Calaveras County Active Transportation & Recreational Trails Plan

March 2026

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Introduction

Calaveras County is a place of scenic beauty, historic charm, and quaint but bustling rural communities located in the Sierra Nevada foothills. Rolling hills provide a home to the approximately 46,000 residents living in the county. As the county continues to grow and evolve, there is a pressing need to ensure that residents and visitors alike can safely and comfortably walk and bike for both transportation and recreation. The Calaveras County Active Transportation and Recreational Trails Plan (ATRTP) is a holistic planning document aimed at improving mobility, promoting public health, supporting environmental sustainability, and enhancing the quality of life for all who live, work, play, and travel in the region.

Calaveras County is comprised of one incorporated city (Angels Camp), and multiple unincorporated community areas. Some community areas are formally designated as a census designated place (CDP) while others are not CDPs but are designated communities in the Calaveras County General Plan. Communities are geographically dispersed throughout the county but there are larger clusters of development which serve the broader adjacent community areas. Although rural in nature, many of these small communities have a variety of land uses that are geographically spaced close together.

From a transportation perspective, many trips are short enough that they could be walking or biking trips; however, due to the fact that high volume, high speed roads (in many cases highways) with limited bicycle and pedestrian facilities provide the primary connection in most of these communities, many people rely solely on vehicles for transportation.

The ATRTP outlines a vision for a connected network of pedestrian, bicycle, and in some locations, equestrian, infrastructure that links communities, schools, parks, employment centers, and recreational destinations. The intent of the plan is to serve as a roadmap for creating safer, more accessible, and more inviting streets and trails through the following efforts:

- Identifying existing opportunities and constraints;
- Identifying key communities and locations in which active transportation facilities would improve access and mobility;
- Identifying areas in which new trails can be developed and/or existing trails can be expanded to provide more recreational opportunities;
- Prioritizing infrastructure improvements;
- Promoting policy and implementation strategies, including cost and funding opportunities

Public input has played a key role in shaping the ATRTP as ensuring the plan reflects the county's unique rural character and community values is critical. Through thoughtful planning and investment, Calaveras County can foster a culture of active transportation and develop a robust active transportation and recreational trail network that supports economic vitality, reduces traffic congestion, air pollution, and greenhouse gas emissions by reducing vehicle miles traveled, and helps preserve the natural environment for future generations.

The ATRTP is an important step toward making walking, biking and recreating safer, easier, and more enjoyable for everyone. The plan will help make the county and city eligible for new funding to create new trails, sidewalks, bike lanes, and other improvements towards walking and biking. The plan will support applications for funding from the statewide Active Transportation Program and other funding sources. This plan meets all requirements for active transportation plans as specified by the California Transportation Commission's 2025 Active Transportation Program Guidelines (adopted March 22, 2024). A summary of these requirements and where they are addressed within the plan is provided in Appendix A - Plan Conformance with ATP Guidelines.

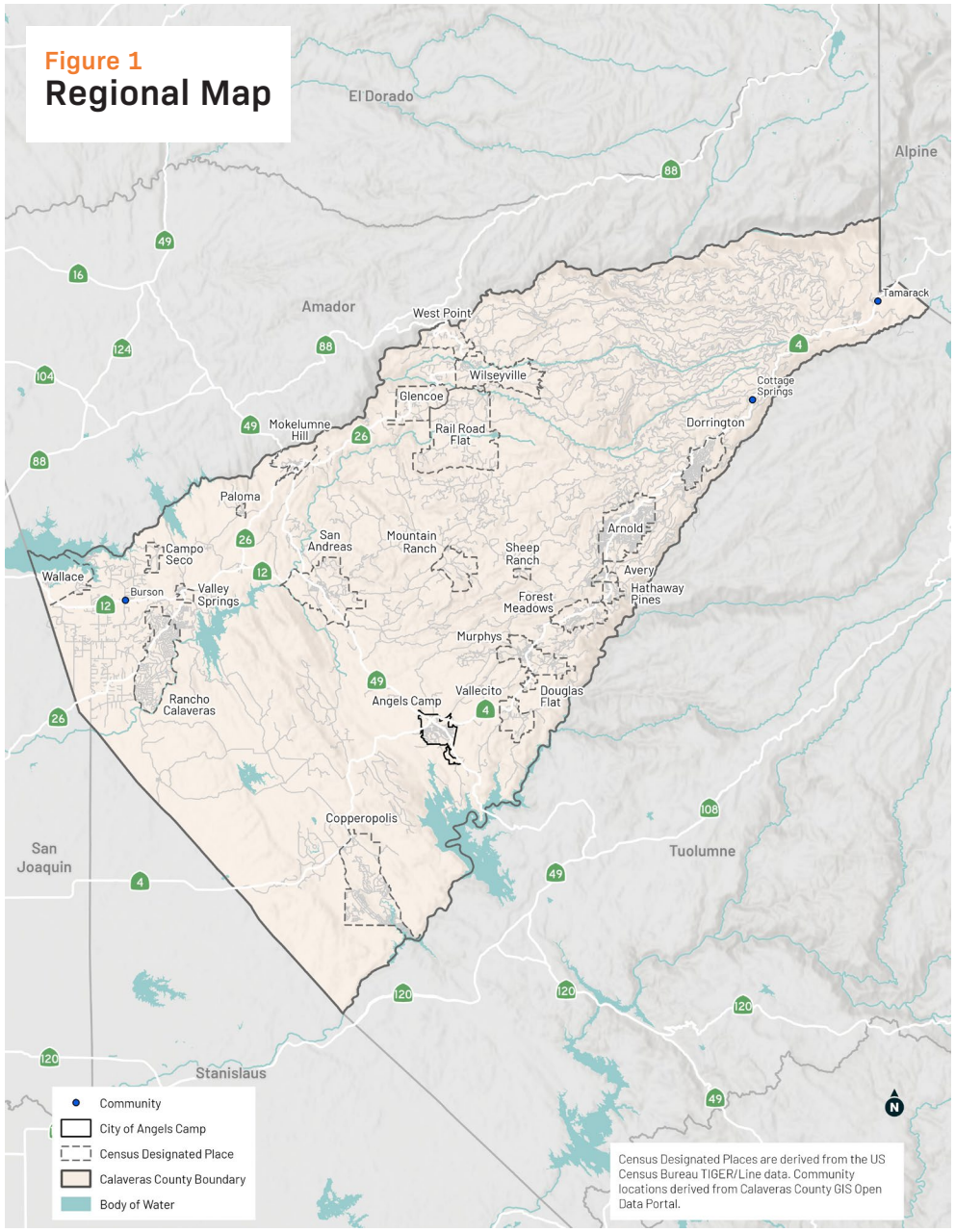
The goals for this plan were developed with consideration of other local and state plans and policies, desires of local residents, and emerging trends and opportunities in active transportation.

The 2015 Calaveras County Regional Bicycle, Pedestrian, and Safe Routes to School Master Plan, the Regional Transportation Plan, and the General Plan each have goals supporting increasing walking and biking. The California Transportation Plan, Caltrans Complete Streets Action Plan, and the Caltrans District 10 Active Transportation Plan also have specific goals and policies for increasing biking and walking that are also supported by this plan. Lastly, multiple community specific plans such as the San Andreas Pope Street and Safe Routes to School Gap Fill Plan, the Valley Springs Town Center Connectivity Plan, the Murphys SR 4 Complete Streets Corridor Plan and Project Prioritization, the Angels Camp North Main Street Plan and the SR 49 Complete Streets Corridor Plan and Copello Road Pedestrian Connector, among others, have been developed in recent years and include specific improvements aimed at supporting walking and biking throughout the County. These community plans were developed in coordination with local community members, schools, businesses and other stakeholders and served as a starting point for this ATRTP. These plans are described in greater detail in Appendix B - Relevant Plans and Policies.

Plan Goals

1. Develop facilities and programs to allow all people in the county to more easily and more safely get to where they need to go by walking and biking, including wheelchairs, scooters, and e-bikes.
2. Create a network of local bicycle and pedestrian facilities that connect residents to key destinations, including commercial shopping centers, employment centers, medical facilities, schools, parks, recreational trails and more.
3. Create a network of regional bicycle and in some cases, equestrian, connections that encourages both local residents and visitors to make longer distance recreational trips between various communities in the county and between communities and existing recreational facilities.
4. Consider all members of community when selecting facilities and prioritizing transportation modes.
5. Support implementation of the General Plan and Regional Transportation Plan.
6. Meet the requirements of the California Transportation Commission ATP guidelines.
7. Support successful funding applications for walking, biking, and recreational trail improvements.

Figure 1
Regional Map



Regional Context

Calaveras County is located in the western Sierra Nevada foothills, bordering the counties of Amador, Alpine, Tuolumne, San Joaquin and Stanislaus (see Figure 1). Calaveras is considered a gateway community for outdoor recreation as it provides access to many key destinations within and adjacent to the county including Big Trees State Park, Stanislaus National Forest, Bear Valley Mountain Resort, Yosemite National Park, and other various hiking, camping, and fishing key destinations. This plan includes walking and biking recommendations for the larger community areas including Angels Camp, Arnold, Burson/Wallace, Copperopolis, Mokelumne Hill, Murphys, Rancho Calaveras, San Andreas, Valley Springs, and West Point. Additionally, recommendations are included for bikeways and paths that connect these communities both to each other, and to recreational destinations.

Public Participation

Obtaining input from residents throughout the county was an important part of the ATRTP development process. The public helped identify recommended improvements to walking, biking, and recreational trail opportunities. The public outreach effort included the following:

- A booth at the four-day Calaveras County Fair & Jumping Frog Jubilee in May 2024 and 2025.
- Community meetings in Valley Springs and Angels Camp in July 2024.
- Attendance at the following pop-up events:
  - Music in the Park – San Andreas in July 2024
  - Music in the Park – Murphys in July 2024
  - Farmers Market – Valley Springs in May 2025
  - 4th of July Parade/Sierra Nevada Arts and Crafts Festival – Arnold in July 2025
- Stakeholder meetings in August 2024 and July 2025.
- Joint community meeting and stakeholder meeting in San Andreas in October 2025.
- Online survey which garnered 360 responses.
- Two online crowdsourced interactive maps:
  - The first map was used to display existing conditions and provide opportunity for the public to provide input on what improvements they'd like to see/identify areas of concern. This map was available for comment from May 2024 to November 2024. Input was used to develop the initial draft recommended projects.
  - The second map was used to display the initial draft recommended projects and provide opportunity for the public to easily review improvements and provide input on the recommendations. This map was available for comment from May 2025 to August 2025. Input was used to finalize the draft recommended projects.
- A website used to communicate information about the plan process throughout the project.
- Project advertisements through local newspapers and online through social media platforms and nextdoor.

Appendix C - Public Participation, provides additional details on public input received.

Active Transportation Facilities

Active transportation networks include several different types of infrastructure. Walking facilities include sidewalks, marked crosswalks, and shared-use paths/sidepaths. Bicycling facilities, in order from lowest stress and most comfortable to highest stress and least comfortable, include shared-use paths/sidepaths, separated bikeways, bike lanes, and bike routes. Bike parking also supports bicycling networks. Paved shoulders can also be used as an effective tool in promoting both walking and biking, particularly in areas with constraints. These improvements, as well as other treatments are introduced in this chapter and described in detail in Appendix D - Walking and Biking Facilities Toolkit.

Sidewalks

Sidewalks are paved areas immediately adjacent to the vehicular right-of-way for the use of pedestrians. Unlike shared-use paths, they are directly adjacent to the main right-of-way or may have minimal separation. Sidewalks may be used by people riding bicycles unless directly prohibited. Neither the Calaveras County or City of Angels Camp Municipal Codes prohibit bicycle riding on sidewalks; however, both prohibit skateboards and rollerskating.

Specifically, the City of Angels Camp Municipal Code Section 10.42 states:

"No person may propel or ride upon any skateboard or rollerskates on any sidewalk or roadway in the business district of the City of Angels or on any public access parking lot, any city property or sidewalks contained therein. The business district of the City of Angels is defined as the Main Street or State Highway 49 from the north end to the south end of the city limits of the city of Angels, Highway 4 to the city limits and Murphys Grade Road."

The Calaveras County Municipal Code Section 10.30 states:

"No person shall ride or propel skateboards, rollerskates, coasters, toy vehicles, or similar devices on public highways, sidewalks, roadways or parking lots in the unincorporated area of Calaveras County in such a manner as to interfere with the movement of vehicles or pedestrians thereon. "

Crosswalks

Crosswalks, which are street crossings for pedestrians, may be marked or unmarked. Marked crosswalks feature striping and other enhancements. These features may be used to to raise awareness of the crossing and to delineate the best place to cross. There are two types of marked crosswalks:

- **Controlled crosswalks** are located with stop signs or traffic signals.
- **Uncontrolled crosswalks** are located without stop signs or traffic signals. Under California law, drivers are legally required to yield to pedestrians at uncontrolled crosswalks.

Additional features can be added to crosswalks to increase visibility on busy streets:

- **High-visibility crosswalk markings** add additional striping to the pavement.
- **Warning signage** improves visibility of crosswalks and increases the likelihood that a driver will yield to or stop for pedestrians.
- **Curb extensions** decrease the pedestrian crossing distance at intersections and improve the visibility of pedestrians waiting to cross the street.
- **Median refuge islands** allow pedestrians to cross one direction of traffic, then wait in the center of the street to cross the other direction of traffic.
- **Rectangular rapid flashing beacons** (RRFBs) allow the pedestrian to activate a flashing light when crossing.
- **Pedestrian hybrid beacons** (PHBs) require traffic to stop for pedestrians when activated, but allow vehicles to proceed with caution after the pedestrian crossing has been completed.

More features are described in Appendix D.

Shared-Use Paths/Sidepaths

Shared-use paths, often referred to as a Class I Bike Path in the Highway Design Manual, or paved trails, are off-street facilities that provide exclusive use for non-motorized travel by both bicyclists and pedestrians (Figure 2). They are often utilized for both recreational and commute trips and are the preferred facility type for interested but concerned bicyclists. Shared-use paths are often referred to as sidepaths when located directly adjacent to a roadway. Because the broader facility design considerations (width and mix of user types) are the same for shared-use paths and sidepaths, they are grouped together for the purposes of this ATRTP. Shared-use paths/sidepaths provide an important recreational amenity for bicyclists, pedestrians, dog walkers, runners, skaters, and those using other non-motorized forms of travel.

Separated Bikeways

Separated bikeways, also referred to as cycle tracks, protected bike lanes, or a Class IV Separated Bikeway in the Highway Design Manual, are physically separated bicycle facilities located within or directly adjacent to the roadway that are designed for exclusive use by bicyclists. The key feature of a separated bikeway is a vertical element that provides physical separation from motor vehicle traffic (Figure 3), which helps create a level of comfort similar to shared-use paths/sidepaths. The type and characteristics of separation can vary but may include raised medians, landscaped area, large planters, painted buffers with flexible delineator posts, parked vehicles, other fixed barriers, or an elevation change between the bikeway and roadway. Separated bikeways can be either one-way or two-way, accommodating a single direction of travel or both.

Figure 2: Shared-Use Path

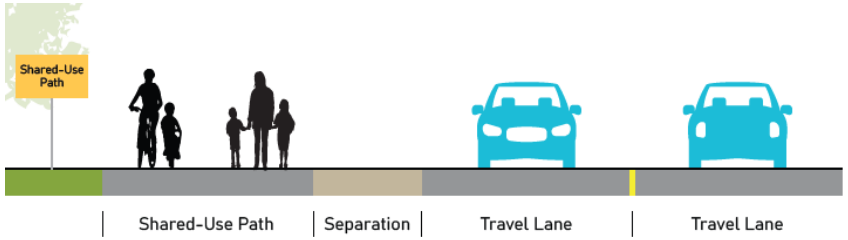
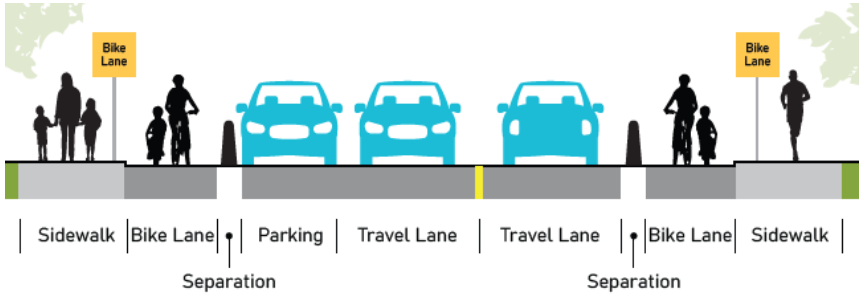


Figure 3: Separated Bikeway

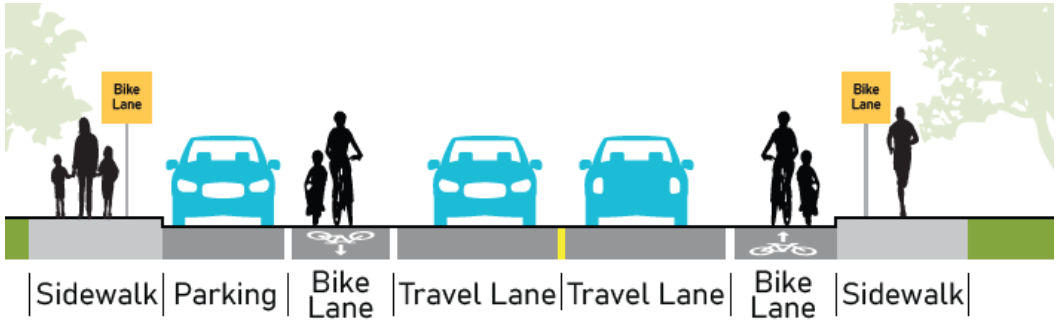


Bike Lanes

Bike lanes, also referred to as a Class II Bike Lane in the Highway Design Manual, are on-street facilities that use striping, stencils, and signage to designate an exclusive or preferential space for bicyclists. A bike lane is located directly adjacent to motor vehicle traffic and follows the same direction of travel as motor vehicle traffic (Figure 4). Bike lanes provide adequate space for comfortable riding and alert drivers about the predictable movements of bicyclists.

Buffered bike lanes are similar to bike lanes but have an additional painted section of pavement that provides space between bike and motor vehicle travel lanes. The total bike lane width encompasses the buffer and the bike lane width.

Figure 4: Bike Lane



Bike Routes

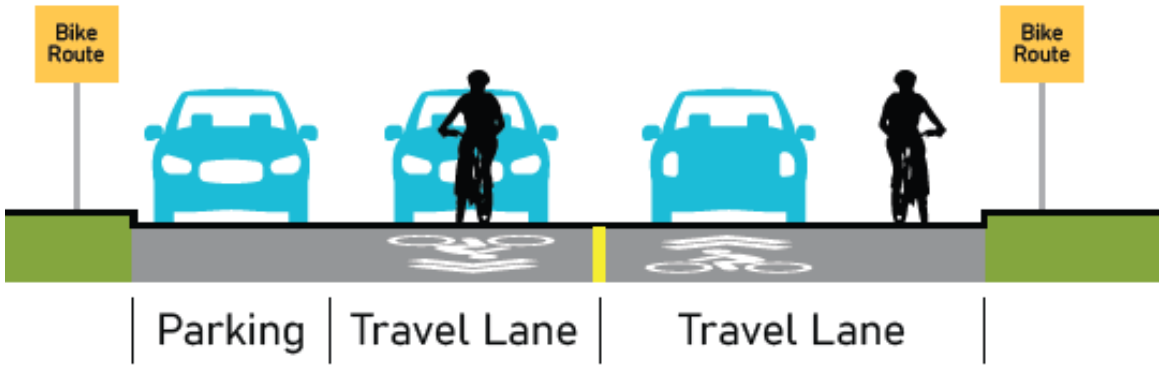
Bike routes, also referred to as a Class III Bike Route in the Highway Design Manual and in some cases, as a Bike Boulevard, are low-stress shared roadways designed to offer priority for bicyclists traveling within a roadway shared with motor vehicles (see Figure 5). Bike Routes are often utilized on low-speed, low-volume roadways to connect to bike lanes or paths and include signage and in some cases, shared-lane markings (sharrows), to alert drivers to the presence of bicyclists. Additional traffic calming features such as speed humps or tables, raised crosswalks, chicanes, etc. can be paired with signage and striping to reduce speeds and increase comfort.

Bicycle boulevards are enhanced bike routes that are intentionally located on low-volume, low-speed local streets and include other features designed to make a low-stress, comfortable, attractive bikeway that prioritizes bicycle travel. These features include shared lane markings, wayfinding signs, and traffic calming features, including at crossings with higher volume arterials. Physical and non-physical measures such as signs, pavement markings, speed lumps, and low or reduced vehicle speeds are utilized to discourage through trips by motor vehicles and create safe, convenient bicycle access.

Sharrows, or shared-lane markings, are a common bike route pavement marking that alerts drivers that bicyclists are sharing the road and facilitate wayfinding through neighborhoods.

Bike Routes in West Point

Figure 5: Bike Route



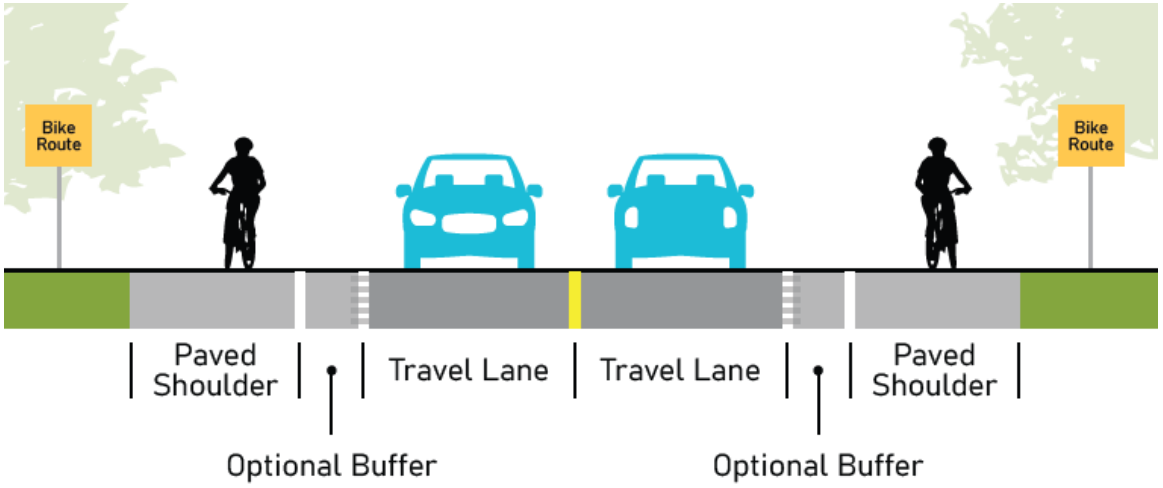
Paved Shoulder

A paved shoulder is a paved area on the edge of the roadway which can be enhanced to serve as a functional travel space for bicyclists and pedestrians in the absence of other facilities with more separation (Figure 6). In Calaveras County, paved shoulders can be an effective tool for providing walking and biking space particularly in constrained locations or in locations where vehicles may need to utilize the shoulder for maintenance, emergency purposes, farm equipment, or even horseback riding.

Buffered paved shoulders can be beneficial for increasing comfort and distance between bicyclists/pedestrians and vehicles. The ATRTP specifically recommends buffered paved shoulders for some locations (generally areas with high speeds and/or volumes) and does not differentiate between buffered and non-buffered in others. However, a buffer can and should be evaluated for all locations where a paved shoulder is recommended, it is just more critical to provide in locations with higher motor vehicle speeds and/or volumes.

Signage is critical when implementing paved shoulders for bicycle or pedestrian use as it communicates to motorists that bicycles and pedestrians may be present in the shoulder. The ATRTP recommends paved shoulders with designated recreational route signage and paved shoulders with bike route signage. Recreational route signage is recommended for locations anticipated to serve both bicyclists and pedestrians and may be used for a variety of trip types. Bike route signage is recommended for locations anticipated to primarily serve bicyclists and is generally recommended on routes anticipated to serve longer distance recreational trips.

Figure 6: Paved Shoulder



Bicycle Parking

Bicycle parking encourages ridership by supporting the final stage of a bicycle trip. Locations with high ridership are excellent candidates for bicycle parking, including civic, residential, commercial, and office spaces. At these locations, both short-term and long-term parking should be accommodated.

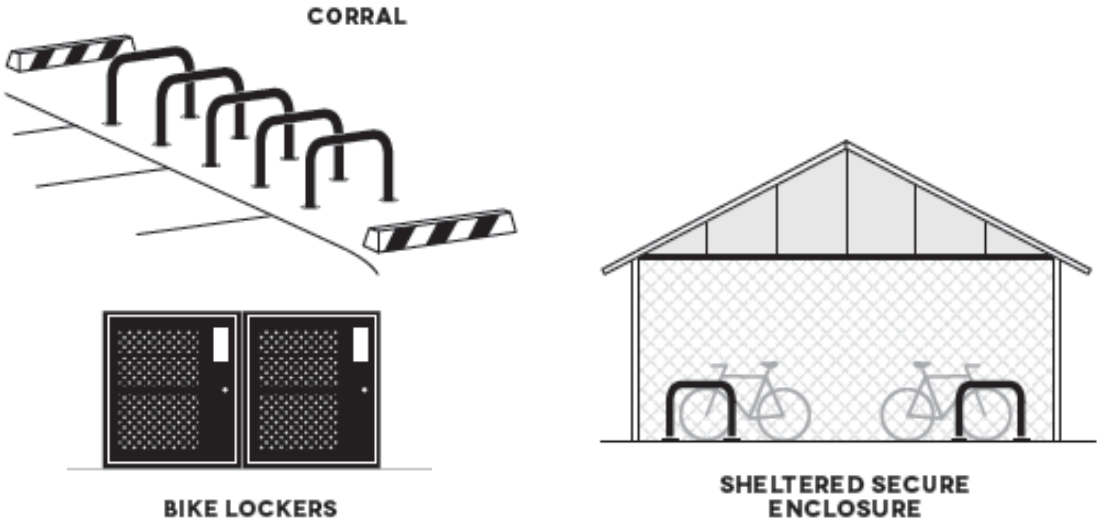
Short-term bicycle parking is temporary bicycle parking intended for visitors. Bicycle racks are a common form of short-term parking. Bicycle racks in front of stores and other destinations allow patrons to park their bike for short periods. Bike parking should be located in well-lit areas to discourage theft. Installing permanent bicycle racks near main entrances also helps bicyclists feel welcome and encourages them to ride their bicycle again on a return trip. Bicycle racks that allow at least two points of contact, such as the wheel and frame, provide the most protection against theft and accidental damage.

Source: Fehr & Peers.

Long-term bicycle parking is intended for employees, students, commuters, and residents to protect bicycles for extended periods. Long-term facilities are more secure than short-term and should fully protect bicycles from theft and weather. Long-term bicycle parking includes bike lockers, bike cages, and bike rooms:

- Bike lockers are outdoor enclosures that accommodate one or two bicycles and are usually leased on a monthly basis or paid short-term use.
- Bike cages are fully enclosed, roofed shelters that house racks of bicycle parking, typically found at schools.
- Bicycle rooms are found inside office or residential buildings, and provide secure indoor parking. Bicycle rooms may feature amenities such as bike pumps and quick-fix tools for employees and residents.

The Association of Pedestrian and Bicycle Professionals (APBP) Essentials of Bike Parking: Selecting and Installing Bike Parking that Works (2015) provides guidance for planning and installing bike parking facilities that are effective and secure.



Source: APBP, Essentials of Bike Parking: Selecting and Installing Bike Parking that Works (2015).

Traffic Calming

Traffic calming devices include a wide range of design treatments capable of reducing vehicle speeds and thus improving the safety and comfort of the transportation network for all users. Reducing vehicle speeds makes travel safer for both bicycles and pedestrians. Traffic calming devices may employ vertical deflection, as with speed bumps, or horizontal deflection as with curb extensions.

Narrowing traffic calming devices are a sub-category of horizontal deflection traffic calming devices. Wider roads are associated with greater crash rates and higher impact speeds. Narrowing roadways often leads to decreased vehicle speeds and improves safety.

Restriping narrower travel lanes for vehicle traffic can reduce motor vehicle speed. In many locations, interior traffic lanes can be narrowed to 10 feet or less to encourage lower speeds. Narrow lanes can make room in the roadway right-of-way for painted medians, center turn lanes, bicycle lanes, or parking.

Emerging Trends and Opportunities

New technologies and changes in California regulations that have emerged in the last several years are supporting expanded use of active transportation.

Electric bikes and scooters are two expanding technologies that provide both new opportunities and challenges. These devices can be partially or fully powered but also share facilities with other users. There is a range of types of e-bikes, scooters, and other devices. State law governs where these devices may be used but also allows local jurisdictions to enact more restrictive rules on where they may be used. A review of these devices and regulations governing their use is included in Appendix D.

Vehicle miles traveled (VMT) has become the standard for measuring transportation impacts under the California Environmental Quality Act since the implementation of California Senate Bill 743. Walking and biking, including using electric bikes and scooters, helps reduce VMT directly. Walking and biking also support greater use of transit, further reducing VMT. The Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity, released by the California Air Pollution Control Officers Association, is a good guide for estimating these reductions. The Calaveras County SB 743 Vehicle Miles Traveled Implementation Report (Calaveras Council of Governments and Fehr & Peers, April 13, 2022) also provides community-scale and project-scale transportation demand management strategies, including bicycle and pedestrian related strategies, that could be used to assist in reducing VMT.

Existing Conditions

As previously noted, Calaveras County is comprised of one incorporated city (Angels Camp), and multiple unincorporated community areas. Some community areas are formally designated as a census designated place (CDP) while others are not CDPs but are designated communities in the Calaveras County General Plan.

Demographic Fast Facts

Population: 46,000 residents

Age: Median age is 52 years old which is higher than the statewide median age of 38

Income: Median household income is $79,877 which is lower than the statewide average of $96,334

Based on US Census Bureau 2024 ACS 5-year estimates

Communities are geographically dispersed throughout the county but there are larger clusters of development which serve the broader adjacent community areas. Although Calaveras County is rural in nature, many of the small communities have a variety of land uses that are geographically spaced close together with relatively flat terrains that are suitable for walking and biking.

However, the following key barriers limit the ability for people to safely and comfortably walk or bike in the county:

- **Lack of Existing Facilities** - Limited bicycle and pedestrian facilities exist in most community areas, including along state highways which often function as a Main Street. In many communities, highways are the primary roadways that provide internal access within and between communities. High volumes and speeds on highways combined with lack of facilities was the primary constraint identified during the public outreach effort of the ATRTP.
- **Topography and Distance** - Rolling hills and long distances generally separate the various communities from each other.
- **Weather** - Summer temperatures are generally high and winter temperatures can be cold, rainy, and even snowy (in the eastern part of the county).

Despite these barriers, walking and biking is common in some communities and recreational bicycling is popular, especially in the spring and fall.

SR 26 in Valley Springs

Transportation Modes

Due to the rural nature of Calaveras County and active transportation barriers previously described, the automobile is the primary mode of travel for residents and transit, walking, and biking is less prevalent. According to the US Census Bureau 2023 American Community Survey (ACS) 5-Year Estimates, Calaveras County has approximately 17,600 workers 16 years and over; 62 percent live and work in Calaveras County. Within the City of Angels Camp, there are approximately 1,300 workers 16 years and over, approximately 39 percent work within the city and 44 percent work within the county but outside of city limits.

Approximately 81 percent of Calaveras County residents and 72 percent of Angels Camp residents commute by car, truck or van, resulting in approximately 14,230 trips to work by vehicle per day in the county and 920 trips to work by vehicle per day in the city.

While the ATRTP is a countywide plan, commuting trends for both the City and County are displayed in Figure 7 and walking and biking trips to work are displayed in Table 1. As displayed, the percentage of commuters who walk to work is higher for the city and similiar for the county when compared to the state average. In particular, walking represents a very high share of commute trips in the City of Angels Camp. It is also important to note that these statistics only include workers who walk or ride to work every day, not those who do so occasionally. Thus, the total number of walking and biking trips is likely greater than shown. Additionally, it is noted that approximately 14 percent of workers in the county and 10 percent of workers in the city work from home.

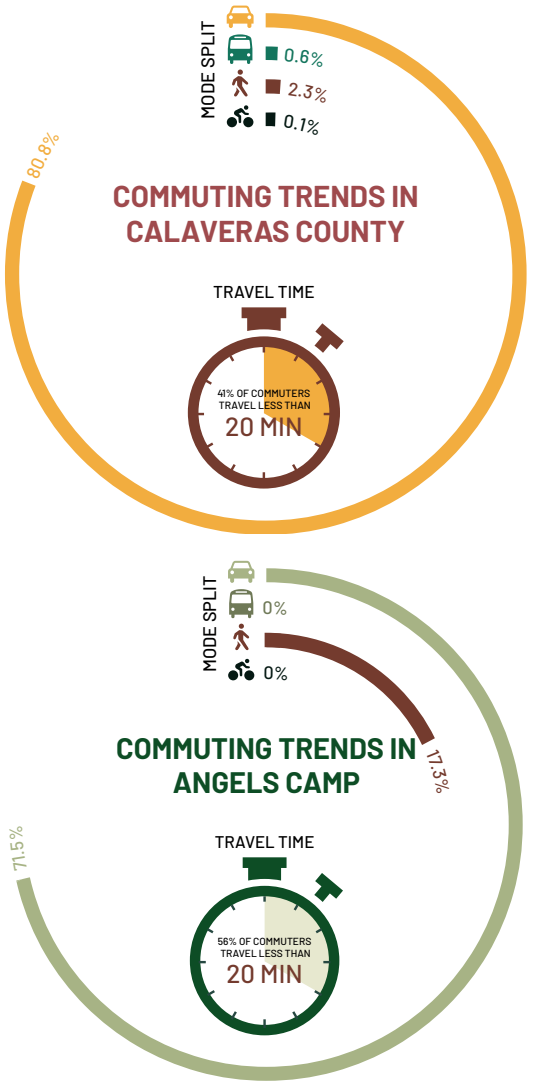
Table 1: Trips to Work by Walking and Bicycling

Location	Commuters	Walking		Bicycling	
		Trips	Share	Trips	Share
City of Angels Camp	1,286	223	17.3%	0	0.0%
Calaveras County	17,617	406	2.3%	18	0.1%
California	18,331,098	439,947	2.4%	128,318	0.7%

Notes: Numbers and shares are estimates. Actual numbers may be higher or lower. Workers ages 16 years and older.

Source: U.S. Census 2019-2023 American Community Survey, 2025. Fehr & Peers, 2025.

Figure 7
Commuting Trends



Although census data on non-commute trips, including trips to school, trips for shopping, and recreational trips is not readily available nor included in these estimates, an online survey was conducted through the ATRTP which resulted in helpful sample data for general walking and biking trips and school trips in the county. The full survey questionnaire and responses are included in Appendix C but specific responses regarding walking and biking frequency are displayed in Figures 8 and 9 and are described below.

Key Survey Takeaways Regarding Existing Use:

- Approximately 32 percent of respondents walk almost every day and 28 percent walk at least a few times a week.
- Approximately 11 percent bike almost every day and 12 percent bike at least a few times a week.
- Approximately 4 percent of respondents noted their child walks to school almost every day and 3 percent noted they bike to school almost every day.
- Approximately 8 percent of respondents noted they utilize recreational trails in their area almost every day and 22 percent noted a few times a week. Walking/hiking and biking were the primary activity when using recreational trails.

While the survey data cannot be quantified to determine the true number of walking and biking trips within the County, it supports that walking and biking is a common activity despite the lack of existing bicycle and pedestrian facilities.

Figure 8
Survey Response for Walking

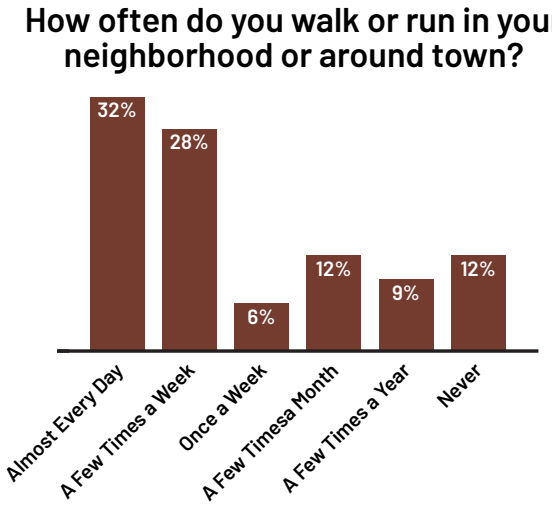
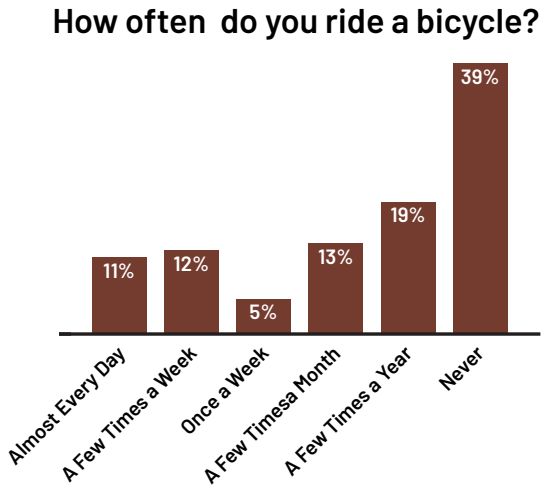


Figure 9
Survey Response for Biking



SR 26 in Valley Springs

Land Use

Figure 10a through 10d show key destinations for pedestrians and bicyclists in Calaveras County. Key destinations include:

- Retail/shopping areas
- Schools
- Parks and Recreational Destinations
- Public buildings, including libraries, post offices, city halls, and county offices
- Hospitals and medical facilities
- Senior facilities

The current general plan land use map identifying residential, commercial, and industrial areas is included in Appendix B and land use and origin-destination patterns are described in Appendix H – Existing Conditions Assessment.

Transit Connections

The Calaveras Transit Agency (CTA) manages Calaveras Connect, which provides public transit for the City and County. Calaveras Connect currently provides the following services:

- **Red Line** - Fixed route service between Valley Springs and Arnold with stops in San Andreas, Angels Camp, Douglas Flat, Murphys, and Avery. Hourly service is provided Monday through Friday.
- **Columbia College Shuttle** – Service provided between Angels Camp and Columbia College Monday through Friday during the fall and spring semesters. While this is a fixed route shuttle, deviations can be made within 3/4 miles of the route if they are reserved in advance.
- **Direct-Connect Dial-a-Ride** – Curb-to-curb service connecting many communities in the County and in some cases, connecting to destinations outside of the County. Service is provided Monday through Friday by reservation only. Dial-a-Ride provides service to and between the communities of Rancho Calaveras, Valley Springs, Angels Camp, Copperopolis, Murphys, Arnold, Mountain Ranch, and West Point/Wilseyville. Deviations within 3/4 miles of main roads can be made. Out of county service is provided from San Andreas to Jackson and Sutter Creek Monday through Friday, from West Point and Wilseyville to Jackson on Wednesday, and from Angels Camp to Sonora on Fridays.
- **Saturday Hopper** – Fixed route service between Angels Camp and Murphys and on-demand service from Murphys to Arnold; deviations can be made within 3/4 miles of the route if they are reserved in advance.

Each bus includes bike racks that can accommodate two bikes at a time. Figure 11a and 11b shows bus stops, bus routes, and the dial-a-ride service area within the County.

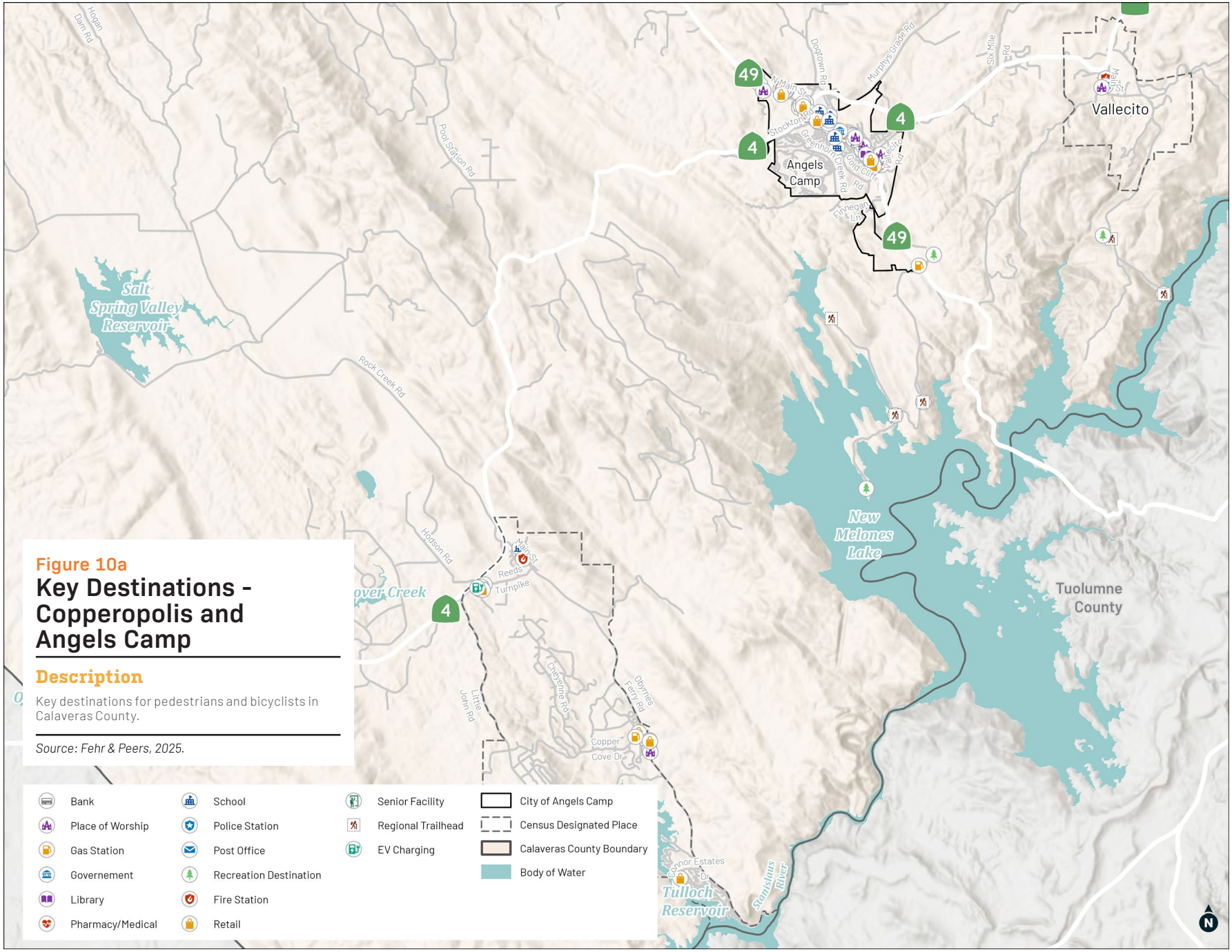


Figure 10a

Key Destinations - Copperopolis and Angels Camp

Description

Key destinations for pedestrians and bicyclists in Calaveras County.

Source: Fehr & Peers, 2025.

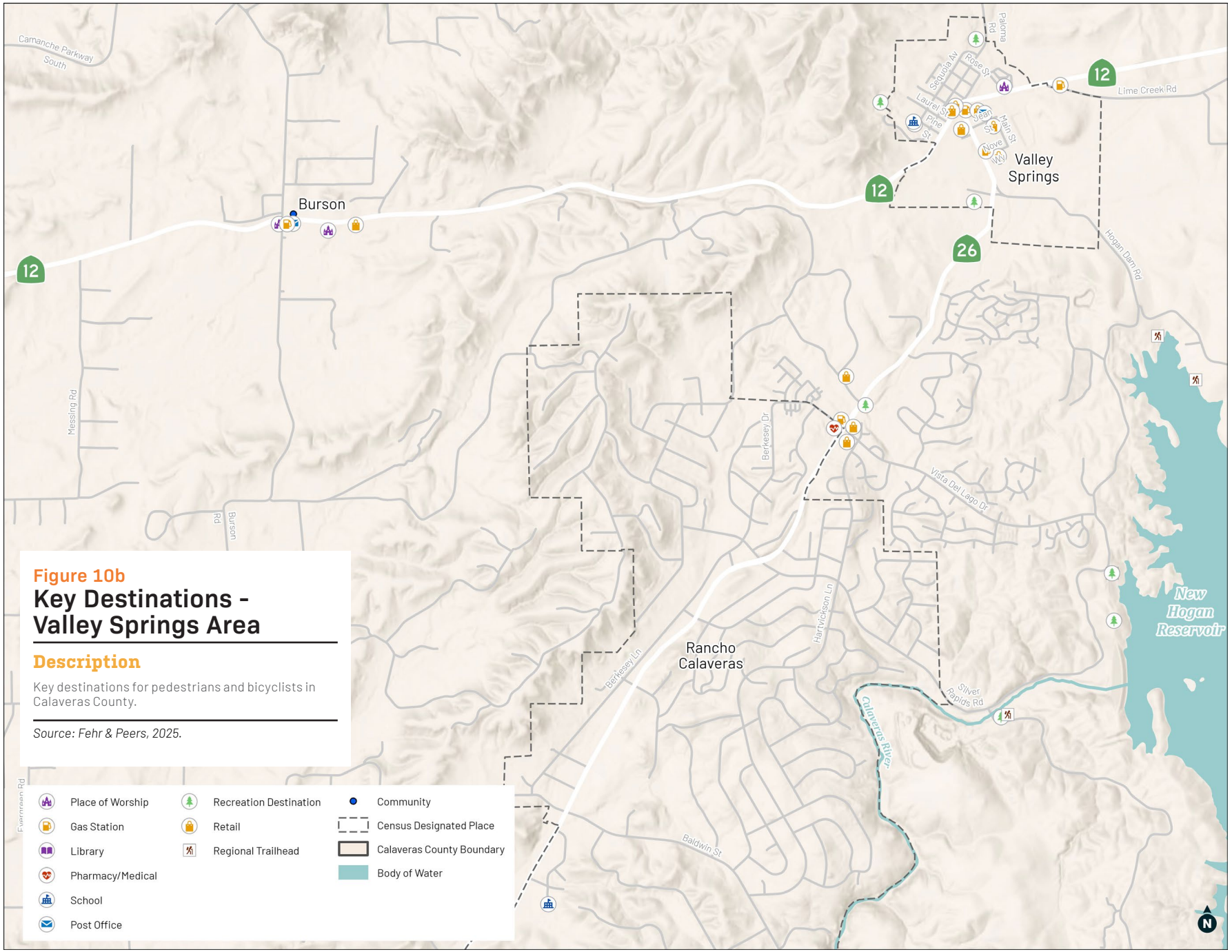


Figure 10b

Key Destinations - Valley Springs Area

Description

Key destinations for pedestrians and bicyclists in Calaveras County.

Source: Fehr & Peers, 2025.

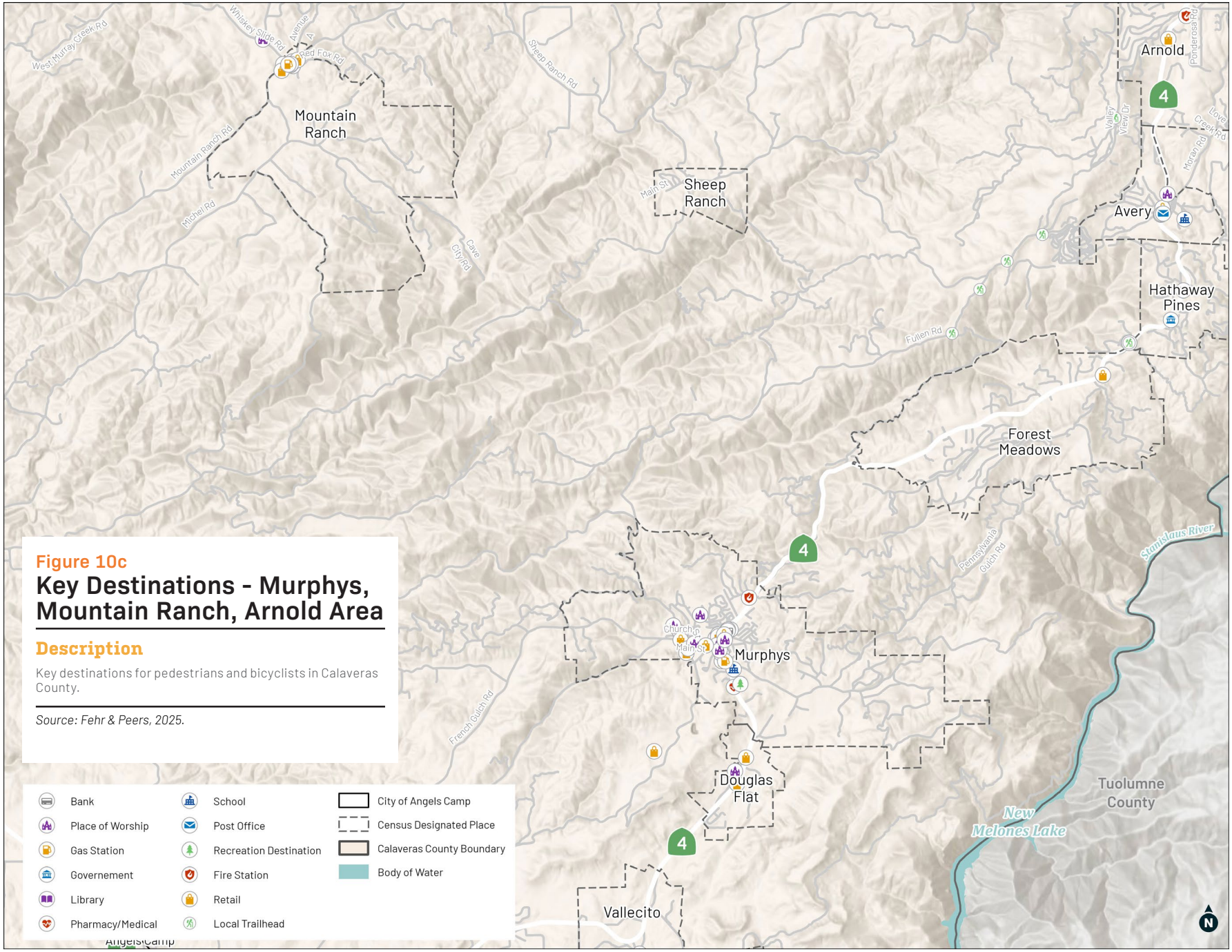


Figure 10c

Key Destinations - Murphys, Mountain Ranch, Arnold Area

Description

Key destinations for pedestrians and bicyclists in Calaveras County.

Source: Fehr & Peers, 2025.

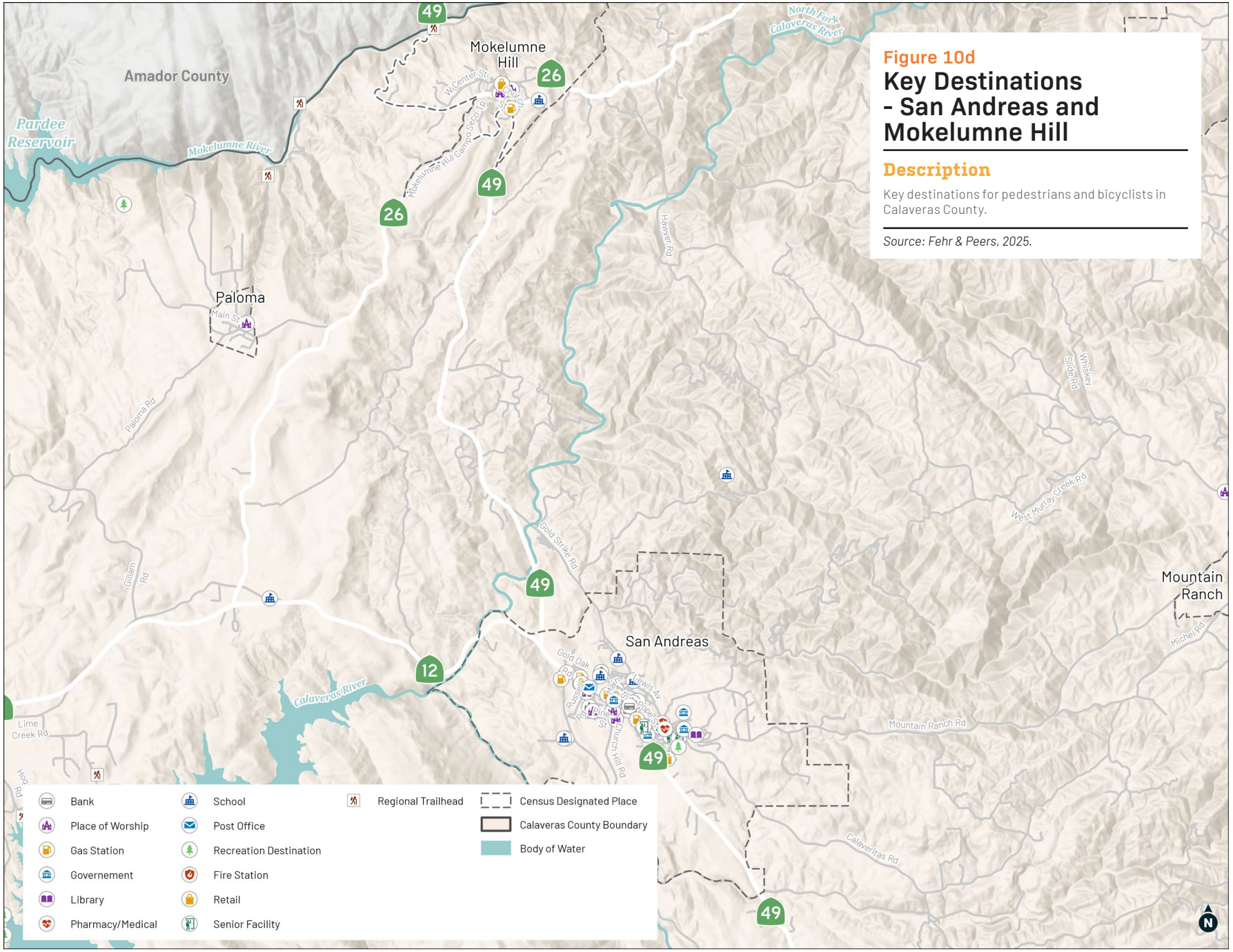


Figure 10d

Key Destinations - San Andreas and Mokelumne Hill

Description

Key destinations for pedestrians and bicyclists in Calaveras County.

Source: Fehr & Peers, 2025.

Figure 11a

Transit Service Areas

Description

Map of Calaveras connect bus routes and service areas.

Source: Calaveras Connect, 2025.

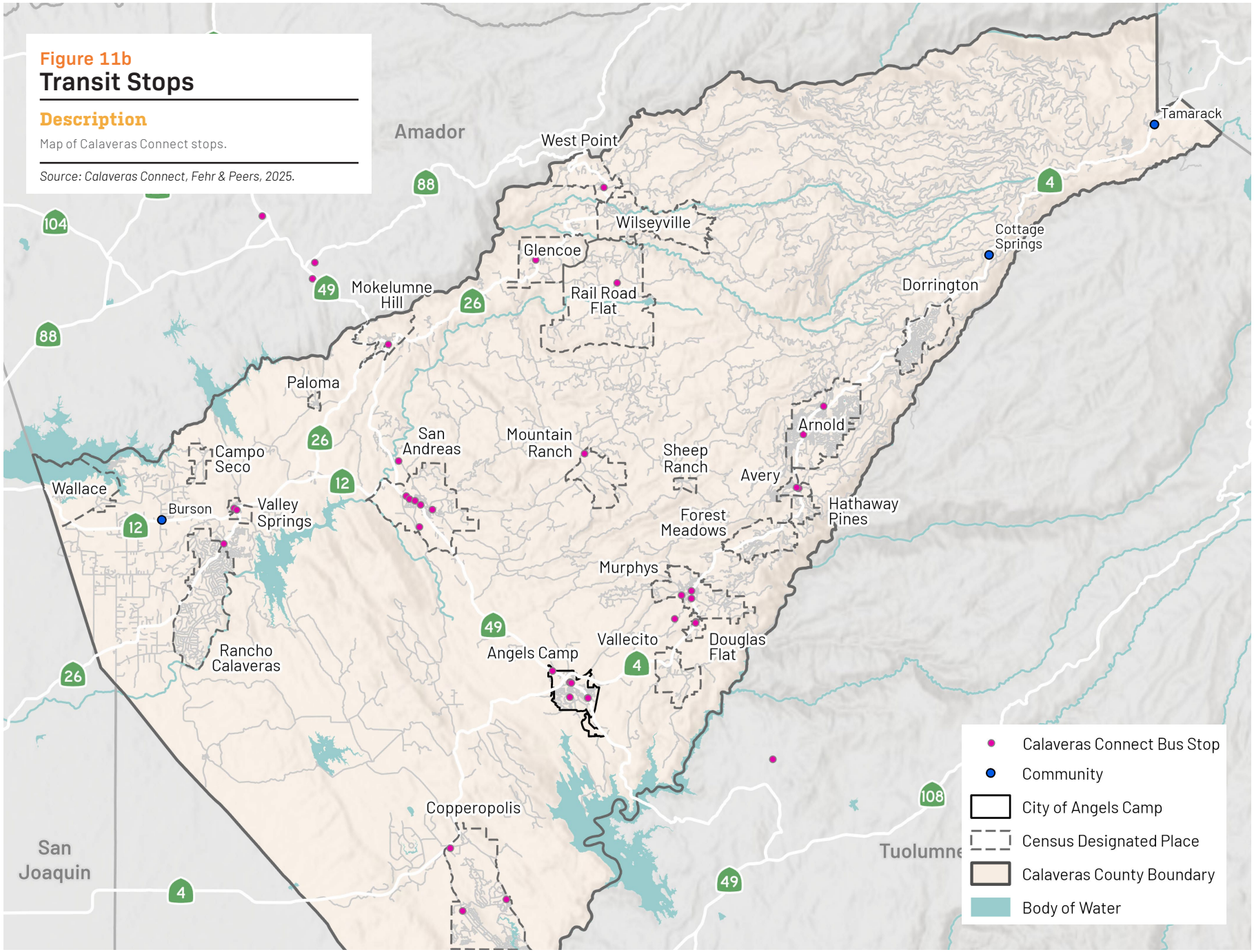
Figure 11b

Transit Stops

Description

Map of Calaveras Connect stops.

Source: Calaveras Connect, Fehr & Peers, 2025.



Disadvantaged Communities

Service to disadvantaged and underserved communities, often referred to as environmental justice communities, is a key factor in many grant funding programs such as California's Active Transportation Program. Ensuring disadvantaged communities are being included in the planning process is critical as it allows special consideration to be given to addressing the respective community needs. This plan presents a variety of different indicators of disadvantaged communities based on guidance in the 2025 Active Transportation Program (ATP) Guidelines adopted by the California Transportation Commission (CTC) on March 22, 2024. Table 2 and Figure 12 display disadvantaged community census tracts.

- **Household median income** – Census tracts with median household income less than 80 percent of the statewide median, or $73,524 based on the 2018-2022 American Community Survey (ACS). Six census tracts in the County are considered disadvantaged based on this indicator.
- **Free and reduced price meal (FRPM) eligibility** – The share of students at a school who are eligible for subsidized meals, based on the 2022-2023 school year. Schools with at least 75 percent eligible are considered disadvantaged by the ATP guidelines.

  The following three schools are considered disadvantaged based on this indicator:

  - Calaveras River Academy located at 150 Old Oak Grove Road, San Andreas.
  - Oakendell Community School located at 3585 Hawver Road, San Andreas.
  - Learner, Empowered Academic Progress (LEAP) located at 981 Tuolumne Avenue, Angels Camp
- **CalEnviroScreen 4.0 score percentile** – A measure of environmental health by census tract. Inputs include socioeconomic factors, population characteristics, pollution factors, and environmental factors. Tracts with higher percentiles are more disadvantaged. An area identified as among the most disadvantaged 25% in the state according to the CalEPA and based on the California Communities Environmental Health Screening Tool 4.0 are considered disadvantaged by the ATP guidelines. Two census tracts in the County are considered disadvantaged based on this indicator.
- **California Healthy Places Index** – A measure of the community conditions shaping health outcomes. Factors include economics, education, transportation, social, neighborhood, housing, clean environment, and healthcare access. Census tracts in the worst scoring 25 percent are considered disadvantaged by the ATP guidelines. Three census tracts in the County are considered disadvantaged based on this indicator.
- **Federal Climate and Economic Justice Screening Tool (CEJST)** – The CEJST tool was launched by the White House Council on Environmental Quality (CEQ) as part of the Justice40 Initiative, which seeks to deliver 40 percent of the overall benefits of federal climate, clean energy, affordable and sustainable housing, clean water, and other investments to disadvantaged communities that are marginalized, underserved, and overburdened by pollution. Communities are considered disadvantaged if they are in a census tract that meets the threshold for at least one of the tool's eight categories of burden and corresponding economic indicator. Three census tracts in the County are considered disadvantaged based on this indicator. It is noted this tool may no longer be considered valid under the current federal administration; however, the tool is referenced in the ATP guidelines and future validity is unknown. Therefore, communities are still evaluated based on this tool.
- **US DOT Equitable Transportation Community (ETC) Explorer Tool** – A measure of the cumulative burden communities experience, as a result of underinvestment in transportation, in the following five components: Transportation Insecurity, Climate and Disaster Risk Burden, Environmental Burden, Health Vulnerability, and Social Vulnerability. It is designed to complement the CEJST by providing users deeper insight into the transportation disadvantage component of CEJST. Similar to the CEJST, future validity is unknown.

Census tracts scoring in the worst 25 percent are considered to be disadvantaged by the ATP guidelines. Three census tracts in the County are considered disadvantaged based on this indicator.

As displayed, census tracts 06009000301/302 and 06009000400 are considered disadvantaged by multiple of the tools evaluated. The following communities are in these census tracts:

- Glencoe
- Mokelumne Hill
- Mountain Ranch
- Rail Road Flat
- San Andreas
- Sheep Ranch
- West Point
- Wilseyville

Amongst the various tools, these communities are most commonly considered disadvantaged due to income, wildfire risk, health risk/vulnerability, and transportation insecurity including transportation access, transportation cost burden, and traffic safety. There are limited roadways that provide access in/out of the communities, limited transit, minimal to no walking or biking facilities, and limited access to jobs, services, health facilities, recreational facilities, and educational facilities. As a result, many residents must make longer trips via automobile just to access basic needs (like schools, jobs, grocery stores, etc.).

According to the ETC Tool, all three census tracts are low income with a median household income range between approximately $45,000 and $54,000 per year, have a high transportation cost burden where between approximately 18 percent and 22 percent of their annual household income is spent on transportation, and a high housing cost burden where between approximately 41 percent and 59 percent of households spend more than 30 percent of their income on housing.

For communities like San Andreas and Mokelumne Hill, active transportation investments could alleviate some of the transportation cost burden as trips currently being made by automobile could be converted to walking and biking trips. Many of the other communities in these census tracts are too far from key destinations to walk or bike. However, active transportation or recreational trail investments could be made to improve overall quality of life by giving residents the opportunity to safely walk or bike in their community, rather than having to drive to a location where they can walk or bike safely.

Table 2: Disadvantaged Community Status

Census Tract	Median Household Income[1]	CalEnviroscreen 4.0[2]	Healthy Places Index[3]	CEJST[4]	ETC[5]
06009000121	X				
06009000122	X				
06009000220					X
06009000301 & 02	X	X	X	X	
06009000400	X		X	X	X
06009000504[6]					X
06009000506	X				

Notes:
[1] US Census Bureau Table B19013 2022: ACS 5-Year Estimates was reviewed to determine eligibility for this criteria.
[2] CalEnviroScreen 4.0 Results (arcgis.com) was reviewed to determine eligibility for this criteria.
3 California Healthy Places Index was reviewed to determine eligibility for this criteria.
[4] Climate & Economic Justice Screening Tool (geoplatform.gov) was reviewed to determine eligibility for this criteria.
[5] State Results | USDOT Equitable Transportation Community (ETC) Explorer (arcgis.com) was reviewed to determine eligibility for this criteria.
[6]06009000504 is excluded from Healthy Places Index and CalEnviroScreen 4.0 due to low population and/or unreliable data.

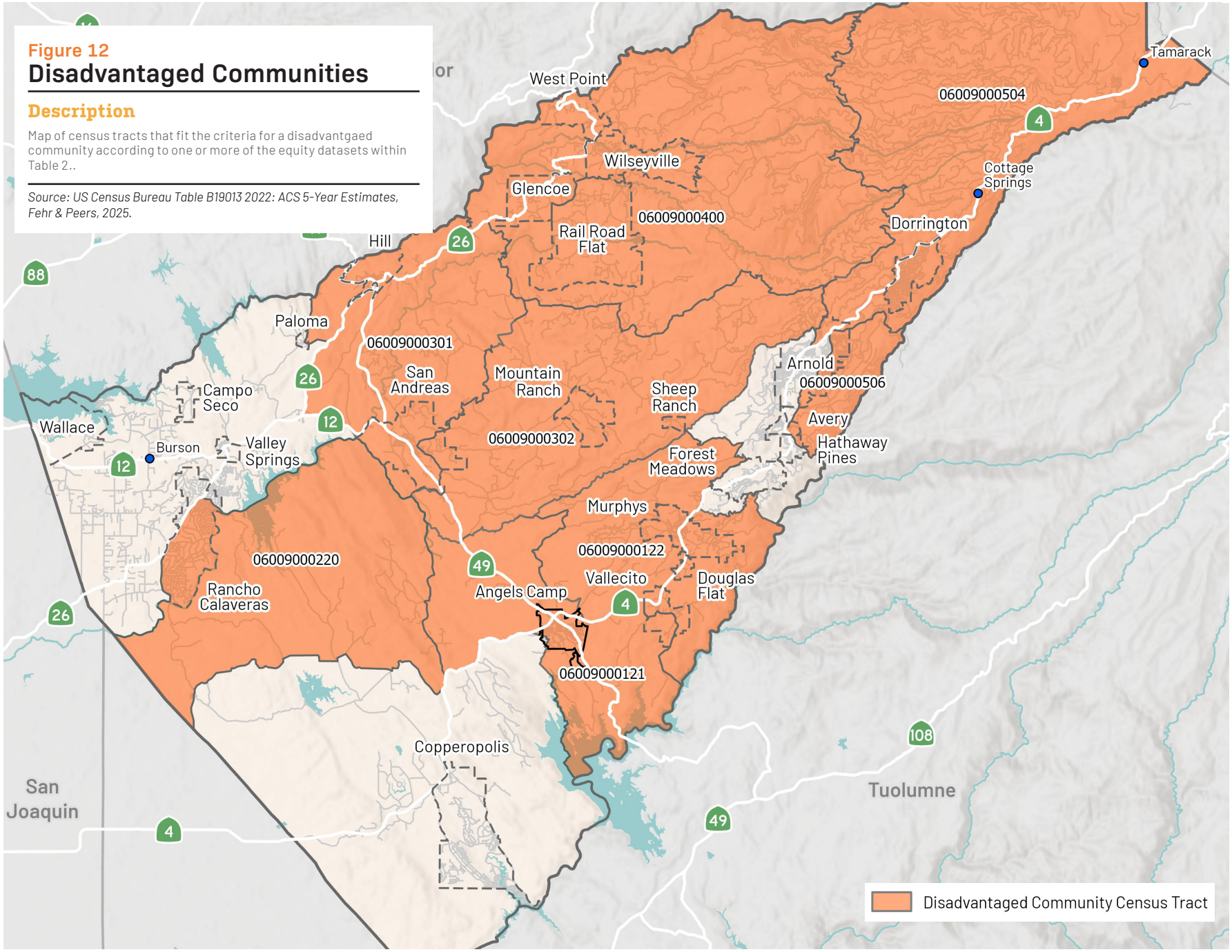
Figure 12

Disadvantaged Communities

Description

Map of census tracts that fit the criteria for a disadvantgaed community according to one or more of the equity datasets within Table 2..

Source: US Census Bureau Table B19013 2022: ACS 5-Year Estimates, Fehr & Peers, 2025.



Active Transportation and Recreational Trail Infrastructure

Currently, there are approximately 2 miles of shared-use paths, 1 mile of streets with bicycle lanes, 5 miles of streets with bicycle routes, 21 miles of sidewalks, and 153 miles of recreational trails within the County.

Existing Walking Facilities

Existing sidewalks and crosswalks in the County as a whole are generally limited. Most infrastructure is located in the City of Angels Camp and the San Andreas community areas. Copperopolis, Murphys, and Valley Springs also have sidewalks and crosswalks in various locations, Mokelumne Hill has a small stretch of sidewalk on Main Street, and Mountain Ranch has a shared-use path. However, in all locations, gaps are present creating a discontinuous and disconnected pedestrian network and in some locations, sidewalks are overgrown and unwalkable . Sidewalks adjacent to commercial land uses on SR 49 in both Angels Camp and San Andreas provide the most mobility, however, accessibility is lacking given gaps along these corridors and lack of connection between these commercial areas and adjacent residential neighborhoods. Although residential neighborhoods are physically located within walking distance to key destinations such as retail/shopping areas, jobs, schools, parks, hospitals, etc., in many of these communities, residents are unable to safely and comfortably access these destinations by walking due to inadequate pedestrian facilities.

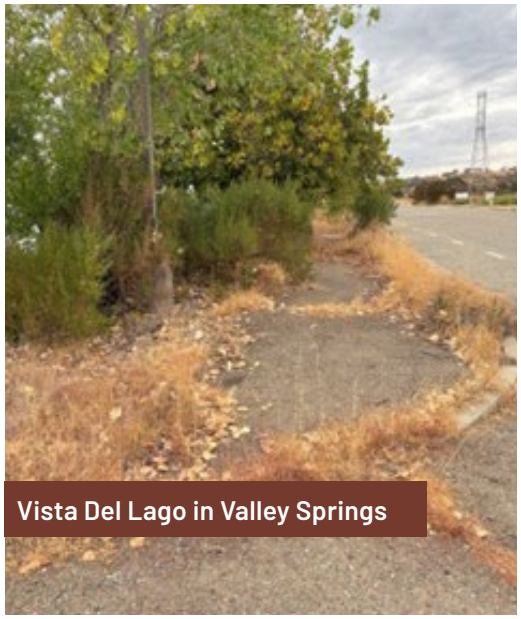
Figures 13a through 13f display the existing pedestrian infrastructure. In addition to these countywide figures, communities with the most existing infrastructure are shown in greater detail below. Table 3 provides the length of sidewalks and total number of crosswalks in these communities[1].

Table 3: Existing Pedestrian Facilities in Community Areas

Community	Sidewalks (Miles)	Crosswalks	RRFBs
Angels Camp	9.26	48	0
Copperopolis	1.84	29	0
Mokelumne Hill	<1	3	0
Murphys	3.18	13	1
San Andreas	4.21	19	2
Valley Springs/ Rancho Calaveras	1.63	16	1

Source: Fehr & Peers, 2025

SR 49 in Angels Camp



Vista Del Lago in Valley Springs

[1] With the exception of very few subdivisions, most residential neighborhoods in the county lack any sidewalks and crossing improvements; however, some do have internal trails. Trails located within gated communities that are not accessible to the public are not shown in this plan.

Figure 13a
Existing Walking Facilities

Description

Map of existing pedestrian infrastructure RRFBs, crosswalks, sidewalk, and multi-use paths.

Source: GreenDOT, Fehr & Peers, 2025.

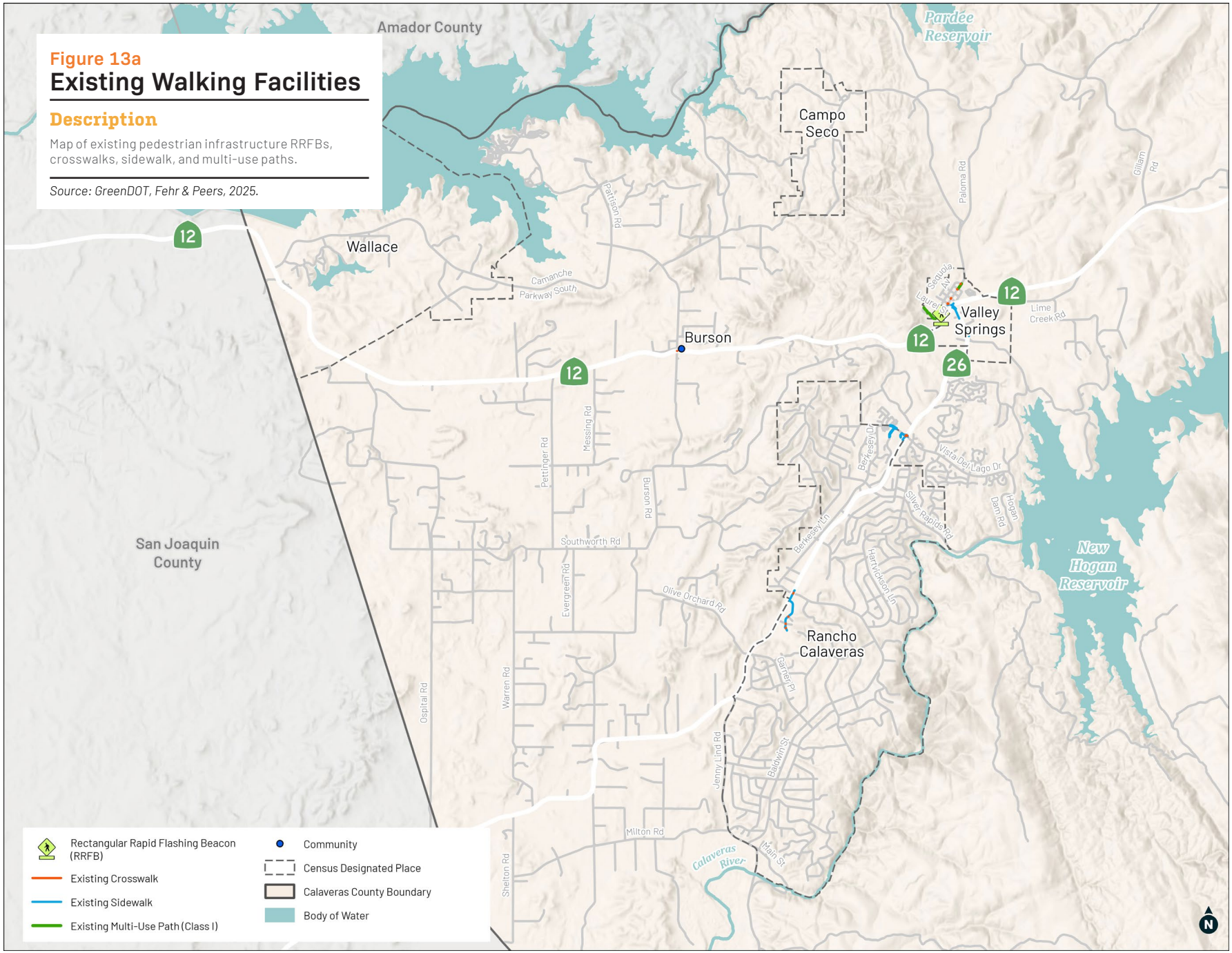


Figure 13b

Existing Walking Facilities

Description

Map of existing pedestrian infrastructure RRFBs, crosswalks, sidewalk, and multi-use paths.

Source: GreenDOT, Fehr & Peers, 2025.

Figure 13c

Existing Walking Facilities

Description

Map of existing pedestrian infrastructure RRFBs, crosswalks, sidewalk, and multi-use paths.

Source: GreenDOT, Fehr & Peers, 2025.

Figure 13d

Existing Walking Facilities

Description

Map of existing pedestrian infrastructure RRFBs, crosswalks, sidewalk, and multi-use paths.

Source: GreenDOT, Fehr & Peers, 2025.

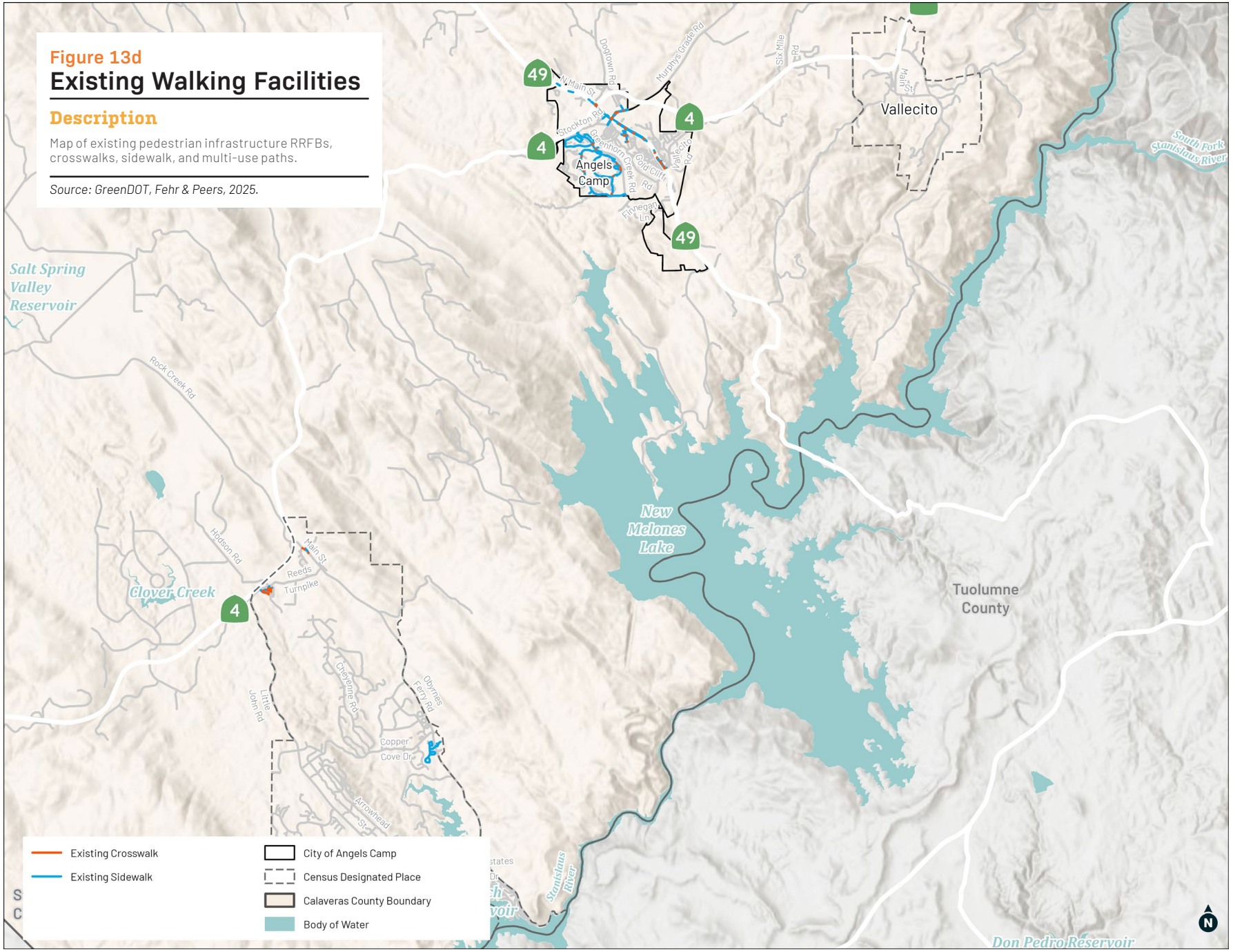


Figure 13e

Existing Walking Facilities

Description

Map of existing pedestrian infrastructure RRFBs, crosswalks, sidewalk, and multi-use paths.

Source: GreenDOT, Fehr & Peers, 2025.

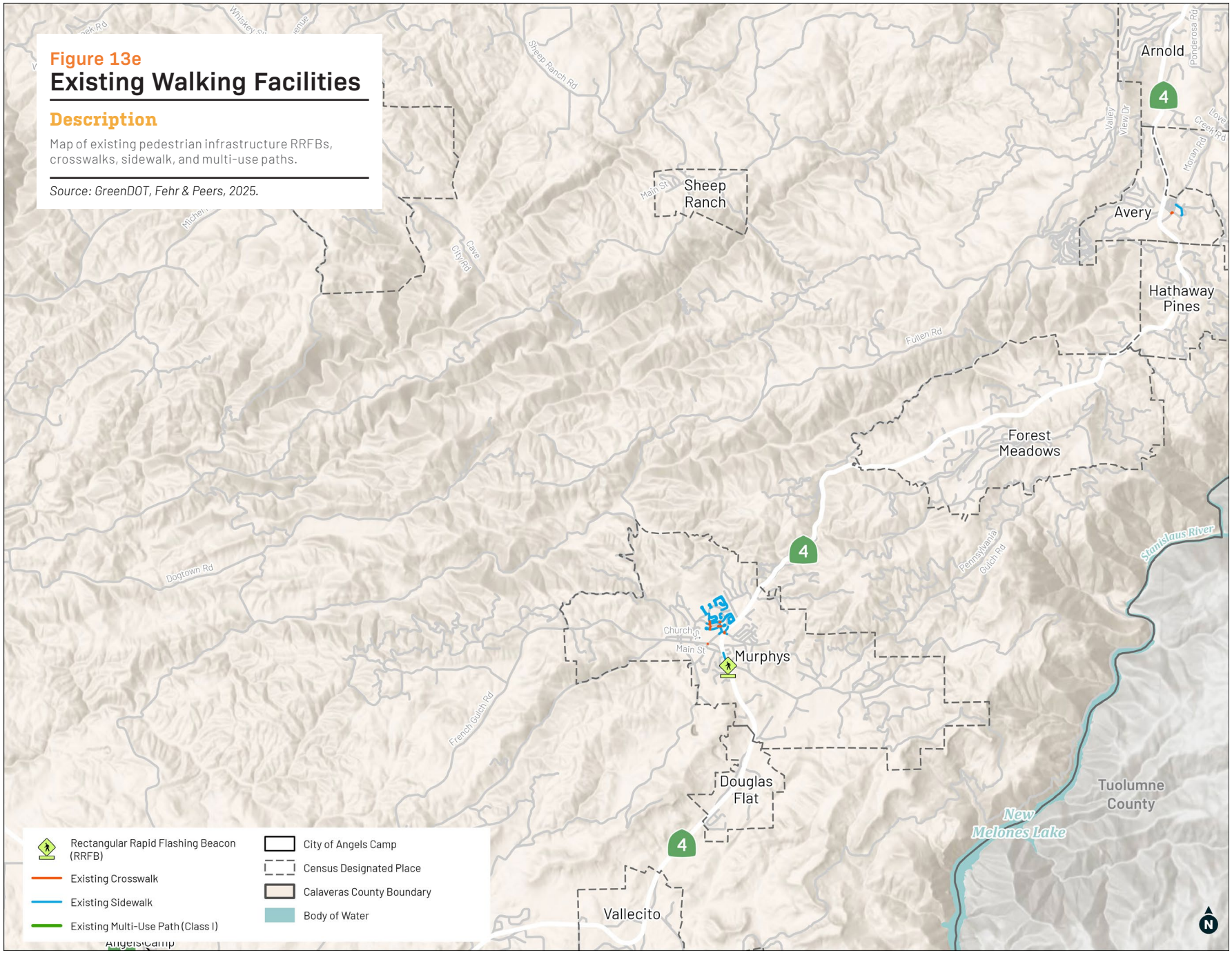


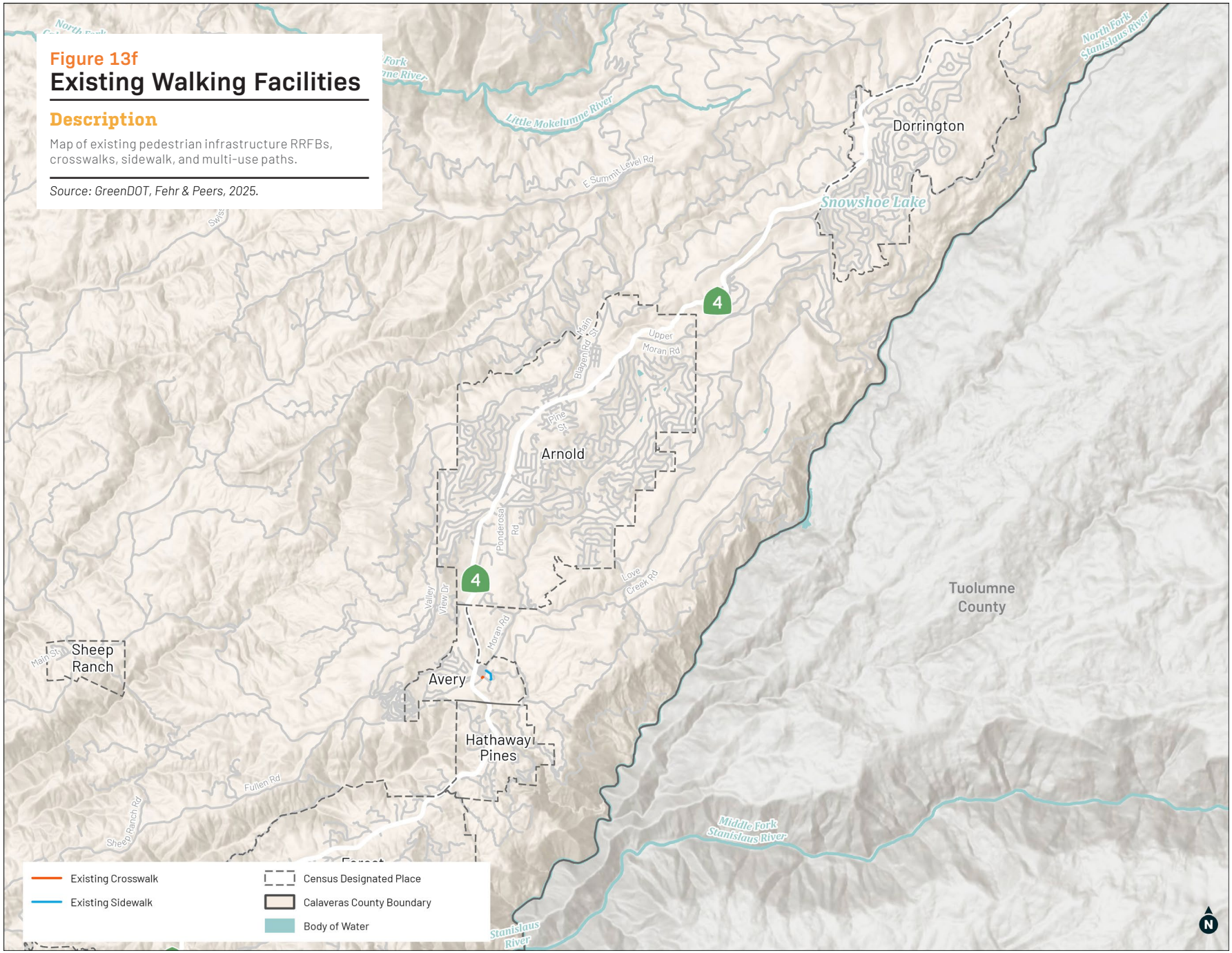
Figure 13f

Existing Walking Facilities

Description

Map of existing pedestrian infrastructure RRFBs, crosswalks, sidewalk, and multi-use paths.

Source: GreenDOT, Fehr & Peers, 2025.



Existing Bicycle Facilities

Similar to pedestrian facilities, existing bicycle facilities in the County are limited. Within the communities of Angels Camp, Copperopolis, San Andreas, Valley Springs, and West Point, bicycle facilities are present; however, they are few and far between, fail to connect residential developments to key destinations, often abruptly end, and generally do not meet current standards for signage or striping. Additionally, in some instances signage does not match the facility type which may lead to confusion for bicyclists and automobiles as it is unclear where bicyclists should be riding.

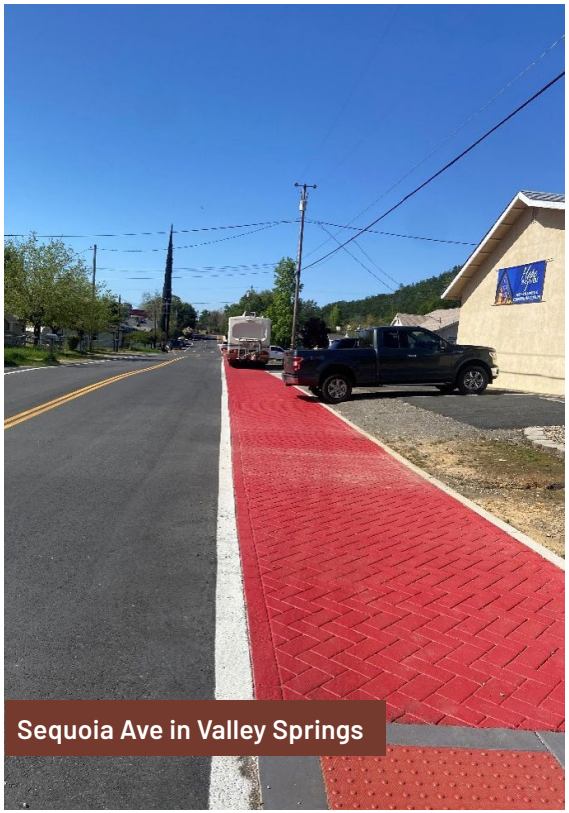
Examples of where this occurs are described below:

- Daphne Street in Valley Springs – On the east side of Daphne Street near Sequoia Avenue, a shared-use path is constructed but it is signed for a bike route. On the west side of Daphne Street near Pine Street, a bike lane is constructed but it is signed for a bike route. This may lead to confusion as it is unclear if bicyclists should be riding in the bike lane or riding in the road with automobiles.

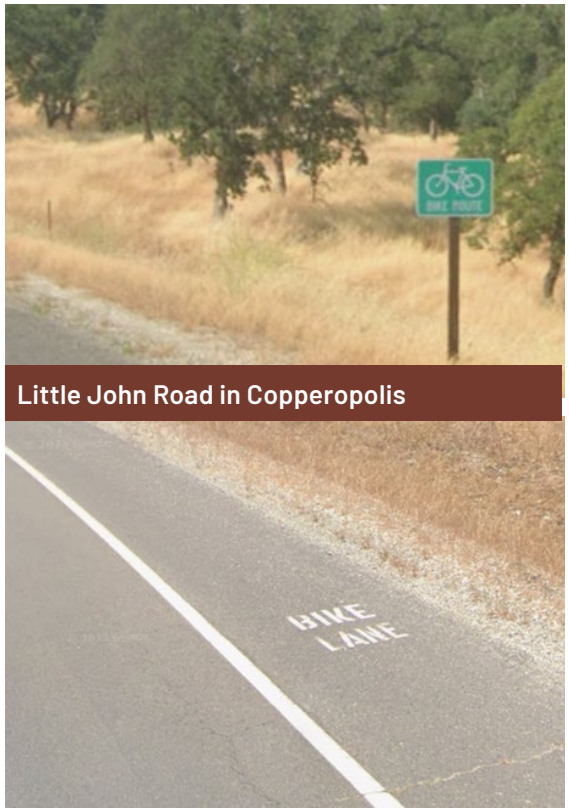
Daphne St in Valley Springs

- On Sequoia Avenue in Valley Springs – A paved shoulder was recently constructed with the intention of functioning similar to a shared-use path and providing a walking and biking facility for elementary school students. However, no signage or striping were included with the project and as a result, it is unclear to motorists that this space is intended for use by pedestrians and bicyclists. As a result, motorists often park within the paved shoulder, hindering, safety, comfort, and accessibility for students walking to school.
- Little John Road in Copperopolis – A portion of Little John Road between Town Square and Quiver Street has vertical signage indicating it is a bike route but has painted signage calling it a bike lane. This may lead to confusion as it is unclear if bicyclists should be riding in the bike lane or riding in the road with automobiles.

Figures 14a through 14e display the existing bicycle infrastructure in key community areas. Table 4 provides the length of bicycle facilities in these communities. Figure 15 displays existing bicycle parking.



Sequoia Ave in Valley Springs



Little John Road in Copperopolis

Table 4: Existing Bicyle Facilities in Community Areas

Community	Shared-Use Path (Miles)	Bike Lane (Miles)	Bike Route (Miles)
Angels Camp	0	0.28	0
Copperopolis	0	0	2.49
Mokelumne Hill	0.69	0	0
Murphys	0.66	0.54	0
San Andreas	0.28	0.47	0
Valley Springs/Rancho Calaveras	0	0	2.32

Notes: Shared-use paths are measured by total path length given they are not always on both sides of the road while bike lanes and bike routes are measured by centerline given they generally are.

Source: Fehr & Peers, 2025

Figure 14a

Existing Biking Facilities

Description

Map of existing bicycle facilities throughout the county.

Source: GreenDOT, Fehr & Peers, 2025.

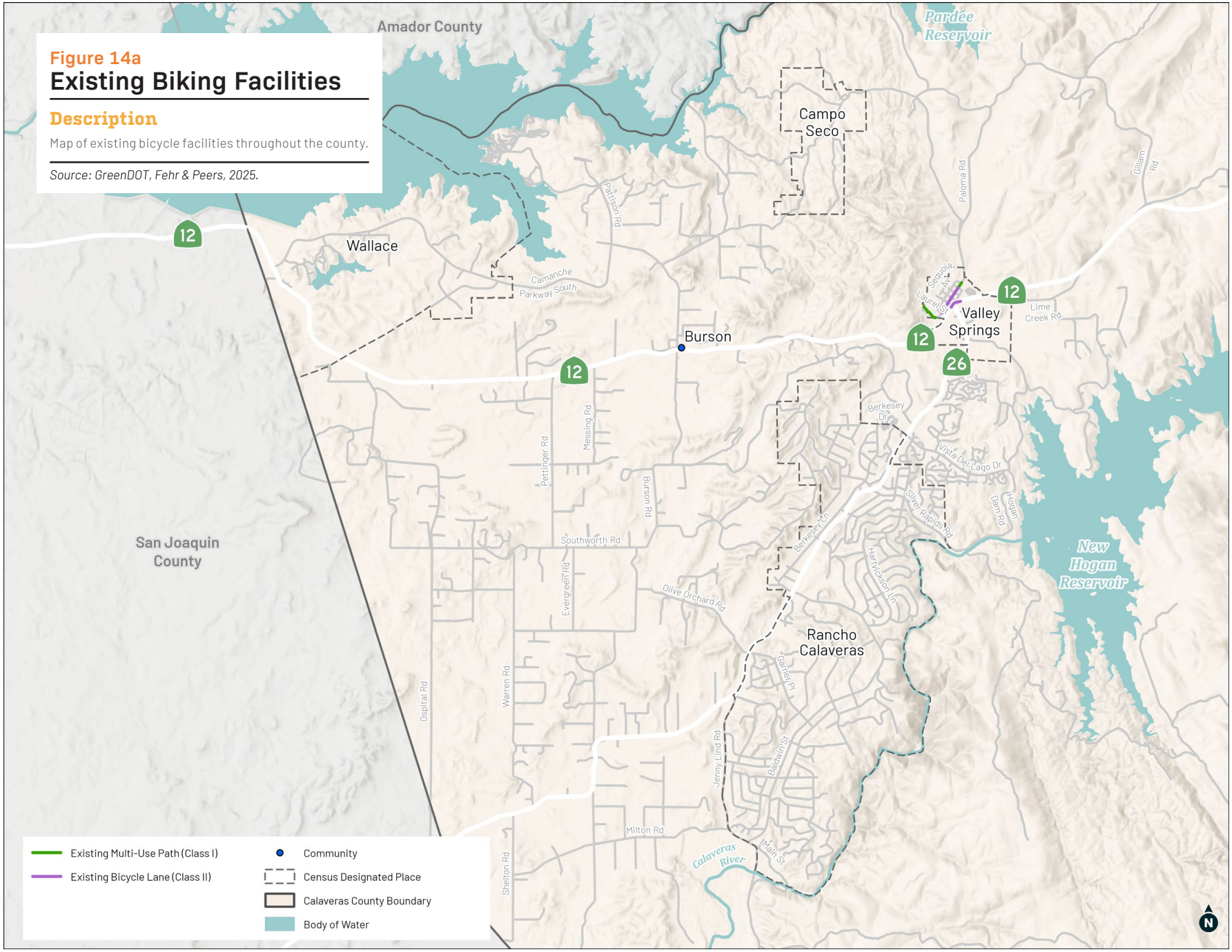


Figure 14b

Existing Biking Facilities

Description

Map of existing bicycle facilities throughout the county.

Source: GreenDOT, Fehr & Peers, 2025.

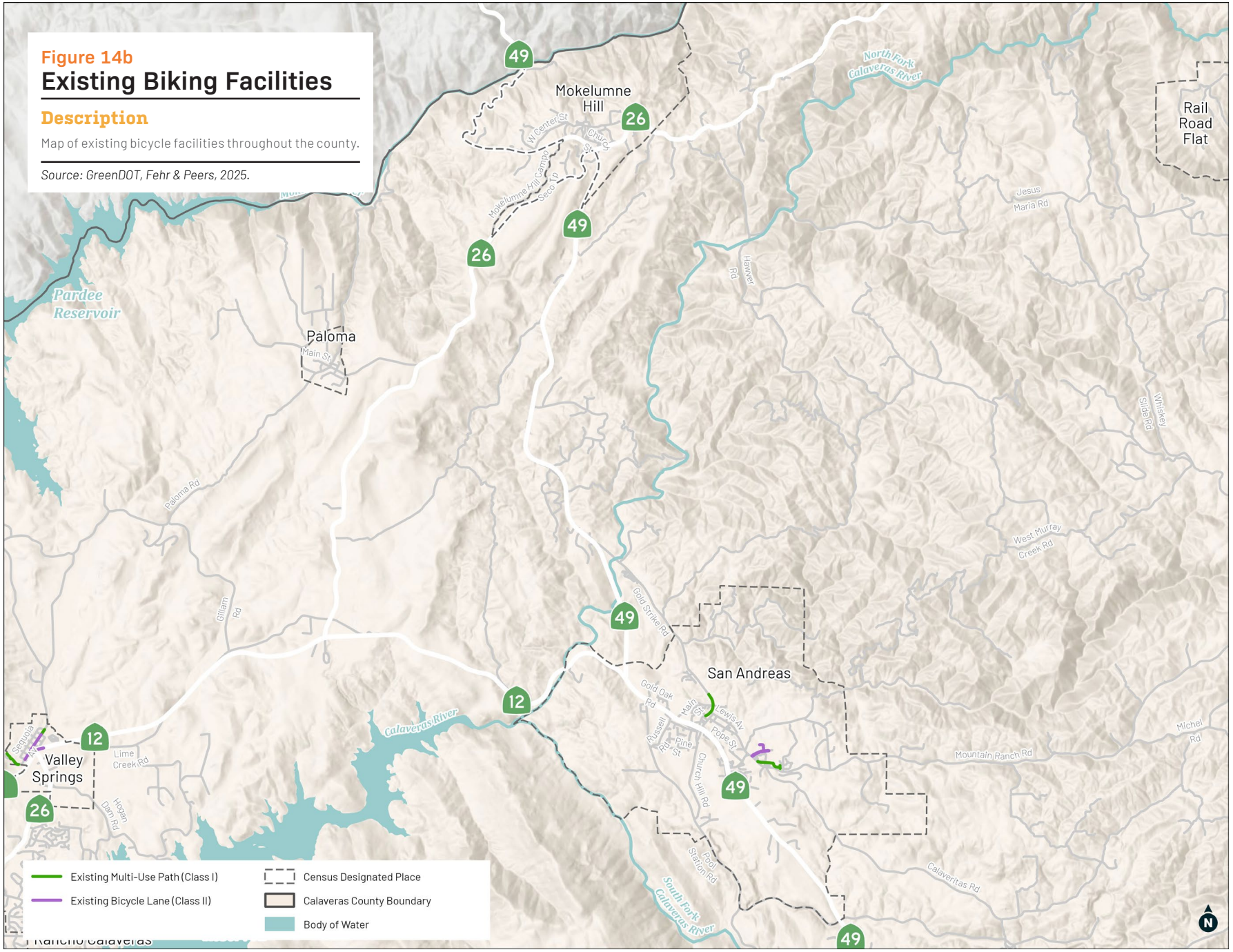


Figure 14c

Existing Biking Facilities

Description

Map of existing bicycle facilities throughout the county.

Source: GreenDOT, Fehr & Peers, 2025.

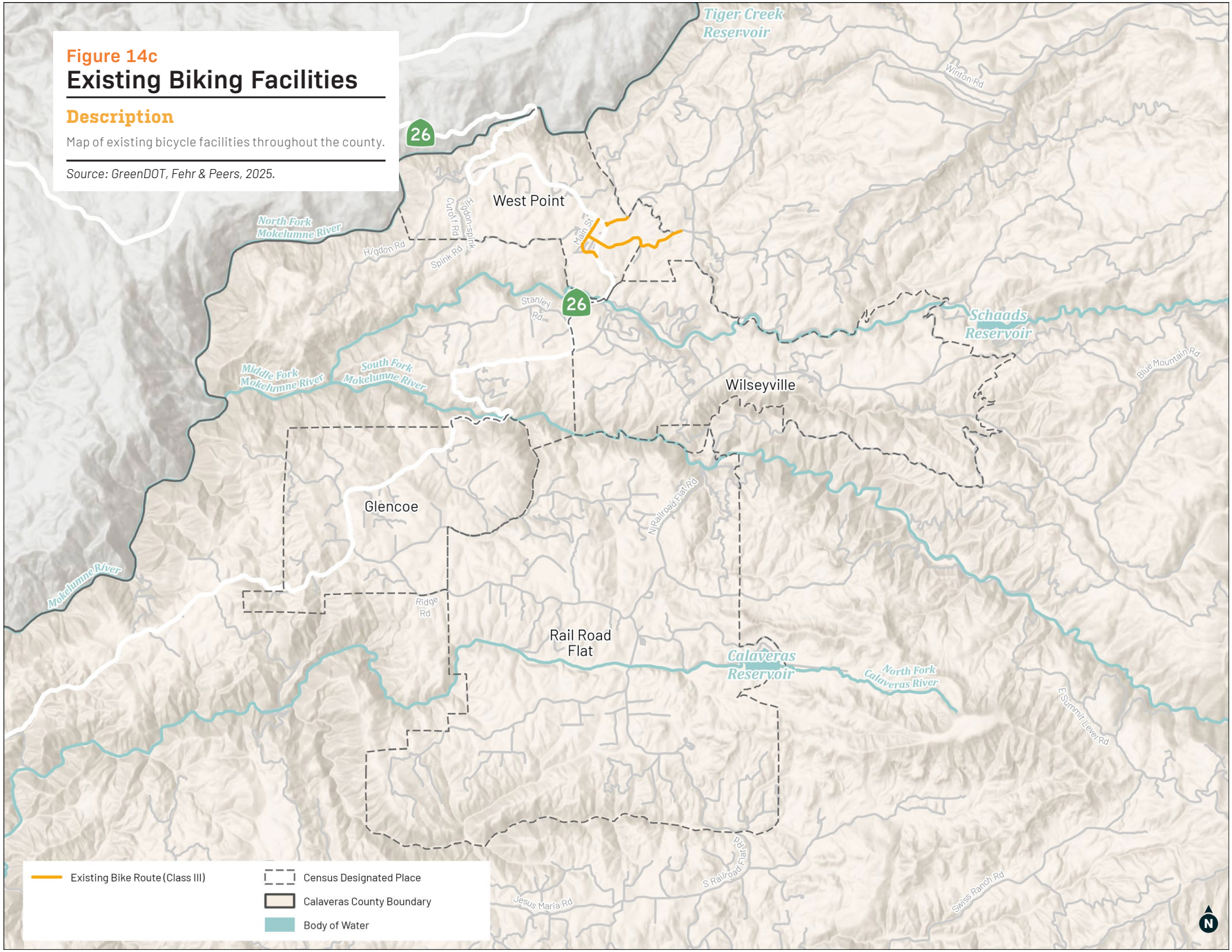


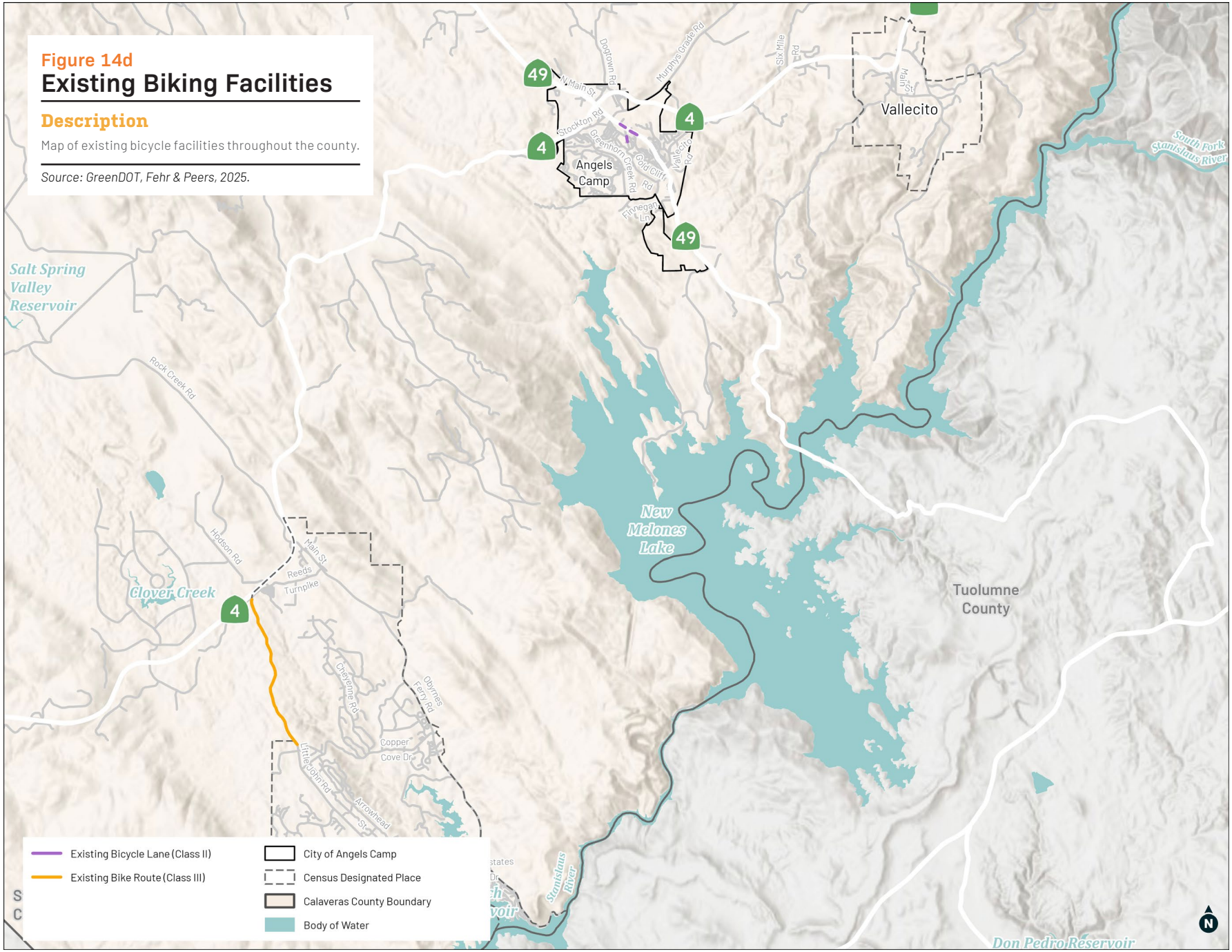
Figure 14d

Existing Biking Facilities

Description

Map of existing bicycle facilities throughout the county.

Source: GreenDOT, Fehr & Peers, 2025.



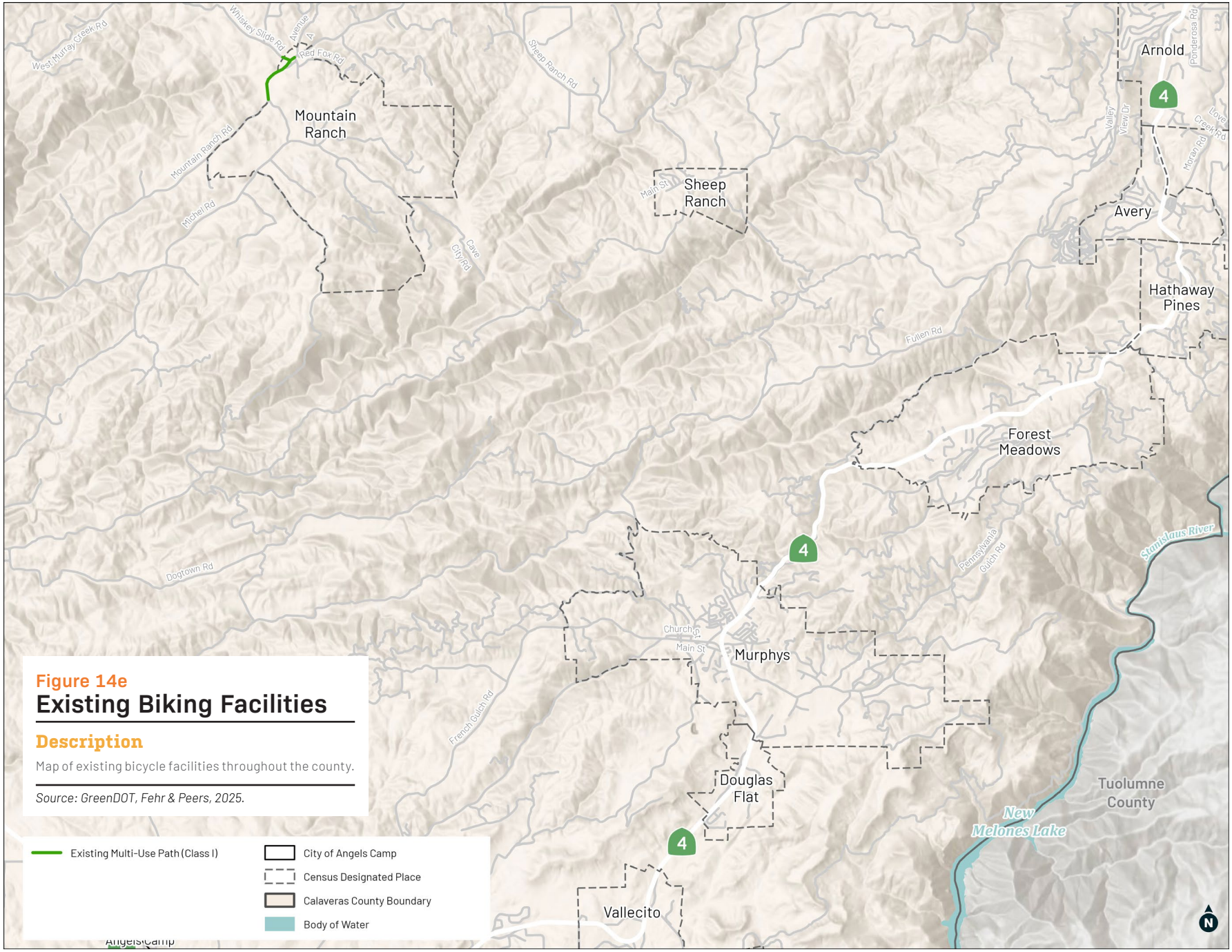


Figure 14e

Existing Biking Facilities

Description

Map of existing bicycle facilities throughout the county.

Source: GreenDOT, Fehr & Peers, 2025.

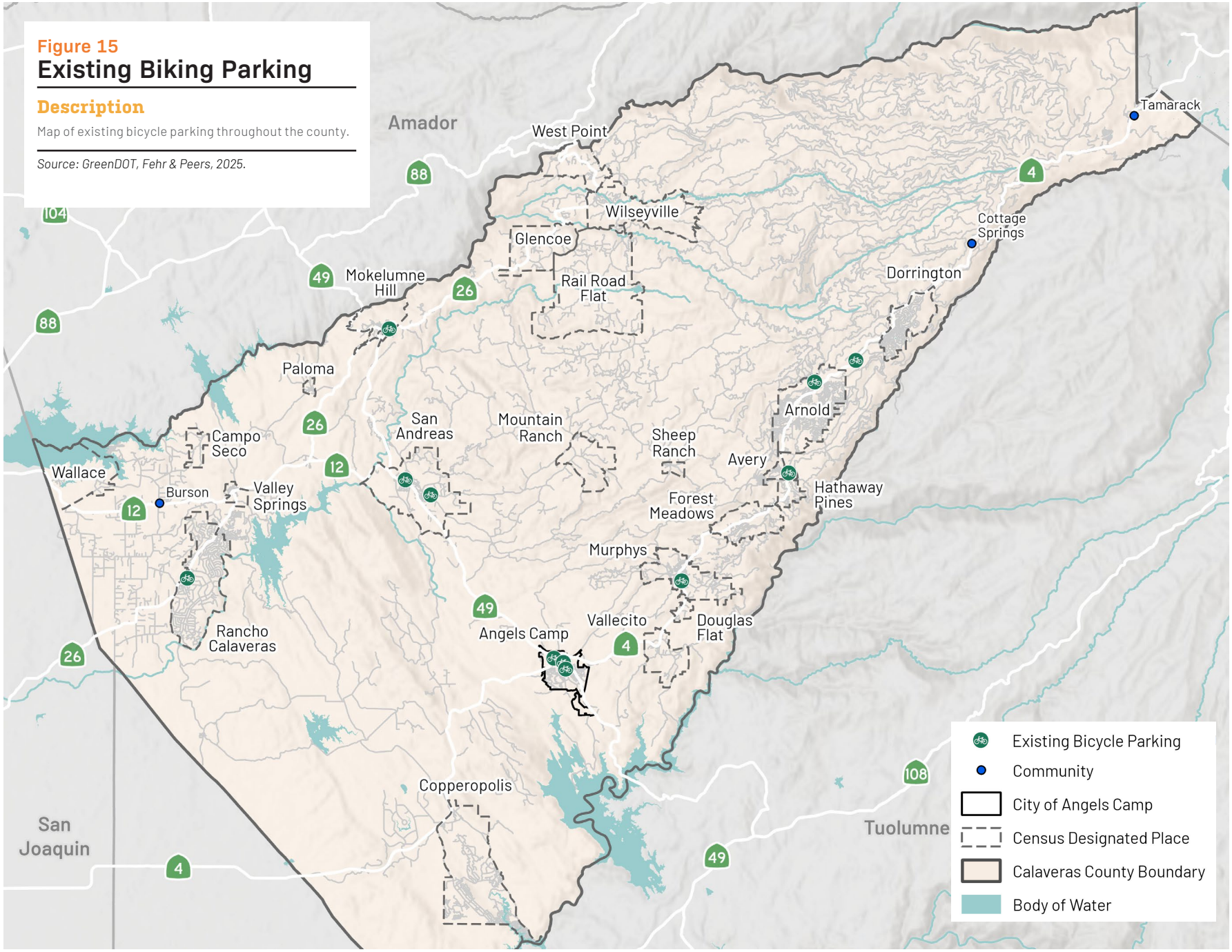
Figure 15

Existing Biking Parking

Description

Map of existing bicycle parking throughout the county.

Source: GreenDOT, Fehr & Peers, 2025.



Existing Recreational Trails

Calaveras County has a robust recreational trail network consisting of approximately 153 miles of recreational trails which are displayed on Figure 16. Residents and visitors can utilize these trails for a variety of recreational opportunities including[2]:

- Hiking/walking
- Running
- Dog Walking
- Bike Riding
- Horseback Riding
- ATV/Off-Road Vehicles
- Cross County Skiing/Snowshoeing
- Snowmobiling

It is noted that the existing recreational trail network displayed on Figure 16 was derived using a combination of local knowledge, stakeholder and community input, online maps produced by the owners/maintainers of trail networks such as East Bay Municipal Utility District (EBMUD), U.S. Army Corps of Engineers, Arnold Rim Trail Association (ARTA), and recreational trail data sources like Strava and All Trails. In some cases, displayed trails may be unsanctioned active use trails, meaning the public is currently able to access/utilize them but they are not formally designated or maintained as trails. As such, trail users should always verify ability to access and utilize any trail identified with the owner/maintainer of the trail network. Access should be reviewed prior to each trip given trails may be closed during various times of the year due to weather, maintenance, or other factors.

[2] Note – not all trails allow all activities. Restrictions apply on specific trails and on specific segments of specific trails. Trail users should always review restrictions on official trail website or by contacting the owner/maintainer of the specific trail.

Mokelumne Coast to Crest Trail

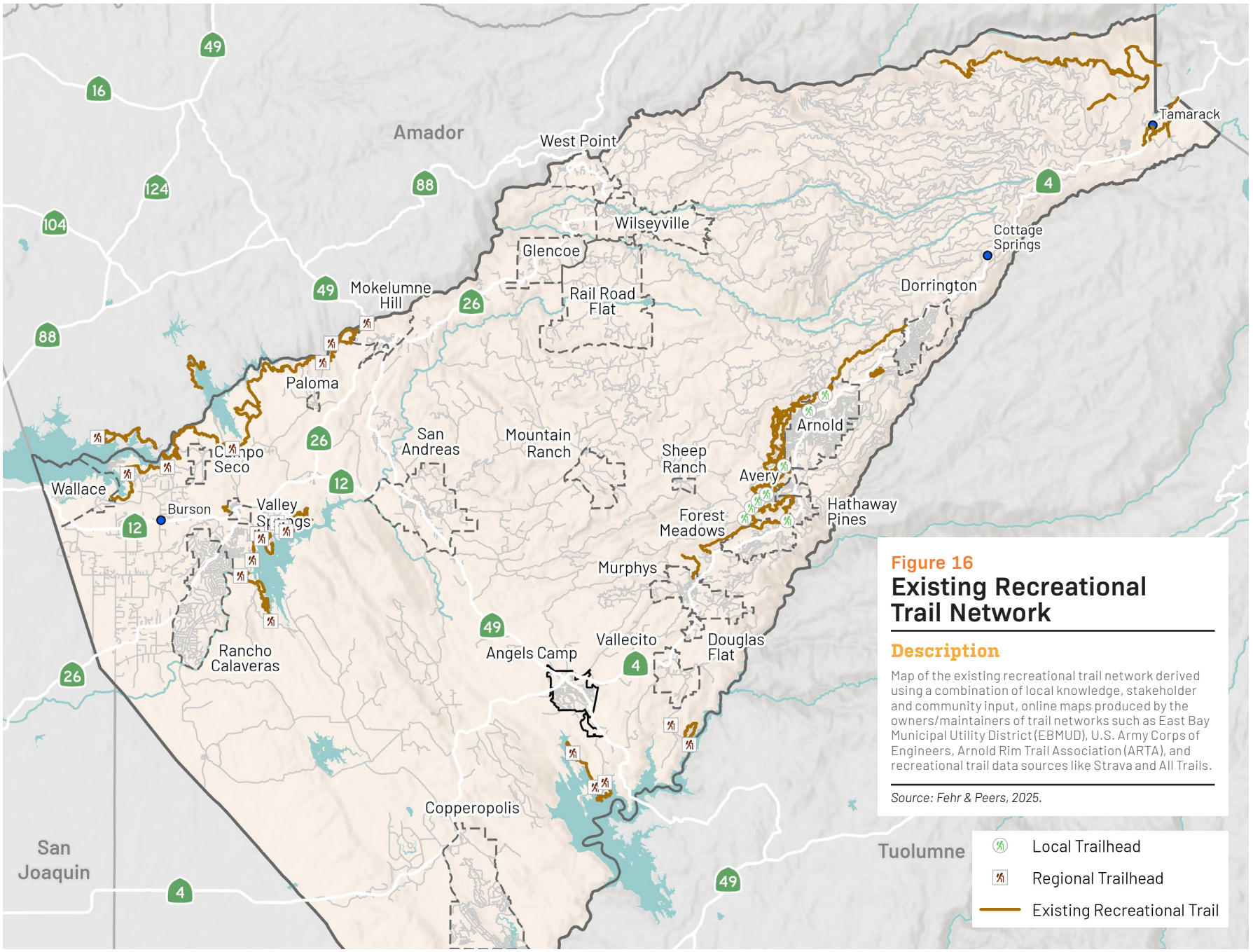


Figure 16

Existing Recreational Trail Network

Description

Map of the existing recreational trail network derived using a combination of local knowledge, stakeholder and community input, online maps produced by the owners/maintainers of trail networks such as East Bay Municipal Utility District (EBMUD), U.S. Army Corps of Engineers, Arnold Rim Trail Association (ARTA), and recreational trail data sources like Strava and All Trails.

Source: Fehr & Peers, 2025.

Residents were asked through the public outreach survey which trails they used most often, what their primary activity was, and how frequently they utilized these trails. Figures 17 through 19 display summarized responses. The full survey questionnaire and responses are included in Appendix C.

As displayed, Lake Hogan, Arnold Rim, and Big Trees are the most frequented trails. Residents primarily utilize trails for walking/hiking or bicycling and almost 40 percent use the trails at least once a week. A common theme noted in the survey and frequently discussed during in person outreach efforts was residents' frustration at having to drive to existing trails despite them being located fairly close to their homes.

For instance, trails at Lake Hogan are located within one mile of the majority of the Gold Creek Subdivision and the La Contenta community and within two miles of residents in downtown Valley Springs and most of Rancho Calaveras; however, there is currently no safe way for residents to walk to/from any of these communities and the lake, forcing residents to drive. Similarly, almost the entire Arnold community is located within walking distance of either the Arnold Rim Trail or Big Trees State Park. Although local access trailheads exist, there is no safe walking or biking path for residents to access these local trailheads and unless one lives directly adjacent to them, residents must drive.

Additionally, specific concerns regarding wayfinding on the Arnold Rim Trail were voiced during the outreach period. Confusion exists regarding both where the trail can be accessed and on the actual trail and as a result, it is not uncommon for users to get lost. In 2023, a fatality occurred on the Arnold Rim Trail and was determined to be caused by an unexperienced hiker getting disoriented, lost, and unable to find her way back[3]. Just two months before this fatality occurred, a biker was lost for three days after becoming disoriented and lost but luckily was found by a search and rescue team consisting of multiple agencies[4]. This is discussed in greater detail in the "Wayfinding" section of the Planned Networks and Programs chapter.

Figure 17

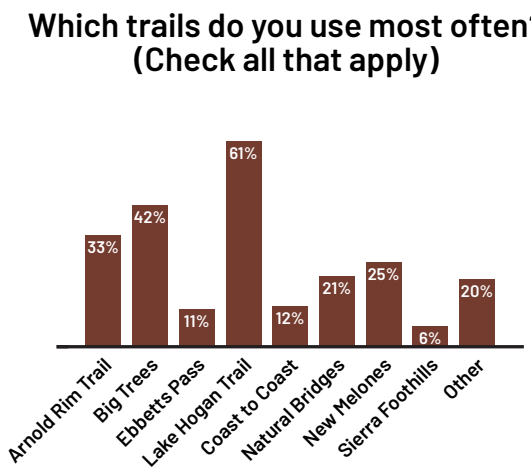


Figure 18

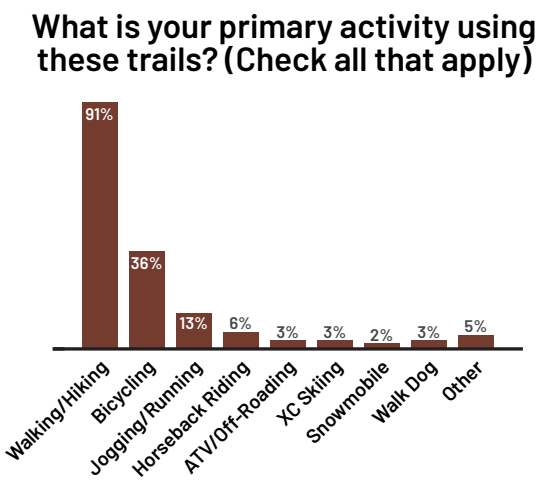
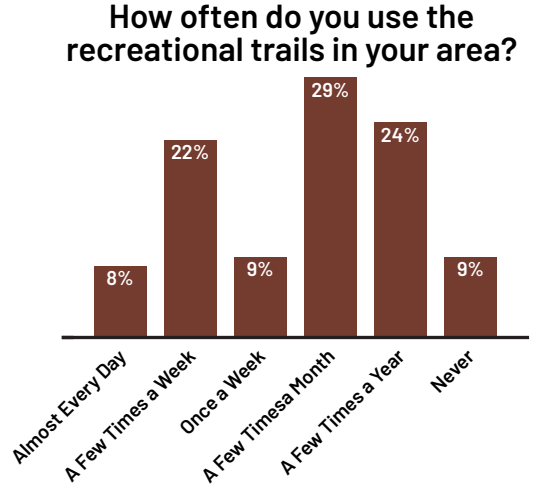


Figure 19



[3] "Traveling nurse who went missing on California hike dies of exposure". Fox News. December 7, 2023. https://www.ktvu.com/news/traveling-nurse-who-went-missing-on-california-hike-died-of-exposure
[4] "Arnold RIM Trail biker rescued after 3-day ordeal". Calaveras Enterprise. October 3, 2023. https://www.calaverasenterprise.com/articles/news/arnold-rim-trail-biker-rescued-after-3-day-ordeal/

Current Active Transportation Improvements

Although existing bicycle and pedestrian facilities are currently limited, multiple active transportation improvement projects are currently under construction or planned to begin construction within the next one to two years.

Valley Springs Improvements

In 2020, the Valley Springs Town Center Connectivity Plan (CCOG, GHD) was completed which identified various improvements in the downtown Valley Springs area. Recently, Phase 1 of this project was completed which included new and improved crossings, a paved shoulder (intended to function as a shared-use path), and sidewalks near Valley Springs Elementary School. The County is currently pursuing additional funding to complete Phase 2 which will generally include sidewalks on the south side of Daphne Street between Pine Street and Laurel Street and paved shoulders on one side of Cedar Street, Laurel Street, Chestnut Stret, and Sequoia Avenue. It is noted that the Town Center Connectivity Plan identified shared-use paths in locations that paved shoulders are currently planned. If paved shoulders are constructed in lieu of a shared-use path, it is recommended that signage and striping be included to indicate that these paved shoulder areas are intended for use by bicyclists and pedestrians and if possible, parking should be prohibited to ensure bicyclists and pedestrians have clear, unobstructed access.

This plan also identifies a planned Class II bike lane and shared-use path on portions of SR 12. In summer of 2025, Caltrans began constructing these improvements along with a traffic signal at the SR 12/Valley Oaks Shopping Center driveway. Improvements are being constructed on the north side of SR 12 between Chestnut Street and the mobile home park and on the south side of SR 12 between the SR 12/SR 26 intersection and the SR 12/Valley Oaks Shopping Center driveway. The project is anticipated to be completed in 2025.

State Route 12 in Valley Springs

State Route 12 in Valley Springs

Angels Creek Master Plan

In 2012, the Angels Creek Master Plan and Trail (City of Angels Camp, RRM Design Group) was completed which identified a planned recreational trail adjacent to Angels Creek that would ultimately provide a connection from the City of Angels Camp to New Melones Lake. Segments of this trail have received environmental clearance and construction of phases I and II are anticipated to be completed by 2030. Phases I and II include construction of a class I shared-use path from Kurt Drive/Vallecito Road through Tryon Park to SR 49, a class III bike route on Finnegan Lane from SR 49 to Finnegan Court, and a class I shared-use path on Finnegan Court from Finnegan Lane to Greenhorn Creek Road dead-end.

SR 49 - San Andreas Improvements

In 2017, the San Andreas SR 49 Commercial Gateway & Corridor Study (CCOG, Omni-Means/GHD) was completed which identified various improvements on SR 49 in San Andreas between Pool Station Road and Airport Road. The plan included complete streets components aimed at closing gaps in the existing pedestrian network and providing continuous sidewalks, additional and improved crossings, and a Class II bike lane. The County is currently coordinating with Caltrans to begin construction of the SR 49 San Andreas Complete Streets Project which will install/upgrade curb ramps, sidewalks, and driveways to current ADA standards and install a Class II bike lane on SR 49 in the town of San Andreas. The project is currently in the PA&ED phase and is estimated to begin construction in 2026.

SR 49 – Angels Camp Improvements

In 2020, the Angels Camp North Main Street Plan (CCOG, City of Angels Camp, GHD) was completed which identified various improvements on SR 49 in Angels Camp beginning just west of Copello Road and terminating just east of the SR 4/SR 49 intersection. In 2017, the Angels Camp Main Street Plan (CCOG, City of Angels Camp, Design Workshop) was completed which identified various improvements on SR 49 between Murphys Grade Road and SR 4/Old Vallecito Road. Both plans included complete streets components aimed at closing gaps in the existing pedestrian network and providing continuous sidewalks along the entire corridor, and installing Class II bike lanes. Two roundabouts were also identified in the North Main Street Plan, one at SR 49/Francis Street and one SR 49/SR 4.

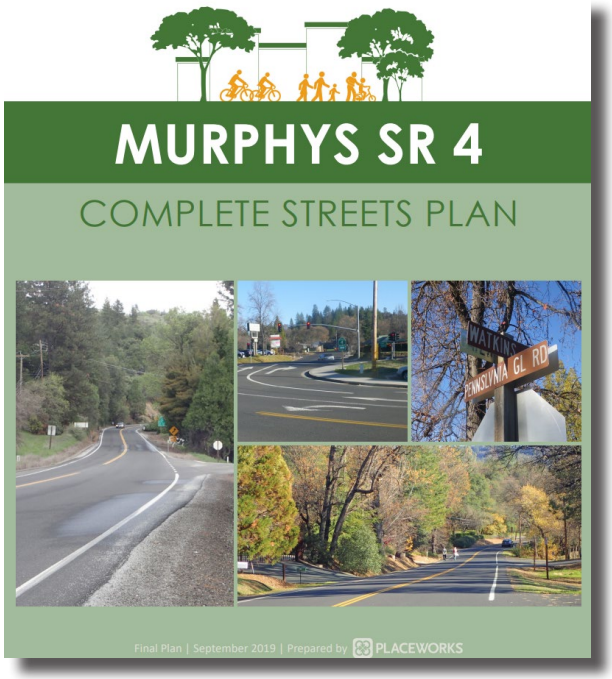
Caltrans is currently in the Project Approval & Environmental Design (PA&ED) phase of the SR 49 Mobility Improvement Project which will include construction of the roundabouts and bicyclist and pedestrian improvements identified in the Angels Camp North Main Street Plan. This project is estimated to be complete by summer 2027.

Caltrans is currently in the construction phase of the SR 49 Angels Camp Complete Streets project which includes construction of new sidewalks which will close gaps in the pedestrian network on SR 49, upgrade existing pedestrian facilities to meet current ADA standards, add street lighting, planting, wayfinding signage and a Class II bike lane. This project is estimated to be complete by summer 2028.

State Route 49 in Angels Camp

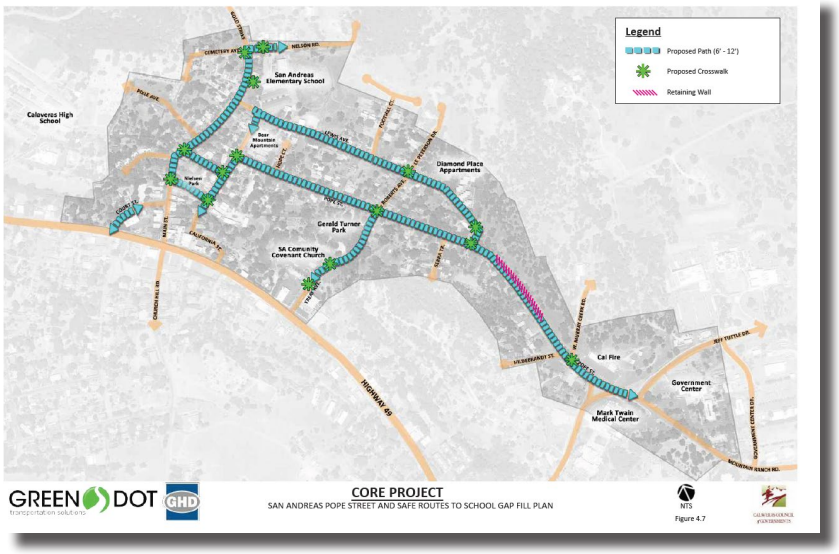
SR 4 – Murphys Improvements

In 2019, the Murphys SR 4 Complete Streets Plan (CCOG, Placeworks) was completed which identified improvements in the Murphys community area on and adjacent to SR 4. Since completion of the Plan, a portion of the sidewalk/paved pedestrian path has been constructed on the west side of SR 4 and improvements near the SR 4/Pennsylvania Gulch Road and SR 4/Big Trees Road/Tom Bell Road intersections have been constructed. Additional updates to the SR 4/Pennsylvania Gulch Road intersection are anticipated to be constructed in the near-term and include upgrading the existing RRFB on SR 4 to a PHB, adding a crosswalk on the east leg, constructing a sidepath on Pennsylvania Gulch Road to provide a connection from SR 4 to the Albert Michelson Elementary School, and installing a RRFB at the existing midblock crossing on Pennsylvania Gulch Road adjacent to the elementary school.



San Andreas Pope Street Improvements

In 2017, the San Andreas Pope Street and Safe Routes to School Gap Fill Plan (CCOG, Green DOT) was completed which identified bicycle and pedestrian improvements on Pope Street, Lewis Avenue, California Street, and additional streets adjacent to the San Andreas Elementary School. The Plan identified the need for safe and continuous bicycle and pedestrian facilities on the north side of SR 49, targeted at providing a connection between existing residential land uses and the school. The project has since received grant funding for design and construction, and is currently in the design phase.



Collisions

Calaveras County is currently in the process of developing a Comprehensive Safety Action Plan (CSAP) which has an ultimate goal of eliminating all traffic-related fatalities and serious injuries and committing to making roads, vehicles, and traffic systems as safe as possible for all users by 2050. Caltrans, which is responsible for SR 12, SR 26, SR 4, and SR 49, has a similar vision of eliminating fatalities and serious injuries on California's roadways by 2050 (described in Director's Policy DP-36, dated February 15, 2022). This vision will be used to determine and prioritize future safety actions.

The CSAP will be based on the Safe Systems approach which acknowledges that humans make mistakes and seeks to ensure that those mistakes do not result in serious injuries for any road user. Recognizing that the human body is vulnerable, the Safe Systems approach seeks to limit the kinetic energy transferred in a crash to a level the body can withstand when designing and operating a transportation network.

The Safe System approach incorporates five elements of a safe transportation system – safe road users, safe vehicles, safe speeds, safe roads, and post-crash care. This approach means that responsibility for road safety is not born solely by road users. While road users are responsible for their own behavior and abiding by laws and regulations and exhibiting due care and proper behavior on the transportation system, safety is a shared responsibility with those who design, operate, and maintain the transportation network, including the automotive industry, law enforcement, elected officials, and government bodies.

In a Safe System, roadway system designers provide safe roadways by using engineering standards, guidance from organizations such as Caltrans and the American Association of State Highway and Transportation Officials (AASHTO), and engineering judgment to create context-sensitive safety solutions.

To evaluate walking and biking safety, UC Berkeley's Safe Transportation Research and Education Center (SafeTREC) Transportation Injury Mapping System (TIMS) was used to evaluate collision patterns in the County. TIMS data focuses on injury collisions and does not include property damage only collisions. Collision data is geolocated and is valuable for mapping and identifying collision patterns, particularly for fatal and severe injury collisions and collisions involving bicyclists and pedestrians. Collisions reported between 2018 and 2022 (the most recent five-year period available) were used for this analysis.

Between 2018 and 2022, there were 1,089 reported collisions in the County, including 232 severe injury collisions and 57 fatal collisions. There were 13 collisions involving bicyclists (resulting in five severe injury collisions and no fatal collisions) and 25 collisions involving pedestrians (resulting in four severe injury and two fatal collisions). Approximately 65 percent of all collisions occurred on state highways or at an intersection with a state highway.

While this plan focuses on bicycle and pedestrian related collisions, all reported injury collisions during the study time period were documented and are described in Appendix H. Reviewing all collision data is important as it can help identify higher risk roadways and intersections that pedestrians and bicyclists may intentionally avoid (i.e. the absence of bicycle and/or pedestrian involved collisions does not indicate an intersection or roadway is safe and in many cases in rural communities, bicycle and pedestrian collision numbers may be low simply because residents are too afraid to walk or bike).

Table 5 summarizes all collisions, and bicycle and pedestrian involved collisions by year. As shown, bicycle and pedestrian involved collisions account for less than four percent of all collisions. However, as previously noted, this low percentage of collisions may be attributed to the fact that many residents do not walk or bike due to safety concerns. Pedestrians are more likely to be involved in a collision and the share of pedestrian involved collisions range from 1.8 percent to 2.7 percent annually.

Table 6 displays the primary collision factor (PCF) for bicycle and pedestrian involved collisions. As shown, over 50 percent of bicycle involved collisions are attributed to bicyclists traveling on the wrong side of road or improper turning. For collisions attributed to bicyclists traveling on the wrong side of the road, three are categorized as the bicyclist driving on the left-hand side of road and one is categorized as bicyclist not riding as close as practicable to the right-hand curb.

Table 5: Collisions Involving Bicyclists and Pedestrians (2018-2022)

Year	All Collisions	Pedestrian		Bicyclist	
		Number	Share	Number	Share
2018	226	6	2.7%	2	1.0%
2019	235	5	2.1%	2	1.0%
2020	191	5	2.6%	3	1.5%
2021	214	5	2.3%	2	1.0%
2022	223	4	1.8%	4	1.8%
Total	**1,089**	**25**	**2.3%**	**13**	**1.2%**

Source: Transportation Injury Mapping System (TIMS), Fehr & Peers, 2024

Table 6: PCF Violation Category: Bicycle and Pedestrian Involved Collisions (2018-2022)

Category	Bicycle Involved Collisions	%	Pedestrian Involved Collisions	%
Wrong Side of Road	4	31	-	-
Improper Turning	3	23	3	12
Unsafe Speed	2	15	4	16
Other Improper Driving	2	15	-	-
Vehicle Right of Way Violation	1	8	-	-
Pedestrian Right of Way Violation	-	-	4	16
Pedestrian Violation	-	-	8	32
Unsafe Starting or Backing	-	-	2	8
Other Than Driver	-	-	1	4
Traffic Signals and Signs	-	-	1	4
Unknown or Not Stated	1	8	2	8
Total	**13**	**100**	**25**	**100**

Represents the two highest categoies for collisions.
Source: Transportation Injury Mapping System (TIMS), Fehr & Peers, 2024

Almost 65 percent of pedestrian involved collisions are attributed to pedestrian violations, pedestrian right of way violations, and unsafe speeds. Notably, pedestrian violations account for almost 50 percent (12 collisions) of all pedestrian involved collisions. Of these 12 collisions, nine involved pedestrians crossing (two in a crosswalk at an intersection, two in a midblock crossing, and five crossing outside of a crosswalk) and three involved pedestrians walking in the road (including the shoulder). However, the classification of pedestrian violation is not truly representative of the cause of the collision as it may be viewed as the pedestrian being at fault. Upon further review of these specific collisions, the PCF violation detail indicates that four of these 12 collisions were due to the driver not yielding at a crosswalk, four indicate the pedestrian crossed outside of a crosswalk or legal crossing but there is no crossing (marked or unmarked) near where the collision occurred, and one has no additional details regarding the cause of the collision so it is unclear what the pedestrian violation was.

In general, caution should be used when evaluating fault for collisions involving bicyclists and pedestrians. Lack of infrastructure for biking and walking may cause bicyclists and pedestrians to make decisions they deem safer or simply more convenient, but are actually less safe. For instance, if no pedestrian walkways or crosswalks are present, a pedestrian may walk in the road and cross at any given location. However, installing pedestrian walkways and designating crossing locations provides clear direction for pedestrians and can result in less dangerous behaviors.

Figures 20 and 21 display the location of bicycle and pedestrian involved collisions. The largest concentration of bicycle and pedestrian involved collisions are described below:

Valley Springs

- SR 26 in Rancho Calaveras between Olive Orchard Road and Farris Drive
- SR 12 in Valley Springs near the Pine Street/SR 12 intersection and near the Lime Creek Road/SR 12 intersection.
- Vista Del Lago Drive between SR 26 and Huckleberry Lane

San Andreas

- SR 49 between Bellview Street (west) and Main Street

Angels Camp

- SR 49 between Copello Drive and Mayo Road

Copperopolis

- Feather Drive near Copper Cove Drive
- Little John Road between Saddle Creek Drive and Kiva Drive

State Route 4

- SR 4 between Angels Camp and Murphys

With the exception of SR 4, collisions are generally concentrated in areas with more residential development that is in close proximity to key destination areas, indicating there is a desire for individuals to walk and bike between land uses.

State Route 12 in Valley Springs

Figure 20

Pedestrian Involved Collisions

Description

Map of collisions involving pedestrians.

Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025

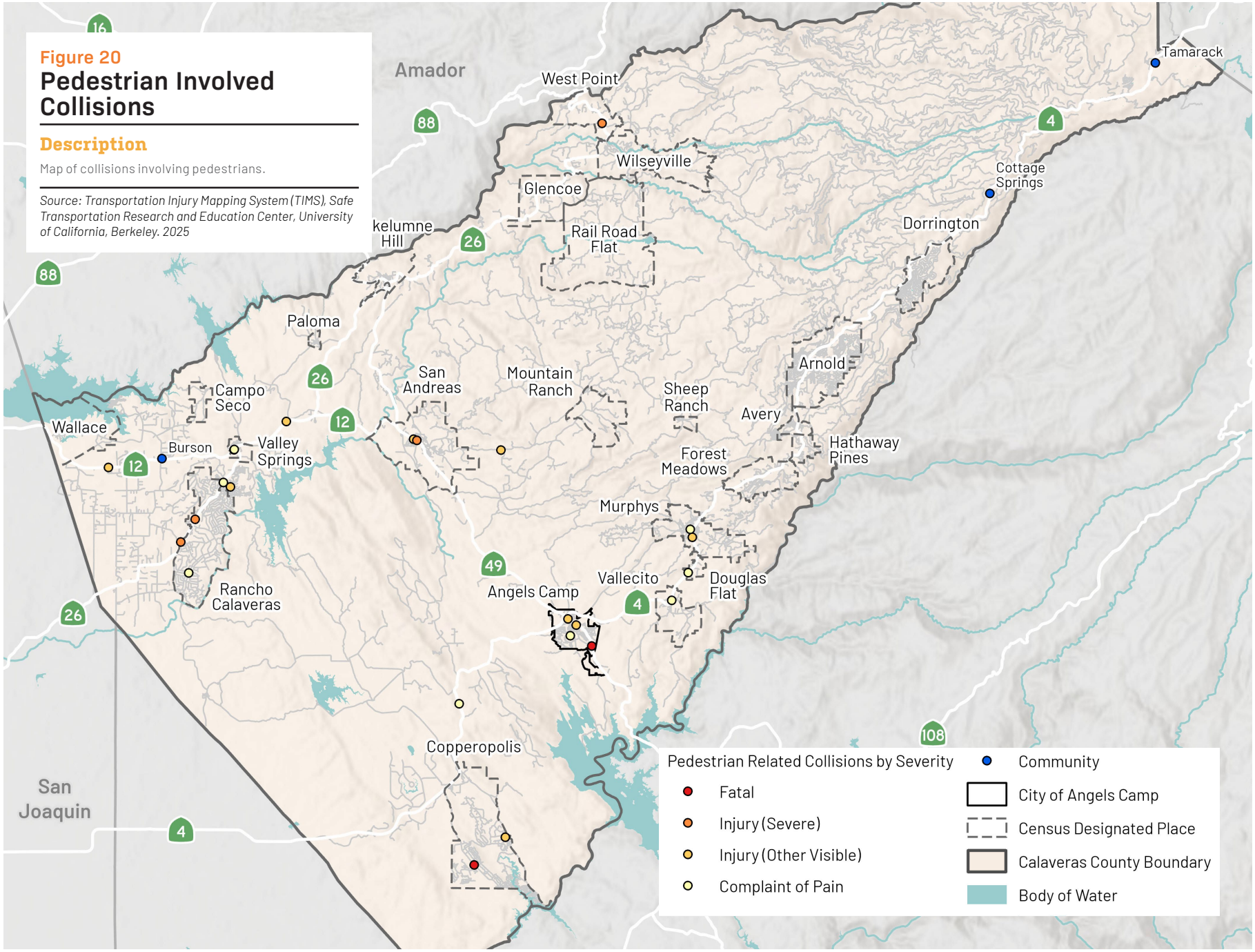


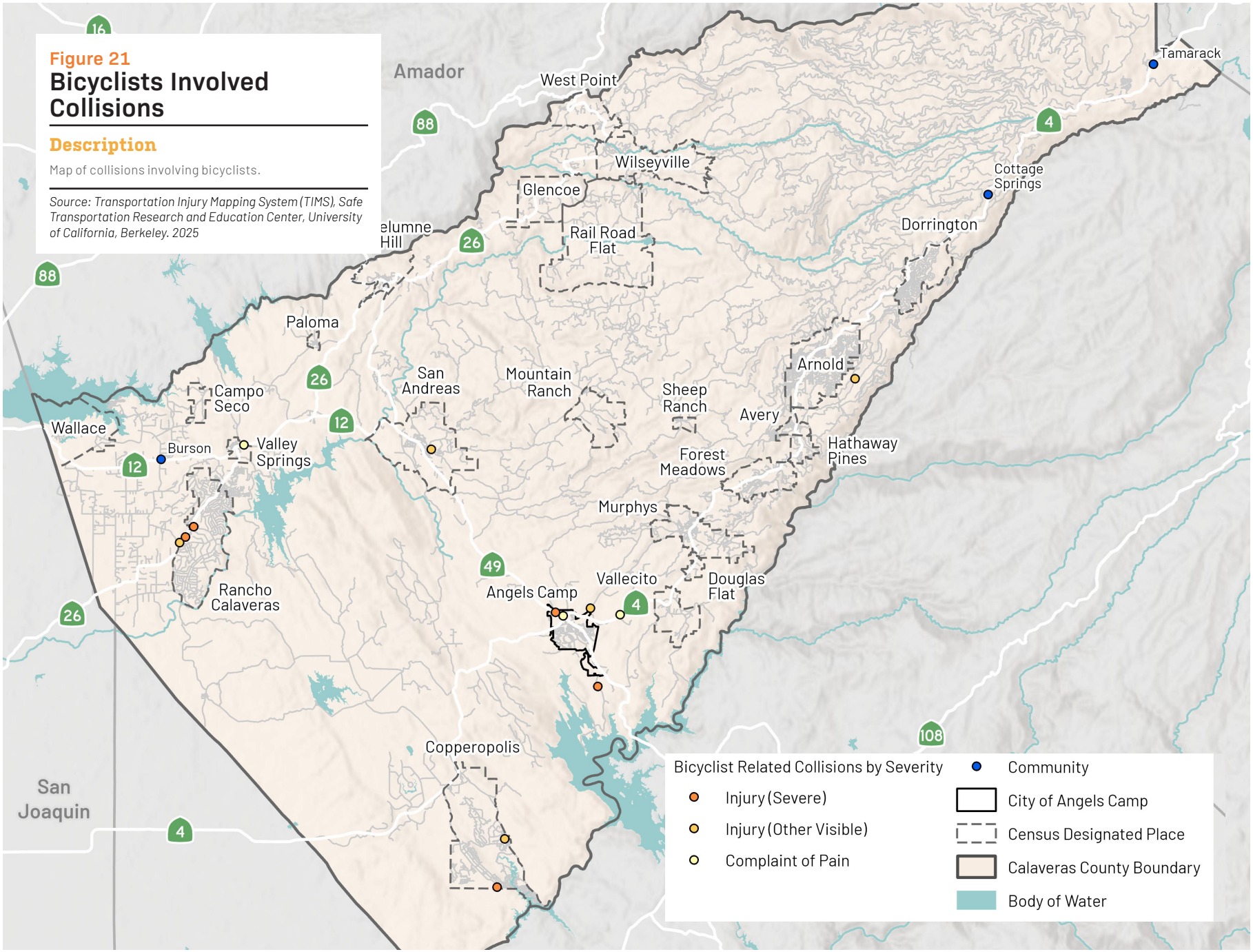
Figure 21

Bicyclists Involved Collisions

Description

Map of collisions involving bicyclists.

Source: Transportation Injury Mapping System (TIMS), Safe Transportation Research and Education Center, University of California, Berkeley. 2025



Level of Traffic Stress

Traffic stress is the discomfort and unease that a person riding a bicycle may feel due to vehicle traffic, roadway conditions, facility design, and other factors. Level of traffic stress (LTS) was analyzed for biking along select major corridors in the County. High vehicle speeds make conditions uncomfortable for bicyclists, particularly when high speeds are combine with high volumes.

People who bicycle vary in experience, skill, ability, and confidence. Some are comfortable riding in traffic and value bicycling facilities and routes that are direct and limit unnecessary delay. These cyclists more comfortably utilize facilities that share the roadway with automobiles or have limited bicycle infrastructure. Other people with less confidence bicycling and lower or developing bicycle skills, such as children and older adult riders, may need more separation from traffic to feel comfortable enough to ride. Different bicycle types (such as trailers for children, cargo bicycles, or adult tricycles) also require more space in bicycle facilities. For these reasons, facilities should be designed to accommodate less skilled riders and a wide variety of bicycle types, especially in heavily traveled areas. Research has correlated these different types of bicycle riders with the LTS that they are willing to experience while cycling.

Metrics have been developed to quantify the LTS that a typical rider may experience so that new bicycle facilities can be targeted to reduce this stress. Factors influencing LTS include the following:

- Number of travel lanes
- Speed of traffic
- Number of vehicles
- Presence of bike lanes
- Width of bike lanes
- Presence of physical barrier

Using these factors, a bicyclist level of traffic stress (BLTS) score can be assigned from 1 to 4 for each roadway segment, with 1 being the least stressful and 4 being the most stressful.

Bicyclist level of traffic stress was evaluated on the following key corridors in the County (displayed on Figure 22):

- SR 12 in Valley Springs between Pine Street and Lime Creek Road
- SR 49 in San Andreas between Pool Station Road and Mountain Ranch Road
- SR 49 in Angels Camp between Copello Road and Vallecito Road
- SR 4 in Murphys between Pennsylvania Gulch Road and Big Trees Road
- SR 4 in Arnold between Cedar Lane/Fir Drive and Blagen Road

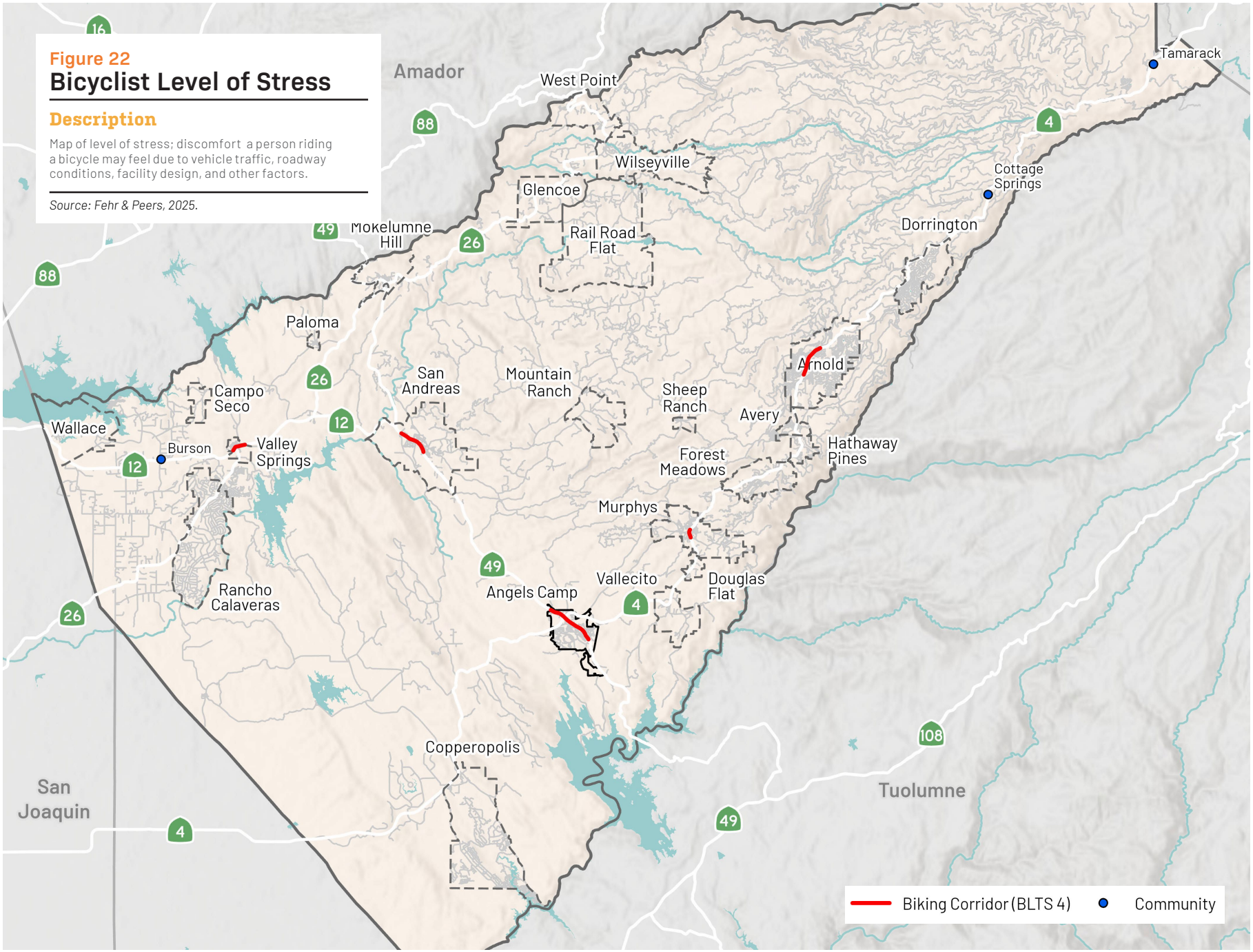
Due to existing volumes, speeds, and lack of bicycle facilities on these corridors, all corridors received LTS 4, indicating bicyclist stress is high.

Figure 22
Bicyclist Level of Stress

Description

Map of level of stress; discomfort a person riding a bicycle may feel due to vehicle traffic, roadway conditions, facility design, and other factors.

Source: Fehr & Peers, 2025.



Planned Network & Programs

This chapter discusses the planned bicycle, pedestrian, and recreational trail networks, and supporting facilities and programs for Calaveras County. The plan was developed to improve connectivity to key destinations, close gaps in the existing networks, and enhance the safety and comfort of pedestrians and bicyclists. Specifically, recommendations were developed with the intention of doing one or more of the following:

- Providing walking and biking connections between existing residential communities and existing nearby schools, parks, job centers, grocery stores, healthcare facilities, shopping centers or other community destinations;
- Providing walking and biking connections between existing residential communities and existing nearby recreational trails and/or other public recreational amenities;
- Expanding the existing recreational trail network in Calaveras County by connecting existing recreational trails to each other, or creating new recreational trails in communities that lack nearby recreational opportunities;
- Creating a cohesive recreational trail network that can promote tourism and stimulate economic activity in key destinations throughout the County.

Planned facilities were developed based on the following:

- Previous planning documents, including bicycle and pedestrian plans, general plans, and community plans
- Discussion and input from the public
- Connectivity to key destinations
- Collision history
- Discussions with jurisdiction staff and stakeholders

Pedestrian, Bicycle, and Recreational Trail Networks

Planned walking and biking facilities are summarized in Table 7 and presented in Figures 23a - 23j. These pedestrian and bicycle networks are the long-term vision for the active transportation facilities in the county and include sidewalks, crosswalks, shared-use paths/ sidepaths, separated bikeways, bike lanes, bike routes, and paved shoulders. The proposed networks are designed to connect residential land uses to key destinations and to serve as recreational assets. Appendix E – Project Priorities and Cost Estimates includes a list of these network improvements, including location and extents, lengths, high-level estimated costs, and priorities.

Identified potential recreational trail improvements are displayed in Figure 23k. In total, approximately 42 miles of potential recreational trail improvements are included in this plan. Appendix E includes a description and location of potential recreational trail related improvements. Potential recreational trail improvements differ from planned active transportation improvements given they are generally located on privately owned land or land owned by agencies such as East Bay Municipal Utilities District (EBMUD), U.S. Army Corps of Engineers, U.S. National Forest Service, and Bureau of Land Management. Implementation and maintenance of these improvements would fall on the landowners (either directly or through maintenance agreements as is the case with the Arnold Rim Trail Association) while implementation and maintenance of active transportation improvements would generally fall on the county or city. For this reason, these projects are recommended for consideration rather than identified as planned improvements.

Identified potential recreational trail improvements focus on closing gaps in the existing recreational trail network or expanding the recreational trail network based on comments received during outreach for this plan. In some cases, public comments were received regarding desire for additional signage or desire for specific improvements to existing trails (such as more jumps for biking on particular segments). These comments are provided in Appendix C for future consideration by the owners/maintainers of existing trails as they improve their trail network.

It is also noted that the U.S. Forest Service has indicated they are currently working on a project which includes reviewing and updating their planned trail network in Calaveras County, particularly in the Arnold/Avery area. Due to the timing of the ATRTP, these specific planned improvements are not included in this plan as planned trails/alignments have not been finalized. However, the U.S. Forest Service has indicated that the primary purpose of this project is to address unauthorized trails in the non-motorized portion of the Arnold/Avery interface while responding to the community's desire for additional access and recreation opportunities. Addressing unauthorized trails is critical for minimizing potential resource damage to heritage sites, soils, vegetation, and wildlife, improving public access, developing better trail connectivity, providing non-road-based trail experiences, and providing increased non-motorized recreation opportunities.

This ATRTP encourages and supports this effort as improving, expanding, and formalizing the trail network in this area would be beneficial for both the local community and visitors that frequent the Arnold Rim Trail. Specifically, formalizing the unsanctioned trail network and providing clear wayfinding signage (for all trails) is strongly recommended in the Arnold/Avery area given the complexity of this trail network, lack of consistent and reliable cell signal, and past experiences with trail users having difficulty with wayfinding.

Table 7: Summary of Planned Walking and Biking Facilities

Facility	Existing (miles)	Planned (miles)	Total (miles)
Sidewalk	20.5	18.4	38.9
Shared-Use Path/Sidepath	1.6	73.1	74.7
Separated Bikeway	0.0	4.8	4.8
Bike Lane	1.3	5.6	6.9
Bike Route	4.8	8.0	12.8
Paved Shoulder	0.0	37.1	37.1
Buffered Paved Shoulder	0.0	169.5	169.5

Notes: Sidewalk and Shared-Use Path/Sidepath distances measured by the total length while other facilities are measured by centerline.
Source: Fehr & Peers, 2025

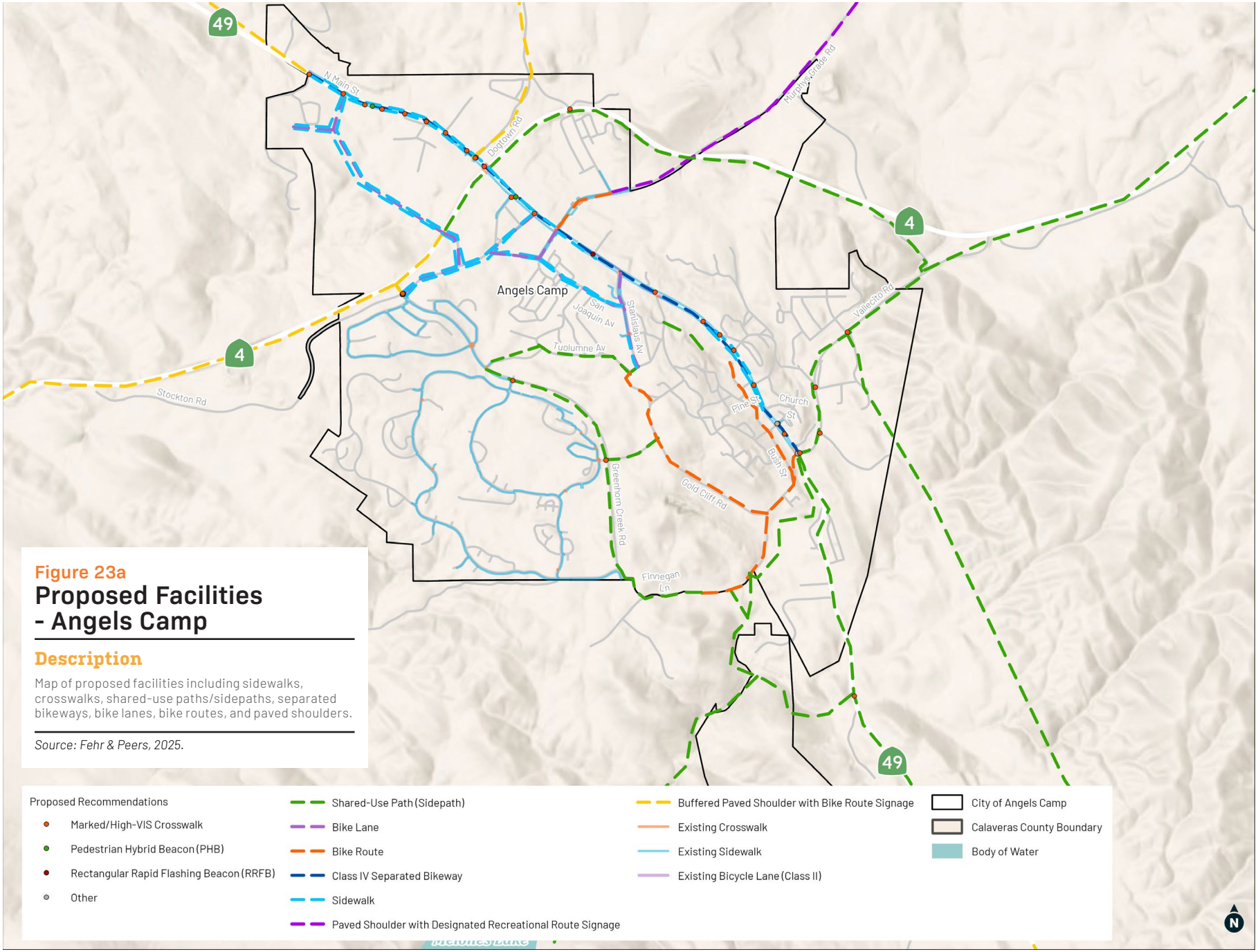


Figure 23a

Proposed Facilities - Angels Camp

Description

Map of proposed facilities including sidewalks, crosswalks, shared-use paths/sidepaths, separated bikeways, bike lanes, bike routes, and paved shoulders.

Source: Fehr & Peers, 2025.

Figure 23b

Proposed Facilities - Arnold

Description

Map of proposed facilities including sidewalks, crosswalks, shared-use paths/sidepaths, separated bikeways, bike lanes, bike routes, and paved shoulders.

Source: Fehr & Peers, 2025.

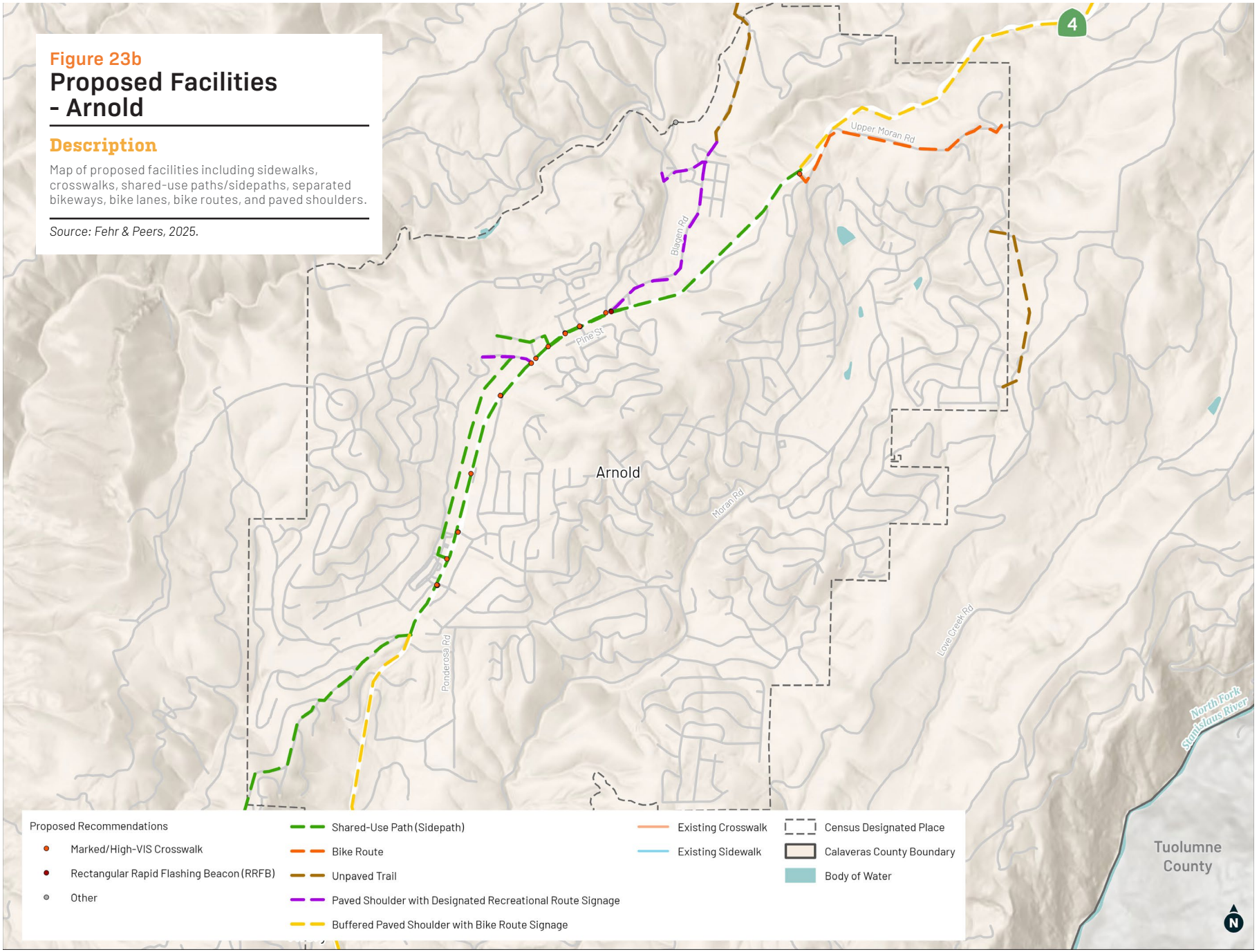


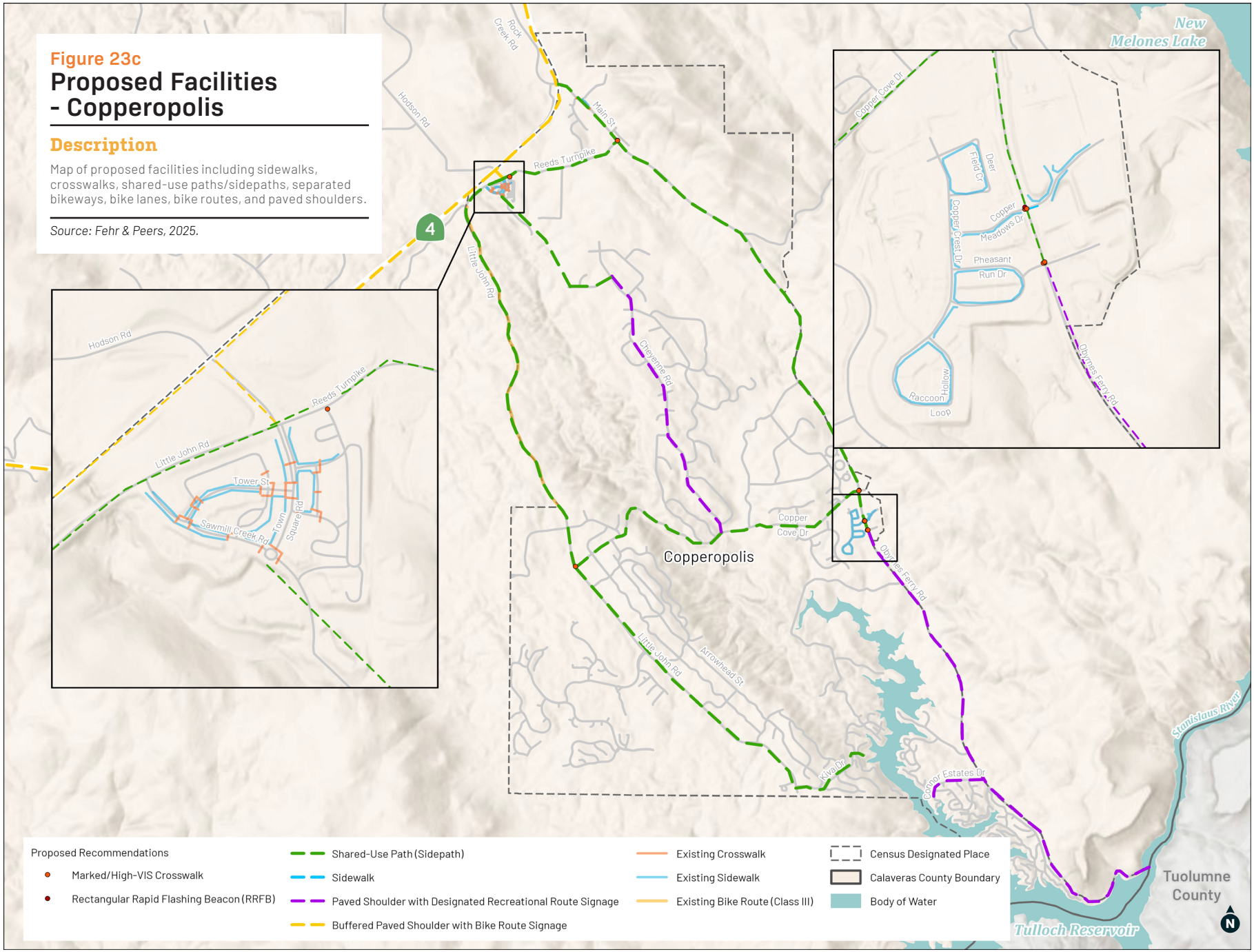
Figure 23c

Proposed Facilities - Copperopolis

Description

Map of proposed facilities including sidewalks, crosswalks, shared-use paths/sidepaths, separated bikeways, bike lanes, bike routes, and paved shoulders.

Source: Fehr & Peers, 2025.



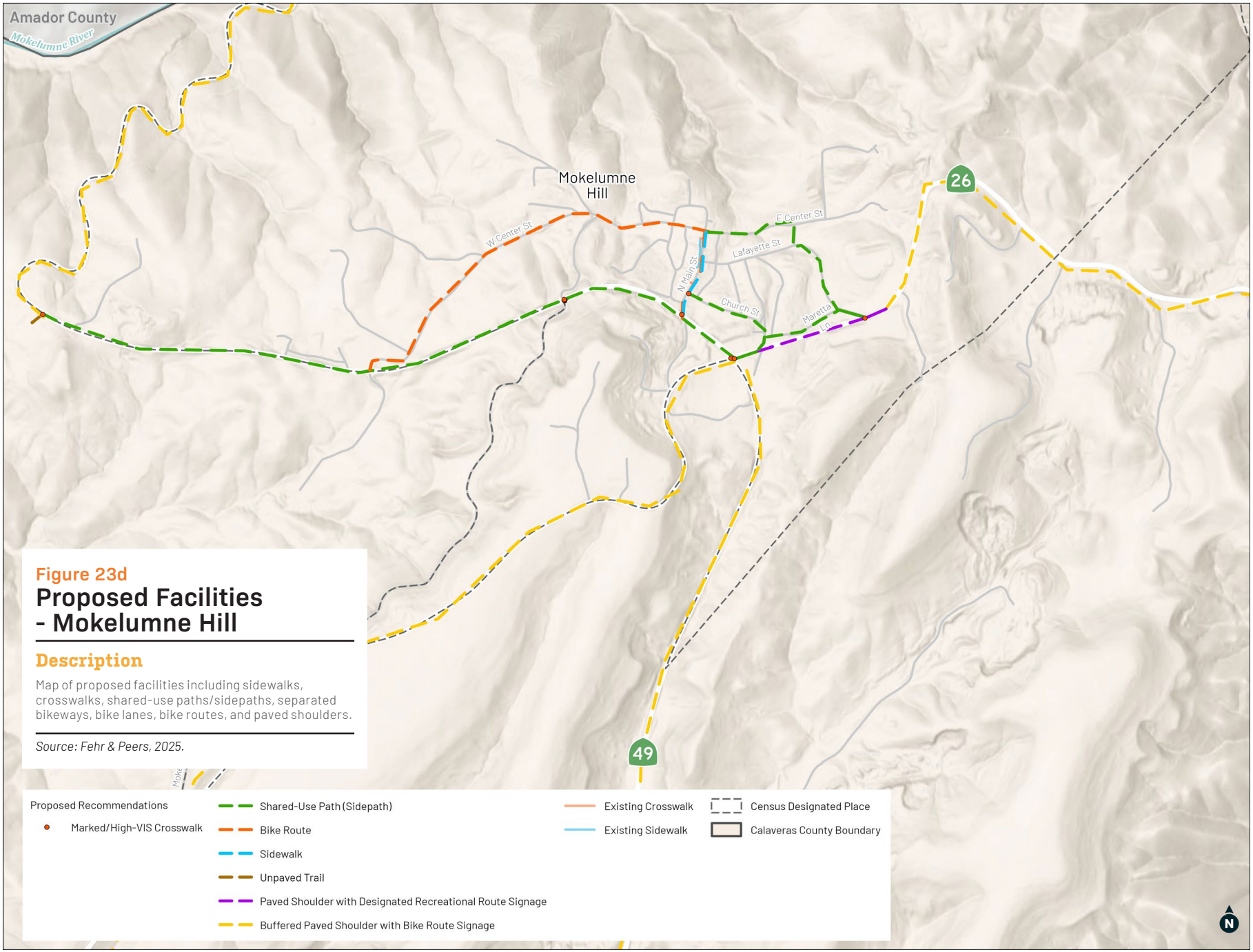


Figure 23d

Proposed Facilities - Mokelumne Hill

Description

Map of proposed facilities including sidewalks, crosswalks, shared-use paths/sidepaths, separated bikeways, bike lanes, bike routes, and paved shoulders.

Source: Fehr & Peers, 2025.

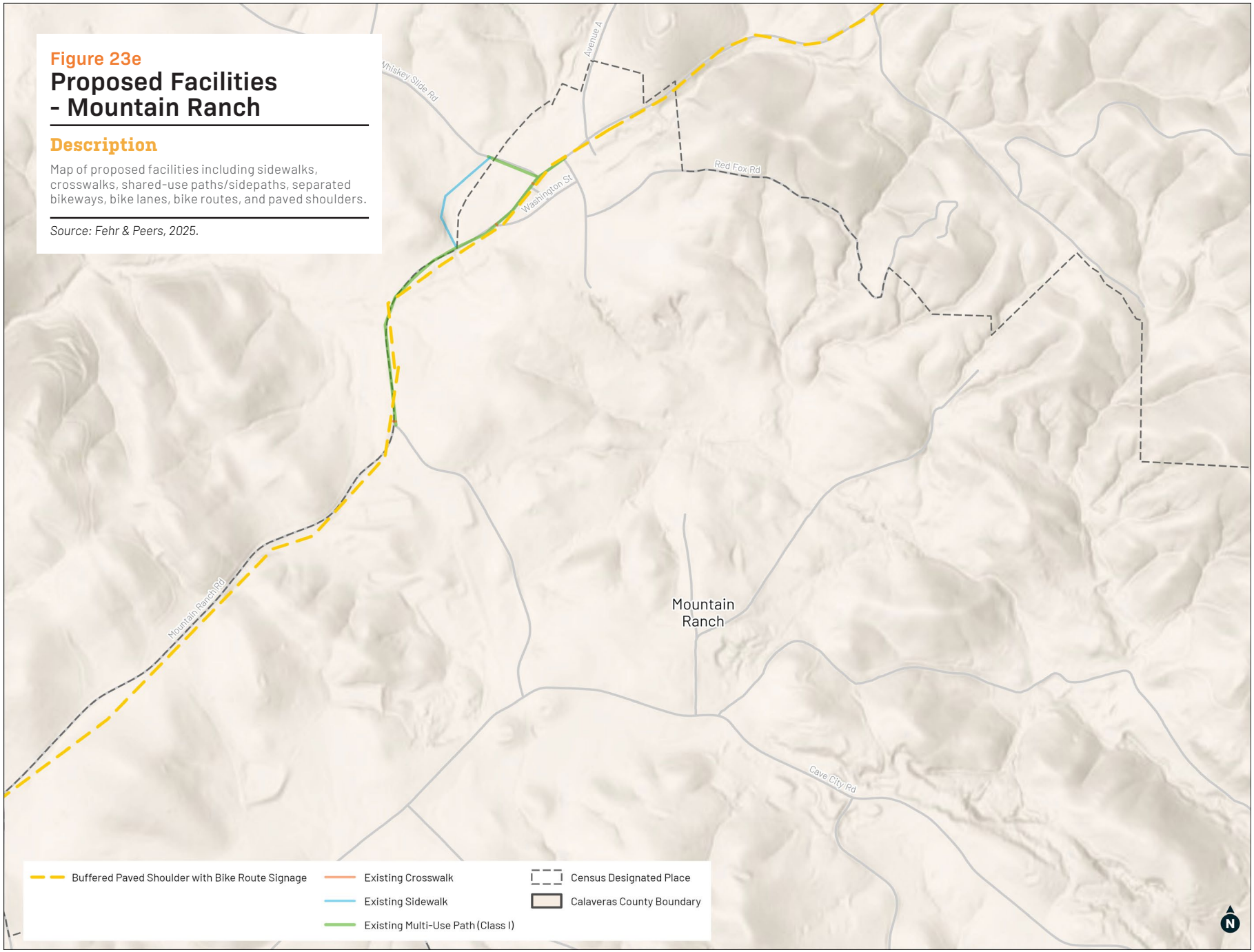
Figure 23e

Proposed Facilities - Mountain Ranch

Description

Map of proposed facilities including sidewalks, crosswalks, shared-use paths/sidepaths, separated bikeways, bike lanes, bike routes, and paved shoulders.

Source: Fehr & Peers, 2025.



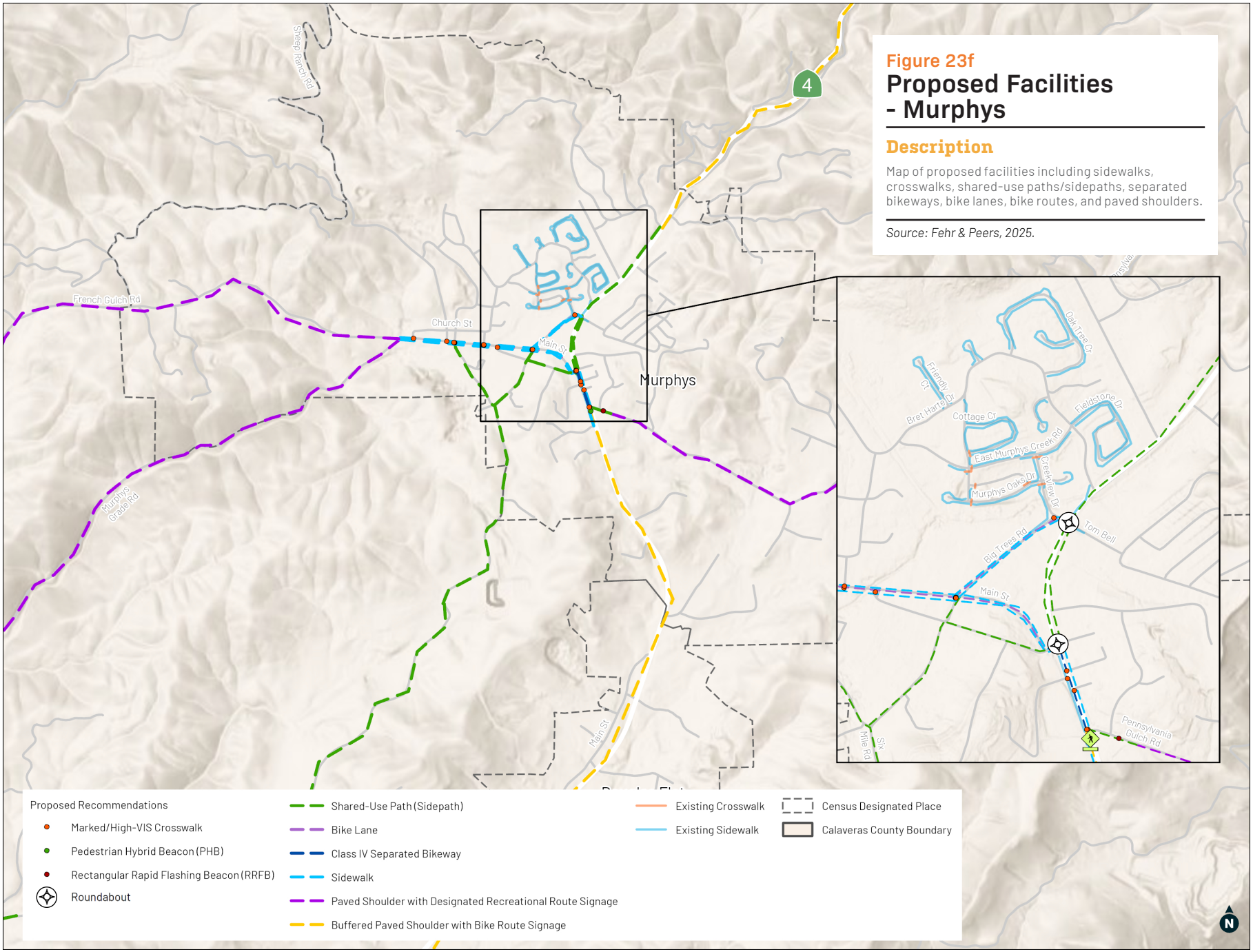


Figure 23f

Proposed Facilities - Murphys

Description

Map of proposed facilities including sidewalks, crosswalks, shared-use paths/sidepaths, separated bikeways, bike lanes, bike routes, and paved shoulders.

Source: Fehr & Peers, 2025.

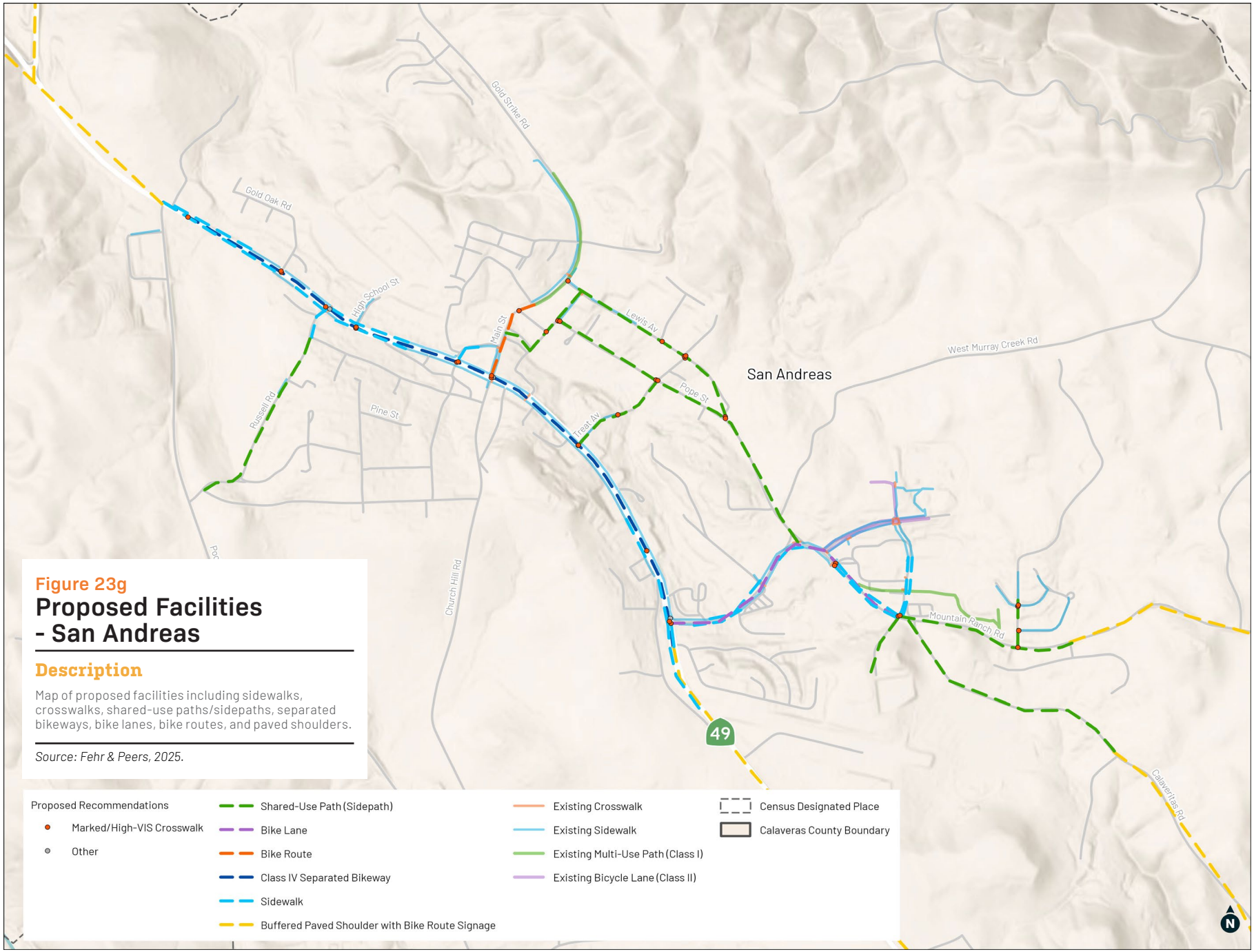


Figure 23g

Proposed Facilities - San Andreas

Description

Map of proposed facilities including sidewalks, crosswalks, shared-use paths/sidepaths, separated bikeways, bike lanes, bike routes, and paved shoulders.

Source: Fehr & Peers, 2025.

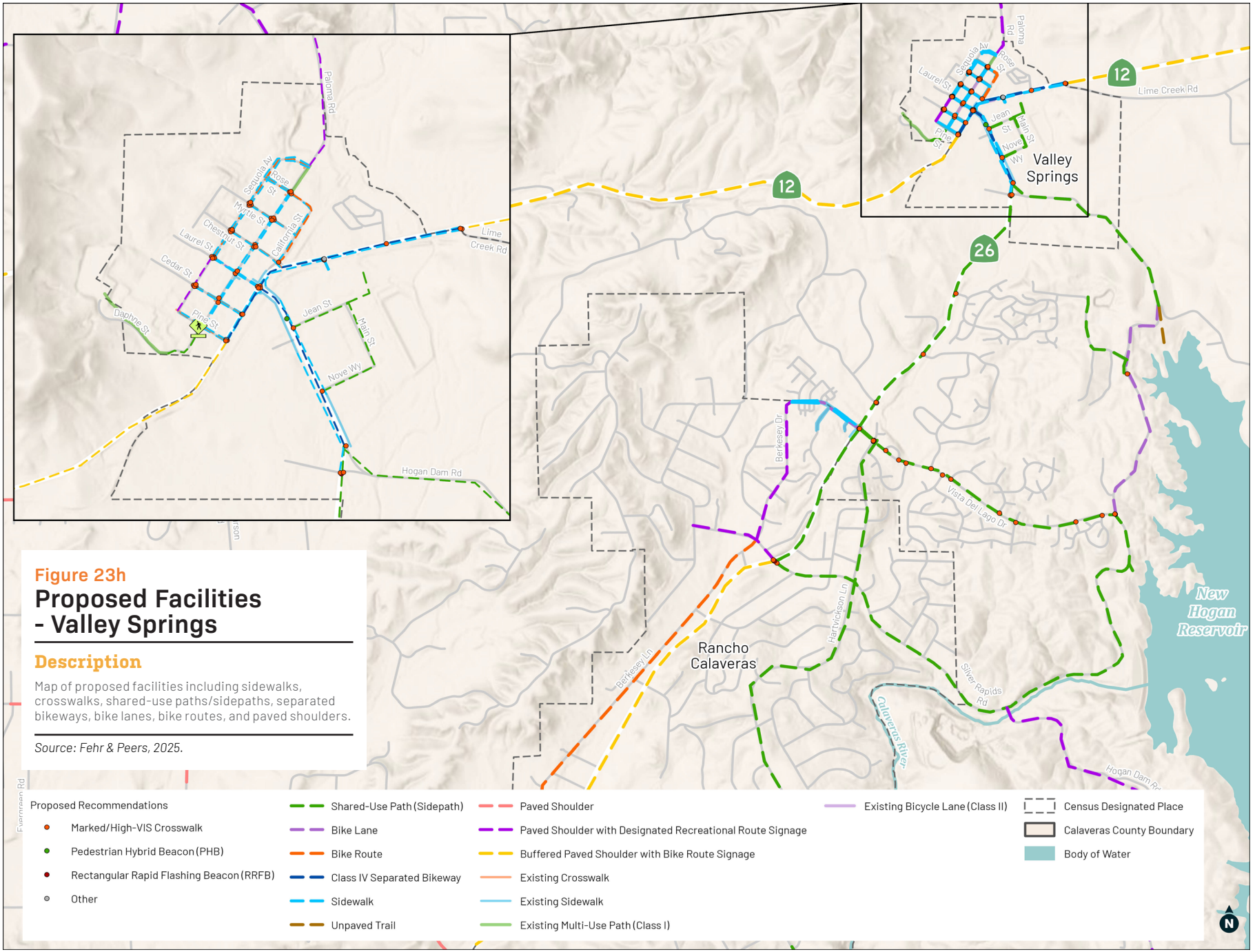


Figure 23h

Proposed Facilities - Valley Springs

Description

Map of proposed facilities including sidewalks, crosswalks, shared-use paths/sidepaths, separated bikeways, bike lanes, bike routes, and paved shoulders.

Source: Fehr & Peers, 2025.

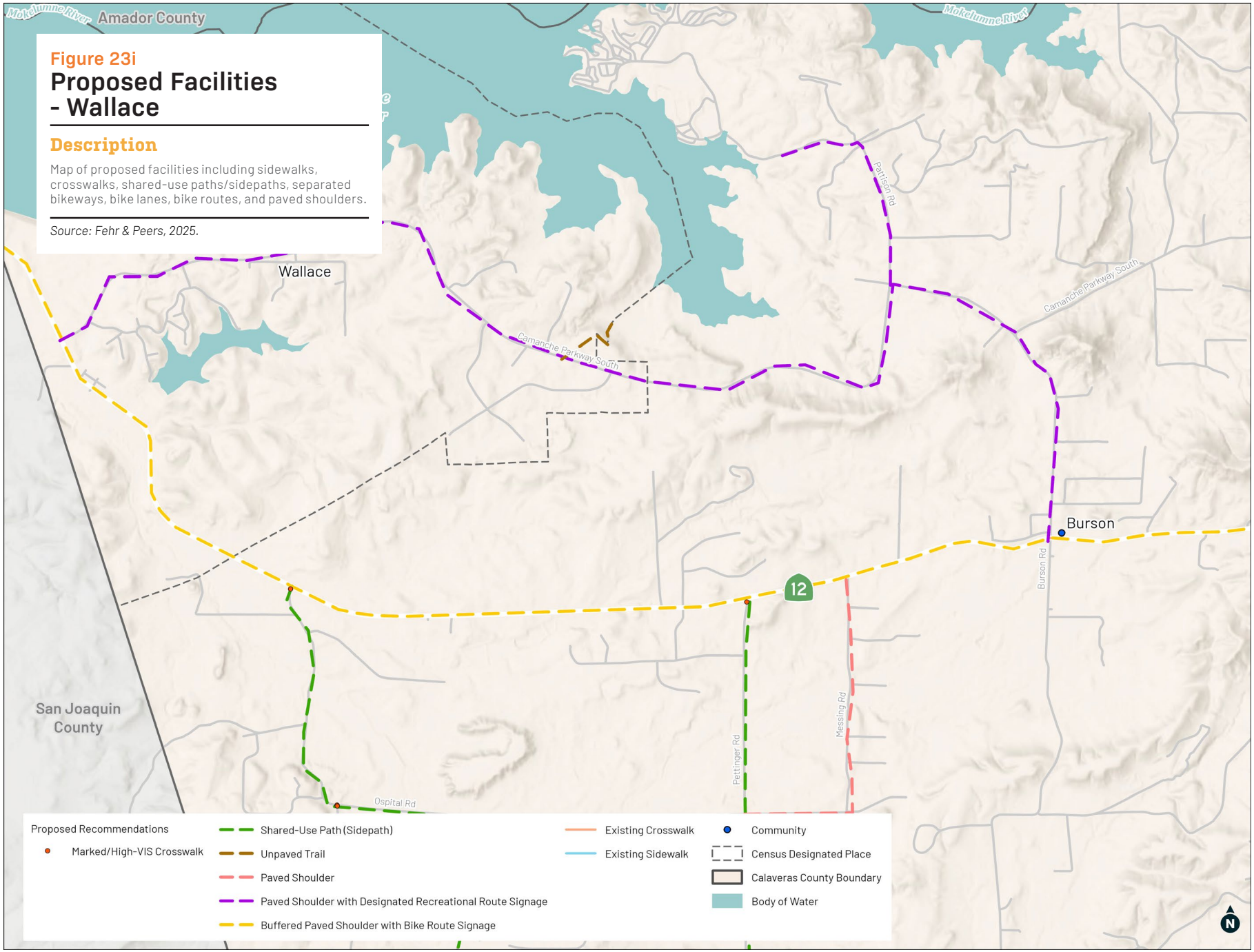
Figure 23i

Proposed Facilities - Wallace

Description

Map of proposed facilities including sidewalks, crosswalks, shared-use paths/sidepaths, separated bikeways, bike lanes, bike routes, and paved shoulders.

Source: Fehr & Peers, 2025.



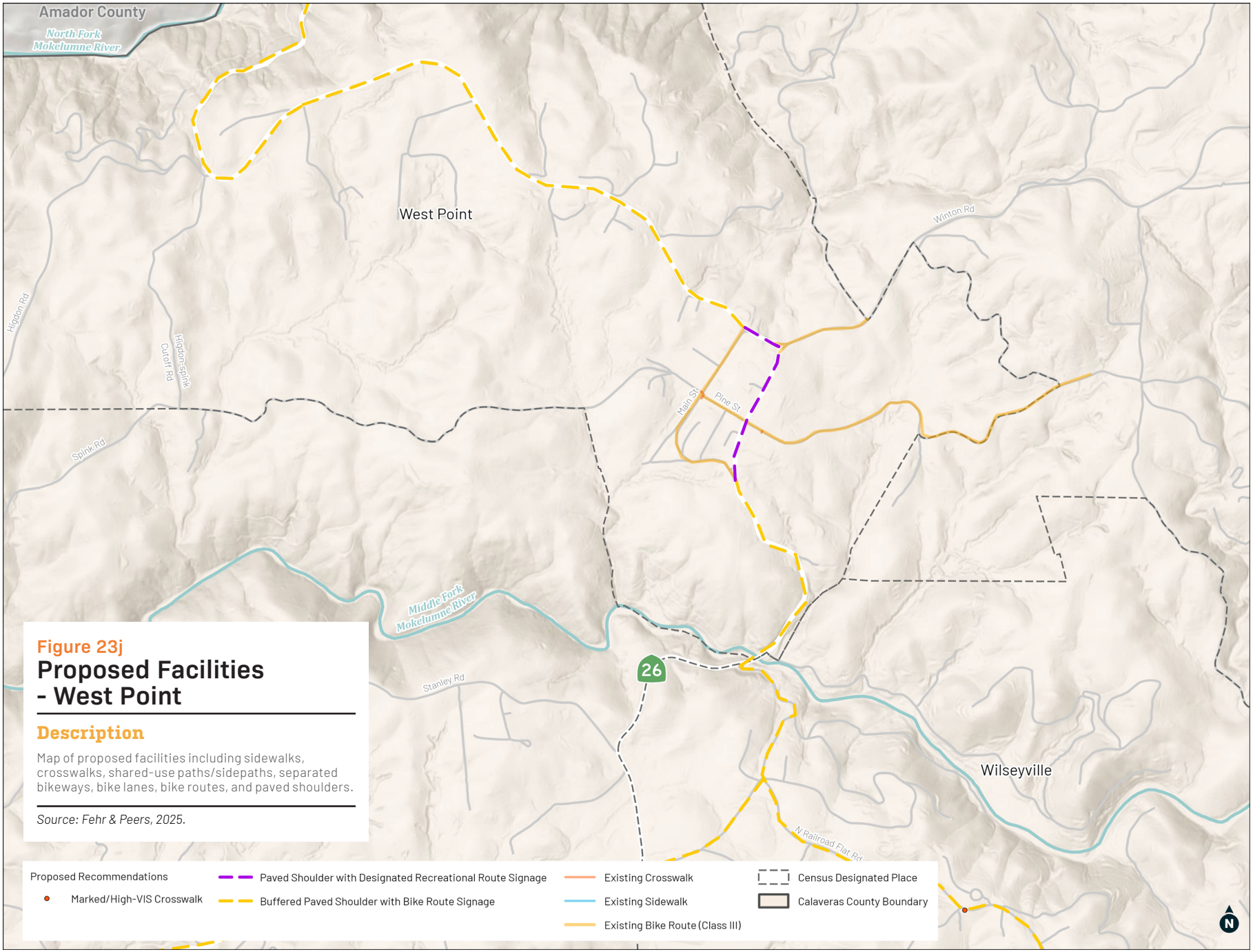


Figure 23j

Proposed Facilities - West Point

Description

Map of proposed facilities including sidewalks, crosswalks, shared-use paths/sidepaths, separated bikeways, bike lanes, bike routes, and paved shoulders.

Source: Fehr & Peers, 2025.

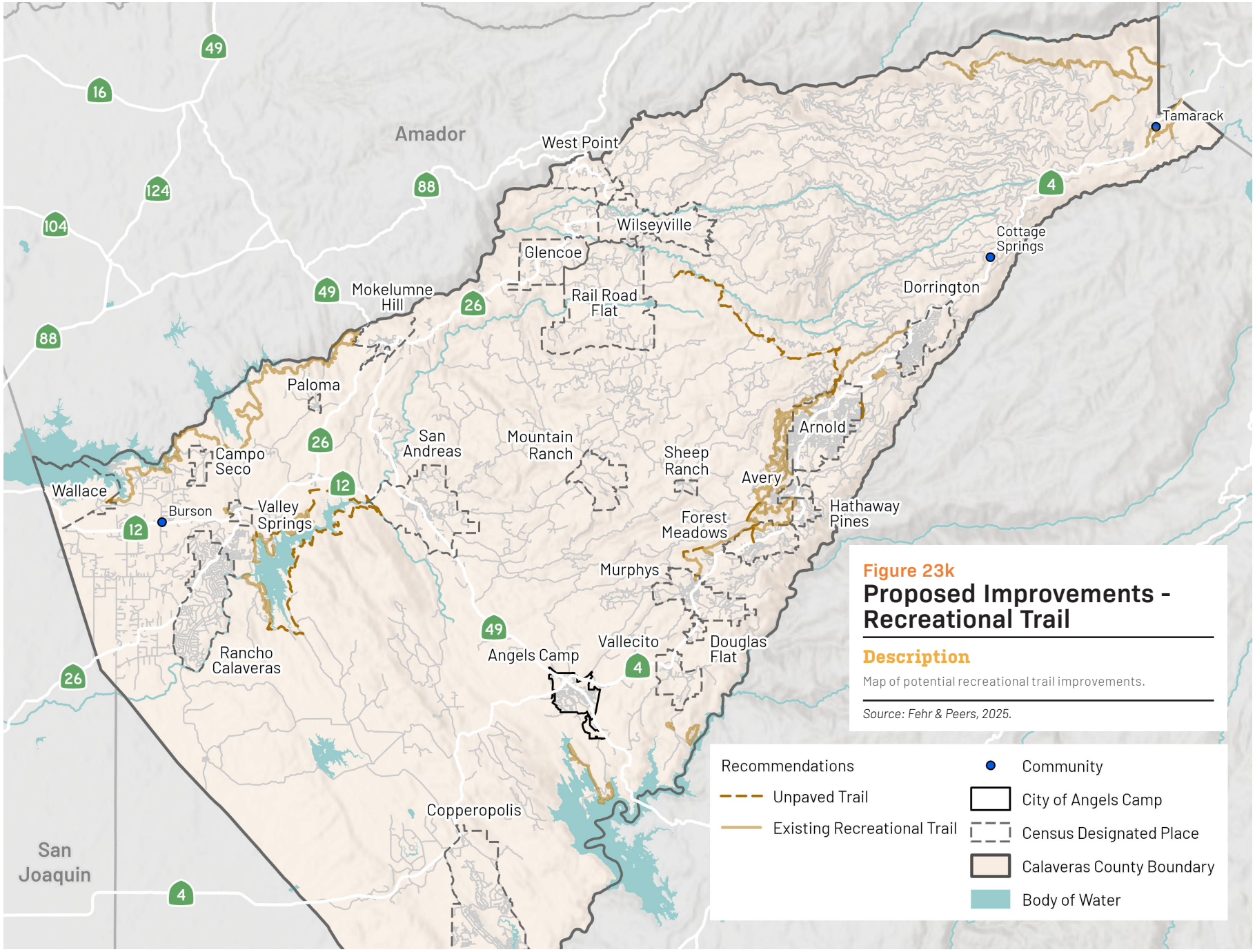


Figure 23k

Proposed Improvements - Recreational Trail

Description

Map of potential recreational trail improvements.

Source: Fehr & Peers, 2025.

Crossing Improvements

Several crossing improvement projects are included to increase pedestrian comfort and safety, as shown in Figures 23a through 23j and described in Appendix E. The decision to install a marked crosswalk or other crosswalk enhancement should be based on engineering judgement/study, and other necessary considerations as appropriate. Some of these considerations include the following:

- Pedestrian travel demand. Demand should include both existing demand and latent demand, the increase in pedestrians that would result from the improvement.
- Service of a facility or use that generates higher pedestrian travel or serves a vulnerable population (e.g., children, elderly, persons with disabilities). This may include schools, hospitals, senior centers, recreation/community centers, libraries, parks, or trails.
- Sight distance requirements, using appropriate stopping sight distance guidance from AASHTO's A Policy on Geometric Design for Highways and Streets or Caltrans' Highway Design Manual.
- Distance to nearest marked crossing.
- Guidance of the California Manual on Uniform Traffic Control Devices (MUTCD).
- Depending on the characteristics of a specific location, a marked crosswalk alone may not be sufficient to ensure efficient function for all users and maintain pedestrian safety. FHWA's Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations provides information on how to select the most appropriate treatment for a specific location. That guide and other resources should be used as appropriate by the designer when the recommendations of this plan are implemented.

Appendix D provides additional guidance on selecting crosswalk improvements.

Supporting Facilities

Wayfinding

Wayfinding signage can be used on bicycle, pedestrian, and recreational trail facilities to direct users to connecting facilities and key destinations. Good wayfinding signs can also encourage pedestrians and bicyclists to visit local businesses. These signs provide the most value at trailheads, trail junctions and at intersections of key biking and walking routes.

For recreational trails specifically, wayfinding signage should be used to clearly direct trail users to various segments of the trail as well as back to parking lots/other destinations. As noted in the Existing Conditions chapter, specific comments were received regarding wayfinding on the Arnold Rim Trail. Increased wayfinding signage and strategic placement of kiosks with maps (ideally both permanently fixed and in pamphlet form for users to take) is critical for reducing the likelihood of trail users getting lost on trails and being unable to find their way back to their starting point. Wayfinding signage should be located at all trail junctions and should periodically include segment lengths (generally at key junctions) so trail users can accurately gauge their physical capabilities for completing each segment and make on the spot decisions regarding whether they want to continue on the trail or return to their original starting point. Additionally, trails should be clearly identified as "out and back" or "loop" trails so trail users have a clear understanding of the route distance and can more easily gauge if/when they should turn around.

Given landowners and trail network maintainers vary between recreational trails within the county, existing signage varies based on the specific trail and there is not a cohesive wayfinding signage program among all trail providers. However, each trail provider should provide consistent signage within their trail network that is easy to understand and navigate and ensure the area around the signage is maintained and clearly visible year round.

For wayfinding on public roads, both the city and county have existing wayfinding signage that provides directions to key destinations but this is primarily oriented towards auto travelers. As active transportation facilities are constructed, wayfinding signage specific to bicyclists and pedestrians should be implemented and installed on active transportation routes consistent with sign design and installation guidance documented in Chapter 9B of the California MUTCD. The AASHTO Guide for the Development of Bicycle Facilities 5th Edition also includes detailed guidance on wayfinding signage. Standard signs and the existing signs may be augmented by signs depicting distances in miles to encourage walking and bicycling. Additionally, the county should review existing bike facility signage and update as necessary to ensure signs accurately match the existing facility. This would

help provide clear direction to bicyclists as to where they should be biking.

When paved shoulders are constructed intended for pedestrian and/or bicyclist use, appropriate signage should be installed to clearly indicate to motorists that pedestrians and bicyclists may be present. This is discussed in greater detail in Appendix D.

Source: AASHTO Guide for the Development of Bicycle Facilities, Fifth Edition (2015).

Lighting

Sufficient lighting on walking and biking facilities reduces the fear of crime and prevents collisions that occur due to decreased visibility. Pedestrian walkways should have lighting that allows people to identify faces from a distance of about 30 feet.

Traffic Calming

Additional traffic calming measures can be considered in tandem with the network recommendations. Calming traffic has the co-benefit of enhancing perceptions of safety and enhancing comfort walking or bicycling.

Bicycle Parking

Section 17.69.090 of the City of Angels Camp Municipal Code requires bicycle parking and support facilities with new construction and in certain nonconforming use situations. However, the Calaveras County Municipal Code does not have policies pertaining to bicycle parking requirements. The Calaveras County Zoning Code should be updated to require bicycle parking facilities with new development or modifications to existing developments. Providing secure bicycle parking facilities would assist in encouraging biking throughout the county. New bicycle parking should meet the standards discussed in the Introduction. Both short- and long-term bicycle parking should be supplied where appropriate, such as at schools, parks, grocery stores, and other key destinations. In existing developed areas, business owners should be encouraged to work with the City and County to provide bicycle parking in visible areas in commercial districts to entice riders to stop and frequent local businesses.

Non-Infrastructure Programs

Several improvements to other supporting programs are also recommended for Calaveras County. The California Office of Traffic Safety provides grants for education, encouragement, and enforcement efforts aimed at improving pedestrian and bicyclist safety. Appendix G - Funding Sources, provides more details on this and other grants.

Education & Encouragement

The County has supported several efforts to encourage walking and biking. Most recently, the Calaveras County Public Health Department received a grant from the California Office of Traffic Safety for an Injury Prevention Program aimed at promoting safe practices for drivers, pedestrians, and bicyclists. The program included hosting "Bicycle Rodeo" events aimed at encouraging safe biking and pedestrian practices, bicycle training courses that educate youth on safe riding behaviors, helmet fitting inspections and helmet distribution, community and school education presentations, community bike rides teaching safe riding skills, and more.

Additionally, the Calaveras County Sheriff's Office has a Community Bike Team which provides patrol services and bike safety demonstrations throughout the county. Their website includes bike safety tips and bike riding opportunities. The Calaveras Council of Governments also hosts the Walk and Bike Calaveras website which includes educational materials and safety tips for walking and biking in the county.

Lastly, both the county and city close various roads to vehicular traffic throughout the year to hold events such as Christmas parades, the Frog Jump parade, the Calaveras High Uptown Rally, Little League/Softball Opening Day Parade, etc. Closing these roads to vehicular traffic encourages walking and biking and creates fun and safe opportunities for residents to do so.

Programs such as walking school buses and biking school buses (also known as bike trains), programs where kids and families walk or bike to school in groups, are other good opportunities for neighborhood schools to encourage walking. Bike to work days/events can also assist in encouraging residents to ride bikes. Continuing to seek grant funding, provide educational opportunities, and encourage walking and biking events such as those described above will increase the number of residents who walk or bike for both leisurely and transportation purposes.

Enforcement

Enforcement efforts by the Calaveras County Sherriff's Office vary. Reports of unsafe speeds, aggressive driving, and poor yielding behavior to bicyclists and pedestrians was a frequent concern heard throughout the community outreach process. Continuing enforcement and focusing efforts, particularly speed control, in areas frequented by bicyclists and pedestrians could help pedestrians and bicyclists and may result in lower speeds in key walking and biking areas.

Pedestrian and Bicyclist Counts

Active transportation count data has not been routinely collected within the county. Creating a countywide program to count bicyclists and pedestrians using on-street facilities as well as shared-use paths would allow the collection of data to support future grant applications and direct future improvement efforts. Bicycle and pedestrian counts, frequently included as part of traffic counts that are often performed when developing roadway improvements, could be collected centrally.

Maintenance

The county does not have formal policies specific to maintaining existing bicycle and pedestrian infrastructure. However, they do have the following maintenance programs and services which would benefit bicyclists and pedestrians:

- Capital Improvement Program (CIP) – The CIP is a five-year plan that identifies planned improvements in the county. The plan is updated annually and identifies maintenance projects as well as new infrastructure projects, including bicycle and pedestrian related projects. The county utilizes a Pavement Management System (PMS) to assess existing conditions and identify priority pavement projects.
- Annual Traffic Striping Program – To maintain County roadways, the Department of Public Works contracts with a striping vendor to repaint the centerline and edge line stripes on an annual basis.
- Roadside Weed Spraying Program – Through this program, land adjacent to roadways is sprayed twice a year to prevent weeds from encroaching onto the edges of the road. This typically occurs near the middle to end of February and middle of April, depending on weather.
- Online Maintenance Request Portal – Calaveras County has an online app that allows residents to submit service requests to the county. This can include minor and major pavement repairs, signage and striping requests, vegetation removal, traffic concerns and more.

Ensuring bicycle and pedestrian facilities are included in restriping efforts and roadside weed spraying programs would help ensure these facilities are regularly maintained, accessible, and clearly delineated from vehicular travel lanes. Additionally, ensuring the county's online portal continues to allow service requests for sidewalk safety improvements, street light improvements, signage and striping improvements, and pavement improvements is critical as it allows bicycle and pedestrian maintenance requests to be brought to the county's attention. More formal policies specific to periodically evaluating bicycle and pedestrian maintenance needs would help systematize existing good practices and ensure that bicycle and pedestrian maintenance projects are proactively incorporated into the County's CIP.

Implementation

Implementation of the planned active transportation and recreational trails network is anticipated to be accomplished in a variety of ways including:

- Through grant funding opportunities for active transportation or recreational trail facilities;
- Through grant funding for road safety projects;
- In conjunction with adjacent development projects;
- In conjunction with maintenance and capacity enhancement projects, including but not limited to, slurry seals, pavement reconstruction, roadway restriping, roadway widening, or sidewalk rehabilitation projects.

Project implementation often requires years to complete and is dependent upon availability and acquisition of funding. Projects requiring land acquisition or utility relocation are more expensive and require extra time to implement while projects that can be implemented in conjunction with roadway improvement projects or development projects are generally easier, faster, and lower cost to implement. While this plan identifies priority projects which are targeted for completion in the next five to ten years, lower priority projects may be implemented before higher priority projects if they can be constructed in conjunction with roadway improvement projects or development projects. Implementation of each individual project is also dependent on detailed project specific feasibility and design studies based on local conditions.

Completed County projects will be reported by County staff to the Board of Supervisors and completed City projects will be reported by City staff to City Council. Completed projects will also be documented online on the respective jurisdictions website. This plan will be updated periodically to reflect evolving needs and progress towards completion.

Project Prioritization

Projects were prioritized based on several criteria:

- Proximity to key destinations, including commercial areas, schools, community amenities such as parks, library, etc., recreational trails, and transit
- Population density
- Collision locations and perception of safety
- Disadvantaged community indicators
- Access to critical facilities documented in the Calaveras County Evacuation and Access Needs Assessment and Preparedness Plan (CCEANAPP)
- Community and/or agency support

These projects and further explanation of the prioritization process are in Appendix E - Project Priorities and Cost Estimates. Appendix I, Project Fact Sheets, provides summaries, costs, and information to support funding for select priority projects.

Several of the projects in the project lists were grouped into priority corridors, which will be the focus of near-term implementation. Each group of projects will contribute to growing the backbone networks of pedestrian and bicycle facilities in the city and county and fulfill needs in the active transportation and recreational trail networks.

Costs

The estimated cost to implement each type of facility is provided in Appendix E - Project Priorities and Cost Estimates and summarized in Tables 8 and 9. If utilities must be relocated or land acquired to implement these facilities, costs will increase. However, many of these facilities may be implemented in conjunction with roadway improvement projects or development projects which may reduce costs.

Project cost estimates are based on local unit cost estimates. These estimates were developed based on relevant project experience/bids in the area. Estimate assumptions for each bikeway type are described in Appendix E. Note, cost estimates are high-level and must be refined through more detailed study and design of each individual project.

Table 8: Roadway Project Cost Estimates

Project Type	Cost per Mile per Side	Priority Projects	All Projects
Bike Route	$21,000	$135,660	$335,160
Paved Shoulder	$838,000	$1,592,200	$62,196,360
Buffered Paved Shoulder	$849,000	-	$287,811,000
Bike Lane	$599,000	$4,366,710	$6,475,190
Separated Bikeway	$922,000	$1,149,600	$1,149,600
Shared-Use Path/Sidepath	$779,000	$25,862,800	$56,976,060
Sidewalk	$1,000,000	$17,140,000	$18,350,000

Source: Calaveras County, City of Angels, WGA, Inc. Fehr & Peers, 2025

Table 9: Intersection Project Cost Estimates

Project Type	Cost	Priority Projects	All Projects
High Visibility Crosswalk	$6,000 per crossing	$276,000	$1,542,000
Bulb-Out/Curb Extension	$41,000 per crossing	$492,000	$738,000
Rectangular Rapid Flashing Beacon (RRFB)	$65,000 per crossing	$325,000	$520,000
Pedestrian Hybrid Beacon	$236,000 per crossing	$944,000	$944,000
Pedestrian Refuge Island	$25,000 per crossing	$75,000	$100,000

Source: Calaveras County, City of Angels, WGA, Inc. Fehr & Peers, 2025

Funding

Federal, state, regional, county, and local organizations provide funding for pedestrian, bicycle, and recreational trail projects and programs. A summary of funding sources is provided in Appendix F - Funding Opportunities.

The following funding sources are recommended as the most applicable for the projects in this plan:

Federal

- Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grant Program
- Congestion Mitigation and Air Quality (CMAQ) Improvement Program
- Surface Transportation Block Grant (STBG) Program
- Reconnecting Communities: Highways to Boulevards
- Strengthening Mobility and Revolutionizing Transportation (SMART) Grant Programs
- Safe Streets and Roads for All (SS4A) Grant Program
- Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) Grant Program.

State

- Active Transportation Program
- Highway Safety Improvement Program
- Local Partnership Program
- California Department of Parks & Recreational Trails Program

Local

- Transportation Demand Management Strategies
- Local Transportation Funds
- General Plan Funds
- In addition to these funding programs, local developer fees may also be considered. These local fees from land development projects can provide match funding or full implementation of projects where there is a nexus to the project.

Recreational Grants:

- PeopleForBikes Community Grant Program
- Rails to Trails Conservancy
- Bank of America Charitable Foundation
- Rober Wood Johnson Foundation
- Community Action for Renewed Environment (CARE)
- American Hiking Society National Trails Fund
- Conservation Alliance Grants
- International Mountain Bicycle Association Trail Accelerator Grants
- USA Cycling Foundation Fund and Trail Tune-Up Grant program

In addition to these funding sources, the Promoting Safe Bicycle Travel Opportunities for Bicycle Tourism and Economic Development Plan includes a thorough list of federal and state funding sources and identifies what the funding source may be used for (e.g. maintenance, first/last mile connections, access to nature, etc.). Given the variety of projects included in the ATRTP, the funding sources identified in the Promoting Safe Bicycle Travel Opportunities for Bicycle Tourism and Economic Development Plan could be appropriate for funding all or portions of certain projects and are included as Attachment 1 in Appendix F.

Potential Outcomes

Implementation of projects identified in the ATRTP may result in a substantial increase in active transportation use and bicycle and pedestrian safety. Increasing facilities available in community areas may also increase mode share. The potential increase in trips as a result of implementation of the ATRTP are shown in Table 10 and are based on mode share in similar communities with comparable characteristics. Though no single location is exactly comparable, these comparisons provide reasonable targets to achieve by implementing the ATRTP and were estimated as described below.

As previously noted, the City of Angels Camp has a very high walking percentage mode share of 17.5 percent. This occurs even with existing gaps in pedestrian infrastructure. If pedestrian infrastructure is constructed in other areas of the county that have a similar mix of land uses (such as residential, jobs, commercial/retail, schools, parks, etc.), it is reasonable to assume that a similar pedestrian mode share could exist. However, it is unreasonable to assume that the pedestrian mode share would increase substantially in areas of the county that do not have a mix of residential, jobs, commercial/retail, schools, parks, etc. For example, the spatial distribution of the county is too large to assume residents living in West Point would walk to work in San Andreas. Therefore, the future countywide pedestrian mode share does not estimate a share of 17.5 in the county as a whole, rather it estimates a walking mode share of 17.5 percent in the community areas where this is more realistic. This results in a potential countywide walking mode share of 9.5 percent.

Countywide (including in the City of Angels Camp), bicycle facilities are limited resulting in a lower existing bicycle mode share. Similar rural communities such as Amador County, Mariposa County, and Tuolumne County have bicycle mode shares ranging from .03 percent to 1.9 percent (averaging 0.73 percent) even with limited infrastructure. This is similar to the existing bicycle mode share statewide. Therefore, it is reasonable to assume a similar, if not higher, mode share in Calaveras County would exist if additional bicycle infrastructure is constructed.

As discussed in the Existing Conditions chapter, these numbers are based on commute trips and do not include shopping, school, or recreational trips, or commuters who only walk or bike to work part time, and the actual number of future trips is likely to be higher than these estimates.

By implementing this plan, pedestrian and bicyclist safety will be improved and the number of collisions involving pedestrians and bicyclists will also be reduced. A 50 percent or greater reduction in injuries and fatalities is a reasonable expectation if this plan, including all supporting programs, are implemented. In addition to these direct health improvements due to collision reduction, implementation will also support physical activity, which will improve community health by reducing incidence of heart disease, high blood pressure, Type 2 diabetes, mental illness, and obesity.

Table 10: Future Trips to Work by Walking and Biking in the County

Mode	Current Trips	Current Share	Future Trips	Future Share
Walking	406	2.3%	1,676	9.5%
Biking	18	0.1%	129	0.7%

Note: Workers aged 16 years and older

Source: US Census 2019-2023 American Community Survey, 2025; Fehr & Peers 2025.