City of Riverbank

Active Transportation Plan

October 2021

Photo: Google Earth

Acknowledgments

City of Riverbank

Kathleen Cleek, Development Services Administration Manager

Laura Graybill, Project Coordinator (Development Services)

City of Riverbank Mayor & City Council

Mayor Richard D. O'Brien

Councilmember District 1, Luis Uribe (Vice Mayor)
Councilmember District 2, Rachel Hernandez
Councilmember District 3, Cal Campbell
Councilmember District 4, Darlene Barber-Martinez

Alta Planning + Design

Brett Hondorp, Principal
Otto Melara, Project Manager
Lisa Shroer, Planner
Charlie Simpson, Planner

Prepared By: alta

Table of Contents

Chapter 1: Introduction & Background

Photo: Google Earth

1. Introduction & Background

Introduction

The City of Riverbank Active Transportation Plan (ATP) guides the development of programs and facilities to enhance bicycling and walking as practical, efficient, and safe transportation choices for Riverbank residents, workers, and visitors.

This plan provides a detailed description of project recommendations that the City can work towards developing in the near and long term. The plan's recommendations not only build upon previously adopted plans, such as the Riverbank General Plan (2009) and the Downtown Specific Plan(2015), but are also a result of extensive qualitative and quantitative analysis. Such analysis includes a robust assessment of the city's existing bicycle and pedestrian conditions and input from both the public and project stakeholders.

Project recommendations address the plan's overarching vision and goals, stemming largely from public input and the City's aspirations as they relate to active transportation.

Background

Project Setting

Riverbank, located within the San Joaquin Valley in Stanislaus County, is a small, and largely, residential community with a population of nearly 25,000 residents.[1] The city is situated along the Stanislaus River and to the east of Highway 99. It neighbors cities such as Modesto, Escalon, and Oakdale. Highway 108 runs through Riverbank and offers residents direct access to the Sierra Mountains, Modesto, and Highway 99.

Vision

Riverbank envisions an environment that supports people of all ages and abilities to comfortably and safely access jobs, schools, recreation, and shopping by foot or on bicycle as a part of daily life.

Goals

Goal 1: SAFETY AND COMFORT

Develop a transportation network inclusive of the needs of pedestrians and bicyclists that allows people of all ages and abilities to feel safe and comfortable using these modes for everyday use.

Goal 2: ACCESS TO DESTINATIONS

Build a connected network of biking and walking routes, allowing people adequate access to major destinations such as Downtown, commercial centers, schools, and parks.

Goal 3: HEALTH AND AFFORDABILITY

Foster an inclusive culture of walking and biking that celebrates these modes as healthy and affordable ways to get around.

Goal 4: VIBRANT PUBLIC SPACE

Create welcoming and attractive public spaces that encourage social interaction, stewardship, and pride in Riverbank.

1 US Census Bureau (2019) American Community Survey 5-Year Estimates.

Land Use

Riverbank is a small, family-oriented, residential community surrounded by agricultural land. Residents enjoy access to parks, schools, and a riverfront. Small commercial centers are located near 3rd Street and Santa Fe Street in Downtown, along Patterson Road, and at the Crossroads Shopping Center.

Riverbank is expected to steadily grow in population. To accommodate that future growth, the City is planning new mixed-use developments in the West Crossroads area, the Cannery District, and the Riverbank Industrial Park. In addition to brand new developments, the City of Riverbank's Downtown Specific Plan allows for more housing Downtown.

Activity Generators

Within Riverbank, there are a number of activity generators that have the potential to create significant demand for walking and biking.

Parks and Recreation Areas

Riverbank has many neighborhoods parks throughout the city such as Zerillo Park, Silva Park, and California Avenue Park. Jacob Myers Park, just north of the city boundary along the Stanislaus River, attracts users from all across the city. The city also has a few recreation centers such as the Riverbank Sports Complex, Rainbow Fields, and the smaller Riverbank Skate Park.

Commercial Areas and Corridors

Patterson Road is one of the major commercial corridors, which also includes the Riverbank Station shopping center and Galaxy Theatres. The biggest mall and/or shopping center is the Riverbank Crossroads, located in the southwestern corner of the city. Lastly, Downtown Riverbank is another commercial area, especially along 3rd Street and Santa Fe Street.

Major Employment Areas

Also being the largest mall in the city, the Riverbank Crossroads provides a significant amount of jobs for the areas residents. Other major employment areas include the Riverbank Industrial Park and Downtown Riverbank.

Schools

The Riverbank Unified School District includes two high schools, a middle school, two elementary schools, and a language academy. All but one, Mesa Verde Elementary school, are located within the City of Riverbank and are located throughout the city. All of the schools, except for the Riverbank Language Academy, are located in the eastern part of the city.

Crossroads Elementary School is located in the southwestern area of the city, but is part of the larger Sylvan Union School District. This school district consists mostly of schools in the City of Modesto.

Civic Buildings

The city's various civic buildings, such as the Riverbank City Hall, Library, Teen Center, and Community Center are concentrated in Downtown and the immediately surrounding area in the northeast part of the city.

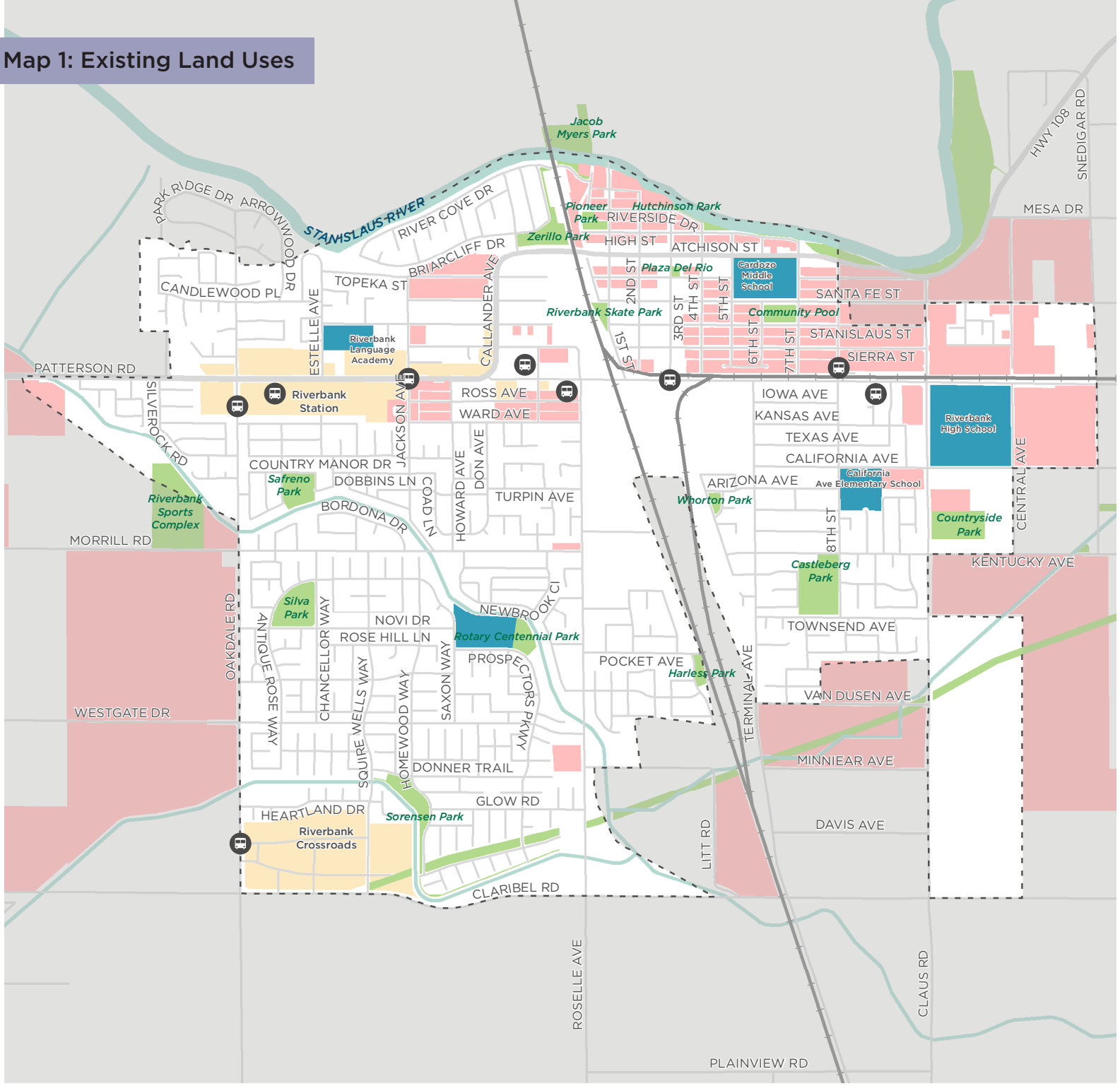
Medical Facilities

Riverbank has two medical clinics. The Riverbank Community Health Center, located off of Patterson Road and the Golden Valley Health Centers located at Riverbank High School. The nearest hospitals are in Oakdale and Modesto.

Transit

The Stanislaus Regional Transit (StaRT) Bus Route 60 connects Riverbank with Oakdale and Modesto.

Map 1: Existing Land Uses



EXISTING LAND USES

RIVERBANK CA ACTIVE TRANSPORTATION PLAN

Destinations + Boundaries

- Bus Stop
- School
- Park
- High/Medium Density Residential
- Commercial Area
- City Boundary

alta Data Sources: City of Riverbank, Stanislaus County.

N

0 0.25 0.5 MILES

Demographics

Riverbank is home to 24,482 residents.[1] The Stanislaus County Council of Governments (StanCOG) estimates that by 2042, the population will increase to 33,562.[2] The majority of the Riverbank population is Hispanic (57%), followed by White (33%), Asian (5%), Black (2%), two or more races (2%), and Native (1%). StanCOG estimates that a majority of the county's future growth will occur within the Hispanic and Asian communities as well as within the age group of persons age 60 years and older.

Over 50% of Riverbank residents speak a language other than English. Spanish is the most commonly spoken second language in Riverbank (46%), although Asian and Pacific Island languages and other Indo-European languages together are spoken by about five percent of Riverbank residents.

The median household income in Riverbank is $70,549.[1] This is higher than the median income of $63,037 in Stanislaus County.[3]

1 US Census Bureau (2019) American Community Survey 5-Year Estimates.

2 Stanislaus County Council of Governments (2018). Regional Transportation Plan/ Sustainable Communities Strategy. Chapter 4: Future Conditions. http://www.stancog.org/pdf/rtp2018/final/chapter-4-future-conditions.pdf

3 US Census Bureau (2019) American Community Survey 1-Year Estimates.

29%

of Riverbank residents are

under the age of 18,

which is higher than the Modesto metropolitan area (27%) and the state of California (23%). Children and the elderly are often the most vulnerable road users.

The City of Riverbank is expected to grow

38%

by the year 2042.

With more people living in the city, more trips will be made, and thus, it will be important to provide safe and comfortable transportation options for the city's growing population.

Figure 1: Language Spoken at Home

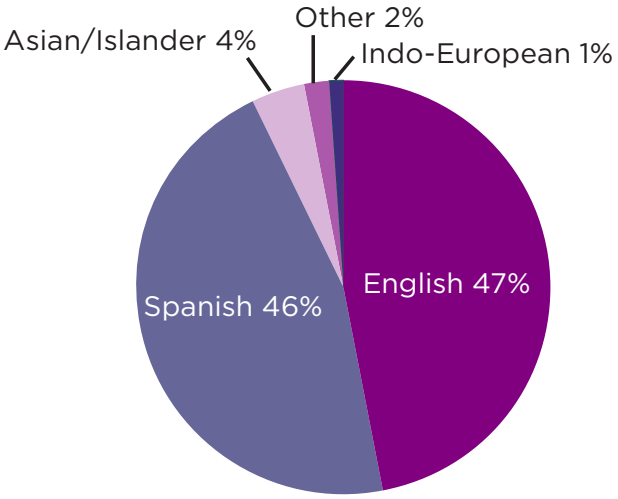
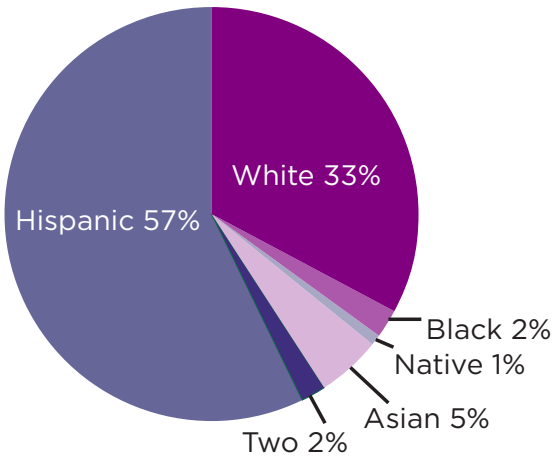


Figure 2: Race & Ethnicity



Transportation Patterns

Based on transportation data from 2019 American Community Survey 5-year Estimates, 1% of Riverbank residents walk to work and 0.3% of residents bike to work (see Table 1). This represents approximately 73 daily work-based bicycle trips and 245 daily work-based walking trips. The census data does not account for commuters using multiple modes of travel to and from work, such as a commuter that may walk to a bus stop; for this response, the trip would be counted as a transit trip.

The percentage of Riverbank residents that walk and bicycle only reflects commuting patterns and does not account for non-commuting trips. The total percentage of residents that walk and bicycle to meet their daily needs, therefore, is likely higher than what the census data shows.

The majority of Riverbank residents travel to nearby cities such as Modesto, Oakdale, and Stockton for work. A small share of Riverbank residents also travel to cities throughout the San Joaquin Valley, the San Francisco Bay Area, and Northern California. According to 2017 census data, 9,939 workers who live in Riverbank travel to work outside of the city limits (shown in Figure 3).[4] Only 5.9% of all workers who live in Riverbank are employed in Riverbank. Opportunities for stronger regional bicycle and pedestrian connections are discussed in Chapter 3 and Chapter 4.

4 US Census Bureau (2017). OnTheMap Inflow/Outflow Analysis. https://onthemap.ces.census.gov/

Table 1: Means of Transportation to Work

Means of Travel	Riverbank	Modesto Metropolitan Area	California
Drive Alone	83.4%	81.8%	73.7%
Carpool	10.9%	10.1%	10.1%
Public Transportation	0.5%	0.8%	5.1%
Bicycle	0.3%	0.3%	1%
Walk	1%	1.2%	2.6%
Work at Home	3.3%	4.8%	5.9%

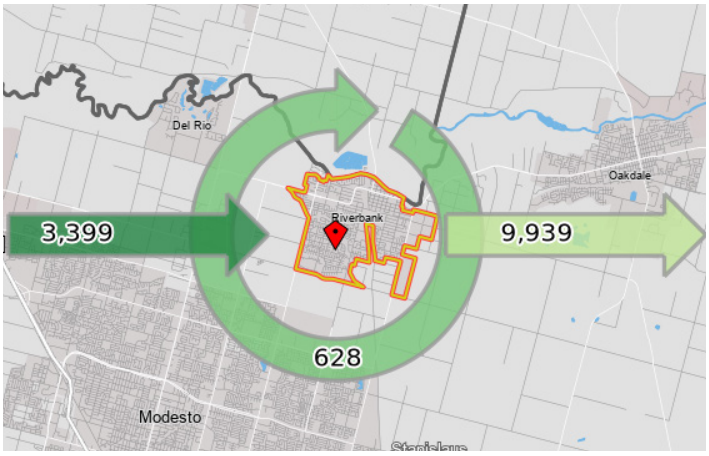
5.9%

of workers who live in Riverbank

are employed in Riverbank,

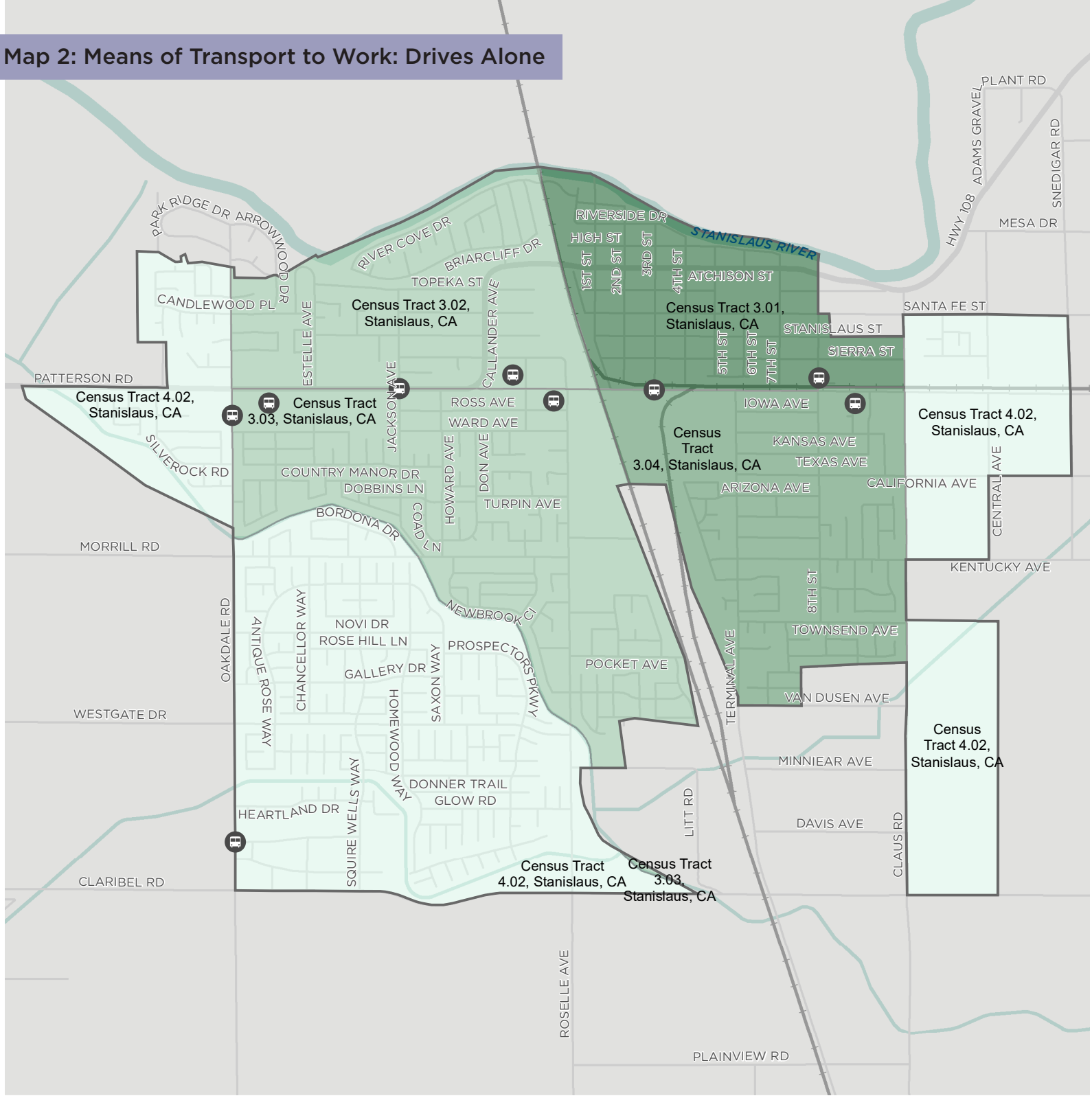
According to 2017 census data, 9,939 workers who live in Riverbank travel to work outside of the city limits, primarily to the City of Modesto.

Figure 3: Riverbank Employment Inflow/Outflow



Source: US Census Bureau (2017). OntheMap Inflow/Outflow Analysis.

Map 2: Means of Transport to Work: Drives Alone



MEANS OF TRANSPORT TO WORK: DRIVES ALONE

RIVERBANK CA ACTIVE TRANSPORTATION PLAN

% Population Drives Alone Work

- 76.4%
- 78.9%
- 83.8%
- 85.4%

Destinations + Boundaries

- Bus Stop
- City Boundary

alta Data Sources: City of Riverbank, Stanislaus County.

N

0 0.25 0.5 MILES

Disadvantaged Communities

Low-income communities tend to rely the most on low-cost forms of transportation, such as bicycling, walking, and transit. Identifying disadvantaged communities in Riverbank can lead to a deeper understanding of where some bicycle and pedestrian improvements may be needed the most. Access to safe bicycling and walking infrastructure that connects people to the places they need to go can help increase health outcomes, decrease transportation cost burdens, and improve environmental outcomes for people living in Riverbank.

As shown in Map 3 on the following page, the northeast corner of the city has the highest percentage of people living in poverty (25.8%).[5] Figure x showed how this part of Riverbank has the lowest rates of people who drive alone to work, reflecting research in the United States that people living in poverty walk or bicycle at rates higher than the rest of the population.

The California Communities Environmental Health Screening Tool (CalEnviroScreen) identifies disadvantaged communities around the state using variables that measure pollution burden and socioeconomic disadvantage. These variables are displayed in Figure 4 below. Areas of the state that receive high scores in this index are prioritized as recipients from some state funding sources and can be more competitive in regional funding programs. **Four of the five census tracts in Riverbank are designated as the top 25% highest scoring census tracts in California.[6]**

Levels of Particulate Matter 2.5 (PM 2.5) are a major environmental concern in Riverbank. PM2.5 comes from several sources, including cars and trucking activity. As a result, it can be mitigated by reducing automobile travel.

CalEnviroScreen data also reveals that many neighborhoods in Riverbank experience high rates of cardiovascular disease.

5 US Census Bureau (2018) American Community Survey 1-Year Estimates.

6 CalEnviroScreen 3.0 Results: https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30

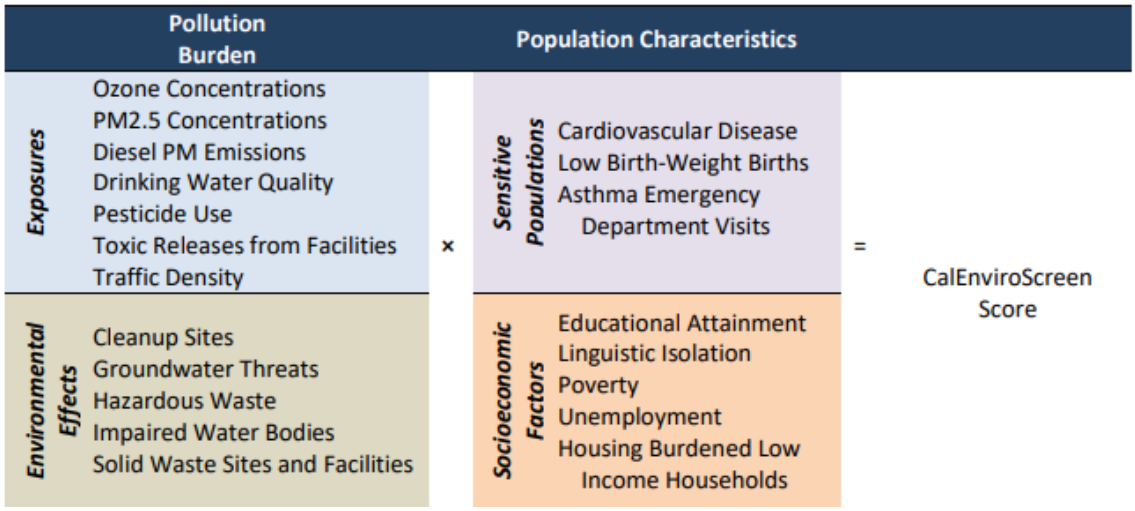
Disproportionately Disadvantaged

The northeast corner of the city has a poverty rate of 25.8%, which is significantly higher than rates in Stanislaus County (15.6%) an the state (12.8%)

People in Riverbank have higher rates of cardiovascular disease than 62% of all other communities in California.

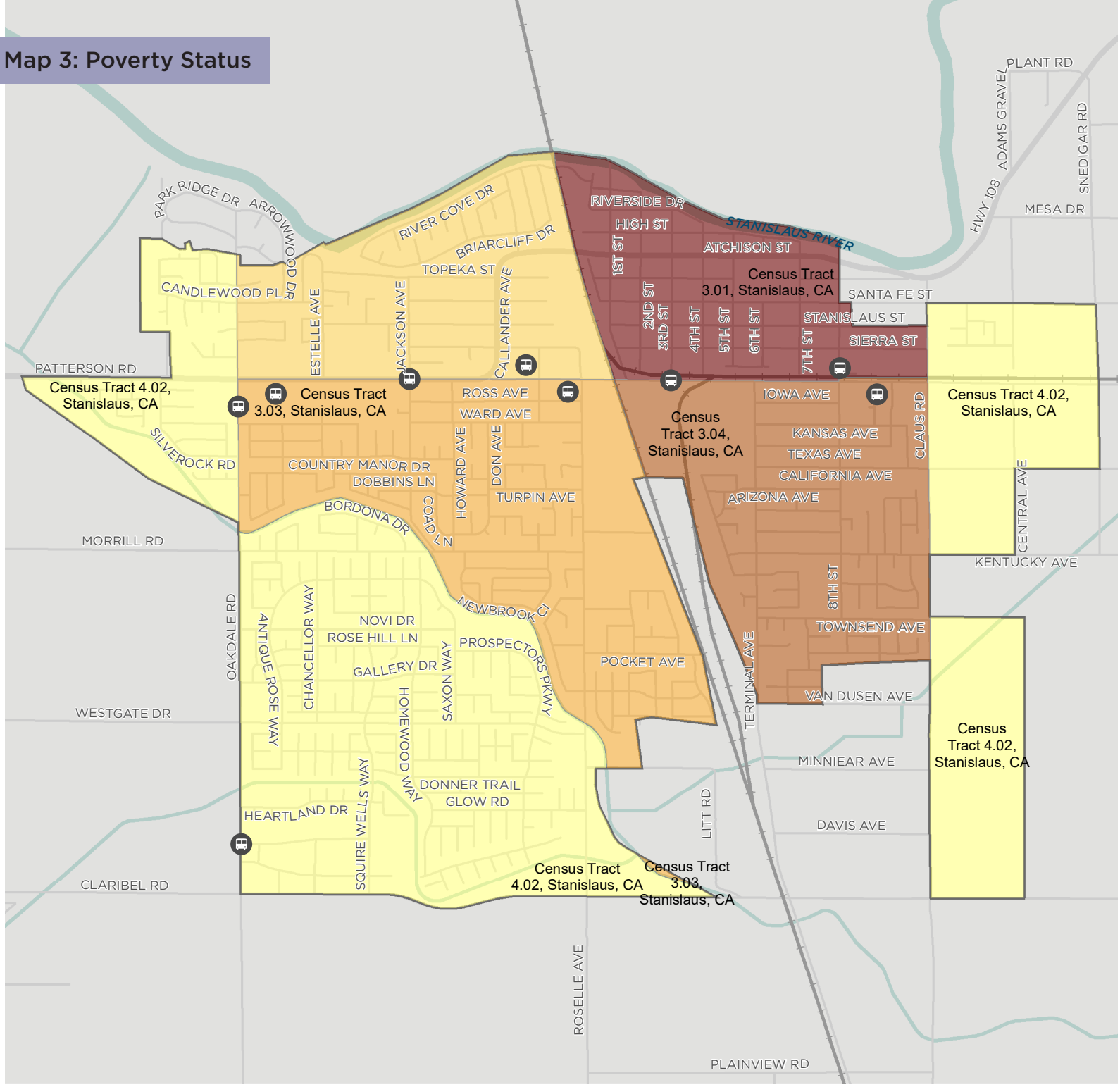
Every census tract in Riverbank has a concentration of Particulate Matter 2.5 higher than 93% of all other census tracts in the State of California.

Figure 4: CalEnviroScreen Criteria



Source: California Environmental Protection Agency (2017). Designation of Disadvantaged Communities Pursuant to Senate Bill 535. https://calepa.ca.gov/wp-content/uploads/sites/6/2017/04/SB-535-Designation-Final.pdf

Map 3: Poverty Status



POVERTY STATUS

RIVERBANK CA ACTIVE TRANSPORTATION PLAN

% Population Living At or Under Federal Poverty Level Per Census Tract

- 7.8%
- 9.7%
- 11.8%
- 14.3%
- 25.8%

Destinations + Boundaries

- Bus Stop
- City Boundary

alta Data Sources: City of Riverbank, Stanislaus County.

N

0 0.25 0.5 MILES

Relationship to Other Plans

The Active Transportation Plan identified existing planning documents, policies, and projects that are relevant to planning for future bicycle and pedestrian infrastructure investment in Riverbank. These documents include:

Riverbank General Plan 2005 - 2025

Policies and concepts relevant to the bicycle and pedestrian circulation system in Riverbank include:

Policy CIRC 1.7 – The City will ensure frequent street and trail connections between new residential developments and established neighborhoods, between downtown and surrounding neighborhoods, across the railroad, across the river, and between other important origin and destination points.

Policy CIRC-2.4 The City will ensure that redevelopment and revitalization efforts in the existing City are designed to accommodate and encourage pedestrian and bicycle travel, as well as public transit options, as such options become more widely available.

Fundamental Concepts for the Circulation System – Safety - The circulation system should allow people to feel safe, whether they are driving, walking, or riding a bicycle.

Fundamental Concepts for the Circulation System – Accessibility - The circulation system should be easily accessible to all users, whatever their level of income, age, or physical ability.

City of Riverbank Crossroads Specific Plan (2001)

Policies relevant to the bicycle and pedestrian circulation system in Riverbank include:

Circulation Objective 2 - Develop a hierarchy of streets which promote efficient auto travel within the Crossroads Community while encouraging pedestrian- and bicycle-oriented travel

Circulation Policy 2.2 - Provide minor and local neighborhood streets which discourage through-traffic and high speeds

Crossroads West Specific Plan (2019)

The Crossroads West Specific Plan establishes the vision for 380 acres of new development in Riverbank. Relevant policies include:

Sustainability Element A2 – Reduce Dependency on Automobiles

Sustainability Element A3 – Open Street Network and Walkable Streets (including a continuous bicycle and walking trails or paths throughout the Crossroads West Specific Plan area)

Downtown Specific Plan (2015)

Policies established for the traffic and circulation element of the plan as well as relevant design guidelines include:

- Establish safe and attractive pedestrian linkages between the Downtown Core and Cannery District
- Establish safe and attractive pedestrian linkage between neighborhood North of Atchison and the downtown district.
- Require development in the Cannery District to build on Downtown's small-town character (The Cannery District)
- Require a network of walkable streets, blocks, and open spaces
- Connect Santa Fe Street between Callander Avenue and First Street
- Ensure that a railroad crossing of some design is safe, attractive, and supportive of walking and cycling between the Cannery District and the Downtown Core District.

Local Redevelopment Authority Specific Plan (2013)

The plan outlines a plan for bicycle circulation. Relevant recommendations in this plan include:

- Short-term and long-term bicycling provision within the RAAP site
- A study of a possible bike sharing program to improve overall mobility

Public Input

Public engagement was an integral part of the planning process; local in-depth knowledge of existing conditions and local needs informed and supplemented existing conditions analyses, creating a holistic understanding of the community's opportunities and challenges. The Riverbank Active Transportation Plan included a thorough public outreach process that included many different engagement opportunities.

The planning process occurred in three phases with public engagement occurring throughout each phase.

The phased approach focused on feedback about how people get around in the first phase, asked for input on recommended projects in the second phase, and finally asked for feedback on the draft plan in the final phase.

To inform the proposed active transportation network, people who live, work, and spend time in Riverbank provided their input through the following, as shown in Table 2:

- Virtual Citizen Advisory Team meetings
- Project website
- Online web map
- Virtual community workshop
- City Council presentations

The project website and opportunities for input were also advertised through a newsletter and social media posts. All meetings and outreach materials were provided in English and Spanish.

Table 2: Forms of Public Input

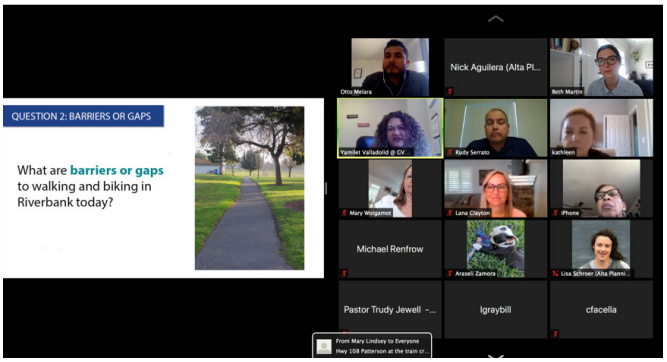
Input Type	Input Date
Community Advisory Team Meetings	May 21, 2020; October 6, 2020
Web Map (Phase 1)	April 13 - November 6, 2020
Web Map (Phase 2)	March 22 - April 27th, 2021
Virtual Community Workshop	March 25, 2021
City Council presentations	October 13, 2020; July 27, 2021; August 24, 2021* (scheduled meeting at time of Draft Plan)

COVID-19 Impacts

This plan reflects an adjusted planning process in response to the COVID-19 pandemic. Beginning with the California Governor's March 2020 Stay at Home Order, planned outreach activities and the associated scheduled were modified to comply with public health guidelines in effect throughout the remainder of 2020. This includes extended public comment periods, shift to virtual outreach activities, and extension of the overall plan timeline.

Community Advisory Team Meetings

Two virtual Community Advisory Team Meetings were held to discuss the plan with various stakeholders who live in Riverbank to help guide the planning process, provide input, and ensure that the public input process was reaching Riverbank residents through proper channels. The Community Advisory Team consisted of 10 members, representing Riverbank Unified School District, City Council, Golden Valley Health Centers, New Life Church, American Association of University Women, small business owners, and community members.



A screen capture of a virtual Citizen Advisory Team meeting with stakeholders from Riverbank.

Online Web Map

Phase 1: Existing Conditions

The City of Riverbank published a publicly accessible web map—WalkBikeRiverbank.com—open to the public from April 13 - November 6, 2020 and allowed residents to indicate the following:

- Destinations I currently or would like to access
- Bicycle or walking routes that need improvement
- Barriers to biking or walking

Phase 2: Recommendations

The City published another version of the web map—open from March 22 - April 23, 2021—that allowed residents to provide input on draft recommendations.

Web Map By the Numbers

948

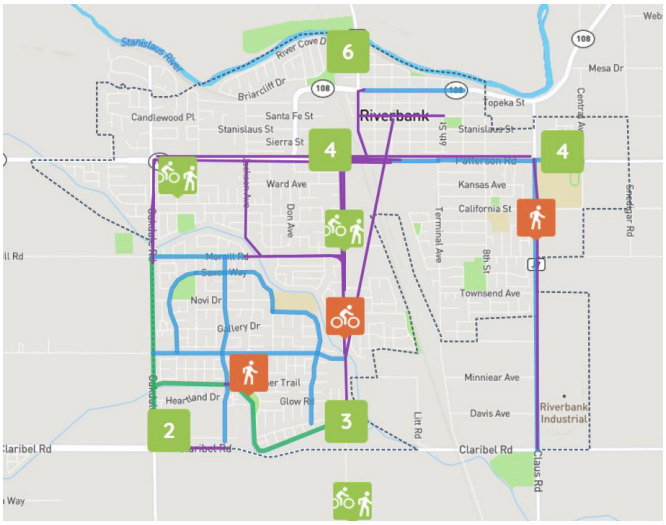
page visits to the website

706

unique webmap users

78

webmap votes/comments



A screen capture of the public input webmap, where users provided feedback on both existing conditions and recommendations.

Virtual Community Workshop

A virtual community workshop was held on March 25, 2021 that provided a summary of the planning process, the results of the existing conditions analysis, introduced the draft recommendations, and provided opportunities to provide feedback on the draft recommendations. The workshop was streamed on Zoom, Youtube Live, Local Spectrum Channel 2, U-Verse Channel 99, and the recording was posted to the Riverbank project website.

A screen capture of the project team presenting at the virtual Community Workshop on March 25, 2021.

Chapter 2: Existing Conditions

Photo: City of Riverbank

2. Existing Conditions

Existing Pedestrian Network

A spatial analysis using aerial imagery showed common conditions for pedestrians along local/collector roadways and major arterial roadways.

Local / Collector Roadways

The local residential streets within Riverbank typically have stop signs and no crosswalks at intersections. High-visibility crosswalks exist adjacent to schools, many parks, and sometimes when local roadways cross collectors or arterial roadways.

High-visibility crossings, as well as some curb extensions, are especially frequent in the Downtown retail core along 3rd Street and Santa Fe Street and in the southwest area of the city along collector roadways such as Crawford Road and Morrill Road, which has relatively newer housing and development.

Arterial Roadways

Arterial roadways throughout the city, such as Patterson Road and Atchison Street, prioritize the movement of motor vehicle traffic with multiple lanes and limited dedicated pedestrian crossings. While signalized intersections in the city typically have pedestrian signals, they often require long crossing distances with wide turning radii for cars. The unsignalized intersections along arterial roadways often have no signage or crosswalk, such as at Callander Avenue and Sierra Street. Lastly, arterial roadways in Riverbank often have long distances between dedicated pedestrian crossings.

Sidewalks

Local / Collector Roadways

Riverbank has a relatively complete sidewalk network throughout the city, especially within residential areas. Areas of the city with more recent residential development, such as west of Roselle Avenue, typically have a complete sidewalk network. Some local and collector streets in less developed areas, however, lack sidewalks. Examples include Stanislaus Street and Santa Fe Street between 8th Street and Claus Road.

Arterial Roadways

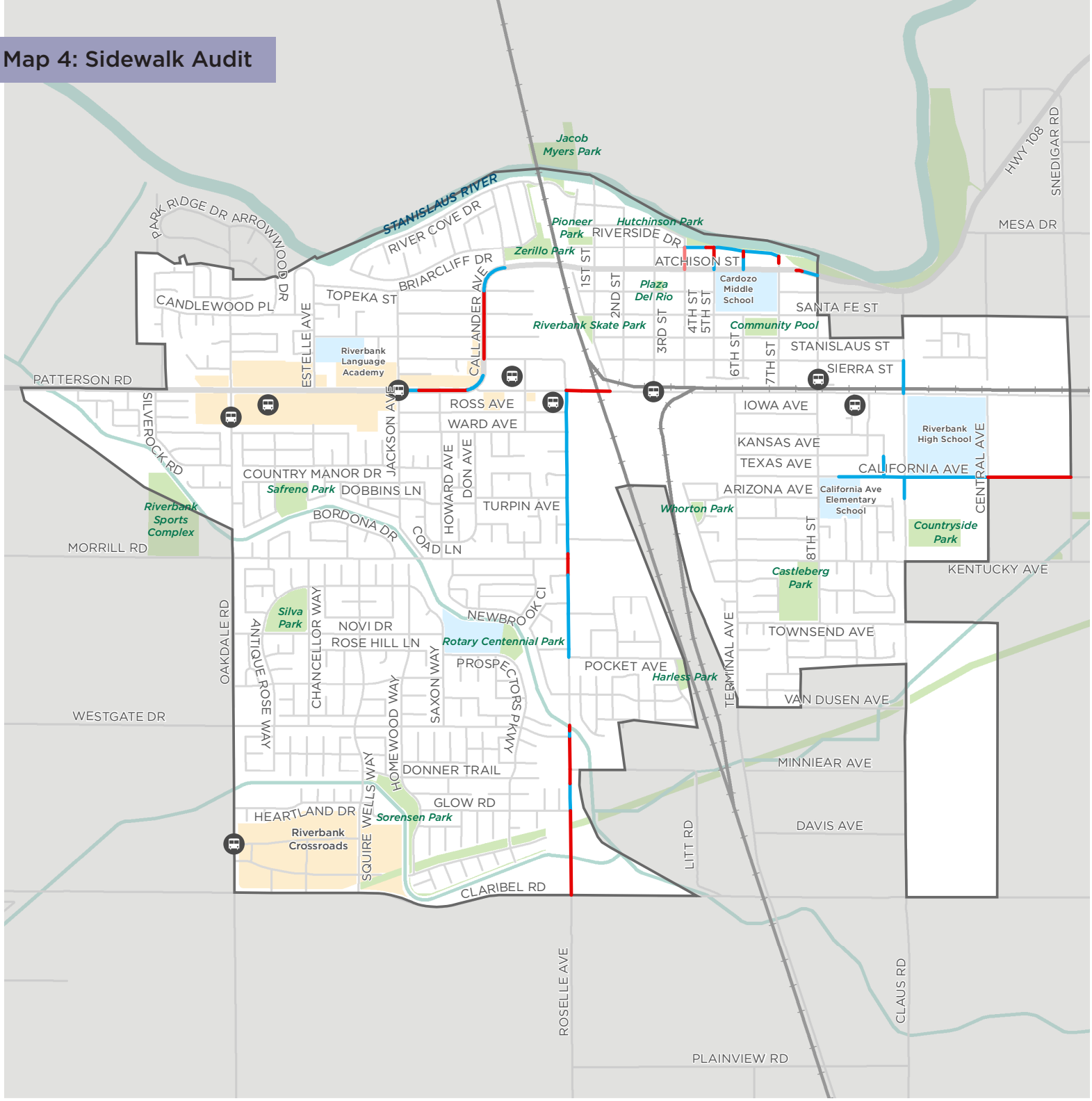
Map 4 on the following page shows the existing sidewalk network along arterial roadways.

Many of the major roadways lack sidewalks either on one or both sides of the street such as Callander Avenue, Patterson Road, Roselle Avenue, and Claus Road.

Callander Ave and Sierra Street shows a common condition of an unsignalized intersection at a major roadway with no way for pedestrians to cross. Photo: Google Earth

The intersection of Roselle Ave and Morrill Road shows a section of Roselle without sidewalks. Photo: Google Earth

Map 4: Sidewalk Audit



SIDEWALK AUDIT

RIVERBANK CA ACTIVE TRANSPORTATION PLAN

Sidewalk Presence

- One-Side
- Sidewalk Has Gaps
- No Existing Sidewalk

Destinations + Boundaries

- Bus Stop
- School
- Park
- Commercial Area
- City Boundary

Data Sources: City of Riverbank, Stanislaus County.

0 0.25 0.5 MILES

Existing Bicycle Network

The California Department of Transportation (Caltrans) designates four classes of bicycle facilities: Class I shared use paths, Class II bicycle lanes, Class III bicycle routes, and Class IV separated bikeways. Riverbank has 7.29 miles of Class II bicycle lanes and a 2.28 miles of Class I shared use paths.

The northeast corner of the city has two east-west Class II bicycle lanes on segments of Patterson Road and Atchison Street. As seen in Map 5, a 1.5-mile segment of Class II bicycle lane on Claus Road runs south from Patterson Road until the city limit. There are no other north-south or east-west bicycle facility connections on the east side of Riverbank. The railroad tracks are a major barrier to east-west connections across the city.

The southwest area of Riverbank (also known as the Crossroads) has the most extensive network of bicycle facilities, even though it is mostly limited to south of Morrill Road. Class II bicycle lanes connect parts of the neighborhood along Squire Wells Way, Crawford Road, Prospectors Pkwy, Antique Rose Way, Saxon Way, and Morrill Road but do not extend north of Morrill Road. With recent construction, Class II bike lanes were added to short segments of Claribel Road Roselle Ave along the southern edge of the city. The southwest area of the city also has a Class I shared use path along the Modesto Irrigation District's (MID) Lateral Number One Canal and north-south along the eastern side of Oakdale Road.

Finally, the northwest corner of Riverbank does not have any existing bicycle facilities.

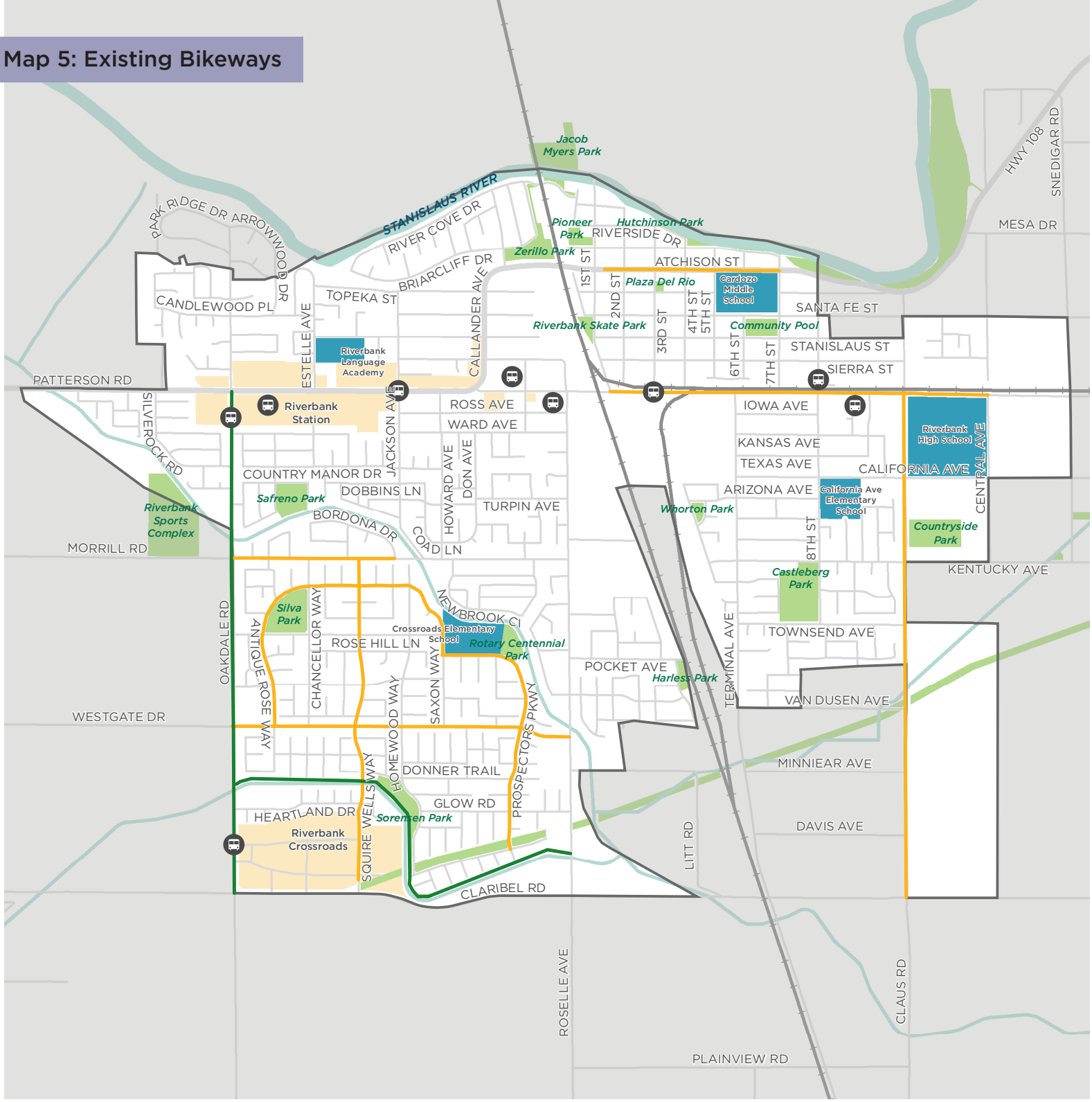
As shown on Map 5 on the following page and described above, the City of Riverbank has mostly Class II bicycle lanes and a couple Class I shared use paths. These facilities, however, are mostly concentrated in the southwest area of the city, are disconnected from each other, and are not located along most major roadways.

An existing Class II bike lane at the intersection of Claus Road and Townsend Avenue. Photo: City of Riverbank

A Class I shared use path at Squire Wells Way along the Modesto Irrigation District's (MID) Lateral Number One Canal. Photo: Google Earth

Class II bike lane along Patterson Road in the eastern part of the city. Photo: Google Earth

Map 5: Existing Bikeways



EXISTING BIKEWAYS

RIVERBANK CA ACTIVE TRANSPORTATION PLAN

Existing Bikeways

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

Destinations + Boundaries

- Bus Stop
- School
- Park
- Commercial Area
- City Boundary

0 0.25 0.5 MILES

alta Data Sources: City of Riverbank, Stanislaus County.

Collision Analysis

Between 2014 and 2018[7], there were 10 bicycle collisions and 16 pedestrian collisions in Riverbank, including 3 pedestrian fatalities, 1 pedestrian-involved serious injury, and 20 total minor injuries involving both bicyclists and pedestrians.

Major Roadways

Patterson Road has the most reported bicycle and pedestrian collisions in the city. Almost one third of all collisions in Riverbank during this five-year period occurred along Patterson Road. As displayed in Map 7, the majority of bicycle collisions in Riverbank have occurred on or approaching Patterson Road. As can be seen in Map 6, there have been three fatal collisions in Riverbank involving pedestrians and all three of them have occurred along Patterson Road.

Atchison Street, Oakdale Road, Crawford Road, and Prospector's Parkway are other corridors with two or more reported bicycle and pedestrian collisions in the last five years.

Children and Older Adults

As they either are not old enough to drive or their physical driving capabilities decline, children and older adults are typically more dependant upon biking, walking, and/or public transportation. Children and older adults are also more vulnerable to traffic crashes.

Riverbank has a higher rate of collisions involving both younger and older people than Stanislaus County at large. Between 2014 and 2018, 33% of all collisions in Riverbank involved people age 19 or younger. In comparison, 24% of all collisions in Stanislaus County during this time period involved people age 19 or younger. Almost 26% of all collisions in Riverbank involved people 60 years of age or older in comparison to 14% in the county.

26

Crashes involving people bicycling and/or walking.

3 **Fatalities**
All three involved pedestrians.

1 **Serious Injury**
Involved a pedestrian

20 **Minor Injuries**
10 involved pedestrians and 10 involved bicyclists

1/3

of all collisions occurred on

Patterson Road.

including all 3 pedestrian fatalities.

1/3

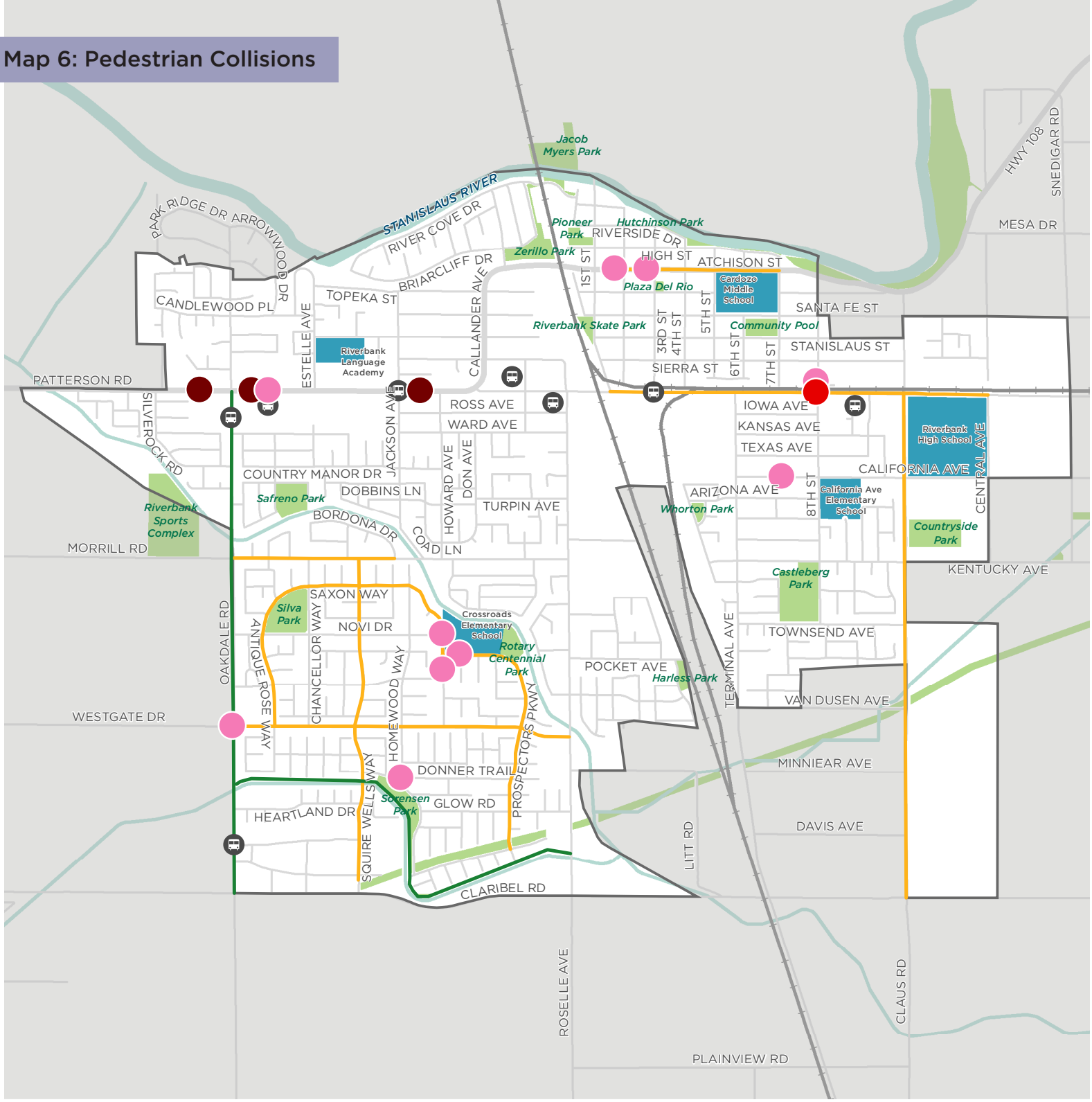
of all collisions involved

Children 19 or younger.

10% more children were involved in collisions in Riverbank compared to Stanislaus County.

7 This is the most recent data publicly available at the time of analysis.

Map 6: Pedestrian Collisions



PEDESTRIAN COLLISIONS (2014 - 2018)

RIVERBANK CA ACTIVE TRANSPORTATION PLAN

alta

Data Sources: Transportation Injury Mapping System (TIMS), City of Riverbank, Stanislaus County.

Pedestrian Collisions (by Severity)

- Fatality (3)
- Severe Injury (1)
- Minor Injury (10)

Existing Bikeways

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

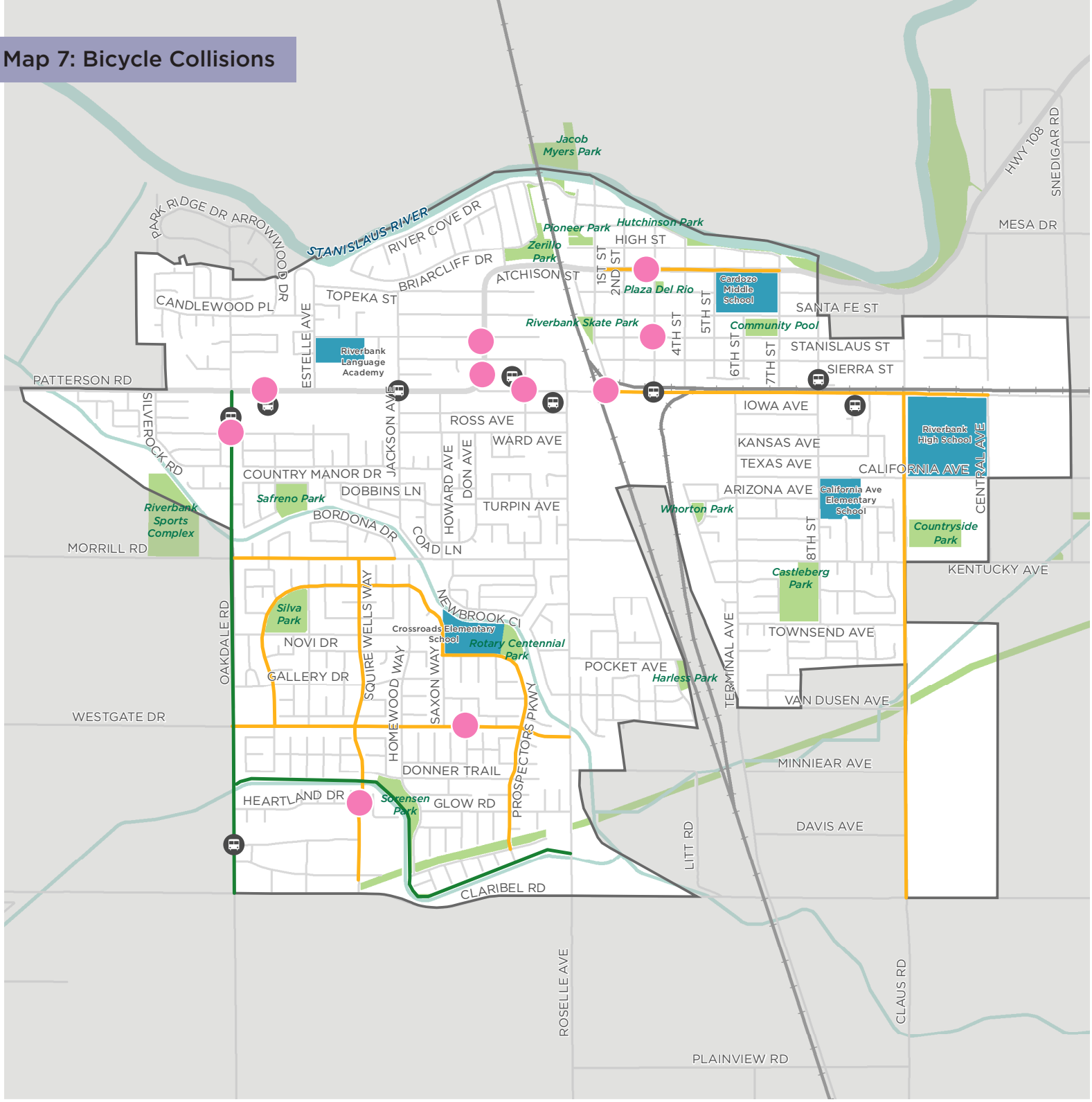
Destinations + Boundaries

- Bus Stop
- School
- Park
- City Boundary

0 0.25 0.5 MILES

N

Map 7: Bicycle Collisions



BICYCLE COLLISIONS (2014 - 2018)

RIVERBANK CA ACTIVE TRANSPORTATION PLAN

Bicycle Collisions (by Severity)

- Minor Injury (10)

Existing Bikeways

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

Destinations + Boundaries

- Bus Stop
- School
- Park
- City Boundary

MILES
0 0.25 0.5

alta

Data Sources: Transportation Injury Mapping System (TIMS), City of Riverbank, Stanislaus County.

Summary: Key Opportunities

Public input and the existing conditions assessment resulted in the identification of four key opportunities helped to inform the recommendations described in the next chapter.

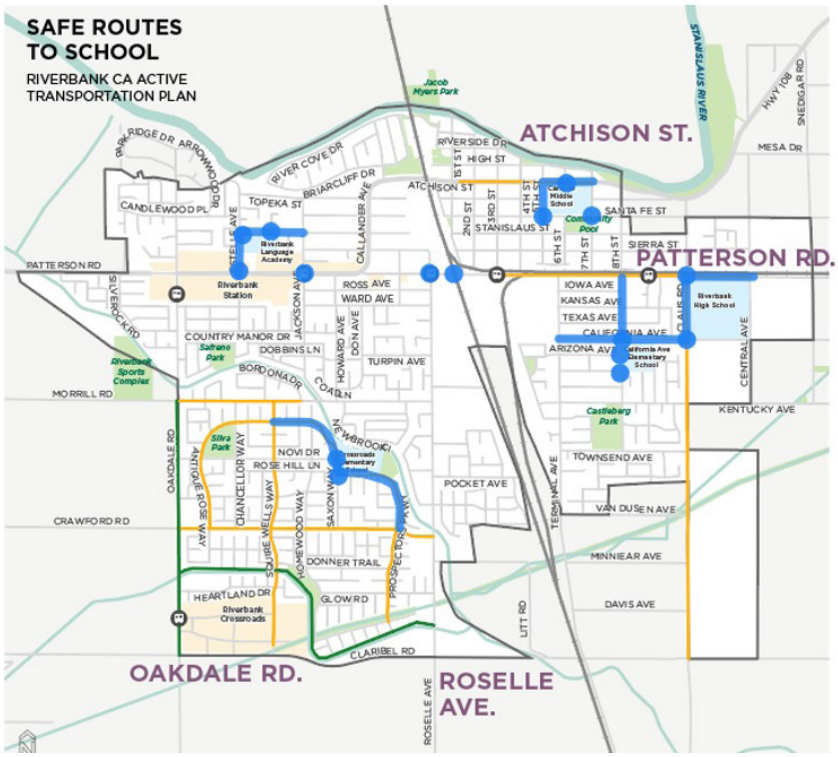
Enable Crosstown Connections

Crosstown arterials like Patterson Street, Roselle Avenue, and Oakdale lack complete biking and walking facilities. This makes intersections and railroad crossings feel dangerous and uncomfortable. Therefore, an opportunity exists to develop a low stress "spine" network of walking facilities, separated bikeways, and/or trails, with special attention to major intersections and railroad crossings.

Improve Connections to Schools

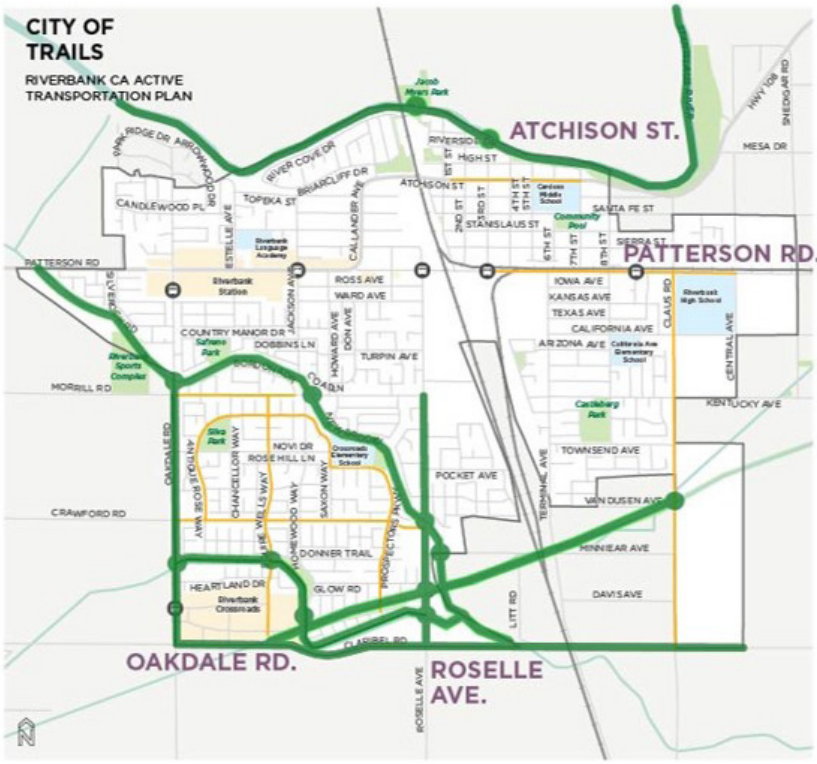
Riverbank residents worry about student safety as they walk and bike to school.

Therefore, an opportunity exists to make walking, biking, and rolling to school more safe, comfortable, and convenient. In addition to physical infrastructure, Riverbank could support events and activities to promote walking and biking to school.



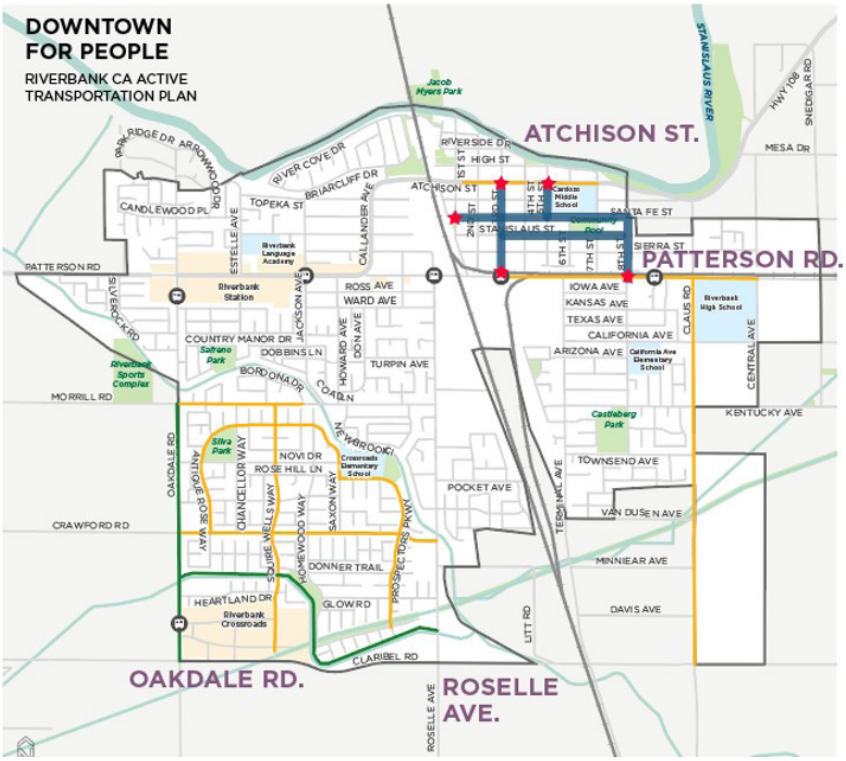
Enhance the Trail Network

Residents enjoy the existing trails in Riverbank, but feel like they are currently disconnected and, therefore, not convenient to use for transportation. Therefore, an opportunity exists to enhance the trail network across the city. **W**aterways and canals, in particular, provide available corridors for trails. Trails can be used for recreation and to access destinations such as schools, parks, and local retail destinations.



Improve Downtown Connectivity

Barriers such as major roadways and railroad crossings prevent people from safely and comfortably accessing Downtown. Therefore, an opportunity exists to develop safe walking and biking routes that lead to Downtown. Amenities such as shade, outdoor seating, and secure locations for bike parking can also encourage people to walk and bike to Downtown.



Chapter 3: Recommendations

Photo: riverbank.org

3. Recommendations

The proposed bicycle and pedestrian network is described in the following chapter. Recommendations include both physical infrastructure improvements as well as programs to help promote and encourage biking and walking.

The bicycle recommendations provide a connected network of dedicated bikeways through off-street trails and on neighborhood streets, collectors, and arterials.

Pedestrian recommendations include spot improvements and sidewalk improvements. Spot improvements aim to enhance conditions for pedestrians at intersections, trails, midblock, and across barriers such as railroad tracks. In addition to spot improvements, the pedestrian recommendations include filling key gaps in the sidewalk network.

Together, the bicycle and pedestrian recommendations aim to address the following **key opportunities**, which were identified through the existing conditions assessment and public input:

Enable Crosstown Connections

Recommendations improve crosstown arterials, like Patterson Street, Roselle Avenue, and Oakdale Road.

Improve Connections to Schools

Recommendations improve streets and intersections connecting to schools.

Enhance the Trail Network

Waterways and canals are utilized to increase the number of trails.

Improve Downtown Connectivity

Recommendations improve connections to, from, and within Downtown.

Class IV Cycle Track in Modesto, CA. Photo: Alta Planning + Design

Crawford Road in Riverbank. Photo: Google Earth

Class IV Cycle Track in Modesto, CA. Photo: Alta Planning + Design

Bicycle Recommendations

The proposed bicycle recommendations, when fully built out, will create a complete network of bicycle facilities that connect people to key destinations. The proposed bicycle facilities, described in more detail on page 32, include paved shared use paths (Class I), bicycle lanes (Class II), buffered bike lanes (Class IIB), bicycle routes (Class III), bike boulevards (Class IIIB), and separated bikeways (Class IV).

"Low stress" bicycle facilities include Class I paved shared use paths, Class IV separated bikeways, and Class IIIB bike boulevards. These facilities aim to provide safety and comfort for people of all ages and abilities. Low stress bikeways form the backbone of the bicycle network, providing maximum separation from motor vehicles on major roads and support comfortable travel along neighborhood roadways where bicycle travel is prioritized.

Where available right-of-way is limited or a low stress bikeway is not feasible without further study needed, Class II bike lanes and Class IIB buffered bike lanes are proposed.

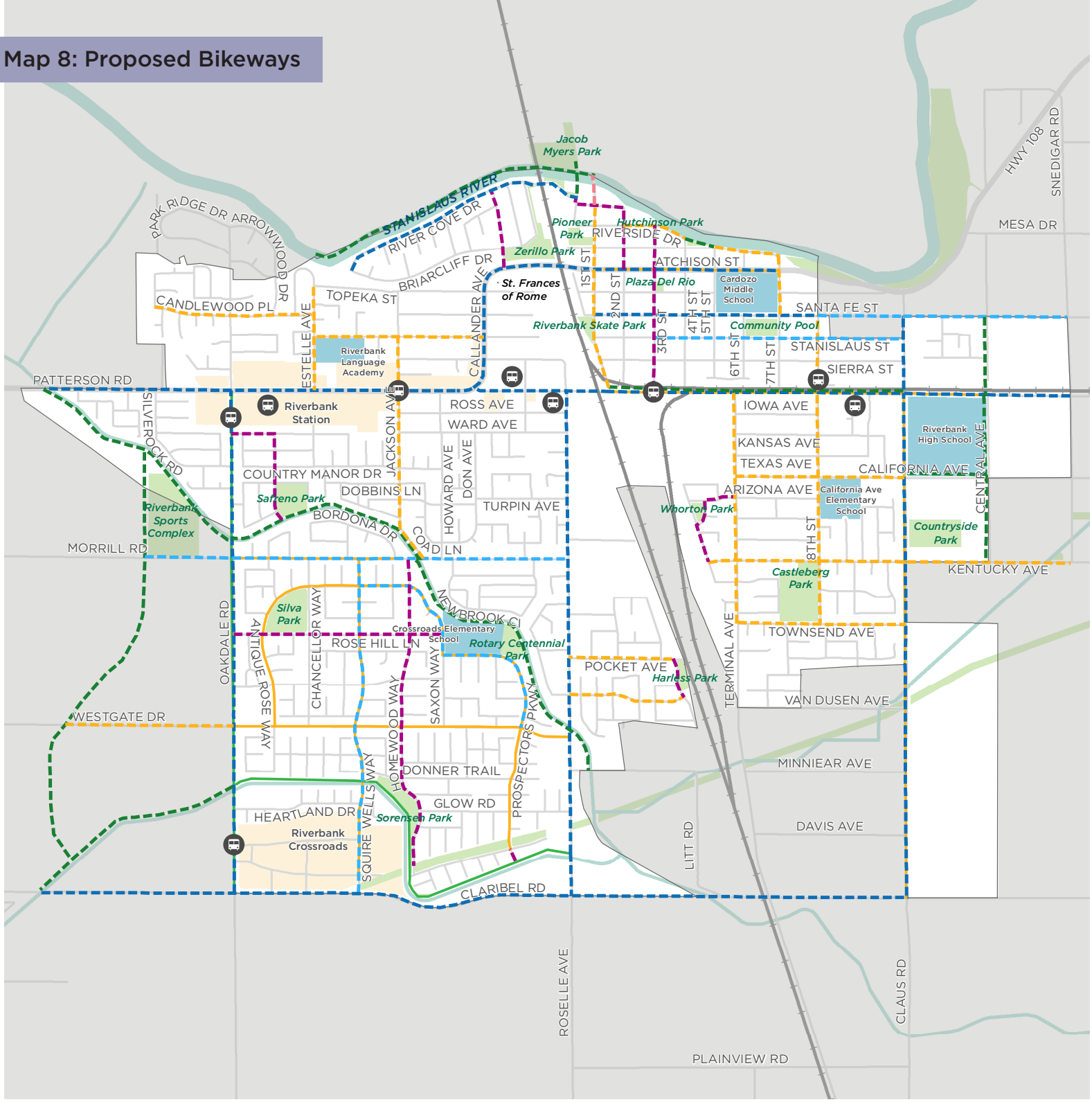
This Plan recommends 42 miles of new or upgraded bicycle facilities across Riverbank, proposing upgrades to about 7 miles of existing facilities and adding about 35 miles of new dedicated facilities. Table 3 provides a breakdown of the proposed bicycle network broken down by bikeway class. Map 8 shows the proposed bicycle network. Table 4 on pages 32 and 33 lists all of the proposed bicycle recommendations by segment and bikeway class. When fully built out, Riverbank will have over 46 miles of dedicated bicycle facilities that form a connected network.

Table 3: Bicycle Facility Miles by Classification

Bicycle Facility	Existing, (Miles)	Proposed, (Miles)	Total Network, (Miles)*
Class I: Paved Shared Use Path	2.3	7.2	8.5
Class II: Bicycle Lane	8.6	7.9	10.7
Class IIB: Buffered Bike Lane	0	5.6	5.6
Class III: Bike Route	0	0.1	0.1
Class IIIB: Bicycle Boulevard	0	3.5	3.5
Class IV: Separated Bikeway	0	17.9	17.9
TOTAL	10.9	42.2	46.3

* The total network of 46.3 miles includes existing bicycle facilities that are not getting upgraded (4.1 miles) combined with proposed bicycle facilities (42.2 miles).

Map 8: Proposed Bikeways



PROPOSED BIKEWAYS

RIVERBANK CA ACTIVE TRANSPORTATION PLAN

Proposed Bikeways

- Class I Shared-Use Path
- Class II Bicycle Lane
- Class IIB Buffered Bicycle Lane
- Class III Bicycle Route
- Class IIIB Bicycle Boulevard
- Class IV Separated Bikeway

Existing Bikeways

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

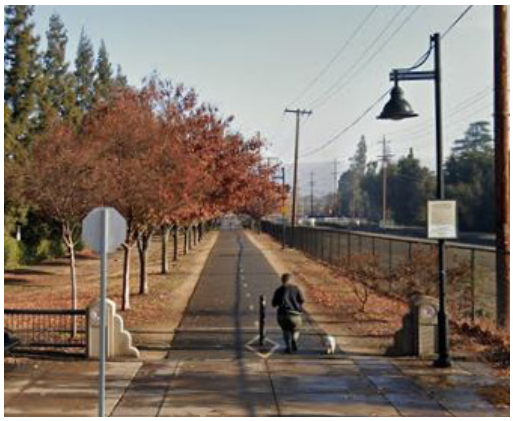
Destinations + Boundaries

- Bus Stop
- Commercial Area
- School
- City Boundary
- Park

alta Data Sources: City of Riverbank, Stanislaus County.

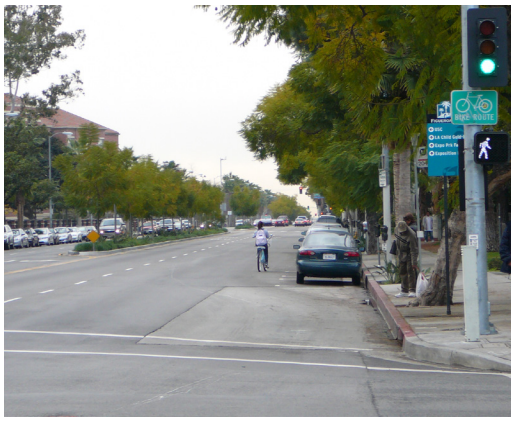
0 0.25 0.5 MILES

Bicycle Facility Types



Class I: Paved Shared Use Path

Paved shared use paths are completely separated from the roadway and typically shared with bicyclists and pedestrians.



Class III: Designated Bike Route

Bike routes are signed routes where people bicycling share the lane with motor vehicles. Bike routes can also include pavement markings.

Class II: Bike Lane

A bike lane is a dedicated lane for bicycle travel adjacent to traffic and separated from motor vehicles by a painted white line.

Class IIIB: Bike Boulevard

Bike boulevards are local roadways that prioritize bicycle travel through traffic calming features such as traffic diverters and speed humps.

Class IIB: Buffered Bike Lane

Buffered bike lane is a dedicated lane for bicycle travel adjacent to traffic and separated from motor vehicles by a painted buffer.

Class IV: Cycle Track

A cycle track is an on-street bikeway separated from motor vehicles by a curb, median, planters, or other physical barrier.

Example Bicycle Design Treatments

In addition to the linear bicycle improvements, a variety of design treatments can be used to support roadway crossings, provide enhanced connections, and address existing gaps or missing links in the bicycle network. The photos and descriptions shown on this page provide a few examples.

Bike Signal

Bike signals provide a dedicated crossing signal that signifies when people on bicycles can cross.

Intersection Crossing Marking

Safer bicycle networks require bicycle lane markings to continue through intersections. These improvements are relatively low-cost

Rectangular Rapid Flashing Beacon (RRFB)

RRFBs alert drivers at unsignalized intersections of people walking or biking. The flashing beacon can be activated by a push button.

Bike Box

Bike boxes provide a dedicated space for bicyclists ahead of motor vehicle traffic at signalized intersections.

Protected Intersection

Protected intersections maintain physical separation between motor vehicles and people bicycling through intersections.

Table 4: Proposed Bikeways

Street	Start	End	Recommendation	Length, (Miles)
Patterson Road	1st Street	Claus Road	Class I: Paved Shared Use Path	0.87
Canal Path	Oakdale Road (City Boundary)	Minnear Avenue (City Boundary)	Class I: Paved Shared Use Path	1.54
California Street & Central Avenue (High School Grounds)	Patterson Road	Claus Road	Class I: Paved Shared Use Path	0.47
Hutchinson Park Trail	Riverside Drive	Riverside Drive (near 5th Street)	Class I: Paved Shared Use Path	0.09
Central Avenue	Kentucky Avenue	California Avenue	Class I: Paved Shared Use Path	0.25
Stanislaus River Trail	City Boundary	City Boundary	Class I: Paved Shared Use Path	0.89
Burneyville Road Bike/Ped Bridge	Burneyville Road	Jacob Myers Park	Class I: Paved Shared Use Path	0.09
Mid Main Canal Trail	Patterson Road	Oakdale Road	Class I: Paved Shared Use Path	0.74
Central Avenue	Patterson Road	Santa Fe Street	Class I: Paved Shared Use Path	0.23
Sport Complex Trail	Mid Main Canal Trail	Morrill Road	Class I: Paved Shared Use Path	0.31
Mid Lateral 6 Canal Trail	Claribel Road	Oakdale Road	Class I: Paved Shared Use Path	0.67
Park Basin 13 Trail	Mid Lateral 6 Canal	Morrill Road	Class I: Paved Shared Use Path	1.00
8th Street	Patterson Road	Townsend Avenue	Class II: Bike Lane	0.91
1st Street	Orange Avenue	Patterson Road	Class II: Bike Lane	0.55
California Avenue	Terminal Avenue	Claus Road	Class II: Bike Lane	0.50
Stanislaus Street	Estelle Avenue	Callander Avenue	Class II: Bike Lane	0.50
Riverside Drive	2nd Street	4th Street	Class II: Bike Lane	0.19
Kentucky Avenue	Tennessee Avenue	Snedigar Road	Class II: Bike Lane	1.07
Estelle Avenue	Patterson Road	Topeka Street	Class II: Bike Lane	0.31
Terminal Avenue	Townsend Avenue	Patterson Road	Class II: Bike Lane	0.68
Riverside Drive	5th Street	7th Street	Class II: Bike Lane	0.19
7th Street	Riverside Drive	Santa Fe Street	Class II: Bike Lane	0.17
Jackson Avenue	Stanislaus Street	Morrill Road	Class II: Bike Lane	0.68
Candlewood Place	Woodhaven Place	Estelle Avenue	Class II: Bike Lane	0.47
Rose Brook Drive	Roselle Avenue	Litt Road	Class II: Bike Lane	0.34
Pocket Avenue	Roselle Avenue	Litt Road	Class II: Bike Lane	0.31
Townsend Avenue	Terminal Avenue	Claus Road	Class II: Bike Lane	0.50
Crawford Road	Proposed West Crossroads Trail	Oakdale Road	Class II: Bike Lane	0.50
Stanislaus Street	3rd Street	8th Street	Class IIB: Buffered Bike Lane	0.74
Saxon Way	Squire Wells Way	Prospectors Parkway	Class IIB: Buffered Bike Lane	0.39

Table 4: Proposed Bikeways (Continued)

Street	Start	End	Recommendation	Length, (Miles)
Morrill Road	Oakdale Road	Roselle Avenue	Class IIB: Buffered Bike Lane	0.99
Squire Wells Way	Morrill Road	Claribel Road	Class IIB: Buffered Bike Lane	1.00
Prospectors Parkway	Saxon Way	Crawford Road	Class IIB: Buffered Bike Lane	0.41
Santa Fe Street	Claus Road	Snedigar Road	Class IIB: Buffered Bike Lane	0.48
Santa Fe Street	1st Street	8th Street	Class IIB: Buffered Bike Lane	0.25
Morrill Road	Proposed West Crossroads Trail	Oakdale Road	Class IIB: Buffered Bike Lane	0.25
1st Street	Jacob Myers Park	Orange Avenue	Class III: Bicycle Route	0.09
2nd Street - Orange Avenue	River Cove Drive	Atchison Street	Class IIIB: Bicycle Boulevard	0.34
3rd Street	Atchison Street	Patterson Road	Class IIIB: Bicycle Boulevard	0.36
Homewood Way	Morrill Street	Proposed Canal Trail	Class IIIB: Bicycle Boulevard	0.93
3rd Street	Riverside Drive	Atchison Street	Class IIIB: Bicycle Boulevard	0.13
Crossroads Drive - Colony Manor Drive	Oakdale Road	New Canal Trail / Sefreno Park	Class IIIB: Bicycle Boulevard	0.39
Novi Drive - Homewood Way - Gallery Drive	Oakdale Way	Saxon Way	Class IIIB: Bicycle Boulevard	0.61
Prestwick Drive	River Cove Drive	Atchison Street	Class IIIB: Bicycle Boulevard	0.23
Prospectors Parkway	Blacksand Creek Way	Lateral Number One Trail	Class IIIB: Bicycle Boulevard	0.04
Virginia - Tennessee - Memphis - Arizona	Terminal Avenue	Terminal Avenue	Class IIIB: Bicycle Boulevard	0.29
Litt Road	Pocket Avenue	South Rose Brook Drive	Class IIIB: Bicycle Boulevard	0.12
Atchinson Street*	1st Street	7th Street	Class IV Separated Bikeway	0.54
Patterson Road	Callander Avenue	Snedigar Road	Class IV Separated Bikeway	1.77
Patterson Road*	City Boundary (West)	Jackson Avenue	Class IV Separated Bikeway	1.05
Claus Road	Minnear Avenue	Santa Fe Street	Class IV Separated Bikeway	1.35
Callander Avenue*	Patterson Road	1st Street	Class IV Separated Bikeway	0.72
Patterson Road*	Jackson Avenue	Sierra Court	Class IV Separated Bikeway	0.17
Oakdale Road	Morrill Road	Claribel Road	Class IV Separated Bikeway	1.49
Santa Fe Street	1st Street	8th Street	Class IV Separated Bikeway	0.66
Roselle Avenue	Claribel Avenue	Patterson Road	Class IV Separated Bikeway	1.37
Roselle Avenue	Claribel Avenue	Patterson Road	Class IV Separated Bikeway	0.12
Claus Road	Claribel Road	Minniear Avenue	Class IV Separated Bikeway	0.37
Claribel Road	Mid Lateral 6 Canal	Claus Road	Class IV Separated Bikeway	2.59
River Cove Drive	Briarcliff Drive	Burneyville Road	Class IV Separated Bikeway	0.76

* Caltrans Right of Way on State Highway 108

Pedestrian Recommendations

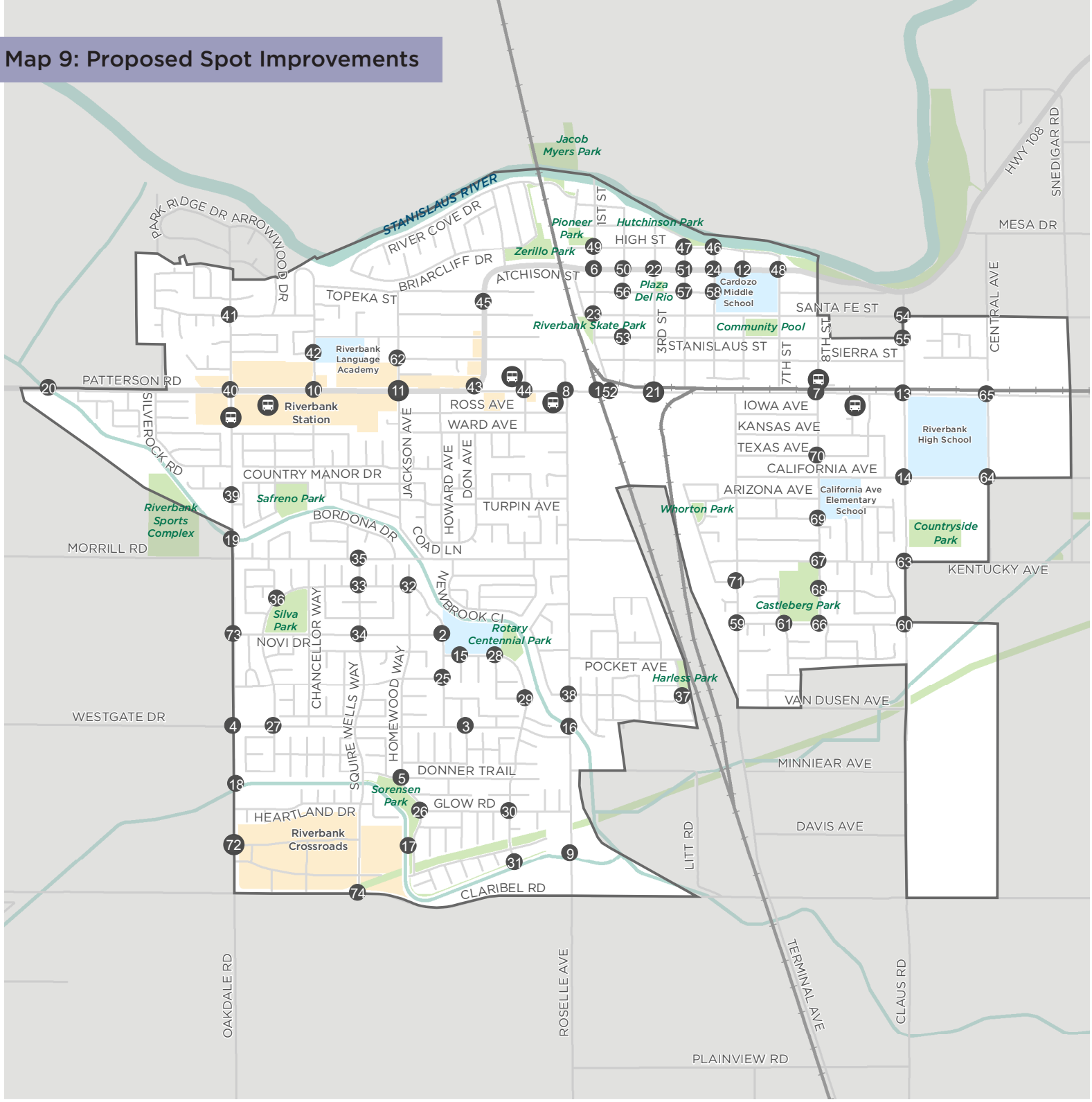
The pedestrian recommendations focus on improving safety for people walking along and across roadways in Riverbank through spot improvements and sidewalk improvements.

As mentioned in the collision analysis on page 21, pedestrians in Riverbank are disproportionately injured or killed in traffic compared to other modes. Between 2014 and 2018, of the 26 traffic crashes involving people biking and walking, there were 3 people killed and 1 serious injury—all 4 were pedestrians.

This plan recommends a total of **74 pedestrian spot improvements**, which can be seen on Map 9. Spot improvements aim to improve safety and comfort for people crossing the street and provide connections to destinations such as schools, parks, bus stops, and stores. The proposed spot improvements also consider connections to trails (Class I paved shared use paths). Examples of pedestrian spot improvements are described in more detail on page 37. A full list of proposed pedestrian spot improvements can be seen in Table 5 on pages 38 and 39.

In addition to improving safety and connectivity at intersections, sidewalk recommendations ensure that people have a dedicated and accessible space to walk. This plan recommends approximately **3.5 miles of new or upgraded sidewalks**, focusing on arterials and missing sidewalks within 500 feet of schools.

Map 9: Proposed Spot Improvements



PROPOSED SPOT IMPROVEMENTS

RIVERBANK CA ACTIVE TRANSPORTATION PLAN

Spot Improvements

- Spot Improvement

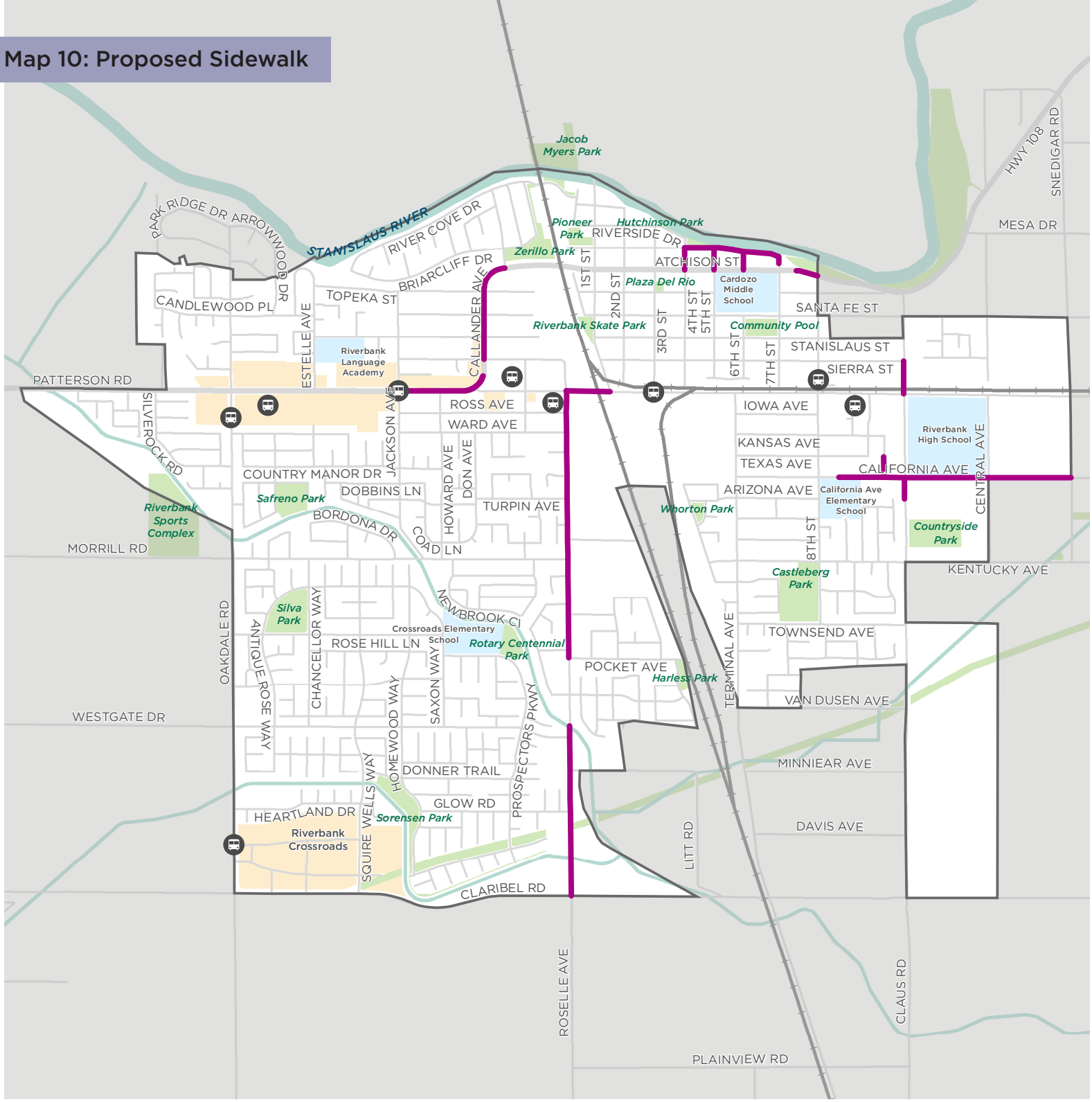
Destinations + Boundaries

- Bus Stop
- Commercial Area
- School
- City Boundary
- Park

MILES
0 0.25 0.5

alta Data Sources: City of Riverbank, Stanislaus County.

Map 10: Proposed Sidewalk



PROPOSED SIDEWALK

RIVERBANK CA ACTIVE TRANSPORTATION PLAN

Proposed Sidewalk Improvements (On Arterial Roadways or within 500ft of a School)

- Sidewalk Improvement

Destinations + Boundaries

- Bus Stop
- Commercial Area
- School
- City Boundary
- Park

alta Data Sources: City of Riverbank, Stanislaus County.

0 0.25 0.5 MILES

Example Pedestrian Improvements

Rectangular Rapid Flashing Beacon (RRFB)

RRFBs alert drivers at unsignalized intersections of people walking or biking. The flashing beacon can be activated by a push button.

Median Refuge Islands

Median refuge islands shorten crossing distances by establishing a safe waiting space in the middle of a crossing.

ADA Curb Ramps / High Visibility Crosswalks

ADA curb ramps are required by the Americans with Disabilities Act to allow safe crossing conditions. High visibility crosswalks use easy-to-see traffic markings to increase yielding behavior.

Right Turn Restrictions

In areas with high pedestrian volumes, eliminating right turns on red simplifies turning movements and can increase pedestrian predictability.

Sidewalk Improvement

Sidewalk improvements can include repaving and widening to provide more space for pedestrians, landscaping, and commercial activity.

Pedestrian Countdown Signal

Pedestrian countdown signals inform pedestrians of when and how long they have to cross the street.

Table 5: Pedestrian Spot Improvements

Project ID	Cross Street 1	Cross Street 2	Recommended Options
1	Patterson Road	Railroad Tracks	Improved Railroad crossing (planned)
2	Saxon Way	Novi Drive	Curb extensions, raised crossing, advanced yield markings, rectangular rapid flashing beacon, pedestrian-scaled lighting
3	Crawford Road	Silversmythe Lane	Rectangular rapid flashing beacon
4	Crawford Road	Oakdale Road	Median refuge island, remove turn island in crosswalk, improve signal timing
5	Donner Trail	Homewood Way	High-visibility crosswalk
6*	Atchison Street	1st Street	Consider protected intersection, curb extensions, high-visibility crosswalks, no right on red, improved signal timing, left-turn hardening
7	Patterson Road	8th Street	Railroad crossing
8	Patterson Road	Roselle Avenue	Curb extensions, high-visibility crosswalks, traffic signal, remove channelized right turn, consider left-turn hardening
9	MID Lateral One Canal	Roselle Avenue	Trail access
10*	Patterson Road	Estelle Avenue	Curb extensions, median refuge island, high-visibility crosswalks (on all three sides), improved signal timing, and sidewalks
11*	Patterson Road	Jackson Avenue	Curb extensions, high-visibility crosswalks, improved signal timing, and consider diverter
12*	Atchison Street	6th Street	High-visibility crosswalks, rectangular rapid flashing beacon, and pedestrian-scaled lighting
13	Patterson Road	Claus Road	Curb extensions, high visibility crosswalks, stop bar, lead pedestrian interval, median refuge island, pedestrian scramble, pedestrian-scaled lighting
14	California Avenue	Claus Road	Median refuge island, curb extensions, upgrade to HAWK, and pedestrian-scaled lighting
15	Prospector's Parkway	Arnerich Court	High-visibility crosswalks, consider limiting driveway to right-turn only
16	MID Canal	Roselle Avenue	Trail crossing (proposed)
17	MID Lateral 5 (400' north of Hetch Hetchy)		Trail crossing
18	MID Lateral 5	Oakdale Road	Pedestrian Hybrid Beacon or Overcrossing
19	Proposed Trail	Oakdale Road	Trail Crossing (proposed)
20	Patterson Road	Proposed Trail	Trail Crossing (proposed)
21	Patterson Road	3rd Street	Railroad Crossing, HAWK, high-visibility crosswalks,
22*	Atchison Street	3rd Street	High-visibility crosswalks, curb extensions, median refuge islands, and HAWK
23	Santa Fe Street	1st Street	Rectangular rapid flashing beacon
24*	Atchison Street	5th Street	High-visibility crosswalks, curb extensions, median refuge islands, HAWK, and pedestrian-scaled lighting
25	Gallery Drive	Saxon Way	High-visibility crosswalk and signage
26	Homewood Way	Glow Road	High-visibility crosswalk
27	Crawford Road	Antique Rose Way	All way stop
28	Prospectors Parkway	Suttermill Drive	Rectangular rapid flashing beacon and pedestrian-scaled lighting
29	Prospectors Parkway	Buckskin Way	High-visibility crosswalk and curb extension

* Caltrans Right of Way on State Highway 108

Table 5: Pedestrian Spot Improvements (Continued)

Project ID	Cross Street 1	Cross Street 2	Recommended Options
30	Prospectors Parkway	Glow Road	Curb extensions and high-visibility crosswalk
31	Prospectors Parkway	Canal Trail	Trail access
32	Saxon Way	Homewood Way	Curb extensions and high-visibility crosswalks
33	Saxon Way	Squire Wells Way	High-visibility crosswalks and rectangular rapid flashing beacon
34	Squire Wells Way	Novi Drive	High-visibility crosswalks and rectangular rapid flashing beacon
35	Squire Wells Way	Morrill Road	Curb extensions and high-visibility crosswalks
36	Antique Rose Way	Jandee Way	High-visibility crosswalk
37	S Rose Brook Drive	Litt Road	High-visibility crosswalk
38	Roselle Drive	S Rose Brook Drive	Median refuge island
39	Oakdale Road	Southgate Drive & Prouty Way	rectangular rapid flashing beacon
40	Oakdale Road	Patterson Road	Curb extensions, median refuge island, high-visibility crosswalks, eliminate excessive turn lanes, improved signal timing
41	Oakdale Road	Candlewood Place	High-visibility crosswalks
42	Estelle Avenue	Rio Verde Drive	High-visibility crosswalks and pedestrian-scaled lighting
43*	Callander Avenue	Patterson Road	Curb extensions, median refuge island, close slip lane, high-visibility crosswalks (all sides), improved signal timing, no right on red
44	Patterson Road	Palmer Avenue	High-visibility crosswalks
45*	Callander Avenue	Topeka Street & Santa Fe Street	Curb extensions, rectangular rapid flashing beacon, median refuge island
46	High Street	5th Street	Sidewalk and high-visibility crosswalk
47	Riverside Drive	High Street	Curb extensions and high-visibility crosswalks
48*	Atchison Street	7th Street	Curb extensions, high-visibility crosswalk, rectangular rapid flashing beacon, and pedestrian-scaled lighting
49	High Street	1st Street	High-visibility crosswalk and rectangular rapid flashing beacon
50*	Atchison Street	2nd Street	Curb extensions and high-visibility crosswalk
51*	Atchison Street	4th Street	Curb extensions, high-visibility crosswalks, and rectangular rapid flashing beacon
52	Patterson Road	1st Street	High-visibility crosswalk (across 1st), remove slip lane, and left-turn hardening
53	Stanislaus Street	2nd Street	High-visibility crosswalk
54	Claus Road	Santa Fe Street	Improved railroad crossing (planned)
55	Claus Road	Stanislaus Street	Curb extensions, raised crossing, advanced yield markings, rectangular rapid flashing beacon, pedestrian-scaled lighting
56	Topeka Street	2nd Street	rectangular rapid flashing beacon
57	Topeka Street	4th Street	Median refuge island, remove turn island in crosswalk, improve signal timing
58	Topeka Street	5th Street	High-visibility crosswalk
59	Terminal Avenue	Townsend Avenue	Curb extensions, high-visibility crosswalks, traffic signal, remove channelized right turn, consider left-turn hardening

* Caltrans Right of Way on State Highway 108

Table 5: Pedestrian Spot Improvements (Continued)

Project ID	Cross Street 1	Cross Street 2	Recommended Options
60	**Claus Road**	**Townsend Avenue**	Trail access
61	**Townsend Avenue**	**Sierra Vista Drive**	Curb extensions, median refuge island, high-visibility crosswalks (on all three sides), improved signal timing, and sidewalks
62	**Jackson Avenue**	**Sierra Street**	Curb extensions, high-visibility crosswalks, improved signal timing, and consider diverter
63	**Claus Road**	**Kentucky Avenue**	High-visibility crosswalks, rectangular rapid flashing beacon, and pedestrian-scaled lighting
64	**California Street**	**Central Avenue**	Curb extensions, high visibility crosswalks, stop bar, lead pedestrian interval, median refuge island, pedestrian scramble, pedestrian-scaled lighting
65	**Patterson Road**	**Central Avenue**	Median refuge island, curb extensions, upgrade to HAWK, and pedestrian-scaled lighting
66	**Townsend Avenue**	**8th Street**	Rectangular rapid flashing beacon and pedestrian-scaled lighting
67	**Kentucky Avenue**	**8th Street**	High-visibility crosswalks, consider limiting driveway to right-turn only
68	**8th Street**	**Belgian Drive**	Trail Crossing (proposed)
69	**8th Street**	**Nevada Avenue**	Trail crossing (proposed)
70	**8th Street**	**Texas Avenue**	Trail crossing
71	**Terminal Avenue**	**Virginia Avenue**	Pedestrian Hybrid Beacon or Overcrossing
72	**Oakdale Road**	**Freddi Lane**	Trail Crossing (proposed)
73	**Oakdale Road**	**Novi Drive**	Trail Crossing (proposed)
74	**Claribel Road**	**Squire Wells Way**	Railroad Crossing, HAWK, high-visibility crosswalks

Table 6: Sidewalk Recommendations

Street	Start	End	Length, (Miles)
California Road	300 feet east of 8th Street	Snedigar Road	0.69
Roselle Avenue	Patterson Road	Pocket Avenue	0.79
High Street - Riverside Drive	4th Street	7th Street	0.30
Patterson Road*	Jackson Avenue	Callander Avenue	0.27
6th Street	Atchison Street	Riverside Drive	0.05
Atchison Street*	260 feet east of 7th Street	8th Street	0.06
Callander Avenue*	Sierra Street	Prestwicker Drive	0.30
5th Street	Atchison Street	Riverside Drive	0.06
Roselle Avenue	Claribel Road	Westgate Drive	0.50
Patterson Road	Railroad Avenue	1st Street	0.13
Claus Road	Patterson Road	Sierra Street	0.09
4th Street	Atchison Street	High Street	0.06
Mathew Lane	California Avenue	300 feet north of California Avenue	0.06
Claus Road	California Avenue	300 feet south of California Avenue	0.06

* Caltrans Right of Way on State Highway 108

Downtown Recommendations

Downtown Riverbank is included as part of the citywide recommendations for linear bikeways, spot improvements, and sidewalks (see maps 8-10). In addition to the recommendations outlined in this chapter, the City may explore four additional strategies to improve walking and biking in Downtown Riverbank, with a focus on beginners and children. As an alternative to removing or altering on-street parking in Downtown—while still improving conditions for walking and biking—the City recommends:

1. Installing traffic calming measures to improve bicyclist safety and comfort while sharing the road with vehicles
2. Installing wayfinding/directional signage to educate bicyclists and pedestrians
3. Studying utilizing alleyways as Class IIIB Bicycle Boulevards to allow for alternative low-stress bike routes
4. Adopt a City ordinance that allows minors to bike on the sidewalk

1. Traffic Calming

Traffic calming includes street design elements that aim to reduce motor vehicle speeds and increase the safety and comfort for people walking and biking. Streets with traffic calming in Downtown Riverbank include Santa Fe Street and 3rd Street, which include features such as rectangular rapid flashing beacons (RRFB), curb extensions, a traffic cirlce, wide sidewalks, a median, and marked crosswalks. Expanding traffic calming measures throughout Downtown streets could help facilitate walking and biking for people of all ages and abilities.

Curb extensions and wide sidewalks at Santa Fe Street and 3rd Street help to reduce motor vehicle traffic speeds in Downtown Riverbank. Photo: City of Riverbank

2. Wayfinding Program

A bicycle and pedestrian wayfinding system consists of comprehensive signing and/or pavement markings to help educate people walking and biking of preferred routing options and nearby destinations. Someone walking along 3rd Street in Downtown, for example, might not know that Cardozo Middle School is only a couple blocks away. Wayfinding can help get them to this and many other destinations as well as choose the preferred route. A Downtown wayfinding program could complement the citywide wayfinding program, described in further detail on the following page.

Pedestrian wayfinding example. Photo: Alta Planning + Design

3. Enhanced Alleyways

The City could study utilizing alleyways as Class IIIB Bicycle Boulevards to allow for alternative low-stress bike routes to other streets in Downtown. Riverbank has paved alleyways running through the middle of every block Downtown that could be enhanced to promote biking and walking. While the alleyways in Downtown are mostly in good condition, enhancements such as wayfinding, improved maintenance, and improved crossings will need to be considered. Midblock crossings, for example, will be essential to safely and comfortably travel along alleways where they intersect with streets.

4. Sidewalk Policy

The City of Riverbank could explore altering City policy to allow for minors, defined as children under the age of 18, to ride bicycles on the sidewalk. This policy would offer children, who may not feel comfortable riding their bicycle in the street, a dedicated space separate from motor vehicle traffic. It is important to note, however, that bicyclists riding on the sidewalk must travel slowly and ensure that pedestrians still have the right-of-way.

An alleyway behind North Hall facing 3rd Street in Downtown Riverbank. Photo: City of Riverbank

A child riding a bike on the sidewalk. Photo: Alta Planning + Design

A midblock crossing along Santa Fe Street in Downtown Riverbank. Photo: City of Riverbank

Program Recommendations

Programs refer to non-infrastructure efforts that support walking, bicycling, and other mobility options in the city. Programs supplement infrastructure improvements by helping residents adopt active transportation modes with various incentives.

Safe Routes to School

Safe Routes to School programs cover a broad range of topics and approaches but generally focus on supporting students in getting to school in a safe and active way.

The City of Riverbank will benefit from implementing a Safe Routes to School program, in coordination with the Riverbank Unified School District and other schools operating in the City. Coordination with Stanislaus County and the San Joaquin Council of Governments can help connect the City with existing resources and funding opportunities.

Potential Safe Routes to School program offerings to schools include:

- Bicycle and pedestrian educational resources
- Bike and walk to school day events
- Bicycle rodeo
- Crossing guards
- Parent surveys
- Student walking and biking counts
- Walking school buses
- Suggested walking and biking routes to school maps
- Infrastructure improvements

Wayfinding Program

A bicycle wayfinding system consists of comprehensive signing and/or pavement markings to guide bicyclists to their destinations. Wayfinding signs direct bicyclists along the existing bicycle network and to important community destinations such as libraries, schools, parks, shopping districts, and civic buildings. Wayfinding is important for people to be able to navigate throughout Riverbank. Signs along the bicycle network should indicate the direction of travel, the locations of major destinations, and the time/distance to these destinations along the network. Riverbank does not have a consistent wayfinding sign program implemented throughout the rest of the city's bicycle network. This program could serve both wayfinding and safety purposes including:

- Helping to familiarize users with the network
- Helping users identify the best routes to destinations
- Helping users understand travel time and distances to their destinations
- Access to banking services, and/or cell phone technology.

Lastly, most bike share systems have been incorporated electric bicycles into their systems.

Bikeshare Program

The City of Riverbank should explore partnerships to form a bike share program. Bike share is a publicly and/or privately offered service that makes bicycles available on a short-term basis. It is designed to provide a cost-effective and convenient travel option for short trips.

A bike share system consists of a fleet of user-friendly and durable bikes placed at stations or hubs in conveniently-located areas. Some bike share systems are dockless, meaning they are not connected to a particular station.

Bike share systems typically encourage shorter, spontaneous trips of 30 minutes or less. During this time, people can check out a bicycle, ride it, and lock it either at a station--or if it is a dockless system--at an acceptable parking spot not impeding the sidewalk right-of-way. Bike share systems have different pricing and membership structures. Some systems allow for unlimited, short trips and annual or monthly memberships. Others charge for each trip or each hour of use. Increasingly, bike share systems are designing payment and membership structures that are accessible to people with varying income levels.

Bicycle Parking Program

Bicycle parking and related trip end facilities complete the bicycle network. A convenient and secure location to store a bicycle while at a destination is necessary for trips made by bike, especially when connecting to transit. Bike parking can be either short-term or secure and long-term. Bike parking options should include locations that accommodate bikes of differing sizes or supporting e-bikes and charging locations, particularly within secure parking areas.

Riverbank should also review and update its development standards to encourage greater provision for bicycle parking in new developments.

Chapter 4: Implementation

4. Implementation

Implementation of the proposed bicycle and pedestrian programs and improvements described in the previous chapters of the Active Transportation Plan will require funding from local, regional, state, and federal sources and coordination with multiple agencies both within and outside the City. To facilitate implementation efforts, this chapter presents the project prioritization methodology, maps and tables of the prioritized bicycle and pedestrian projects, cost estimates, and potential funding sources. Concept plans for three priority projects will are shown at the conclusion of this section. This implementation approach is intended to establish a framework that guides implementation over time and can be adjusted to account for future changes as Riverbank continues to grow.

Prioritization

The proposed bikeway and pedestrian improvements, when fully implemented, will provide a comprehensive active transportation network for Riverbank. Recognizing that there are limited financial resources that can be devoted to these projects, it is necessary to establish a system for prioritizing the improvements that can provide the most effective use of available funds, and help direct effective grant writing in the future.

Prioritization Criteria

In order to identify high priority projects, the project team developed prioritization criteria, established through the community engagement process and existing conditions assessment (Chapters 1 and 2 of this plan). The criteria to determine high priority projects include safety, public support, and the plan's four key opportunities (reference pages 24 and 25 for more information about the key opportunities): Enable Crosstown Connections, Improve Connections to Schools, Enhance the Trail Network, and Improve Downtown Connectivity.

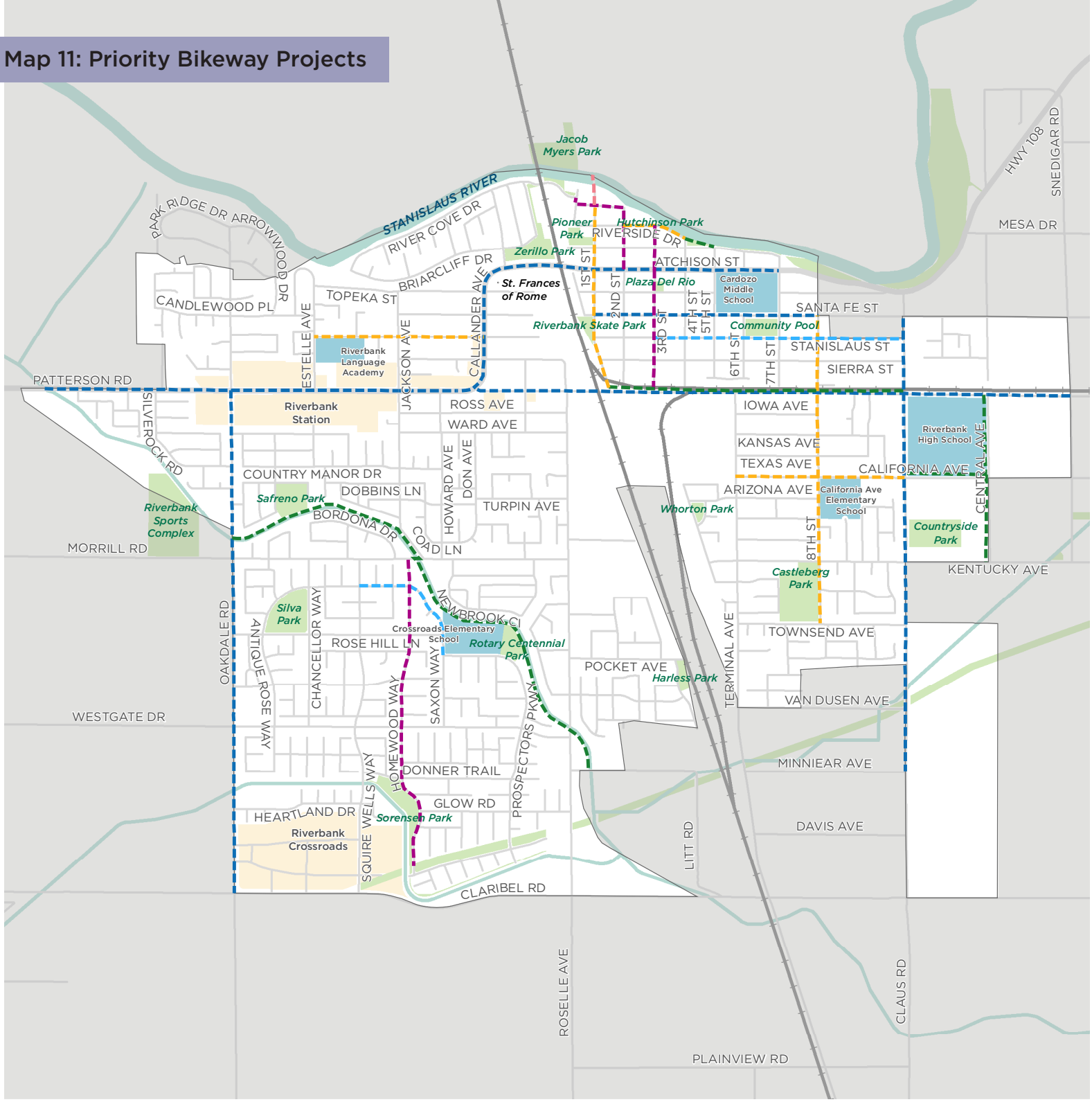
Using these criteria, shown in **Table 7**, projects were assigned a score between 0 and 6 and then sorted into **high priority projects**. Each criteria had a possibility of 1 point for a maximum possible score—the highest priority project—of 6. The priority sidewalk and bikeway recommendations include projects that scored 3 or higher. The priority pedestrian spot improvements include projects that scored a 4 or higher.

The prioritized recommendations, which include both linear bikeway improvements, pedestrian spot improvements, and sidewalk improvements are shown on the maps and tables in the following pages.

Table 7: Prioritization Criteria

Criteria	Measure	Points
Safety	Projects that are within close proximity (250 feet) of at least one bicycle-related collision	1
Public Support	Projects that received supportive comments on the online web map	1
Enable Crosstown Connections	Projects that provide a low stress connection on cross town corridors	1
Improve Connections to Schools	Projects that improve the safety of walking or biking routes directly to a school	1
Enhance the Trail Network	Trail projects, or projects that connect people to a park or trail	1
Improve Downtown Connectivity	Projects that connect people to downtown	1

Map 11: Priority Bikeway Projects



PRIORITY BIKEWAY PROJECTS

RIVERBANK CA ACTIVE TRANSPORTATION PLAN

Proposed Improvements

- Class I Shared-Use Path
- Class II Bicycle Lane
- Class IIB Buffered Bicycle Lane
- Class III Bicycle Route
- Class IIIB Bicycle Boulevard
- Class IV Separated Bikeway

Destinations + Boundaries

- School
- Park
- Commercial Area
- City Boundary

MILES
0 0.25 0.5

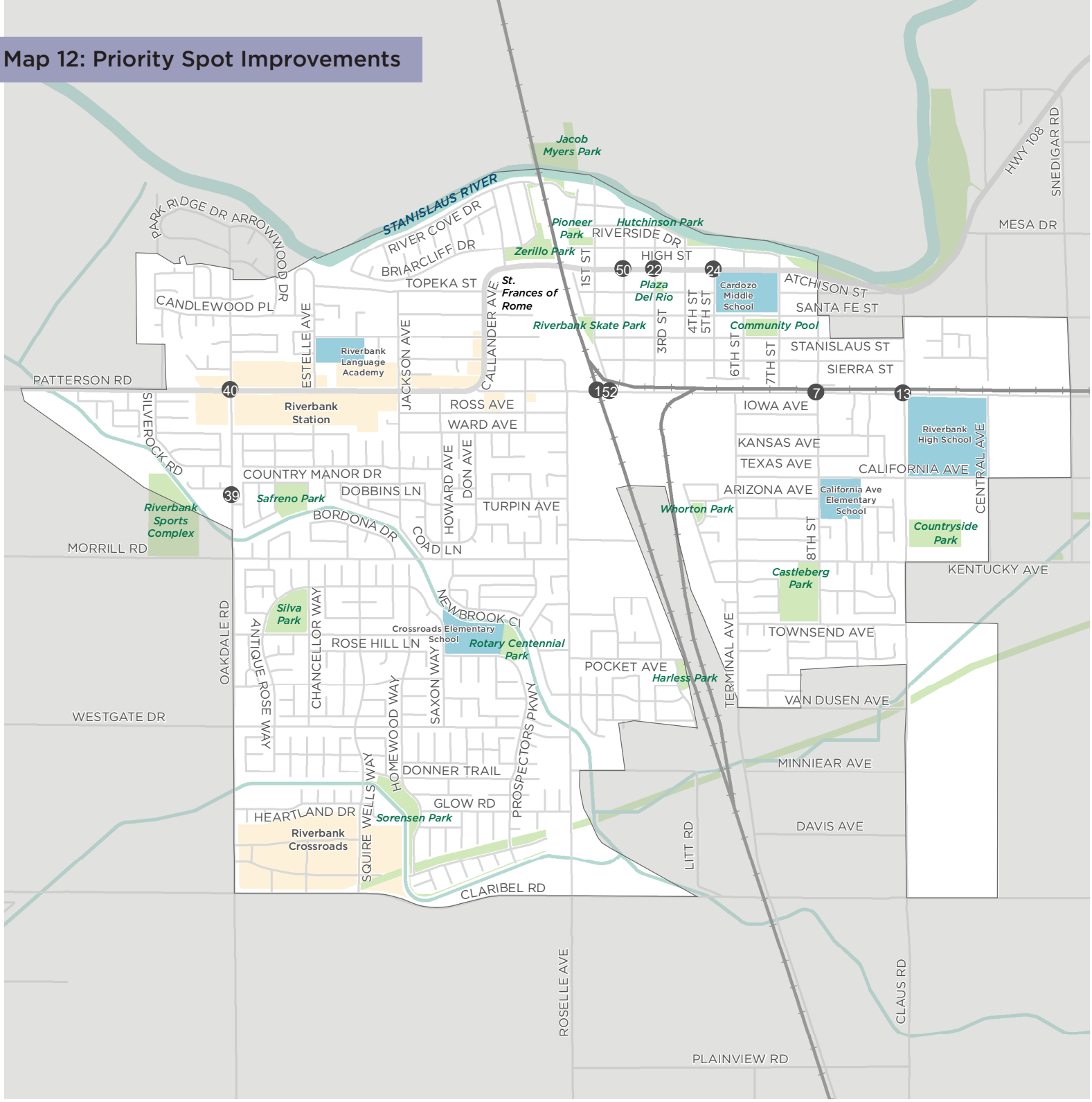
alta Data Sources: City of Riverbank, Stanislaus County.

Table 8: Priority Bikeway Projects

Street	Start	End	Recommendation	Length, (Miles)
Patterson Road	1st Street	Claus Road	Class I: Paved Shared Use Path	0.87
Canal Path	Oakdale Road (City Boundary)	Minnear Avenue (City Boundary)	Class I: Paved Shared Use Path	1.54
California Street & Central Avenue (High School Grounds)	Patterson Road	Claus Road	Class I: Paved Shared Use Path	0.47
Hutchinson Park Trail	Riverside Drive	Riverside Drive (near 5th Street)	Class I: Paved Shared Use Path	0.09
Central Avenue	Kentucky Avenue	California Avenue	Class I: Paved Shared Use Path	0.25
California Avenue	Terminal Avenue	Claus Road	Class II: Bike Lane	0.50
8th Street	Patterson Road	Townsend Avenue	Class II: Bike Lane	0.91
Stanislaus Street	Estelle Avenue	Callander Avenue	Class II: Bike Lane	0.50
Riverside Drive	2nd Street	4th Street	Class II: Bike Lane	0.19
1st Street	Orange Avenue	Patterson Road	Class II: Bike Lane	0.55
Stanislaus Street	3rd Street	8th Street	Class IIB: Buffered Bike Lane	0.74
Saxon Way	Squire Wells Way	Prospectors Parkway	Class IIB: Buffered Bike Lane	0.39
1st Street	Jacob Myers Park	Orange Avenue	Class III: Bicycle Route	0.09
3rd Street	Atchison Street	Patterson Road	Class IIIB: Bicycle Boulevard	0.36
2nd Street - Orange Avenue	River Cove Drive	Atchison Street	Class IIIB: Bicycle Boulevard	0.34
Homewood Way	Morrill Street	Proposed Canal Path	Class IIIB: Bicycle Boulevard	0.93
3rd Street	Riverside Drive	Atchison Street	Class IIIB: Bicycle Boulevard	0.13
Patterson Road*	City Boundary (West)	Jackson Avenue	Class IV Separated Bikeway	1.05
Patterson Road*	Jackson Avenue	Sierra Court	Class IV Separated Bikeway	0.17
Claus Road	Minnear Avenue	Santa Fe Street	Class IV Separated Bikeway	1.35
Callander Avenue*	Patterson Road	1st Street	Class IV Separated Bikeway	0.72
Atchison Street*	1st Street	7th Street	Class IV Separated Bikeway	0.54
Oakdale Road	Morrill Road	Claribel Road	Class IV Separated Bikeway	1.49
Patterson Road	Callander Avenue	Snedigar Road	Class IV Separated Bikeway	1.77
Santa Fe Street	1st Street	8th Street	Class IV Separated Bikeway	0.66

* Caltrans Right of Way on State Highway 108

Map 12: Priority Spot Improvements



PRIORITY SPOT IMPROVEMENTS

RIVERBANK CA ACTIVE TRANSPORTATION PLAN

Proposed Improvements

- Spot Improvement

Destinations + Boundaries

- School
- Park
- Commercial Area
- City Boundary

0 0.25 0.5 MILES

alta

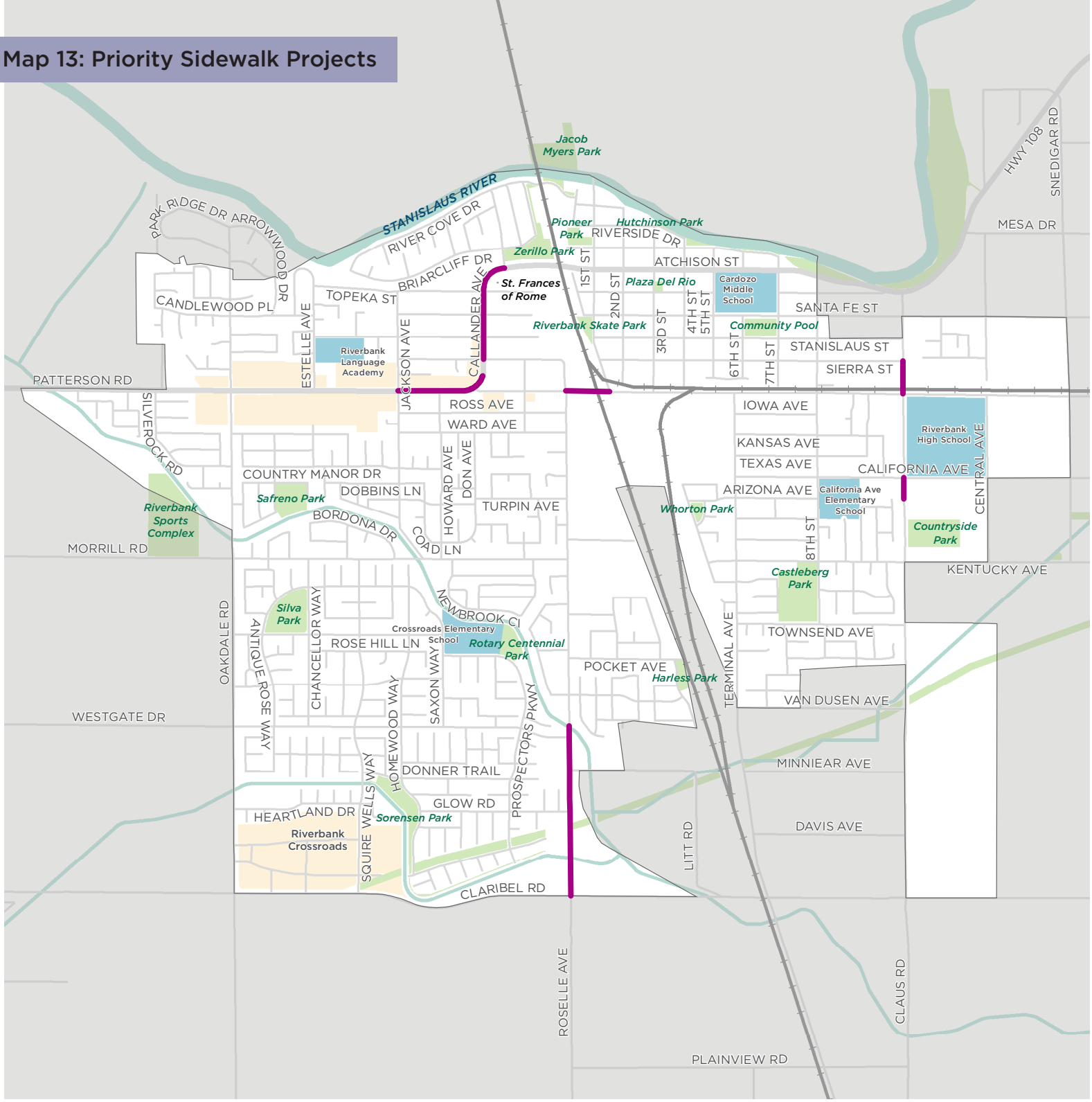
Data Sources: City of Riverbank, Stanislaus County.

Table 9: Priority Pedestrian Spot Improvements

Project ID	Cross Street 1	Cross Street 2	Recommended Options
1	**Patterson Road**	**Railroad Tracks**	Improved Railroad crossing (planned)
7	**Patterson Road**	**8th Street**	Improved Railroad crossing
13	**Patterson Road**	**Claus Road**	Curb extensions, high visibility crosswalks, stop bar, lead pedestrian interval, median refuge island, Pedestrian scramble, pedestrian-scaled lighting
22*	**Atchison Street**	**3rd Street**	High-visibility crosswalks, curb extensions, median refuge islands, and HAWK
24*	**Atchison Street**	**5th Street**	High-visibility crosswalks, curb extensions, median refuge islands, HAWK, and pedestrian-scaled lighting
39	**Oakdale Road**	**Southgate Drive & Prouty Way**	Rectangular Rapid Flashing Beacon (RRFB)
40*	**Oakdale Road**	**Patterson Road**	Curb extensions, median refuge island, high-visibility crosswalks, eliminate excessive turn lanes, improved signal timing
50*	**Atchison Street**	**2nd Street**	Curb extensions and high-visibility crosswalk
52	**Patterson Road**	**1st Street**	High-visibility crosswalk, remove slip lane, and left-turn hardening

* Caltrans Right of Way on State Highway 108

Map 13: Priority Sidewalk Projects



PRIORITY SIDEWALK PROJECTS

RIVERBANK CA ACTIVE TRANSPORTATION PLAN

Proposed Improvements

- Sidewalk Improvement

Destinations + Boundaries

- School
- Park
- Commercial Area
- City Boundary

alta Data Sources: City of Riverbank, Stanislaus County.

0 0.25 0.5 MILES

Table 10: Priority Sidewalk Projects

Street	Start	End	Length, (Miles)
Patterson Road*	Jackson Avenue	Callander Avenue	0.27
Callander Avenue*	Sierra Street	Prestwicker Drive	0.30
Roselle Avenue	Claribel Road	Westgate Drive	0.50
Patterson Road	Railroad Avenue	1st Street	0.13
Claus Road	Patterson Road	Sierra Street	0.09
Claus Road	California Avenue	300 feet south of California Avenue	0.06

* Caltrans Right of Way on State Highway 108

Cost Estimates

Table 11 provides planning-level per unit cost estimates for the recommended bikeway types, sidewalk improvements, and a range of possible pedestrian improvements. These costs do not reflect the full range of options that could be considered for implementation. Some projects may cost more due to specific site conditions and other factors not known at this time. Other projects could be implemented using various treatments, including basic methods such as with paint, and therefore cost significantly less; but would not incorporate the types of infrastructure options (pavement, curbs, or landscaping, for example) included in these cost estimates. Some projects could be installed in phases using simple treatments initially with upgrades to more permanent infrastructure later as funding becomes available.

The cost estimates are based on the design and construction costs for comparable projects in nearby jurisdictions and do not include maintenance and operations costs. The City will have to budget funding for annual maintenance costs, as well as replacement costs every 6-15 years.

Table 12 and Table 13 on the following pages provide planning-level cost estimates for each recommended bikeway segment and sidewalk segment. These costs are based upon the unit cost per mile shown in Table 11 and also includes 30% extra for contingency fees or “soft” costs. All final costs for these improvements were rounded to the nearest $1,000.

Based on the planning level cost estimates in Table 12, the full bicycle network buildout would cost approximately $31,145,000.

Cost estimates are not provided for the pedestrian spot improvements because the specific recommendation types are meant to be considerations. Each pedestrian spot improvement can have a range of pedestrian improvement types, such as those included in the per unit costs in Table 11.

Table 11: Per Unit Planning-Level Cost Estimates

Project Type	Cost	Unit	Notes
Class I: Paved Shared Use Path	$1,500,000	MI (Mile)	
Class II: Bike Lane	$132,000	MI	striping removal, striping, pavement marking, signage
Class IIB: Buffered Bike Lane	$387,000	MI	wayfinding signs, bike loop detectors, buffered bike lane markings, green conflict striping
Class III: Bike Route	$35,000	MI	lane marking, wayfinding signage
Class IIIB: Bike Boulevard	$1,020,000	MI	3 traffic circles, 3 curb extensions, 2 raised crosswalks
Class IV: Cycle Track	$2,313,000	MI	striping removal, signage, pavement marking, green conflict striping, bike signal detection, raised concrete buffer with landscape or hardscape
High Visibility Crosswalk - short (< 3 lanes)	$2,500	EA (Each)	One Leg
High Visibility Crosswalk - medium (4-5 lanes)	$3,750	EA	One Leg
High Visibility Crosswalk - long (6+ lanes)	$5,000	EA	One Leg
Transverse Crosswalk	$3,000	EA	Varies by distance
Curb Extensions/ Corner Radii	$50,000	EA	Varies by size
Leading Pedestrian Interval	$100,000	EA	Costs vary by type of equipment existing and required
Slip Lane Removal	$100,000	EA	Varies by size
Pedestrian- only signal phase	$100,000	EA	Costs vary by type of equipment existing and required
Median Refuge Island	$50,000	EA	Varies by size
Curb Ramps	$5,000	EA	
Signage	$500	EA	Sign, post and foundation
Rectangular Rapid Flashing Beacon (RRFB)	$60,000	EA	
Pavement Markings (Stop/Yield)	$2,000	EA	
Wayfinding Signs	$30,000	MI	10 signs per mile
Neighborhood Traffic Circle	$150,000	EA	
Crosswalk Removal	$500	EA	
Median - short	$50,000	EA	Varies by size
Protected Intersection	$500,000	EA	All 4 corners of intersection
HAWK Beacon	$400,000	EA	
Red Curb	$26,400	MI	
Sidewalk	$500,000	MI	Includes sidewalk, curb and gutter, assumes 6-ft wide sidewalk (one side of roadway)

Table 12: Proposed Bikeway Cost Estimates

Street	Start	End	Recommendation	Length, (Miles)	Cost Estimate
Patterson Road	1st Street	Claus Road	Class I: Paved Shared Use Path	0.87	$1,317,000
Canal Path	Oakdale Road (City Boundary)	Minnear Avenue (City Boundary)	Class I: Paved Shared Use Path	1.54	$2,324,000
California Street & Central Avenue (High School Grounds)	Patterson Road	Claus Road	Class I: Paved Shared Use Path	0.47	$709,000
Hutchinson Park Trail	Riverside Drive	Riverside Drive (near 5th Street)	Class I: Paved Shared Use Path	0.09	$136,000
Central Avenue	Kentucky Avenue	California Avenue	Class I: Paved Shared Use Path	0.25	$390,000
Stanislaus River Trail	City Boundary	City Boundary	Class I: Paved Shared Use Path	0.89	$1,346,000
Burneyville Road Bike/Ped Bridge	Burneyville Road	Jacob Myers Park	Class I: Paved Shared Use Path	0.09	$145,000
Mid Main Canal Trail	Patterson Road	Oakdale Road	Class I: Paved Shared Use Path	0.74	$1,111,000
Central Avenue	Patterson Road	Santa Fe Street	Class I: Paved Shared Use Path	0.23	$352,000
Sport Complex Trail	Mid Main Canal Trail	Morrill Road	Class I: Paved Shared Use Path	0.31	$470,000
Mid Lateral 6 Canal Trail	Claribel Road	Oakdale Road	Class I: Paved Shared Use Path	0.67	$1,016,000
Park Basin 13 Trail	Mid Lateral 6 Canal	Morrill Road	Class I: Paved Shared Use Path	1.00	$1,514,000
8th Street	Patterson Road	Townsend Avenue	Class II: Bike Lane	0.91	$121,000
1st Street	Orange Avenue	Patterson Road	Class II: Bike Lane	0.55	$73,000
California Avenue	Terminal Avenue	Claus Road	Class II: Bike Lane	0.50	$66,000
Stanislaus Street	Estelle Avenue	Callander Avenue	Class II: Bike Lane	0.50	$67,000
Riverside Drive	2nd Street	4th Street	Class II: Bike Lane	0.19	$25,000
Kentucky Avenue	Tennessee Avenue	Snedigar Road	Class II: Bike Lane	1.07	$142,000
Estelle Avenue	Patterson Road	Topeka Street	Class II: Bike Lane	0.31	$41,000
Terminal Avenue	Townsend Avenue	Patterson Road	Class II: Bike Lane	0.68	$91,000
Riverside Drive	5th Street	7th Street	Class II: Bike Lane	0.19	$26,000
7th Street	Riverside Drive	Santa Fe Street	Class II: Bike Lane	0.17	$24,000
Jackson Avenue	Stanislaus Street	Morrill Road	Class II: Bike Lane	0.68	$90,000
Candlewood Place	Woodhaven Place	Estelle Avenue	Class II: Bike Lane	0.47	$63,000
Rose Brook Drive	Roselle Avenue	Litt Road	Class II: Bike Lane	0.34	$46,000
Pocket Avenue	Roselle Avenue	Litt Road	Class II: Bike Lane	0.31	$42,000
Townsend Avenue	Terminal Avenue	Claus Road	Class II: Bike Lane	0.50	$66,000
Crawford Road	Proposed West Crossroads Trail	Oakdale Road	Class II: Bike Lane	0.50	$66,000
Stanislaus Street	3rd Street	8th Street	Class IIB: Buffered Bike Lane	0.74	$287,000
Saxon Way	Squire Wells Way	Prospectors Parkway	Class IIB: Buffered Bike Lane	0.39	$153,000

Table 12: Proposed Bikeway Cost Estimates (Continued)

Street	Start	End	Recommendation	Length, (Miles)	Cost Estimate
Morrill Road	Oakdale Road	Roselle Avenue	Class IIB: Buffered Bike Lane	0.99	$386,000
Squire Wells Way	Morrill Road	Claribel Road	Class IIB: Buffered Bike Lane	1.00	$388,000
Prospectors Parkway	Saxon Way	Crawford Road	Class IIB: Buffered Bike Lane	0.41	$162,000
Santa Fe Street	Claus Road	Snedigar Road	Class IIB: Buffered Bike Lane	0.48	$189,000
Santa Fe Street	1st Street	8th Street	Class IIB: Buffered Bike Lane	0.25	$98,000
Morrill Road	Proposed West Crossroads Trail	Oakdale Road	Class IIB: Buffered Bike Lane	0.25	$100,000
1st Street	Jacob Myers Park	Orange Avenue	Class III: Bicycle Route	0.09	$3,000
2nd Street - Orange Avenue	River Cove Drive	Atchison Street	Class IIIB: Bicycle Boulevard	0.34	$354,000
3rd Street	Atchison Street	Patterson Road	Class IIIB: Bicycle Boulevard	0.36	$373,000
Homewood Way	Morrill Street	Proposed Canal Trail	Class IIIB: Bicycle Boulevard	0.93	$956,000
3rd Street	Riverside Drive	Atchison Street	Class IIIB: Bicycle Boulevard	0.13	$136,000
Crossroads Drive - Colony Manor Drive	Oakdale Road	New Canal Trail / Sefreno Park	Class IIIB: Bicycle Boulevard	0.39	$399,000
Novi Drive - Homewood Way - Gallery Drive	Oakdale Way	Saxon Way	Class IIIB: Bicycle Boulevard	0.61	$629,000
Prestwick Drive	River Cove Drive	Atchison Street	Class IIIB: Bicycle Boulevard	0.23	$239,000
Prospectors Parkway	Blacksand Creek Way	Lateral Number One Trail	Class IIIB: Bicycle Boulevard	0.04	$46,000
Virginia - Tennessee - Memphis - Arizona	Terminal Avenue	Terminal Avenue	Class IIIB: Bicycle Boulevard	0.29	$304,000
Litt Road	Pocket Avenue	South Rose Brook Drive	Class IIIB: Bicycle Boulevard	0.12	$127,000
Atchinson Street*	1st Street	7th Street	Class IV Separated Bikeway	0.54	$1,271,000
Patterson Road	Callander Avenue	Snedigar Road	Class IV Separated Bikeway	1.77	$4,107,000
Patterson Road*	City Boundary (West)	Jackson Avenue	Class IV Separated Bikeway	1.05	$2,435,000
Claus Road	Minnear Avenue	Santa Fe Street	Class IV Separated Bikeway	1.35	$3,133,000
Callander Avenue*	Patterson Road	1st Street	Class IV Separated Bikeway	0.72	$1,682,000
Patterson Road*	Jackson Avenue	Sierra Court	Class IV Separated Bikeway	0.17	$401,000
Oakdale Road	Morrill Road	Claribel Road	Class IV Separated Bikeway	1.49	$3,462,000
Santa Fe Street	1st Street	8th Street	Class IV Separated Bikeway	0.66	$1,539,000
Roselle Avenue	Claribel Avenue	Patterson Road	Class IV Separated Bikeway	1.37	$3,185,000
Roselle Avenue	Claribel Avenue	Patterson Road	Class IV Separated Bikeway	0.12	$290,000
Claus Road	Claribel Road	Minniear Avenue	Class IV Separated Bikeway	0.37	$871,000
Claribel Road	Mid Lateral 6 Canal	Claus Road	Class IV Separated Bikeway	2.59	$5,991,000
River Cove Drive	Briarcliff Drive	Burneyville Road	Class IV Separated Bikeway	0.76	$1,764,000

* Caltrans Right of Way on State Highway 108

Table 13: Proposed Sidewalk Cost Estimates

Street	Start	End	Length, (Miles)	Cost Estimate
California Road	300 feet east of 8th Street	Snedigar Road	0.69	$104,000
Roselle Avenue	Patterson Road	Pocket Avenue	0.79	$119,000
High Street - Riverside Drive	4th Street	7th Street	0.30	$45,000
Patterson Road*	Jackson Avenue	Callander Avenue	0.27	$41,000
6th Street	Atchison Street	Riverside Drive	0.05	$8,000
Atchison Street*	260 feet east of 7th Street	8th Street	0.06	$10,000
Callander Avenue*	Sierra Street	Prestwicker Drive	0.30	$46,000
5th Street	Atchison Street	Riverside Drive	0.06	$10,000
Roselle Avenue	Claribel Road	Westgate Drive	0.50	$76,000
Patterson Road	Railroad Avenue	1st Street	0.13	$20,000
Claus Road	Patterson Road	Sierra Street	0.09	$15,000
4th Street	Atchison Street	High Street	0.06	$10,000
Mathew Lane	California Avenue	300 feet north of California Avenue	0.06	$9,000
Claus Road	California Avenue	300 feet south of California Avenue	0.06	$9,000

* Caltrans Right of Way on State Highway 108

Funding Strategy

There are a variety of potential funding sources including local, regional, state, and federal. The City should also take advantage of private contributions in developing the proposed system. This could include a variety of resources such as volunteer labor during construction or monetary donations towards specific improvements. The funding sources considered appropriate for Riverbank are listed in Table 14.

Figure 5: Funding Sources

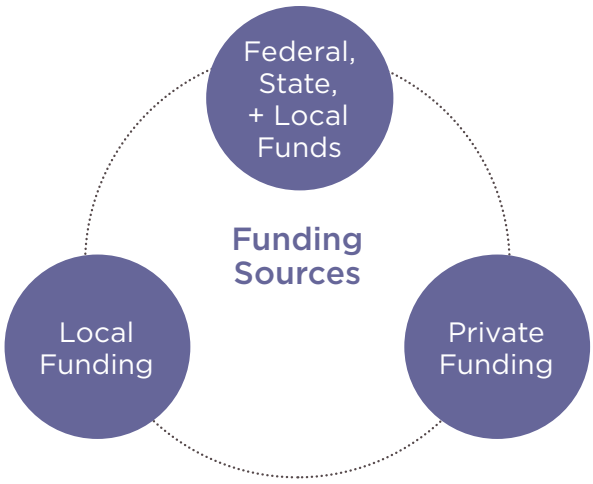


Table 14: Potential Funding Sources

Federal Funding Sources
Rebuilding American Infrastructure with Sustainability and Equity (RAISE) (formerly TIGER)
Rivers, Trails and Conservation Assistance Program (RTCA)
State Funding Sources
Active Transportation Program (ATP)
Solutions for Congested Corridors Programs
Highway Safety Improvement Program (HSIP)
Sustainable Transportation Planning Grant Program (STP)
Office of Traffic Safety: National Safety Program 405(h) Nonmotorized Safety
Recreational Trails Program
Land & Water Conservation Fund (LWCF)
Regional Funding Sources
Bicycle Facilities Grant Program
Measure L
One Bay Area Grant Program 2
Local Funding Sources
New Development or Redevelopment
Assessment Districts
Impact Fees
Open Space District
Non-Traditional and Private Funding Sources
California Conservation Corps (CCC)
Rails to Trails Conservancy (RTC)
Grant and Foundation Opportunities
Adopt-A-Trail/Path Programs
Memorial Funds
Revenue-Producing Operations

Priority Concept Plans

Concept plans have been created for 3 of the priority pedestrian spot improvements recommended on pages 50 and 51 of this plan. The concept plans will be used to increase the City of Riverbank's capacity to apply for grant funding for implementation.

Atchison Street & 5th Street

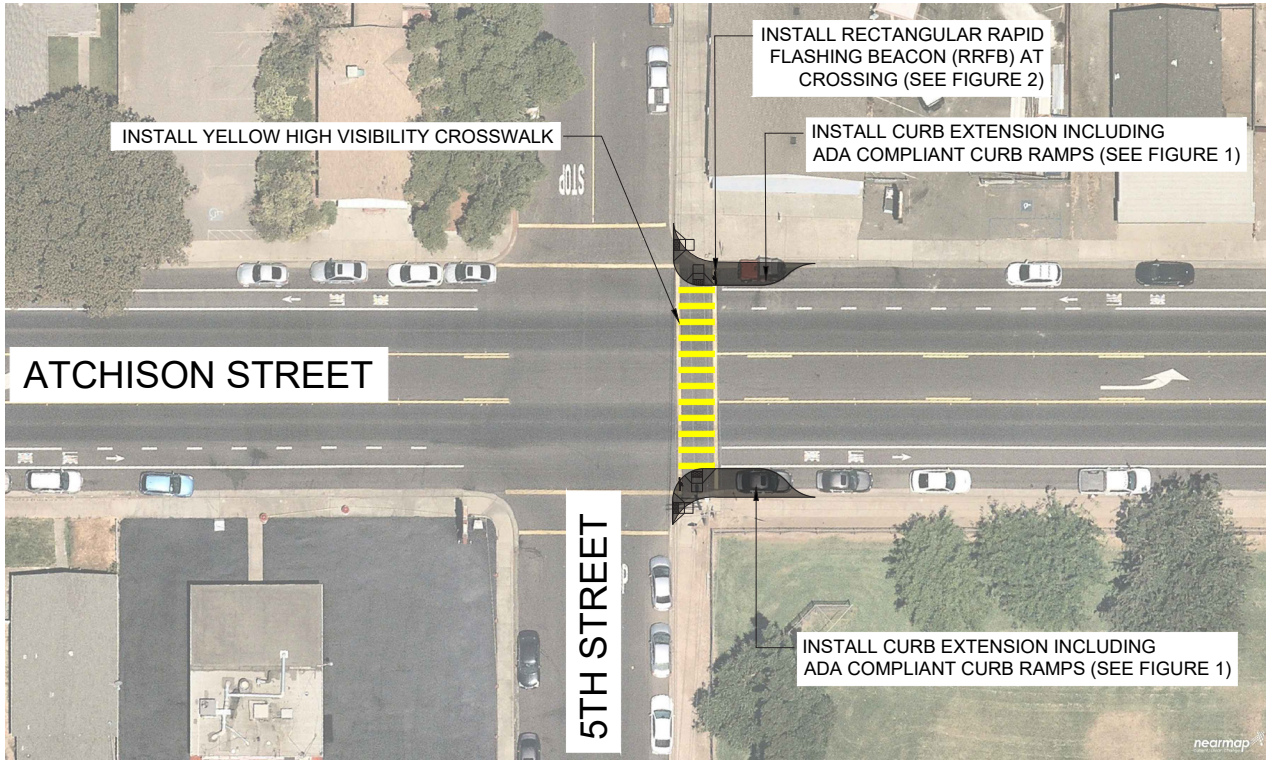


FIGURE 1: EXISTING CURB EXTENSION EXAMPLE (NACTO)

FIGURE 2: EXISTING RRFB EXAMPLE (NACTO)

NTS

alta

304 12th Street, Suite 2A | Oakland, CA 94607
510-540-5008 | altago.com

ATCHISON STREET AT 5TH SREET
RIVERBANK ACTIVE TRANSPORTATION PLAN
RIVERBANK, CA

Patterson Road & 8th Street

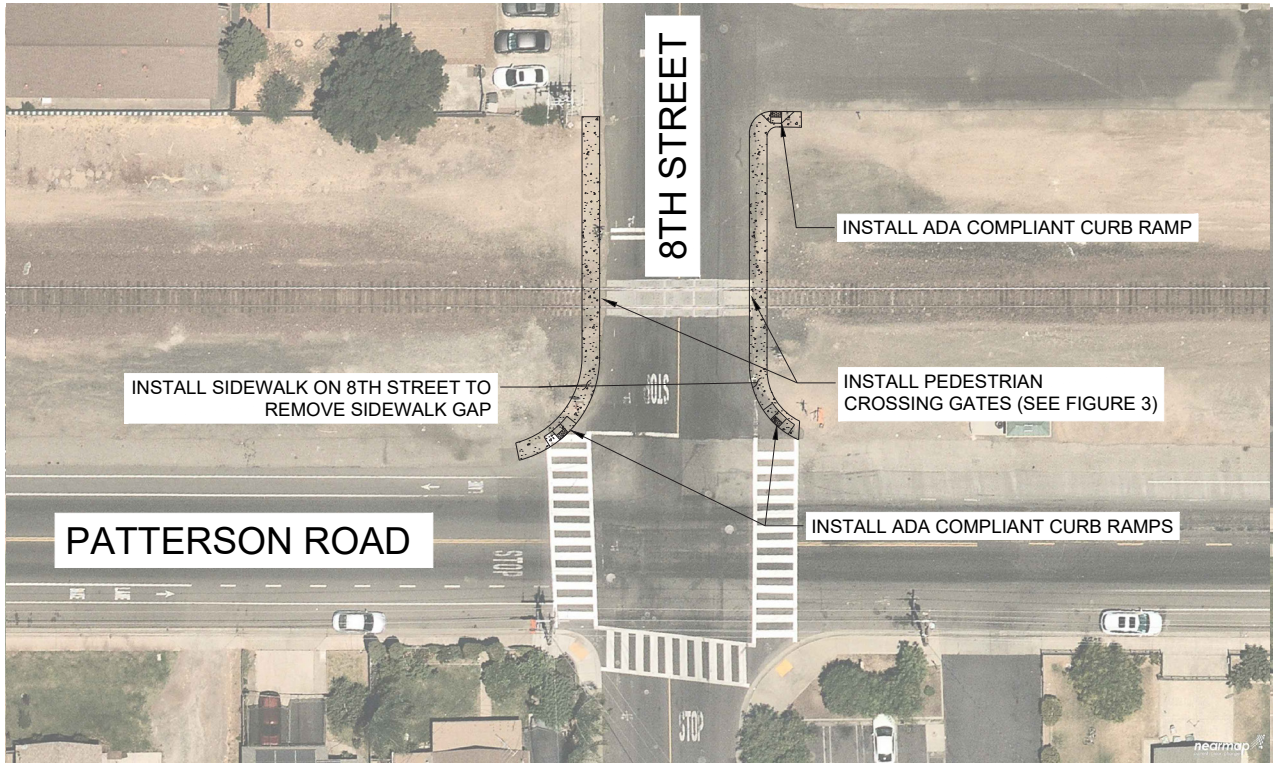


FIGURE 3: EXISTING RAILROAD CROSSING GATE EXAMPLE (GOOGLE MAPS)

NTS

alta

304 12th Street, Suite 2A | Oakland, CA 94607
510-540-5008 | altago.com

PATTERSON ROAD AT 8TH STREET
RIVERBANK ACTIVE TRANSPORTATION PLAN
RIVERBANK, CA

Dwg filename: N:\Shared\PROJECTS\2019\900-2019-264 Riverbank, CA ATP\CAD\2019-264_Concept.dwg Last saved by: EmmaKatz Plot date: 7/22/2021 6:04 PM Plotstyletable: ALTA NCS Standard.ctb

Line measures 1 inch on full scale drawing. If not 1 inch scale accordingly.

Southgate Drive & Oakdale Road

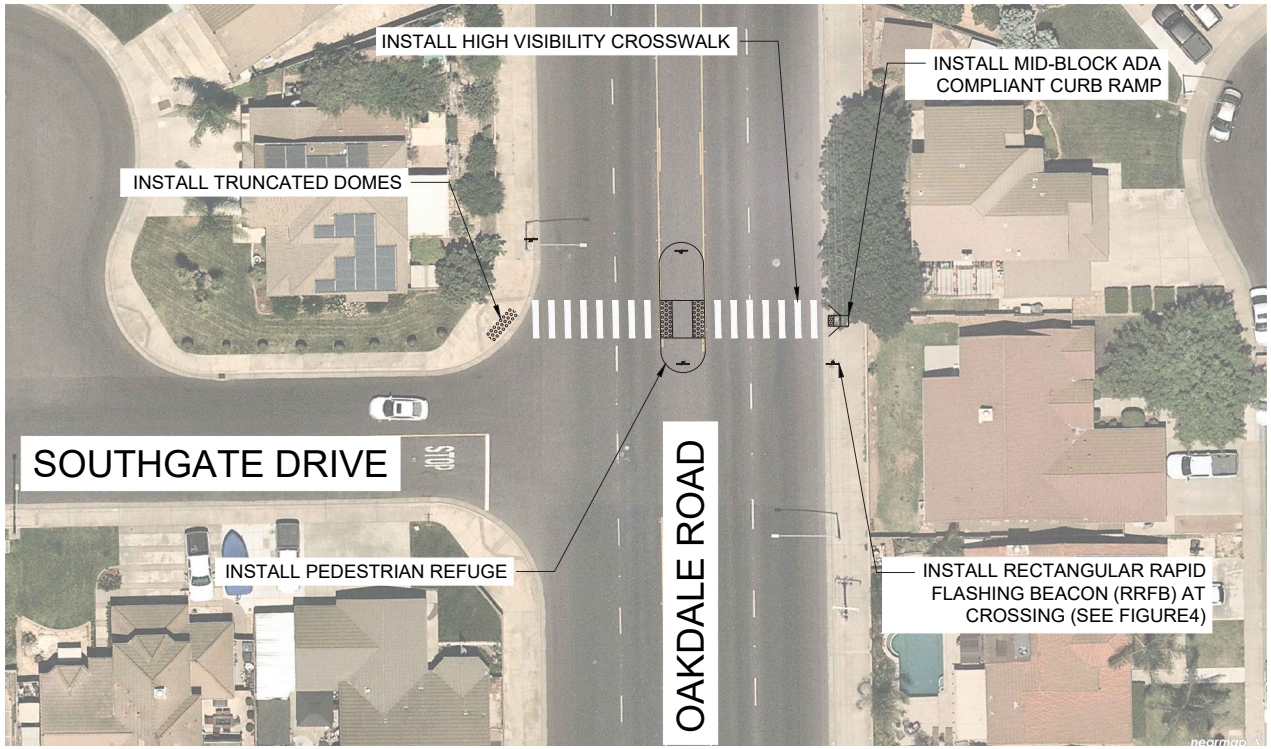


FIGURE4: EXISTING PEDESTRIAN REFUGE WITH RRFB EXAMPLE (NACTO)

NTS

alta

304 12th Street, Suite 2A | Oakland, CA 94607
510-540-5008 | altago.com

SOUTHGATE DRIVE AT OAKDALE ROAD
RIVERBANK ACTIVE TRANSPORTATION PLAN
RIVERBANK, CA

Dwg filename: N:\Shared\PROJECTS\2019\900-2019-264 Riverbank, CA ATP\CAD\2019-264_Concept.dwg Last saved by: EmmaMota Plot date: 7/22/2021 6:04 PM Plotstyletable: ALTA HCS Standard.ctb

Line measures 1 inch on full scale drawing. If not 1 inch scale accordingly.