	Sidewalks, curb, and gutter. Install curb extensions where necessary.	Yes
18	Multiple Corridors General Sidewalk Gap Improvements	Select corridors outside 1/4-mile of schools or commercial districts	Varies (one side of roadway or none)	Sidewalks, curb, and gutter. Install curb extensions where necessary.	

6. CITY OF CHOWCHILLA ACTIVE TRANSPORTATION NETWORK

The City of Chowchilla, the northern gateway to Madera County, is located along SR 99 and the Union Pacific railroad corridor, north of SR 152 and south of the Merced-Madera County Line. SR 233 (West Robertson Boulevard) traverses the city in a northeast/southwest diagonal direction. Chowchilla is approximately 15 miles northwest of the City of Madera.

Similar to the City of Madera's land uses, Chowchilla also has lower density residential uses surrounding a central commercial corridor, SR 233 (or West Robertson Boulevard). As the city's population increases, and as traffic increases into the Central Valley, the utility of SR 233 will need to be assessed as a viable long-term option for truck traffic since it acts as the main street in Chowchilla. As a major arterial street, SR 233 is a multimodal facility for vehicles, bicycles, and pedestrians. While SR 233 and other larger streets in downtown Chowchilla have consistent sidewalks, residential neighborhoods can have gaps in sidewalk infrastructure along local streets.

CITY OF CHOWCHILLA BIKEWAY NETWORK

This section provides an overview of the existing bikeway facilities in the City of Chowchilla and identifies the proposed future network for the City of Chowchilla.

CITY OF CHOWCHILLA EXISTING BICYCLE NETWORK

The City of Chowchilla does not have any existing designated bikeway facilities within the downtown or surrounding neighborhood areas. A small portion of Avenue 26 to the east of SR-99 has on-street bicycle lanes. While neighborhoods streets have relatively lower volumes and speeds, allowing cyclists to feel comfortable, preferred routes are generally not signed or striped to indicate where cyclists should travel. **Figure 10** shows the existing bikeways facilities within the City of Chowchilla and the nearby community of Fairmead (unincorporated Madera County).

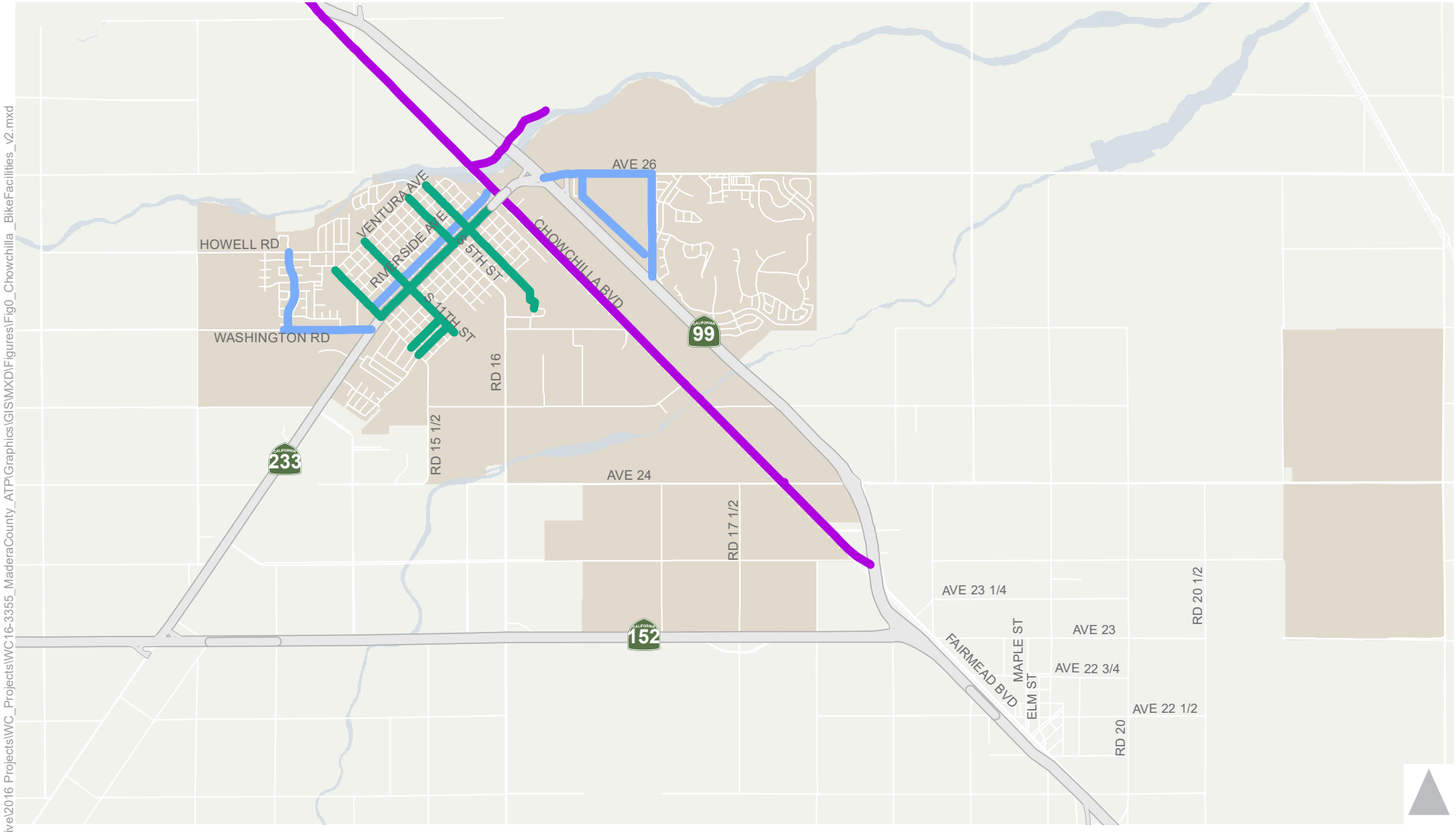


Figure 10

Existing Bicycle Facilities - City of Chowchilla & Fairmead

CITY OF CHOWCHILLA PROPOSED BICYCLE NETWORK

The proposed bicycle network for the City of Chowchilla greatly improves access within Chowchilla. This includes new crosstown links on Ventura Avenue, Riverside Avenue, and others. In addition, a connection is proposed between Chowchilla and nearby Fairmead along Chowchilla Boulevard, Avenue 24, and Fairmead Boulevard. Additionally, a proposed bike path extending from the City of Chowchilla to unincorporated Madera County will provide new recreational facilities. **Figure 11** shows proposed bikeway facilities for the City of Chowchilla while **Table 10** shows the complete list of City of Chowchilla bikeway network projects.

Priority Bikeway Network Projects

Using the prioritization criteria described in Chapter 9 of the ATP, the top priority bikeway corridors for the City of Chowchilla include the following:

TABLE 9: CITY OF CHOWCHILLA PRIORITY BIKEWAY PROJECTS

Rank	Corridor Number	Corridor Name
0	5.A	Riverside Avenue
0	3.A	11th Street
0	6.A	N/S 15th Street
1	11.A	Humboldt Avenue
2	1.A – 1.B	SR 233 (E/W Robertson Boulevard)
2	2.A	Kings Avenue
2	10.A	Washington Road
2	13.A	Trinity Avenue

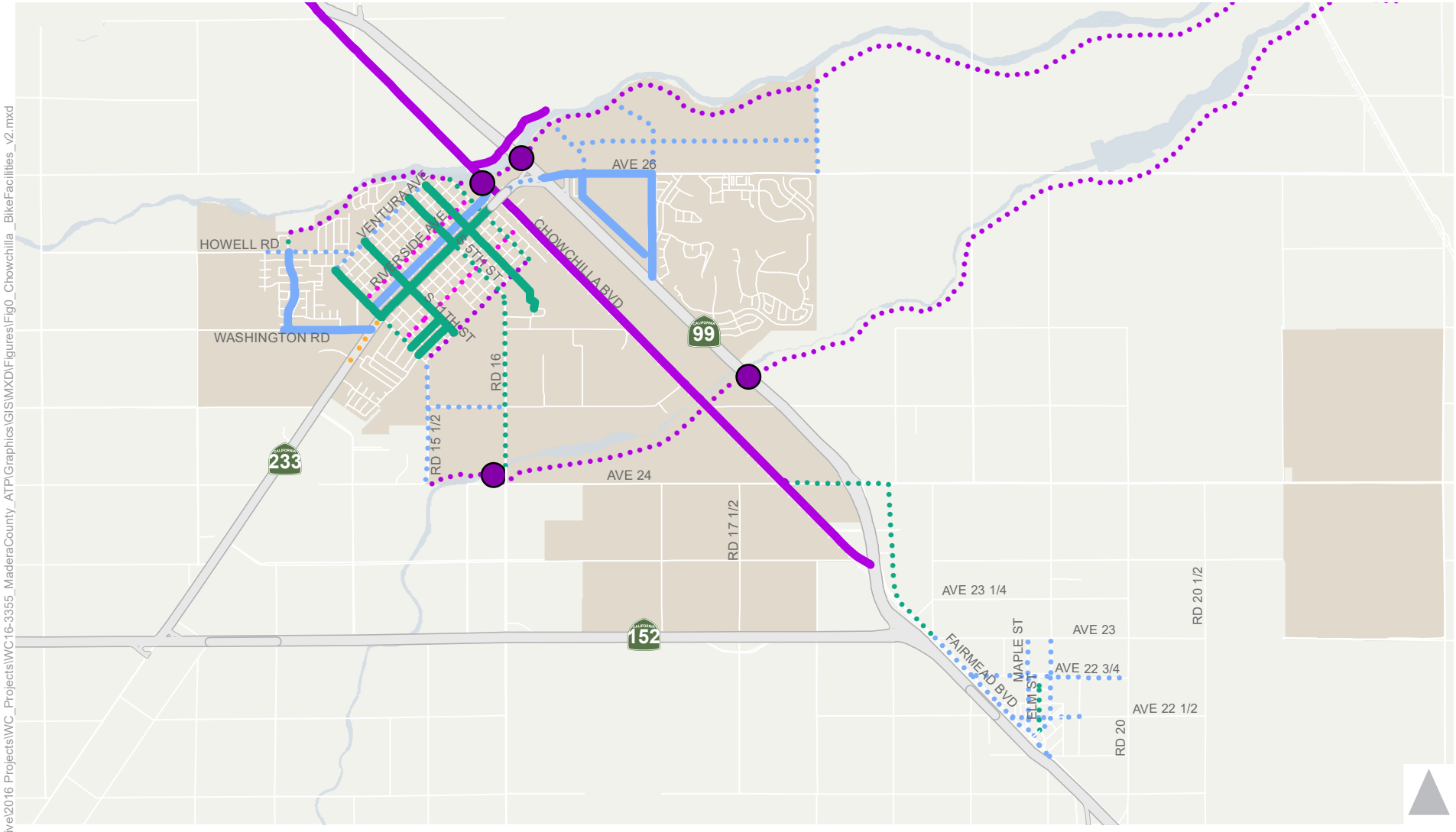


Figure 11

Proposed Bicycle Facilities - City of Chowchilla & Fairmead

TABLE 10: CITY OF CHOWCHILLA BICYCLE PROJECT LIST

Corridor Number	Corridor	Extent	Existing Facilities	Proposed Facilities	Implementation	Length (ft.)	Cost Estimate
1.A	SR 233 (E/W Robertson Boulevard)	Myer Drive to Chowchilla Boulevard	Class III.A Bike Route	Class IV Separated Bikeways	Complete Streets Study	7,920	$5,322,240
1.B	SR 233 (E/W Robertson Boulevard)	Chowchilla Boulevard to Montgomery Lake Way	Class III.A Bike Route	Class II.A Bike Lanes	Short-term: Sharrows and Signage Long-Term: Overpass Reconstruction/ Road Widening with Caltrans Interchange Project	2,730	$177,450
2.A	Kings Avenue	N 15th Street to Chowchilla Boulevard	Class II.A Bike Lanes	Class II.A Bike Lanes	Repaint bike lane striping and markings including conflict zones	5,800	$377,000
3.A	11th Street	Ventura Avenue to Mariposa Avenue (Chowchilla High School)	Class III.A Bike Route	Class III.B Bike Boulevard	Traffic Calming, Signing, and Striping	4,420	$287,300
4.A	Ventura Avenue	N 3rd Street to N 15th Street	None	Class II.A Bike Lanes	Signing, Striping, and Wayfinding	4,200	$273,000
5.A	Riverside Avenue	N 1st Street to N 15th Street	None	Class III.B Bike Boulevard	Traffic Calming, Signing, and Striping	4,950	$321,750
6.A	N/S 15th Street	Ventura Avenue to Mariposa Avenue	None	Class III.A Bike Route	Signing, Striping, and Wayfinding	4,380	$8,760
7.A	Ave 25 1/2 (Howell Road)	City Limit to Ventura Avenue	None	Class II.A Bike Lanes	Signing, Striping, and Remove Parking on One Side	3,300	$214,500

TABLE 10: CITY OF CHOWCHILLA BICYCLE PROJECT LIST

Corridor Number	Corridor	Extent	Existing Facilities	Proposed Facilities	Implementation	Length (ft.)	Cost Estimate
8.A	5th Street	Ventura Avenue to SR 233	Class III.A Bike Route	Class III.B Bike Boulevard	Traffic Calming, Signing, and Striping. Enhanced Crossing at SR 233	2,150	$150,500
8.B	5th Street	SR 233 to Mariposa Avenue	Class III.A Bike Route	Class III.A Bike Boulevard	Traffic Calming, Signing, and Striping.	2,240	$156,800
9.A	Santa Cruz Boulevard	Future Ash Slough Canal Multi-use Path to Howell Road	None	Class II.A Bike Lanes	Signing, and Striping.	720	$29,900
10.A	Washington Road	City Limits to SR 233	Class II.A Bike Lanes	Class II.B Buffered Bike Lanes	Signing and Striping	3,020	$211,400
11.A	Humboldt Avenue	S 15th Street to S Front Street	None	Class III.B Bike Boulevard	Traffic Calming, Signing, and Striping.	5,340	$347,100
12.A	Trinity Avenue	S 11th Street to S Front Street	Class II.A Bike Lanes	Class II.A Bike Lanes	Repaint bike lane striping and markings including conflict zones	3,900	$253,500
13.A	1st Street	Sonoma Ave to Mariposa Ave	None	Class III.B Bike Boulevard	Traffic Calming, Signing, and Striping. Enhanced Crossing at SR 233	4,050	$283,500
14.A	Ash Slough Multi-use Path	Santa Cruz Boulevard to Chowchilla Boulevard	None	Class I Multi-use Path	Capital Improvements	7,300	$876,000
14.B	Ash Slough Multi-use Path	Chowchilla Boulevard Eastern City Limits	None	Class I Multi-use Path	Capital Improvements	13,250	$1,590,000

TABLE 10: CITY OF CHOWCHILLA BICYCLE PROJECT LIST

Corridor Number	Corridor	Extent	Existing Facilities	Proposed Facilities	Implementation	Length (ft.)	Cost Estimate
14.C	Ash Slough Multi-use Path	Bicycle/Pedestrian Undercrossing at Chowchilla Boulevard/Railroad	None	Bicycle/Pedestrian Undercrossing	Capital Improvements	-	Further Analysis Required
14.D	Ash Slough Multi-use Path	Bicycle/Pedestrian Underpass at SR 99	None	Bicycle/Pedestrian Undercrossing	Capital Improvements	-	Further Analysis Required
15.A	Berenda Slough Multi-use Path Extension	Eastern City Limits, to Berenda Reservoir to Avenue 24 1/2 to Road 15 1/2	None	Class I Multi-use Path	Feasibility Study	-	Further Analysis Required
15.B	Ash Slough Loop Multi-use Path Extension	Bicycle/Pedestrian Undercrossing at SR 99	None	Bicycle/Pedestrian Undercrossing	Feasibility Study	-	Further Analysis Required
15.C	Ash Slough Loop Multi-Use Path Extension	Bicycle/Pedestrian Undercrossing at Chowchilla Boulevard/Railroad	None	Bicycle/Pedestrian Undercrossing	Feasibility Study	-	Further Analysis Required
16.A	Road 15 1/2	Mariposa Avenue to Avenue 24	None	Class II.A Bike Lanes	Capital Improvements	4,250	$2,720,000
17.A	Road 24 1/2	Road 15 1/2 to Road 16	None	Class II.A Bike Lanes	Capital Improvements	2,630	$1,683,200
18.A	Road 16	Mariposa Avenue to Avenue 24	None	Class II.A Bike Lanes	Capital Improvements	6,600	$4,224,000

TABLE 10: CITY OF CHOWCHILLA BICYCLE PROJECT LIST

Corridor Number	Corridor	Extent	Existing Facilities	Proposed Facilities	Implementation	Length (ft.)	Cost Estimate
19.A	Mariposa Avenue Multi-Use Path	Road 15 to S 1st Street	None	Class I Multi-use Path	Capital Improvements	8,600	$1,032,000
20.A	Fairmead Connector (Chowchilla Boulevard)	SR 233 to Avenue 24	None	Class III.A Enhanced Bike Route	Capital Improvement - Widen Shoulders and add Rumble Strips	13,800	$7,614,840
20.B	Fairmead Connector (Avenue 24)	Chowchilla Boulevard to Fairmead Boulevard	None	Class III.A Enhanced Bike Route	Capital Improvement - Widen Shoulders and add Rumble Strips	2,720	$1,500,900
21.A	Montgomery Lake Way North Extension	Avenue 26 to Ash Slough Canal	None - Future Roadway	Class II.A Bike Lanes	Capital Improvements	2,320	$1,484,800
22.A	Fig Tree Road Extension	Avenue 26 to Ash Slough Canal	None - Future Roadway	Class II.A Bike Lanes	Capital Improvements	3,700	$2,368,000
23.A	Havasu Drive Widening/Extension	Montgomery Lake Way North Extension to City Limit	None - Future Roadway	Class II.A Bike Lanes	Capital Improvements	8,140	$5,209,600
24.A	Eastern Rancho Calera Roadway at City Limit	Avenue 26 to Ash Slough Canal	None - Future Roadway	Class II.A Bike Lanes	Capital Improvements	2,550	$1,632,000
Total City of Chowchilla Proposed Bikeway Project List Cost							**$57,159,640**

CITY OF CHOWCHILLA PEDESTRIAN NETWORK

The City of Chowchilla has lower density residential uses surrounding a central commercial corridor along SR 233 (West Robertson Boulevard). SR 233 generally has difficult crossings and lacks high visibility crosswalks, pedestrian refuge islands, and overhead street name signs at unsignalized intersections. Automobile-oriented lighting is provided along SR 233 toward the street, but is not provided consistently in the surrounding neighborhoods while pedestrian-scale lighting is generally not provided. Signalized intersections have push-to-walk buttons, and many standard striping crosswalk lines are fading or are no longer visible. Curb ramps are typically diagonal (one per corner) and do not often include tactile areas or truncated domes to alert persons with disabilities to crossing locations. However, the City does mandate ADA improvements with any new project.

CITY OF CHOWCHILLA PROPOSED PEDESTRIAN FACILITIES

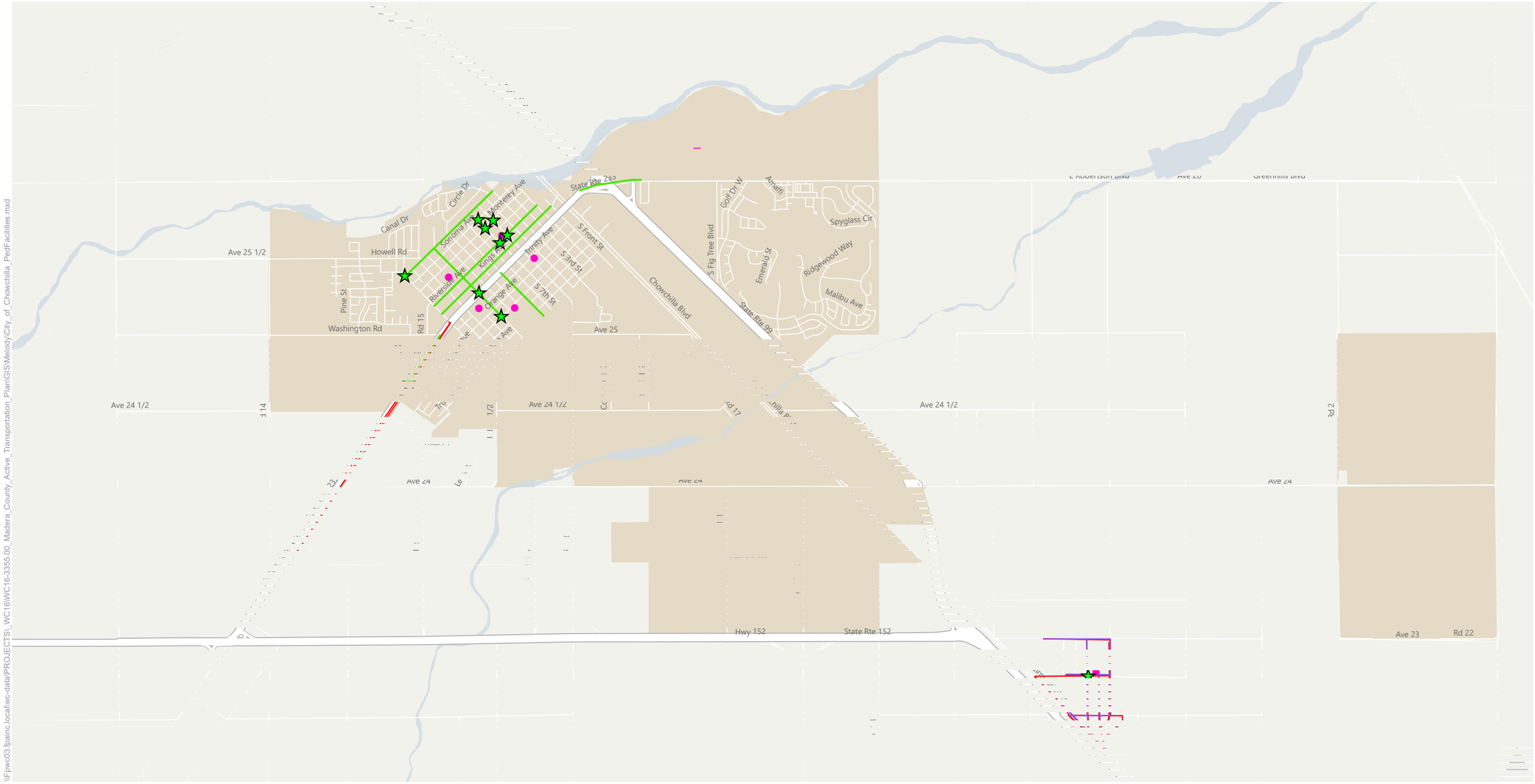
The proposed pedestrian network for the City of Chowchilla addresses access to important activity sites across the city as well as accessibility improvements. A map of all sidewalk gaps was not provided in time for inclusion in the ATP but sidewalk gap completion should be prioritized near schools, major commercial districts, and transit stops. The proposed projects address gaps in the sidewalk network, intersection design, crossings, and other elements of the pedestrian realm. **Figure 12** depicts the proposed pedestrian projects while **Table 12** summarizes the list of pedestrian projects for the City of Chowchilla. Cost estimates are not provided due to the varying construction costs and the ability for projects to be included as components of larger streetscape projects.

Priority Pedestrian Projects

Using the prioritization criteria described in Chapter 9 of the ATP, the top priority pedestrian projects for the City of Chowchilla include the following:

TABLE 11: CITY OF CHOWCHILLA PRIORITY PEDESTRIAN PROJECTS

Rank	Corridor Number	Project Name
0	1	Robertson Blvd & S 11th Street
0	6	Riverside Ave
0	8	S. 8th Street
1	4	S 11th Street & Humboldt Avenue
1	5	Ventura Ave
1	10	CA-233 (Yosemite)



Intersection Improvement

Schools

Corridor Improvement

Survey Results

Improve Sidewalks Here

Improve corridor or add missing connection

Figure 12

Cities of Chowchilla and Fairmead
Pedestrian Facility Improvements

TABLE 12: CITY OF CHOWCHILLA PEDESTRIAN PROJECT LIST

Corridor Number	Corridor/ Intersection Name	Extent	Existing Facilities	Proposed Facilities	SRTS
1	Robertson Blvd & S 11th Street	Intersection Improvement	Sidewalks	Install crosswalks on all approaches. Install curb extensions to reduce the pedestrian crossing distances and reduce corner turn radii. Consider this as part of the Robertson Blvd Complete Streets Study or as a standalone SRTS project. Install audible pedestrian crossing signals and pedestrian signal heads count down signals.	Yes
2	Kings Ave	N Front Street to N 15th Street	Sidewalk presence varies (one side of roadway or none)	Sidewalk gap closures & crossing improvements throughout corridor	
3	11th Street	Ventura Ave to Orange Ave	Sidewalk presence varies (one side of roadway or none)	Sidewalk gap closures & crossing improvements throughout corridor	Yes
4	S 11th Street & Humboldt Avenue	Intersection Improvement	Standard crosswalks on north and south sides of Humboldt Avenue.	Stripe high-visibility crosswalks on all approaches. Install curb extensions to reduce the pedestrian crossing distances and calm traffic in front of the High School.	Yes
5	Ventura Ave	N 3rd Street to N 15th Street	Sidewalks along Ventura Avenue but little permeability across Ventura Avenue.	Add marked crosswalks across Ventura Avenue near the Medical Center and intermittently along the corridor to highlight where major pedestrian flows occur. Install curb extensions at these locations to increase pedestrian visibility around parked cars and to calm traffic.	
6	Riverside Ave	N 1st Street to N 15th Street	Sidewalk presence varies (one side of roadway or none)	Sidewalk gap & crossing improvements throughout corridor.	Yes

TABLE 12: CITY OF CHOWCHILLA PEDESTRIAN PROJECT LIST

Corridor Number	Corridor/ Intersection Name	Extent	Existing Facilities	Proposed Facilities	SRTS
7	N 15th Street & Gill Way	Intersection Improvement	Fading crosswalks	Install high-visibility crosswalk and curb extensions on the westbound and northbound approaches to make pedestrians better visible to traffic and slow vehicles near the park.	
8	S 8th Street	Robertson Boulevard to Humboldt Avenue	Sidewalk presence varies (one side of roadway or none)	Sidewalk gap & crossing improvements throughout corridor	Yes
9	Stephens Elementary School - 6th Street Improvements	Ventura Avenue to Monterey Avenue	Sidewalk presence varies (one side of roadway or none)	Sidewalk gap & crossing improvements throughout corridor. Install high-visibility crosswalks near Stephens Elementary School. Install Rapid Rectangular Flashing Beacons and curb extensions at uncontrolled crossings.	Yes
10	CA-233 (Yosemite)	Washington Road to Palm Parkway	Sidewalk presence varies (one side of roadway or none)	Sidewalk gap & crossing improvements throughout corridor	

7. UNINCORPORATED MADERA COUNTY ACTIVE TRANSPORTATION NETWORK

Many of the foothill communities located in the eastern portion of Madera County came about during the California Gold Rush. The unincorporated foothill communities today serve as popular tourist destinations for lodging and outdoor recreation at nearby national parks. Many aging Baby Boomers seeking quiet and scenic second-home locations have also been moving into these rural areas. The 2010 Census total population for each community is ranked accordingly: Yosemite Lakes (4,952), Oakhurst (2,829), Coarsegold (1,840), Raymond (1,035), and Bass Lake (527). Other communities include Ahwahnee and North Fork.

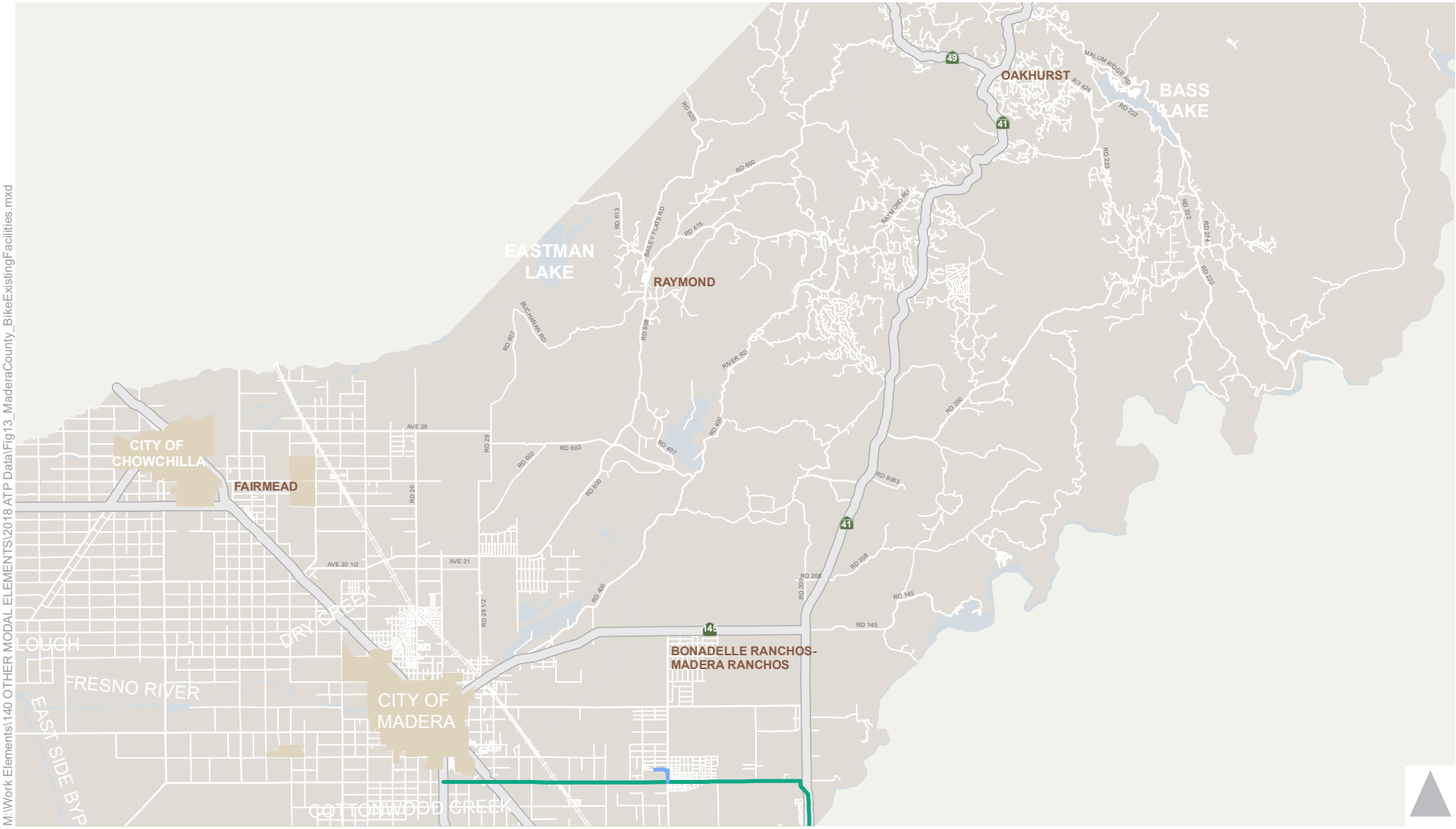
UNINCORPORATED MADERA COUNTY BIKEWAY NETWORK

This section provides an overview of the existing bikeways facilities in unincorporated Madera County and identifies the proposed future network for the unincorporated areas.

UNINCORPORATED MADERA COUNTY EXISTING BICYCLE NETWORK

Bicycle facilities vary between communities within unincorporated Madera County. Yosemite Lakes does not have designated bicycle facilities and preferred routes are not signed or striped to indicate where cyclists should travel. Bicycle and pedestrian facilities in Oakhurst are almost entirely absent in residential areas, although the Oakhurst (Fresno) River Parkway trail has been extended from the community park near SR 41 and Road 426 (Crane Valley Road West). Cyclists in the Oakhurst area primarily consist of long distance recreational riders who are used to sharing the road with vehicular traffic or use wide shoulders where available. Bicycle facilities are entirely absent in the communities of Coarsegold, Raymond, North Fork, and Bass Lake.

Many of the highways connecting these communities have no shoulder or have a small shoulder which cyclists can utilize. However, many of these highways (Caltrans facilities) are not signed for bicycle use, but see regular use by long-distance recreational riders.



Existing Bike Facilities

- Class I - Bike Path
- Class II - Bike Lane
- Class III - Bike Route

Figure 13

Existing Bicycle Facilities - Madera County Foothills

UNINCORPORATED MADERA COUNTY PROPOSED BICYCLE NETWORK

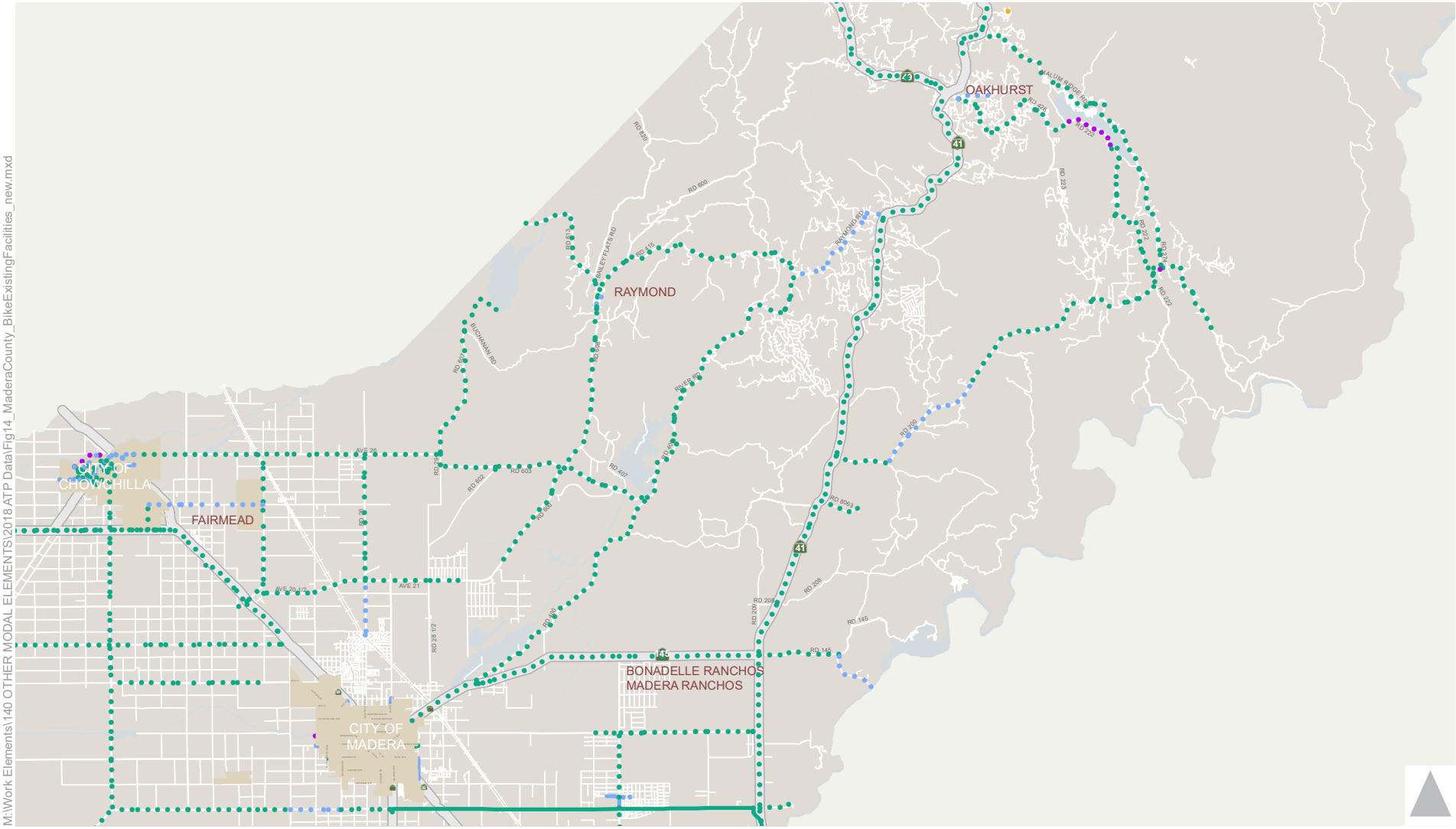
Proposed bicycle facilities in unincorporated Madera County will greatly improve access for both communities within the foothills and between the major urban centers in the western section of the county. This includes new facilities that provide connections between the various towns and cities of Madera County as well as within recreational areas in the foothills. **Figure 14** shows proposed bikeway facilities for unincorporated Madera County while **Table 14** shows the complete list of unincorporated Madera County bikeway network projects.

Priority Bikeway Network Projects

Using the prioritization criteria described in Chapter 9 of the ATP, the top priority bikeway corridors for unincorporated Madera County include the following:

TABLE 13: UNINCORPORATED MADERA COUNTY PRIORITY BIKEWAY PROJECTS

Rank	Corridor Number	Corridor Name
0	19.b, 21.A	Bass Lake Loop Bike Rt./North Fork Rd. - Road 274
0	4.A	Road 19 ½ - Fairmead
0	27.C	SR 41 Route - Southeast Madera County
1	14.A	Avenue 12 1/2 (Ruth Ave) – Madera Acres
1	17.A	Avenue 12 – Madera Ranchos
1	38.A	Raymond Road (Road 600) - Raymond
2	13.A – 13.C	Country Club Drive (Road 26) – Madera Acres



Existing Bike Facilities
- Class I - Bike Path
- Class II - Bike Lane
- Class III - Bike Route

Proposed Bike Facilities
- Class I - Bike Path
- Class II - Bike Lane
- Class III - Bike Route
- Class II.B - Buffered Bike Lane
- Class III.B - Bike Boulevard
- Class IV -Separated Bikeway

Figure 14

Existing & Proposed Bike Facilities - Madera County Foothills

TABLE 14: UNINCORPORATED MADERA COUNTY BICYCLE PROJECT LIST

Corridor Number	Location	Corridor Name	Extent	Existing Facilities	Proposed Facilities	Implementation	Length	Cost Estimate
1.A	Unincorporated Madera County - Fairmead	Fairmead Connector (Fairmead Boulevard)	Avenue 24 to Avenue 22 3/4	None	Class III.A Enhanced Bike Route	Capital Improvements - Widen Shoulders and add Rumble Strips	7,920	$4,370,256
1.B	Unincorporated Madera County - Fairmead	Fairmead Connector (Fairmead Boulevard)	Avenue 22 3/4 to Avenue 22 1/4	None	Class II.A Bike Lanes	Capital Improvements	3,750	$2,400,000
2.A	Unincorporated Madera County - Fairmead	Maple Street	Avenue 23 to Fairmead Boulevard	None	Class II.A Bike Lanes	Capital Improvements Alternative: Advisory Bike Lanes	3,200	$2,048,000
3.A	Unincorporated Madera County - Fairmead	Elm Street	Avenue 22 3/4 to Sinclair Drive	None	Class III.A Enhanced Bike Route	Capital Improvements Alternative: Advisory Bike Lanes	1,820	$1,004,276
4.A	Unincorporated Madera County - Fairmead	Road 19 1/2	Avenue 23 to Fairmead Boulevard	None	Class II.A Bike Lanes	Capital Improvements Alternative: Advisory Bike Lanes	3,600	$2,304,000
5.A	Unincorporated Madera County - Fairmead	Avenue 22 3/4	Fairmead Boulevard to Road 20	None	Class II.A Bike Lanes	Capital Improvements	5,260	$3,366,400
6.A	Unincorporated Madera County - Fairmead	Avenue 22 1/2	Fairmead Boulevard to Sycamore Street	None	Class II.A Bike Lanes	Capital Improvements Alternative: Advisory Bike Lanes	2,280	$1,459,200
7.A	Unincorporated Madera County	Avenue 24	Fairmead Boulevard to Road 22	None	Class III.A Enhanced Bike Route	Capital Improvements - Widen Shoulders and add Rumble Strips	19,800	$10,925,640

TABLE 14: UNINCORPORATED MADERA COUNTY BICYCLE PROJECT LIST

Corridor Number	Location	Corridor Name	Extent	Existing Facilities	Proposed Facilities	Implementation	Length	Cost Estimate
8.A	Unincorporated Madera County	Fairmead Connector (Fairmead Boulevard)	Avenue 22 1/4 to 20 1/2	None	Class III.A Enhanced Bike Route	Capital Improvements - Widen Shoulders and add Rumble Strips	14,940	$8,243,892
8.B	Unincorporated Madera County	Fairmead Connector (Avenue 20 1/2)	Fairmead Boulevard to Golden State Boulevard	None	Class II.A Bike Lanes	Signing, Striping, and Wayfinding	1,530	$99,450
8.C	Unincorporated Madera County	Fairmead Connector (Golden State Boulevard)	Avenue 20 to Avenue 18 1/2	None	Class III.A Enhanced Bike Route	Capital Improvements - Widen Shoulders and add Rumble Strips	11,880	$6,555,384
8.D	Unincorporated Madera County	Fairmead Connector (Avenue 18 1/2)	Golden State Boulevard to Road 23	None	Class II.A Bike Lanes	Signing, Striping, and Wayfinding	985	$64,025
8.E	Unincorporated Madera County	Fairmead Connector (Road 23)	Avenue 18 1/2 to Avenue 17	None	Class III.A Enhanced Bike Route	Capital Improvements - Widen Shoulders and add Rumble Strips	8,130	$4,486,134
8.F	Unincorporated Madera County/ City of Madera	Fairmead Connector (Avenue 17)	Road 23 to Airport Drive	None	Class II.A Bike Lanes	Capital Improvements	6,550	$4,192,000
9.A	Unincorporated Madera County - Madera Acres	Avenue 17	Airport Drive to Walden Drive	None	Class II.A Bike Lanes	Signing and Striping	4,280	$278,200

TABLE 14: UNINCORPORATED MADERA COUNTY BICYCLE PROJECT LIST

Corridor Number	Location	Corridor Name	Extent	Existing Facilities	Proposed Facilities	Implementation	Length	Cost Estimate
9.B	Unincorporated Madera County - Madera Acres	Avenue 17	Walden Drive to Crystal Drive	None	Class II.B Buffered Bike Lanes	Road Diet	5,490	$384,300
9.C	Unincorporated Madera County - Madera Acres	Avenue 17	Crystal Drive to Lake Street	None	Class II.B Buffered Bike Lanes	Capital Improvements	4,850	$3,259,200
10.A	Unincorporated Madera County - Madera Acres	D Street	Avenue 17 to Adell Street	None	Class II.A Bike Lanes	Capital Improvements	4,915	$3,145,600
11.A	Unincorporated Madera County - Madera Acres	Martin Street	Road 26 to D Street	None	Class II.A Bike Lanes	Capital Improvements	3,180	$2,035,200
12.A	Unincorporated Madera County - Madera Acres	Ellis Street	Krohn Street to Country Club Drive	None	Class II.B Buffered Bike Lanes	Capital Improvements	2,790	$1,874,880
12.B	Unincorporated Madera County/ City of Madera - Madera Acres	Ellis Street	Country Club Drive to Chapin Street	None	Class II.A Bike Lanes	Capital Improvements	9,500	$6,080,000
13.A	Unincorporated Madera County/ City of Madera - Madera Acres	Country Club Drive (Road 26)	Clark Street to Avenue 17	None	Class IV Separated Bikeways	Signing and Striping - Narrow lanes	5,915	$443,625

TABLE 14: UNINCORPORATED MADERA COUNTY BICYCLE PROJECT LIST

Corridor Number	Location	Corridor Name	Extent	Existing Facilities	Proposed Facilities	Implementation	Length	Cost Estimate
13.B	Unincorporated Madera County/ City of Madera - Madera Acres	Country Club Drive (Road 26)	Avenue 17 to Club Drive	None	Class III.A Bike Route	Capital Improvements	18,215	$36,430
13.C	Unincorporated Madera County/ City of Madera - Madera Acres	Country Club Drive (Road 26)	Club Drive to Avenue 21	None	Class I Multi-use Path	Signing and Striping	10,825	$1,299,000
14.A	Unincorporated Madera County - Bonadelle Ranchos-Madera Ranchos	Avenue 12 1/2 (Ruth Ave)	Road 35 1/2 to Road 36	Class II.A Bike Lanes	Class II.B Buffered Bike Lanes	Signing and Striping	2,630	$184,100
15.A	Unincorporated Madera County - Bonadelle Ranchos-Madera Ranchos	Road 36	Avenue 12 to Avenue 12 1/2	Class II.A Bike Lanes	Class II.B Buffered Bike Lanes	Road Diet - Protected Intersection at Road 36/Avenue 12 1/2 Alternative: Use Class IV on southbound bikeway	2,415	$169,050
15.B	Unincorporated Madera County - Bonadelle Ranchos-Madera Ranchos	Road 36	Avenue 12 1/2 to SR 145	None	Class I Multi-use Path	Capital Improvements Alternative: Class III.A Bike Route with widened shoulders and add rumble strips	31,840	$3,820,800

TABLE 14: UNINCORPORATED MADERA COUNTY BICYCLE PROJECT LIST

Corridor Number	Location	Corridor Name	Extent	Existing Facilities	Proposed Facilities	Implementation	Length	Cost Estimate
16.A	Unincorporated Madera County - Bonadelle Ranchos-Madera Ranchos	Berkshire Bike Boulevard	Blossom Ave from Road 36 to Road 36 1/2, Road 36 1/2 from Blossom Avenue to Berkshire Drive, and Berkshire Drive from Road 36 1/2 to Road 37 3/4	None	Class III.B Bike Boulevard	Traffic Calming, Signing, and Striping with Bicycle/Pedestrian Hawk Beacon at Road 36 Crossing to Liberty High School	9,720	$5,363,496
17.A	Unincorporated Madera County - Bonadelle Ranchos-Madera Ranchos	Avenue 12	Road 36 to Road 38	Class III.A Bike Route	Class II.A Bike Lanes	Signing and Striping - Narrow lanes to add 6' bike lanes	10,600	$689,000
18.A	Unincorporated Madera County - Bass Lake	Bass Lake Loop Multi-Use Path	Surrounding Bass Lake (Alignment to be Determined)	None	Class I Multi-use Path	Feasibility Study	58,080	Further Analysis Required
19.A	Unincorporated Madera County - Bass Lake	Bass Lake Loop Bike Route (Road 222)	Road 274 to Road 229A	None	Class III.A Enhanced Bike Route	Capital Improvements - Widen Shoulders and add Rumble Strips Alternative: Signing and Striping where widening not feasible	29,600	Further Analysis Required
19.B	Unincorporated Madera County - Bass Lake	Bass Lake Loop Bike Route (Road 274)	Road 222 to Central Camp Road	None	Class III.A Enhanced Bike Route	Capital Improvements - Widen Shoulders and add Rumble Strips Alternative: Signing and Striping where widening not feasible	34,200	$18,871,560

TABLE 14: UNINCORPORATED MADERA COUNTY BICYCLE PROJECT LIST

Corridor Number	Location	Corridor Name	Extent	Existing Facilities	Proposed Facilities	Implementation	Length	Cost Estimate
20.A	Unincorporated Madera County - Yosemite Forks	Yosemite Forks Route (Road 222)	SR 41 to Road 274	None	Class III.A Bike Route	Signing, Striping, and Wayfinding	18,000	$36,000
21.A	Unincorporated Madera County - North Fork	North Fork Route (Road 274)	Central Camp Road to Road 225 (North Fork)	None	Class III.A Bike Route	Capital Improvements - Add Rumble Strips	22,500	$12,415,500
21.B	Unincorporated Madera County - North Fork	North Fork Route (Road 225/Road 222)	Road 274 (North Fork Road) to Amber Ln	None	Class III.A Enhanced Bike Route	Capital Improvements - Widen Shoulders and add Rumble Strips	1,570	$866,326
21.C	Unincorporated Madera County - North Fork	North Fork Route (North Fork Road)	Road 222 to Road 221	None	Class III.A Bike Route	Capital Improvements - Add Rumble Strips	19,000	$10,484,200
22.A	Unincorporated Madera County - Fine Gold	Fine Gold Route (North Fork Road)	Road 221 to SR 41	None	Class III.A Bike Route	Capital Improvements - Add Rumble Strips	71,000	$39,177,800
22.B	Unincorporated Madera County - Bass Lake Annex	Fine Gold Route (Road 221)	Road 229A to North Fork Road	None	Class III.A Bike Route	Signing, Striping, and Wayfinding	19,400	$38,800
23.A	Unincorporated Madera County - North Fork	North Fork Connector (Road 222)	Road 221 to Road 225	None	Class III.A Bike Route	Signing, Striping, and Wayfinding	16,900	$33,800
24.A	Unincorporated Madera County - Oakhurst	SR 41 Complete Streets	Victoria Court to Rocky Cut Road	None	Class II.B Buffered Bike Lanes	Complete Streets Corridor Study	10,400	$6,988,800

TABLE 14: UNINCORPORATED MADERA COUNTY BICYCLE PROJECT LIST

Corridor Number	Location	Corridor Name	Extent	Existing Facilities	Proposed Facilities	Implementation	Length	Cost Estimate
25.A	Unincorporated Madera County - Oakhurst	Golden Chain Highway Route (SR 49)	Westlake Drive to SR 41	None	Class II.B Buffered Bike Lanes	Signing and Striping - Narrow lanes	4,860	$340,200
25.A	Unincorporated Madera County	Golden Chain Highway Route (SR 49)	County Limit to Westlake Drive	None	Class III.A Bike Route	Signing, Striping, and Wayfinding	43,150	$86,300
26.A	Unincorporated Madera County - Oakhurst	Crane Valley Road (Road 426)	SR 41 to High School Road	None	Class II.B Buffered Bike Lanes	Road Diet	2,330	$163,100
26.B	Unincorporated Madera County - Oakhurst	Crane Valley Road (Road 426)	High School Road to Road 222	None	Class III.A Enhanced Bike Route	Capital Improvements - Widen Shoulders and add Rumble Strips	35,200	$19,423,360
27.A	Unincorporated Madera County - Yosemite Forks	SR 41 Route	County Limit to Rocky Cut Road	None	Class III.A Enhanced Bike Route	Capital Improvements - Widen Shoulders and add Rumble Strips	44,150	$24,361,970
27.B	Unincorporated Madera County	SR 41 Route	Victoria Court to SR 145	None	Class III.A Enhanced Bike Route	Capital Improvements - Widen Shoulders and add Rumble Strips	136,000	$75,044,800
27.C	Unincorporated Madera County	SR 41 Route	SR 145 to Avenue 9	None	Class I Multi-use Path	Capital Improvements - Rolling Hills Utilities Trails/SR 41 Parallel	42,600	$5,112,000
28.A	Unincorporated Madera County - Rio Mesa	Road 204	SR 41 to San Joaquin River	None	Class IV Separated Bikeway	Future Development	13,200	$8,870,400

TABLE 14: UNINCORPORATED MADERA COUNTY BICYCLE PROJECT LIST

Corridor Number	Location	Corridor Name	Extent	Existing Facilities	Proposed Facilities	Implementation	Length	Cost Estimate
29.A	Unincorporated Madera County - Rio Mesa	Avenue 15	SR 41 to Road 204	None	Class IV Separated Bikeway	Future Development	71,000	$47,712,000
30.A	Unincorporated Madera County - Rio Mesa	Rio Mesa Boulevard	Road 204 to Avenue 12	None	Class IV Separated Bikeway	Future Development	21,100	$14,179,200
31.A	Unincorporated Madera County - Rio Mesa	Avenue 12	SR 41 to San Joaquin River	None	Class IV Separated Bikeway	Future Development	11,100	$7,459,200
32.A	Unincorporated Madera County - Rio Mesa	San Joaquin River Trail	Avenue 9 Interchange to North Fork Road (Road 206)	None	Class I Multi-use Path	Future Development	54,200	$36,422,400
33.A	Unincorporated Madera County - Rio Mesa	Friant Connector (Road 145)	SR 41 to North Fork Road	None	Class III.A Bike Route	Signing, Striping, and Wayfinding	17,475	$34,950
33.B	Unincorporated Madera County - Rio Mesa	Friant Connector (North Fork Road)	North Fork Road to San Joaquin River	None	Class II.A Bike Lanes	Capital Improvements	10,850	$6,944,000
34.A	Unincorporated Madera County - Rio Mesa	Children's Boulevard (Avenue 9)	Road 40 to SR 41	None	Class II.A Bike Lanes	Capital Improvements	11,000	$7,040,000

TABLE 14: UNINCORPORATED MADERA COUNTY BICYCLE PROJECT LIST

Corridor Number	Location	Corridor Name	Extent	Existing Facilities	Proposed Facilities	Implementation	Length	Cost Estimate
35.A	Unincorporated Madera County - Rio Mesa	Children's Boulevard (Avenue 9) Multi-Use Path	Crockett Way to SR 41	None	Class I Multi-use Path	Capital Improvements	5,100	$612,000
36.A	Unincorporated Madera County - La Vina	La Vina Elementary School Path	Road 23 from La Vina Elementary to Avenue 9 and Avenue 9 from Road 23 to Road 23 1/2	None	Class I Multi-use Path	Capital Improvements	5,100	$612,000
37.A	Unincorporated Madera County - La Vina	La Vina Bikeway (Avenue 9)	Road 23 1/2 to Road 24	None	Class II.A Bike Lanes	Capital Improvements Alternative: Extend La Vina Elementary School Path to Avenue 24	2,680	$1,715,200
38.A	Unincorporated Madera County - Raymond	Raymond Road (Road 600)	Road 606 to 1000 feet North of Road 613	None	Class III.A Enhanced Bike Route	Capital Improvements - Widen Shoulders and add Rumble Strips Alternative: Class I Multi-use Path	7,200	$3,972,960
Total Unincorporated Madera County Proposed Bikeway Project List Cost								**$445,321,644**

*Note: All other Class III.A Bike Route Facilities not included in the project list above are considered as "Signing & Striping" implementation

UNINCORPORATED MADERA COUNTY PEDESTRIAN NETWORK

The unincorporated valley floor communities of Madera Ranchos-Bonadelle Ranchos, Fairmead, Rolling Hills, and La Vina all feature similar gaps in pedestrian infrastructure. With a main thoroughfare through each community, sidewalks are normally minimally present, if present at all, which creates unwelcoming pedestrian environments. These communities often have a rural character and may feature sidewalks in residential areas. Marked crosswalks are sparingly implemented even across major highways in some of the smaller communities. Pedestrian-scale lighting is not present in any of the communities and minimal automobile-oriented lighting can provide intermittent nighttime visibility for pedestrians in a few instances.

The unincorporated foothill communities of Yosemite Lakes, Oakhurst, Coarsegold, Raymond, Bass Lake, and North Fork all feature similar pedestrian infrastructure due to the natural terrain and lower densities. With a main thoroughfare through each community, sidewalks are normally minimally present, if present at all, which creates unwelcoming pedestrian environments. Pedestrian facilities are almost entirely absent in residential areas and many streets end in dead end drives. Roadway shoulders are often used as pedestrian facilities where available. Lighting for either automobiles or pedestrians is generally absent due to rural, mountainous locations.

UNINCORPORATED MADERA COUNTY PROPOSED PEDESTRIAN FACILITIES

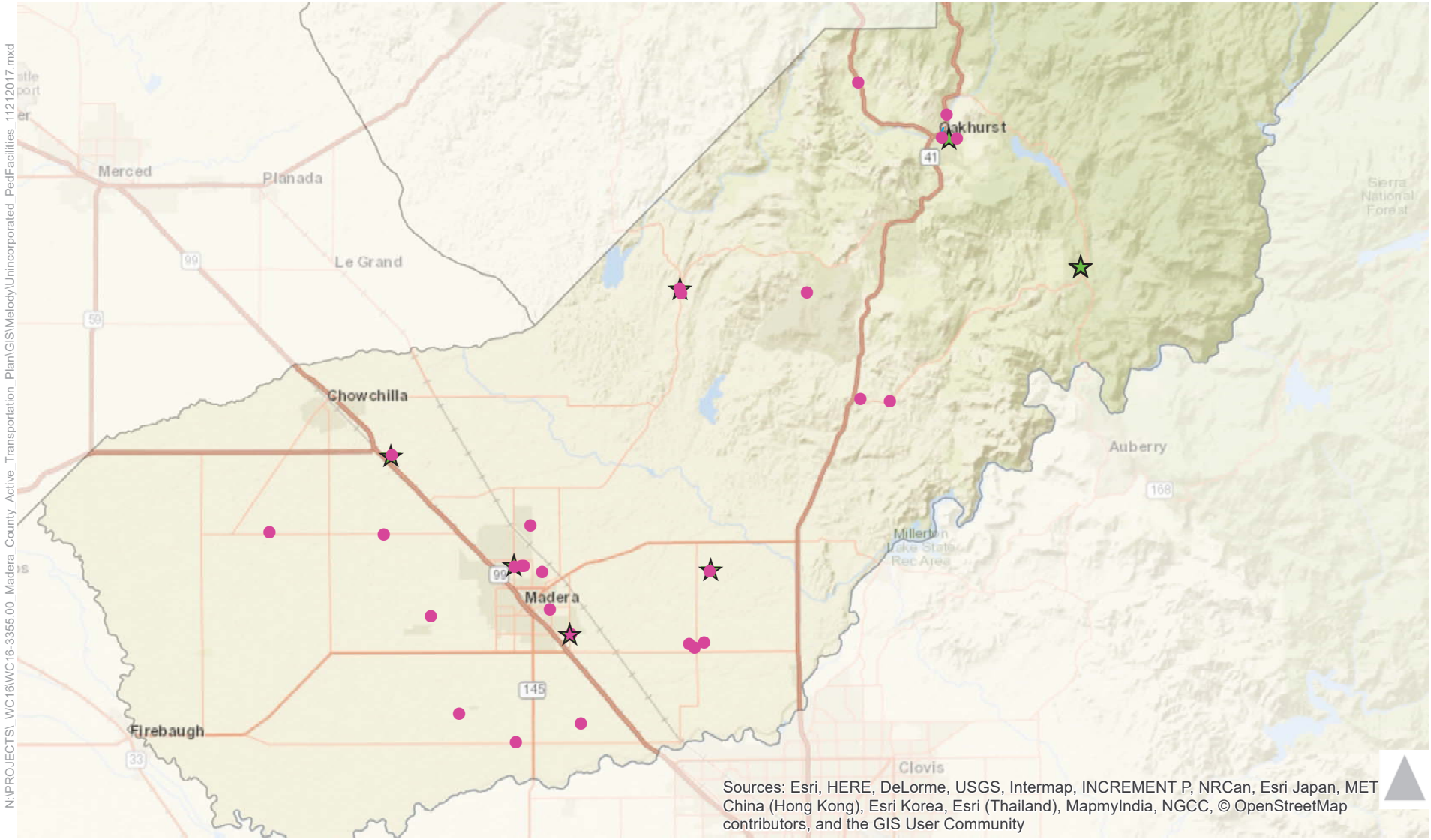
Proposed facilities highlight rural town centers, school access, important destinations for visitors, and other activity sites across unincorporated Madera County. The proposed projects address gaps in the intersection design, crossings, and other elements of the pedestrian realm. The County of Madera requested that priority projects be safe routes to school related. Figure 15: Unincorporated Madera County Proposed Pedestrian Projects depicts the proposed pedestrian projects while **Table 16** summarizes the list of pedestrian projects for unincorporated Madera County. Cost estimates are not provided due to the varying construction costs and the ability for projects to be included as components of larger streetscape projects.

Priority Pedestrian Projects

Using the prioritization criteria described in Chapter 9 of the ATP, the top priority pedestrian projects for unincorporated Madera County include the following:

TABLE 15: UNINCORPORATED MADERA COUNTY PRIORITY PEDESTRIAN PROJECTS

Rank	Corridor Number	Corridor
0	9	Maple Street – Fairmead
0	10	High School Road - Oakhurst
0	5-6	Avenue 12/Road 36 & Blossom Avenue - Bonadelle Ranchos/Madera Ranchos
0	12	Rd 225 (Amber Ln) & Rd 274 – North Fork
1	2	Country Club Drive (Road 26) & Martin Street – Madera Acres
1	7	Ave 22 3/4 & Maple Street - Fairmead
2	4	Avenue 12 & Fernwood Drive – Madera Ranchos
2	8	Multiple Corridors - Fairmead



- Schools
- Intersection Improvement
- Corridor Improvement

Figure 15

Unincorporated Madera County Proposed Pedestrian Facilities

TABLE 16: UNINCORPORATED MADERA COUNTY PEDESTRIAN PROJECT LIST

Corridor Number	Location	Corridor/ intersection Name	Existing Facilities	Proposed Facilities	SRTS
1	Raymond	Raymond Road & South Street	None	Install a Rectangular Rapid Flashing Beacon (RRFB) and high-visibility crosswalk striping across Raymond Road to provide access to Raymond-Knowles Elementary School.	Yes
2	Madera Acres	Country Club Drive (Road 26) & Martin Street	Sidewalks but no crossings	Install a Pedestrian Hybrid Beacon or Traffic Signal with the construction of the future High School adjacent to the existing Jack G. Desmond Middle School to provide pedestrian access to both schools. Use high-visibility crosswalk striping and curb extensions with tight corner radii.	Yes
3	Bonadelle Ranchos-Madera Ranchos	Ave 16 1/2 & Paula Road	Crosswalks with Triple Four Striping on three approaches	Install a high-visibility crosswalk on the westbound approach to provide access to Sierra View Elementary School.	Yes
4	Bonadelle Ranchos-Madera Ranchos	Avenue 12 & Fernwood Drive	None	Install a high-visibility crosswalk on the eastbound approach with a Rapid Rectangular Flashing Beacon (RRFB) to enhance the accessibility of transit facilities. Consider restricting left-turns onto Fernwood from Avenue 12 to provide a pedestrian refuge island.	
5	Bonadelle Ranchos-Madera Ranchos	Avenue 12	Sidewalk on one side of the roadway	Sidewalk Gap Closure: Construct a sidewalk on the north side Avenue 12 between Road 36 and Topper Road to provide access to Liberty High School and Ranchos Middle School.	Yes
6	Bonadelle Ranchos-Madera Ranchos	Road 36 & Blossom Avenue	Crosswalk with Ladder Striping	Pedestrian Hybrid Beacon (PHB) & ADA Improvements: Install a Pedestrian Hybrid Beacon on the south side of the intersection that also facilitates the proposed Bicycle Boulevard crossing. Install an ADA-accessible curb ramp and landing on the east side of the crossing. Consider relocating crosswalk to the north side of the intersection and installing a pedestrian refuge island to facilitate two-stage crossings.	Yes

TABLE 16: UNINCORPORATED MADERA COUNTY PEDESTRIAN PROJECT LIST

Corridor Number	Location	Corridor/ intersection Name	Existing Facilities	Proposed Facilities	SRTS
7	Fairmead	Ave 22 3/4 & Maple Street	None	Install high-visibility crossings on all approaches to provide access to Fairmead Elementary School. Assess the feasibility of installing all-way stop control.	Yes
8	Fairmead	Multiple Corridors	None	Sidewalk Gap Closure: Construct sidewalk gaps (multiple corridors - see map)	
9	Fairmead	Maple Street	None	Class I Multi-Use Path: Install a Class I Multi-Use Side Path between Avenue 23 and Fairmead Boulevard to provide access to Fairmead Elementary School.	Yes
10	Oakhurst	High School Road	None	Class I Multi-Use Path Connection: Install a multi-use path from Oakhurst Elementary School to Yosemite High School. Transition from the north side of High School Road to the south side at the Indian Springs Road intersection with a Rectangular Rapid Flashing Beacon (RRFB) and high-visibility crosswalk striping to utilize the existing pedestrian bridge on the south side.	Yes
11	Oakhurst	Highway 41	Sidewalk on one side of the roadway	Complete Streets Corridor Study: Include an assessment of sidewalk gaps, enhanced midblock crossings, reduced crossing distances, pedestrian-scale lighting, wayfinding, and transit accessibility.	
12	North Fork	Rd 225 (Amber Ln) & Rd 274	Intermittent sidewalks	Sidewalk gap closure; Install a Class I Multi-Use Path between Amber Ln and a pedestrian/bicycle bridge	Yes

8. EDUCATIONAL PROGRAMS AND SAFE ROUTES TO SCHOOL

Infrastructure improvements are only one part of a comprehensive walking and biking program. Chapter 8 describes the existing support programs active in the Madera region and provides targeted recommendations for continuing and enhancing those programs. Support programs consist of the so-called "E's:" education, encouragement, enforcement, and evaluation programs that supplement engineering improvements. Maintenance, wayfinding, and bicycle parking also play important support roles. The support programs recommended for the Madera region are listed below and described in more detail in the following sections:

- Safe Routes to School
- Education
- Enforcement
- Encouragement
- Evaluation
- Maintenance
- Wayfinding
- Bicycle Parking

SAFE ROUTES TO SCHOOLS

Providing safe routes for students to walk and bicycle to school has health and safety benefits in addition to reducing traffic congestion during pick-up and drop-off. Safe Routes to School programs are, therefore, focused on educating and encouraging children to safely walk and bicycle to school. Safe Routes to Schools (SRTS) refers to a variety of multi-disciplinary programs aimed at promoting walking and bicycling to school, and improving traffic safety around school areas through education, enforcement, and engineering measures. Under the 2006 ½ cent Transportation Sales Tax Measure Investment Plan, $93.7 million will be spent to improve each city's and the county's local transportation system for the Safe Routes to Schools and Jobs project.

Because Madera County is very agriculture-based, schools that lie in unincorporated parts of the county often have limited financial resources due to limited county budgets for making infrastructure improvements. Small communities can be overlooked entirely when it comes to funding opportunities and

may be passed up for infrastructure projects in favor of areas with a larger population. Therefore, in rural areas with a lack of safe infrastructure for pedestrians and bicyclists, schools and school districts sometimes feel the safest choice is to discourage children from walking and bicycling to school.

While some rural California communities are beginning to see the benefits of SRTS programs, many continue to struggle with common barriers to safely walking and bicycling to and from school including long travel distances, high traffic volumes and speeds, unsafe intersections and crossings, and the fear of crime and violence.

Local schools in Madera County often feature Walk or Bike to School Day events every year but have limited formal education programs for students on a regular basis. This is often a result of limited funding opportunities available in Madera County. Projects were prioritized throughout the Madera region in Chapter 9 for being in close proximity to or directly aiding schools.

RECOMMENDED ENHANCEMENTS

The following enhancements to the Safe Routes to School program are recommended for the Madera region:

- Create a unified Madera Region Safe Routes to School Program that conducts school safety walking audits at each school to identify engineering, education, enforcement, and encouragement programs that can be customized to the local context. This can be funded through grant programs.

EDUCATIONAL PROGRAMS

This section includes an overview of additional support programs that can be implemented throughout the Madera region.

MULTIMODAL SAFETY CAMPAIGN

Encourage development of a sustained multimodal safety education campaign using social media, online videos, bus shelters, yard signs, bumper stickers, radio messages, and billboard ads. One of the major issues identified by the community through the public outreach process was the need to educate drivers on proper behavior with bicyclists to maximize safety for all roadway users. The ad campaign could have separate ads to appeal to people who drive, bicycle, and walk, respectively. Seattle's safety focused materials include videos and ads: http://www.seattle.gov/visionzero/materials, and the City of Fort Worth has videos that

inform people of the new bicycle facilities in the community, such as separated bikeways: https://www.youtube.com/watch?v=N8k5FRIoTfQ. Focal points of the campaign may include:

Example of a safety campaign from North Carolina: http://www.watchformenc.org/

- Driver safety tips for interacting with bicycles and pedestrians
- Bicyclist safety tips for interacting with drivers and pedestrians
- Pedestrian safety tips for interacting with drivers and bicyclists
- Examples of the walking and/or bicycling distance and preferred route to get between popular destinations. For example, a campaign could advertise the short amount of time it takes to walk to Downtown from a nearby residential neighborhood or from BART to local employers
- Messages specific to safety trends identified through this Plan
- Messages related to new devices and treatment types recommended in this Plan such as pedestrian hybrid beacons, protected intersections, two stage turn boxes, and Class IV separated bikeways

THREE-FOOT PASSING LAW

Ensure residents are informed of the three-foot passing law, AB 1371, which requires drivers to stay at least three feet away when passing bicyclists.

ENFORCEMENT PROGRAMS

Enforcement activities vary widely across the Madera region. The following enhancements can be added to existing enforcement programs in all jurisdictions:

1. **Consider coordinating with the Police/Sherriff Departments** to seek funding to train all officers in walking and bicycling safety issues, and enforcement principles on rules of the road. For example, the Madison, Wisconsin Department of Transportation has developed a DVD in collaboration with the Madison Police Department to train traffic officers in pedestrian and bicycle issues (for more information see http://www.pedbikeinfo.org/cms/downloads/EDU.PedestrianSafetyEnforcementDVDs.pdf. The Bicycle Transportation Alliance in Portland, Oregon also offers Pedestrian Safety Enforcement Training (for more information see https://btaoregon.org/pedestrian-safety/.

2. **Consider Instituting a Bicycle Traffic School ticket diversion program** as allowed per California Vehicle Code Section 42005.3. This would reduce or remove the cost of a bicycle traffic ticket through attendance at free bicycle education workshops. These classes could be scheduled regularly with funding from local jurisdictions or Police Departments and be available to both ticketed individuals and the public.

3. **Consider education programs targeted at seniors who walk and drive**. For example, Walk Wise, Drive Smart is a program aimed at improving the pedestrian environment not only for the growing number of senior citizen pedestrians, but for all residents and visitors. It is a community program that holds educational workshops, walking audits, and feedback surveys. Activities are aimed at senior citizens, providing exercise at a pace and location comfortable to the participants, but open to all. For more information, see http://www.walk-wise.org/ and http://www.pedbikeinfo.org/cms/downloads/OTH.WalkWise,DriveSmart.pdf.

4. **Consider collaborating with Police Departments on pedestrian sting operations at areas of highest safety need**. Pedestrian stings target motorists who dangerously violate the right-of-way of pedestrians crossing the street, and especially motorists who do not stop for a pedestrian when cars in the adjacent lane have stopped. Such operations can also target pedestrians who make unsafe crossings. Stings are most effective on roadways and intersections with high pedestrian volumes such as highway crossings in the foothill communities. Pedestrian stings increase drivers' awareness of pedestrians at intersections; however, as the program is not an ongoing operation, changes in motorist behavior can be short-term. The cost of the program includes police officer staffing time. The Bend, Oregon Police Department received a $3,200 "mini-grant" of Federal funds to cover police officer overtime for six weeks.

ENCOURAGEMENT PROGRAMS

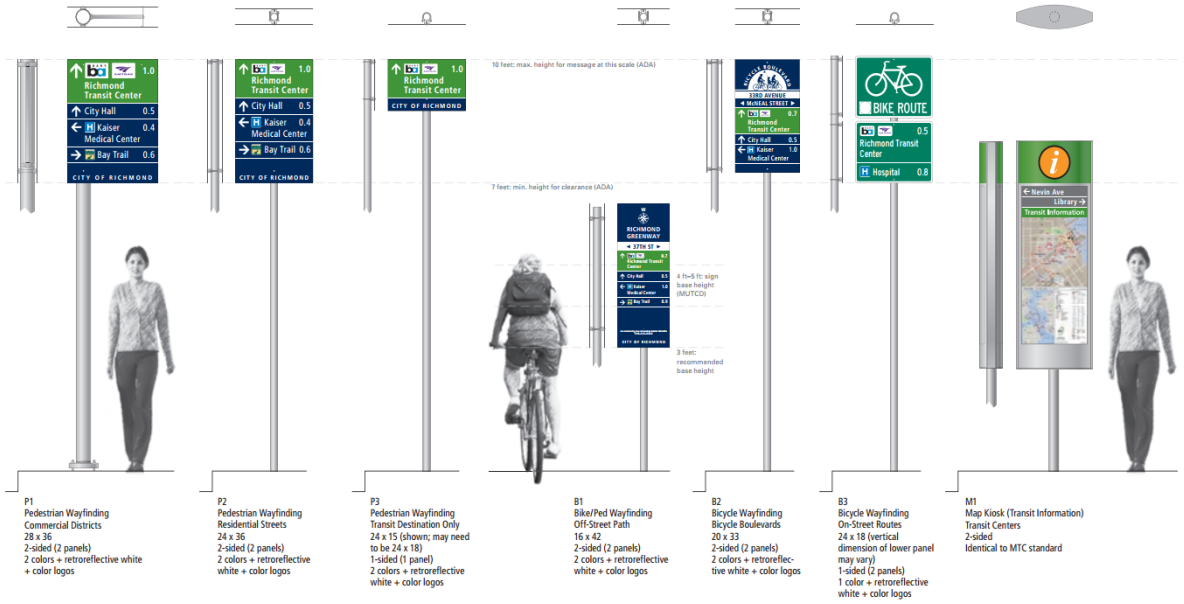
Encouragement programs incentivize or make it easier for people to walk and bicycle, particularly those who do not do so today. These types of programs can include Bike to Work and Bike School Days that currently exist in the Madera region. The following enhancements can be added to existing encouragement programs:

1. **Collaborate with employers and residential developers** to provide walking and bicycling financial incentives as part of transportation demand management (TDM) plans for new development to encourage walking and bicycling for short-trips including commute, recreational, and utilitarian trips.
2. **Require new commercial development to include secure bicycle parking and shower/change rooms.**
3. **Consider other walking-focused events** such as organized walks around popular destinations and include special events, farmer's markets or similar.

WAYFINDING PROGRAM

Wayfinding is important to provide reinforcement and education on the preferred walking and bicycling routes to use throughout the Madera region. Wayfinding is proposed as a key element of the bicycle and pedestrian projects, particularly for facilities such as bicycle boulevards that often snake through residential communities. Wayfinding is important on both trails and on-street bicycle networks, particularly on bicycle boulevards. Good wayfinding is at an appropriate height for bicyclists and pedestrians. Signs confirm directions to nearby destinations and typically include estimated time or distance to those destinations. Wayfinding can also serve a branding function for local destinations, communities, or jurisdictions.

Sample bicycle route wayfinding.



Local jurisdictions or communities could establish a branded wayfinding program similar to that developed by the West Contra Costa Transportation Advisory Committee (WCCTAC) Transit Enhancement Plan and Wayfinding Guide, shown above.

9. IMPLEMENTATION & FUNDING

This chapter details the overarching prioritization criteria used to select the key projects identified throughout this ATP. An implementation strategy is provided; however, it is up to each local agency to use this at their discretion since MCTC does not implement or construct projects.

PRIORITIZATION CRITERIA

Prioritization of the projects identified throughout the ATP is necessary to understand how the community would like to see the Madera region make investments in active transportation infrastructure. This also allows each local agency to select projects more strategically for grant applications. Projects are ranked as rank 0, 1, 2, 3, and onwards to reflect their priority in implementation. Projects identified as Rank 0 reflect the projects selected by local agencies as priorities within their jurisdictions. Subsequent rankings reflect prioritization from the score/prioritization process used in the planning process. The methodology for this scoring process based on criteria selected during the community outreach and addresses common grant funding criteria is outlined in **Table 17** below. For a complete list of the prioritized projects by jurisdiction, refer to Appendix D.

TABLE 17: PRIORITIZATION CRITERIA

Community Selected Criteria	Common Grant Criteria
1. Projects are located near schools or promote safe routes to schools (SRTS) 2. Projects are inexpensive and quick to construct 3. Projects promote spatial equity and cross-town connections 4. Projects promote socio-economic equity by implementing facility in disadvantaged neighborhoods	1. Projects address safety concerns or works to address areas with high numbers of collisions

EQUITY THROUGH PRIORITIZATION

To ensure the Madera Region ATP is sensitive to equity issues the community engagement process resulted in two of the five prioritization criteria being related to equity in terms of spatial and socio-economic distribution of investments. This was accomplished through use of a tool developed by the Office of Environmental Health Hazard Assessment (OEHHA) known as the California Communities Environmental Health Screening Tool (CalEnviroScreen). The data set identifies California communities burdened with

environmental pollution and socio-economic challenges. CalEnviroScreen has two major components: 1) Pollution Burden (Exposure and Environmental Effects) and 2) Population Characteristics (Sensitive Populations and Socio-economic Factors). **Table 18** summarizes the inputs included in the CalEnviroScreen data.

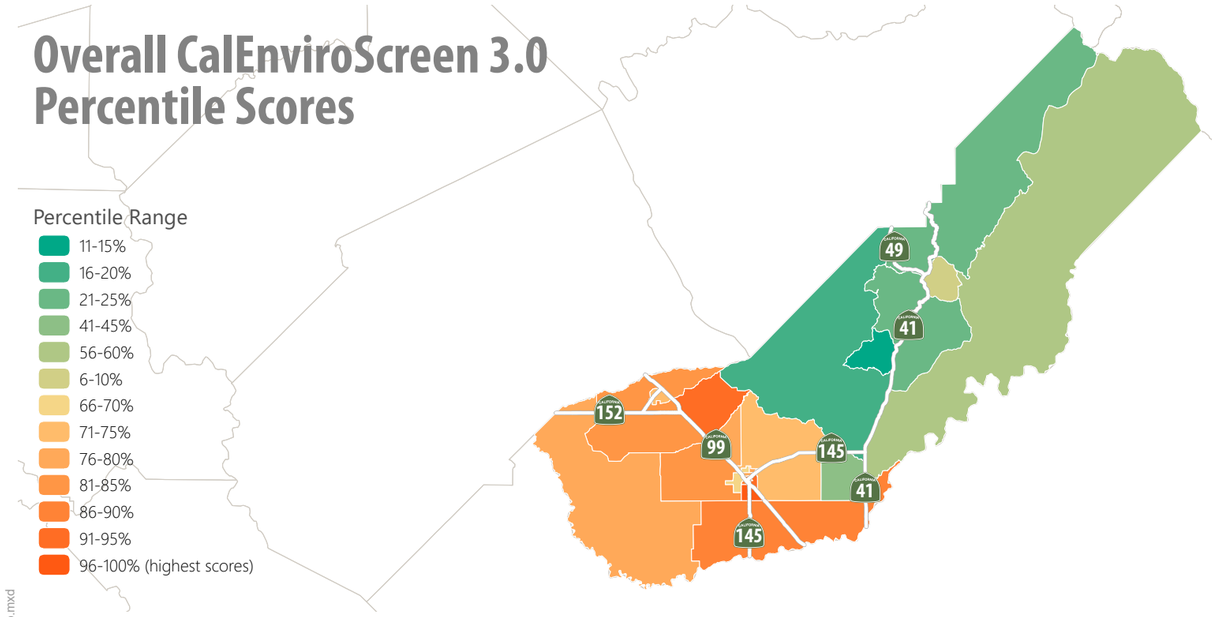
TABLE 18: CALENVIROSCREEN EQUITY INDICATORS

Pollution Burden	Population Characteristics
EXPOSURE • Ozone concentrations in air • PM 2.5 concentrations in air • Diesel particulate matter emissions • Drinking water contaminants • Use of certain high-hazard, high-volatility pesticides • Toxic releases from facilities • Traffic density	SENSITIVE POPULATIONS • Asthma emergency department visits • Cardiovascular disease (emergency department visits for heart attacks) • Low birth-weight infants
ENVIRONMENTAL EFFECTS • Toxic cleanup sites • Groundwater threats from leaking underground storage sites and cleanups • Hazardous waste facilities and generators • Impaired water bodies • Solid waste sites and facilities	SOCIO-ECONOMIC FACTORS • Educational attainment • Housing burdened low income households • Linguistic isolation • Poverty • Unemployment

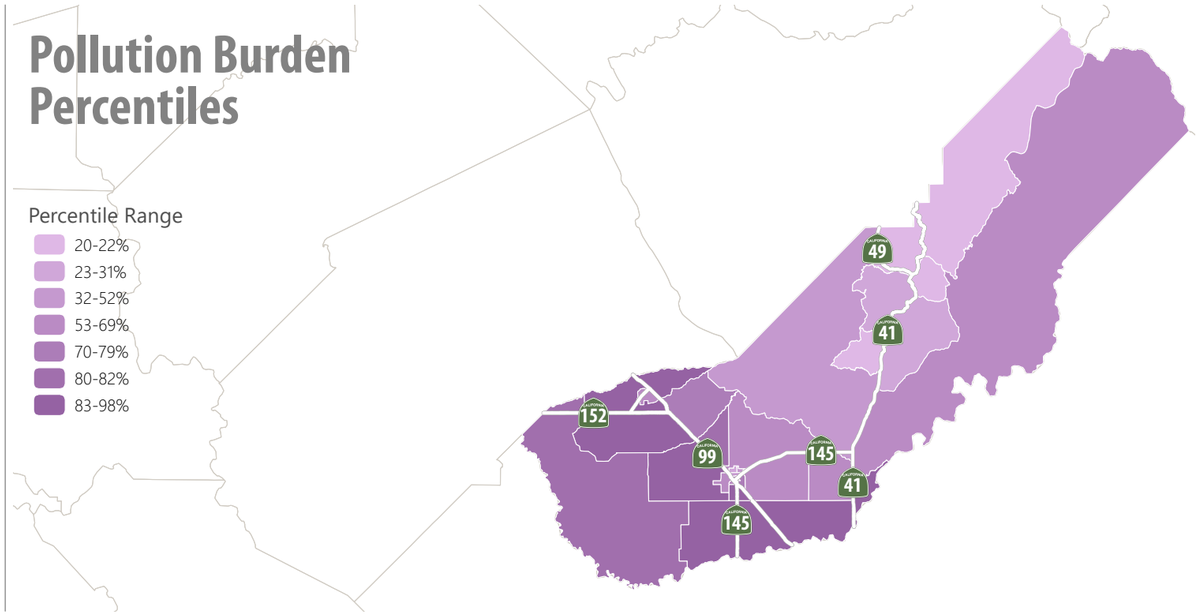
The overall CalEnviroScreen score therefore identifies disadvantaged communities based on geographic, socio-economic, public health, and environmental hazard criteria. The data was then used to assess whether the proposed projects were located in disadvantaged communities and were weighted higher in the prioritization. **Figure 16** summarizes the CalEnviroScreen Results for Madera County while more detailed maps can be accessed on OEHHA's website.

While specific data could be used to calculate the socio-economic equity, spatial equity implies that projects work to establish connections between neighborhoods and are not isolated projects. Connectivity must be increased between neighborhoods to qualify as promoting spatial equity; projects were assessed to see if they linked multiple neighborhoods or provided connections across major barriers.

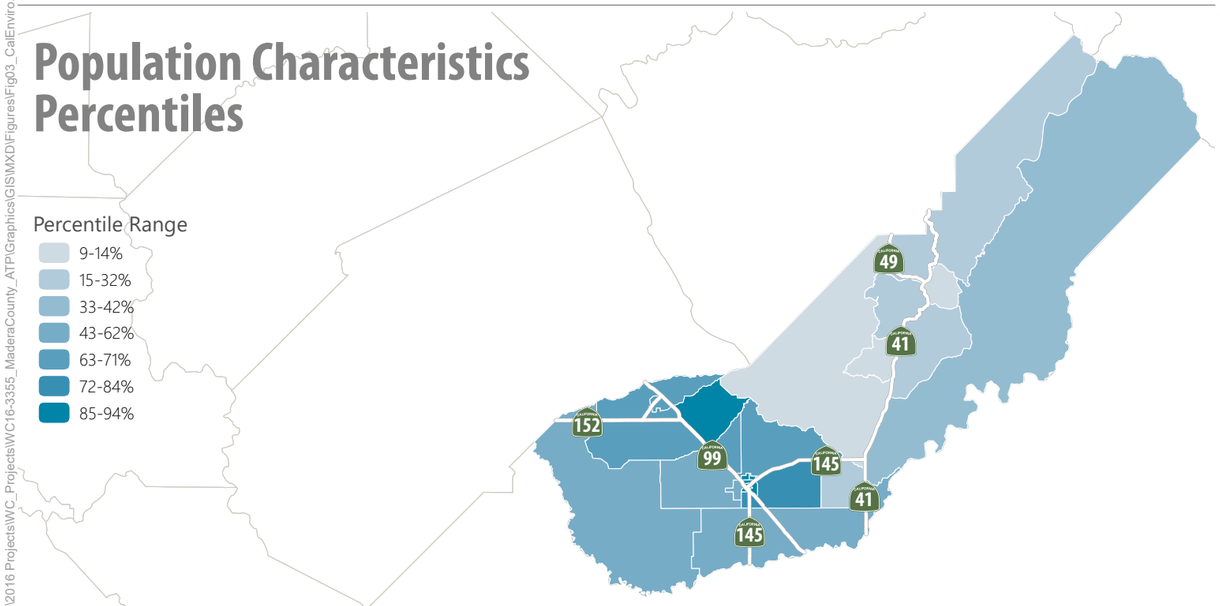
Overall CalEnviroScreen 3.0 Percentile Scores



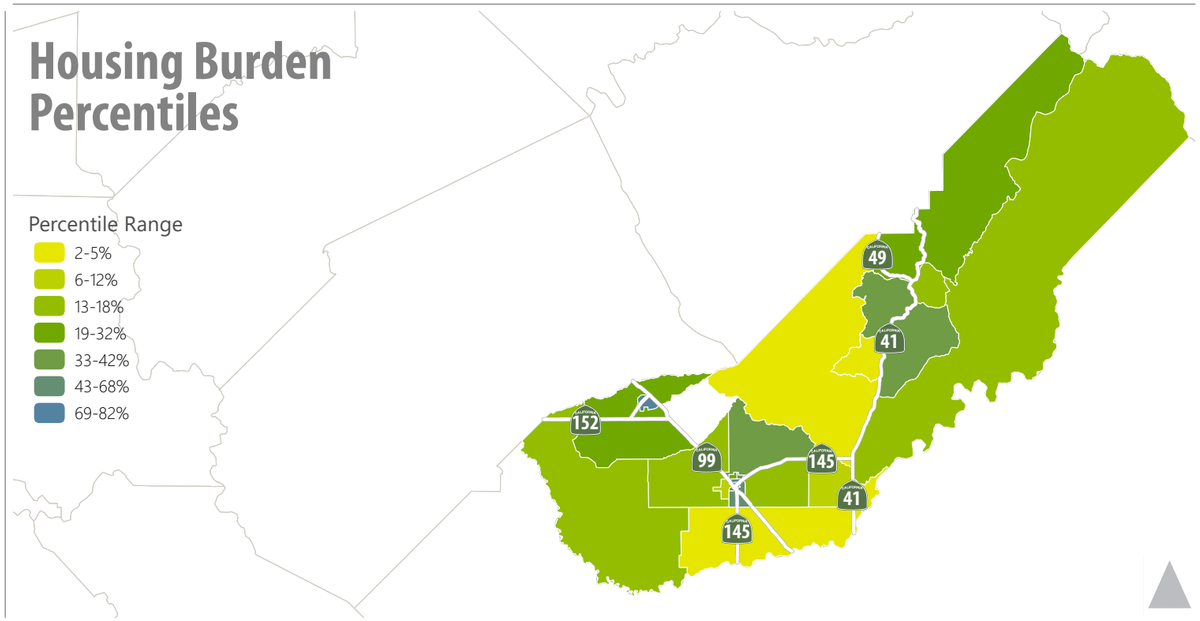
Pollution Burden Percentiles



Population Characteristics Percentiles



Housing Burden Percentiles



N:\2016 Projects\WC_Projects\WC16-3355_MaderaCounty_ATP\Graphics\GIS\MXD\FiguresFig03_CalEnviro.mxd

Figure 16

CalEnviroScreen 3.0 Results for Madera County

IMPLEMENTATION STRATEGY

Table 19 presents the implementation plan for the ATP, which will largely be carried out by local agencies since MCTC does not implement projects. This strategy includes recommended tasks that MCTC may monitor progress on as part of future funding criteria for ATP projects. Many of the implementation plan elements will be completed on an ongoing basis, and the table outlines which should be initiated upon plan adoption with demonstrated progress in the next five years. The table also identifies lead agency/partners, timeline, and relative cost for each action. While this plan provides a general road map of community priorities, in some cases lower priority projects may be implemented sooner as discrete opportunities arise, such as through repaving projects or development-related improvements.

TABLE 19: IMPLEMENTATION STRATEGY

Task	Task	Lead Agency/ Partners	Timeline	Relative Cost
Apply for and Secure Funding for Project Design & Construction	• Apply "80/20" rule for bicycle project funding, so that 80 percent of funding covers the highest need facilities and 20 percent of funding are reserved for spot/ as needed improvements. • Allocate funding or staff time to develop competitive grant applications to projects that will be highly competitive for funding, such as safety and complete streets projects with strong public support. • Refer to the Potential Funding Sources section of the ATP to identify available funding sources for each project in the prioritized project list.	Local Agencies, MCTC to provide guidance for funding sources	Ongoing, 5 Years	$$
Conduct Complete Streets Studies	• Seek grants for the Complete Streets studies identified as part of the ATP to plan for local contexts.	Local Agencies	Ongoing, 5-10 Years	$$$
Deploy Educational, Encouragement, and Enforcement Programs	• Work with the County Public Health Department and local agencies to establish a Countywide Safe Routes to School Program • Work with the Police Department to enhance and further development education, encouragement, and enforcement programs	Local Agencies, MCTC, Police Departments	Ongoing, 5 Years	$$-$$$

TABLE 19: IMPLEMENTATION STRATEGY

Task	Task	Lead Agency/ Partners	Timeline	Relative Cost
Enhance Maintenance and Ongoing Operations	• Develop a maintenance plan for trails and separated bikeways • Coordinate with Street Landscaping and Maintenance divisions to provide a well maintained bicycle network	Local Agency Public Works & Maintenance & Repair Services	Ongoing, 5 Years	$$

COST OF THE PLAN

The total cost of the all bicycle projects identified in the ATP are presented in order to provide a base for each local agency to seek funding opportunities for implementation. **Table 20** summarizes the cost to complete the Plan for all infrastructure-related projects by local agency. These are planning-level cost estimates that include contingencies. Each local agency will need to develop detailed estimates during the preliminary engineering stage as individual projects advance toward implementation and for pedestrian projects or pedestrian/bicycle bridges. Cost estimates for programmatic elements in the ATP are not provided as the scale of implementation and scope of work can vary drastically. Each local agency should outline the necessary components of each project and establish a cost prior to the implementation of education and support programs.

TABLE 20: ESTIMATED COST OF THE PLAN

Facility Type	New Miles	Cost
City of Madera		
Class I	5.4	$3,411,000
Class II Bike Lanes	26.4	$38,868,775
Class II Buffered Bike Lanes	11.5	$18,794,860
Class III Bike Route	1.8	$61,440
Class III Enhanced Bike Route	-	-
Class III Bike Boulevard	6.2	$2,251,489
Class IV Separated Bikeways (Striping & Soft-tipped Posts)	4.8	$8,167,500
Total City of Madera Plan Cost	***56.0***	***$71,555,064***

TABLE 20: ESTIMATED COST OF THE PLAN

Facility Type	New Miles	Cost
City of Chowchilla		
Class I	16.1	$20,298,000
Class II Bike Lanes	7.0	$11,065,050
Class II Buffered Bike Lanes	2.7	$2,365,690
Class III Bike Route	1.3	$13,560
Class III Enhanced Bike Route	4.4	$12,757,616
Class III Bike Boulevard	4.0	$1,390,150
Class IV Separated Bikeways (Striping & Soft-tipped Posts)	1.5	$5,322,240
Total City of Chowchilla Plan Cost	***37.0***	***$53,212,306***
Unincorporated Madera County		
Class I	39.3	$65,302,200
Class II.A	15.9	$43,860,275
Class II.B	6.8	$13,363,630
Class III.A	25.2	$266,280
Class III.A Enhanced	88.1	$256,537,338
Class III.B	1.8	$5,363,496
Class IV	23.2	$78,664,425
Total Unincorporated Madera County Plan Cost	***200.3***	***$463,357,644***
Total Madera Region ATP Costs	**293.4**	**$588,125,014**

For purposes of this ATP, conceptual construction costs for the proposed system were based on the following assumptions:

- New Class I facilities would be constructed on generally flat right-of-way with no grade separation and minimal grading needed; cost of right-of-way acquisition is not included. However, these assumptions can lead to differences for Class I facilities in the foothills where grading may be required.
- Most new Class II bikeways would require minimal or no roadway improvements, such as roadway widening, unless otherwise called out in the project description.

- New Class III bikeways would require sharrows and striping. Enhanced Class III Bikes Routes were considered similar costs to wider cross-section Class II Bike Lanes for planning purposes. Bicycle boulevards assume traffic calming measures would also be installed.
- New Class IV separated bikeways can vary substantially in cost, due to the wide variety of treatment types and materials used. It is assumed the City will primarily use striped buffers with plastic pylons in the near-term but install raised curb barriers and protected intersections in the long-term buildout of the Backbone Network.

MAINTENANCE COSTS

Multi-use path maintenance includes cleaning, resurfacing, and re-striping an asphalt path, repairing bridges and other structures, cleaning drainage systems, removing trash, and landscaping. While typical month-to-month maintenance may be low, deferred maintenance can lead to costly repairs.

The estimated annual maintenance expenses for shared-use paths is approximately $13,000 per mile for landscaping work, including monthly trash collection, biannual weeding and asphalt cleaning, and annual tree pruning. This annual estimate is in addition to slurry seal treatments, which should occur roughly once every ten years, and cost approximately $28,000 per mile (based on $4 per square yard and a 12-foot-wide trail, including restriping). If slurry seal is applied every 10 years, more expensive trail rehabilitation (i.e., pavement overlay and reconstruction) may not be necessary.

For bicycle lanes, the cost consists of maintaining pavement markings and striping. The estimated annual maintenance cost of $455 per mile consists of restriping (including the cost to restripe bike lanes and refresh stencils). This annual expense is in addition to sign replacement costs of about $2,000 per sign. Signs need to be replaced roughly once every ten years.

Class III Bike Routes & Bicycle Boulevard facilities will require maintenance of bike signs located along the bike route every ten years (with costs of about $2,000 per sign). However, Class III Enhanced Routes may require costs more closely associated with Class II facilities.

The cost for maintaining Class IV facilities depends on the type of bikeway constructed. If Class IV facilities are designed to be raised bikeways, then, maintenance costs are more similar to sidewalk maintenance costs, equating to approximately $132,000 per mile every ten years. For bikeways separated by painted buffer and a vertical element such as a bollard, per mile maintenance costs are approximately $15,000/year. It is also important to note that on street bikeway facilities (as opposed to off street, Class I trail facilities) are often repurposed vehicular road space, which would otherwise require vehicular pavement

maintenance. Total maintenance costs for on street bikeway facilities may be partially offset by cost savings to standard pavement maintenance.

TABLE 21: REGIONAL CONCEPTUAL ANNUAL MAINTENANCE COSTS

Facility Type	Description	Length of Proposed Facilities	Estimated Cost (2017 $)
Class I	Bicycle Path	60.9	$791,129.04
Class II.A	Bicycle Lane1	49.4	$22,477.27
Class II.B	Buffered Bicycle Lane	20.9	$9,531.31
Class III	Bicycle Route/Boulevard	40.3	Sign Replacement (Every 10 Years)
Class III	Enhanced Bike Route	92.4	$42,055.63
Class IV	Separated Bikeway	29.5	$441,917.76
Total Annual Maintenance Costs			**$1,307,111.00**

Costs are in 2017 dollars, excluding right-of-way costs. Cost do not include sign replacement and other maintenance that does not occur annually.

POTENTIAL FUNDING SOURCES

Federal, State, regional, county and local organizations provide funding for pedestrian and bicycle projects and programs. The most recent Federal surface transportation funding program, Fixing America's Surface Transportation Act (FAST), was signed into law in December 2015. This is the first long-term Federal transportation authorization enacted since 2012, and the first long-term funding since the signing of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) in 2005. The new authorization brings changes to typical funding sources and structures.

Since the Federal Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991, the biggest sources of funding for bicycle and pedestrian projects have included the Transportation Enhancements (TE) program, Surface Transportation Program (STP), Congestion Mitigation and Air Quality (CMAQ) program, Recreational Trails Program (RTP) and the Safe Routes to School (SRTS) program. In 2012, Moving Ahead for Progress in the 21st Century (MAP-21) combined the TE, SRTS and RTP programs into one Transportation Alternatives Program (TAP).

The FAST Act renames the STP the Surface Transportation Block Grant (STBG) program with TAP as a set-aside program of the STGB. TAP funding was set at 2% of all the core highway programs: about $835 million for FY 2017. Walking and bicycling projects remain an eligible project type for the larger STBG, as well as,

CMAQ and the Highway Safety Improvement Program (HSIP). FAST funding is distributed to Federal and State surface transportation funds. Most of these resources are available through the California Department of Transportation (Caltrans), and a limited number of programs through MCTC.

Measure T, administered by the Madera County Transportation Authority, is another important source of funding. The measure is a half-cent sales tax aimed at improving the overall quality of Madera County's transportation system. The Authority remains committed to working with the local agencies to move all programs forward simultaneously and strives to provide a balanced expenditure of Measure T funds throughout the County. This Local Transportation Program can be used on pedestrian and bicycle facilities and trails.

Tribal Transportation Funding is an additional source of funding. The Tribal Transportation Program (TTP), a program of the Federal Highway Administration, Office of Federal Lands Highway established in 23 U.S.C. 202, provides funds to Federally-recognized tribes for their transportation needs using a statutory formula based on tribal population, road mileage and average tribal shares of the former Tribal Transportation Allocation Methodology formula. The TTP and its associated TTP Bridge Program and TTP Safety Fund are the primary resources earmarked for tribes for transportation. A portion of these funds are available for Safe Routes to School and Recreational Trails projects. In 2016, the TTP program received $456 million under FAST.

Table 22 summarizes the applicability of these various funding sources to projects, planning efforts, and programs proposed in this Plan. The most applicable funding sources for the improvements proposed by this Plan are the Active Transportation Program and Highway Safety Improvement Program. The appendix includes details about current programs that are used to fund existing scheduled projects and an assessment of upcoming programs as of October 2017. These may change as State and local programs adapt to the new FAST funding.

TABLE 22: FUNDING SOURCES APPLICABILITY

Funding Source	Class I Bicycle Path	Class II Bicycle Lane	Class III Bicycle Route	Class IV Separated Bikeways	Pedestrian Projects	Other Projects	Planning and Programs
Congestion Mitigation and Air Quality Improvements Program (CMAQ)	◒	●	●	●	●	◒	◒
Regional Surface Transportation Block Grant (RSTBG)	●	●	●	●	●	●	●
Highway Safety Improvement Program (HSIP) Grants	◒	●	◒	●	●	●	○
Caltrans Transportation Planning Grants	○	○	○	○	○	○	●
Local Transportation Fund (LTF)	●	●	●	●	●	●	○
California State Parks Recreational Trails Program (RTP)	●	○	○	○	○	○	○
Land and Water Conservation Fund (LWCP)	●	○	○	○	○	○	○
Active Transportation Program (ATP)	●	●	●	●	●	●	●
Transportation Development Act (TDA)	●	●	●	●	●	●	●
Affordable Housing and Sustainable Communities Program (AHSC)	◒	◒	◒	◒	◒	◒	◒
California Office of Traffic Safety Pedestrian and Bicycle Safety Grants	○	○	○	○	○	○	●
Madera County Measure T	●	●	●	●	●	●	●
San Joaquin Valley Air Pollution Control District (SJVAPCD) Bikeway Incentive Program	●	●	●	○	○	○	○

Notes:

● Indicates that funds may be used for this category, ○ indicates that funds may not be used for this category, and ◒ indicates that funds may be used, though restrictions apply.

10. ATP EVALUATION & PERFORMANCE MEASURES

Performance measures related to active transportation can be implemented in multiple stages of the planning process. This includes project prioritization, construction, and after delivery. Performance measures can help communicate the value of potential planning efforts to project stakeholders, including community residents, politicians, and technical staff. During the construction process, performance measures can help local agencies monitor potential effects on surrounding business and residential communities. Performance measures can communicate the efficacy of improvements and policies over the long-term and help communicate success or areas for improvement.

SELECTING PERFORMANCE MEASURES

The first step of selecting performance measures related to active transportation projects is to identify the associated goals of a transportation infrastructure or planning project. Performance measures related to active transportation can reflect a diverse array of goals, including economic development, public health, and accessibility as encouraged by the draft Complete Streets Vision Statement. The performance measure categories include:

- Health and Safety: the impact of a project on the well-being and safety of network users.
- Multimodal Performance: the quality of travel experience across modes.
- Equity: the fair distribution of active transportation improvements and funding.
- Education: examine the effectiveness of active transportation programs in reaching a broad and diverse audience.
- Access: performance measures reflect the character of the built environment within a project area and the connectivity of its active transportation network.
- Infrastructure: these are broad in nature and evaluate the quantity and quality of active transportation facilities.
- Economic Development: characterize the influence of active transportation on local and regional economic performance.
- Placemaking: capture the sense of place created through art, landscaping and public amenities.

Performance measures can be generally categorized as *outputs* and *outcomes*, and the selection of performance measures should reflect a mix of both types. The main difference between these two categories is the level of control held by an agency or other entity in the result. For example, a transportation agency

can have direct control over the miles of bike lanes produced in a given municipality. While that agency might influence mode share in that municipality by improving bicycle facilities, they do not have direct control over mode share in the population. Miles of bicycle facilities are therefore an output, and mode share is an outcome.

ACTIVE TRANSPORTATION PERFORMANCE MEASURES

Based on the set of focus areas related to active transportation, the following are performance measures to be used by MCTC to evaluate the active transportation program performance through the region. New baselines may need to be evaluated by category.

TABLE 23: RECOMMENDED PERFORMANCE MEASURES

Focus Area	Metric	Description
OUTPUT METRICS		
Multimodal Performance	**Proximity to Transit** – Increase the number of projects located near transit.	The proximity of active transportation infrastructure to transit within Madera County.
Equity	**Proximity to Vulnerable Populations** – Increase the number of projects located in Disadvantaged neighborhoods.	The proximity of active transportation infrastructure to communities of concern within the region.
Access	**Facility Miles** – Encourage a construction pace of one corridor project per year for each jurisdiction.	The miles of active transportation facilities in a geographic area.
Access	**Facilities for School Access** – Increase the number of projects that directly benefit schools.	The amount of active transportation infrastructure in proximity to schools in a region.
Infrastructure	**Quality of Supportive Bike Parking** – Include bicycle parking as part of larger corridor projects or streetscape projects.	A measurement of the bike parking available nearby active transportation facilities.
OUTCOME METRICS		
Economic Development	**Sales revenue** – Collect data on sales revenue before and after the implementation of projects.	Sales revenue for a commercial district or larger area. As data on local sales revenue can be difficult to gather, surveys can be used to gather information from merchants.

TABLE 23: RECOMMENDED PERFORMANCE MEASURES

Focus Area	Metric	Description
Health and Safety	**Number of collisions** – Reduce the total number of fatal and severe bicycle and pedestrian collisions	Collision data can be used to understand baseline conditions as well as the performance of active transportation projects in terms of its effect on safety. Analyses can consider the number of collisions, the types of collisions, and the location of collisions to understand trends and impacts.
Multimodal Performance	**Mode Split** – Improve the percentage of all walking and bicycling trips by 2030 by 25%.	Mode split measures the distribution of trips within a geographic area by mode.