

Fresno County Regional Trails Plan

Administrative Draft – February 2021

Appendices

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Appendix A: Existing Conditions & Field Inventory

Who is this Plan serving?

The Fresno County Regional Trails Plan is intended to serve all people who walk or hike, bike, or ride horses on trails or shared-used paths in Fresno County. The Plan aims to serve a variety of trail users, including people using them for recreational and utilitarian purposes. It also serves to encourage potential new users.

Recreational Trips

Fresno County offers many recreational opportunities; people can hike, run, bike, horseback ride, nature watch, fish, and more. This Plan will serve people currently engaged in these activities and those who are potentially interested, including tourists. Tourists can typically be categorized into four groups:

- **Adventure tourists,** or high-energy thrill seekers, who bicycle or hike for long distances. They see the journey as part of the adventure.
- **Events-based tourists** who travel to a place for a specific event, such as a marathon or organized bike ride.
- **Destination tourists** who travel to a specific place because it's on their "bucket list." Destinations in Fresno County that attract these tourists could include national parks and forests.
- **Educational tourists** who visit and tour areas for informational or exploratory reasons.

This Plan will consider all active tourist user groups and will not focus on a particular group

Utilitarian Trips

This Plan also serves people who may use the trails, and more specifically the shared-used paths, for utilitarian trips, such as commuting to work, running errands, or traveling to school. In 2017, bicycling comprised 0.9 percent of all trips in Fresno county, and walking comprised 1.9 percent[1]. A connected system of unpaved trails and paved Class I shared-use paths can help people comfortably and safely make their day-to-day trips with minimal interactions with motor vehicle traffic.

Potential Users

Additionally, this Plan serves people who may be interested in but are not currently engaged in outdoor activities. Access and use of trails and paths are different based on race, income, age, ability, gender, and education; it is important for this Plan to recognize disparities among the population and to create a trail system that is attractive and accessible to all. A survey on national outdoor participation from the Outdoor Foundation has shown that different racial populations and income levels participate in outdoor activities with varied frequency.[2] For example, two-thirds of outdoor participants had incomes of $50,000 or more, and 63 percent had some level of college education. Furthermore, 74 percent of survey respondents were white, followed by Hispanic (ten percent), Black (nine percent), Asian (six percent) and other races (one percent). These data show that there are many

[1] US Census American Community Survey 2010-2016, Fresno County Regional Active Transportation Plan
[2] *Outdoor Participation Report*, 2018. Outdoor Foundation.

individuals who do not participate in outdoor recreation, and likely do not use trails often. However, these individuals could be potential users of trails in the Fresno County region.

Fresno County Character and Land Use

Fresno County is centrally located within the San Joaquin Valley and Sierra Nevada Mountains and spans over 6,000 square miles. The county is home to approximately one million people and has an overall population density of approximately 170 people per square mile. The county includes jurisdictions of various sizes, the largest of which are the cities of Fresno and Clovis. Other cities in Fresno County include Reedley, Sanger, Selma, Parlier, Kerman, Coalinga, Kingsburg, Mendota, Firebaugh, Huron, Fowler, Orange Cove, and San Joaquin.

Land use in Fresno County ranges from dense, urban areas to agricultural communities. The county also includes federally owned lands, including the Sierra National Forest, Kings Canyon National Park, and Sequoia National Park. Major waterways in Fresno County include the San Joaquin River and the Kings River, and these are used for recreational purposes, such as local parks, state-operated parks like Millerton Lake State Recreation Area. The topography is flat in the San Joaquin Valley, with hills of the Coast Range to the west and mountainous terrain of the Sierra Nevada Mountains to the east.

The history of settlement in Fresno County dates back centuries. Originally, the county was home to the Yokuts and Mono peoples. Since the mid-19th century, fertile land along the San Joaquin River has largely been used for agricultural purposes, and Fresno County is rates first in the nation for agricultural production. Almonds and grapes are top crops. The area also has a history of oil extraction, which continues today. In the late 19th and early 20th centuries, railroads were an important mode of transportation. As freight movement has shifted to trucking, some railroad lines running through Fresno County have been abandoned and converted into shared-use paths.

EXISTING TRAIL NETWORK

Unpaved, off-street trails and paved shared-use paths are important elements of a comfortable and low-stress multimodal transportation network as they provide options for people of all ages and abilities to walk and bike. Fresno County has several trails and paths in both urban and rural areas, as detailed in Table 1 and shown in Figures 1 and 2. Paths are characterized as paved (i.e., asphalt or concrete) while trails are unpaved (i.e., natural surfacing or gravel).

Table 1: Existing Trail Types and Lengths, in miles

Agency	Trail	Path	Total
County	1.4*	42.8	42.8
State	18.9	0	18.9
City of Fresno	0	41.8	41.8
City of Clovis	0	69.6	69.6
Other Local Jurisdictions	17.8	2.9	20.8
Federal Lands	1027.7	4.9	1032.6
Total	1064.5	162.0	1226.5

*County trails are also labeled as equestrian trails.

Trail Connections and Key Destinations

Trails in Fresno County connect to a variety of destinations, such as local parks and outdoor recreation areas, lakes, schools and universities, and commercial and employment centers. In addition, there are many trails within national parks and forests.

Some cities, such as in Fresno, Clovis, Reedley, and Orange Cove, have converted irrigation canals and railroad corridors into paved paths, and many of these paths connect through downtown areas and provide connections to popular destinations. Two examples of these “rails trails” paths include the more urban Fresno-Clovis Rail Trail between Clovis North High School and downtown Clovis, and the Reedley Rail-Trail in Reedley.

Additionally, some paved paths in Fresno County have been constructed parallel to waterways, and these trails provide regional connectivity and links to natural areas. For example, the Lewis S. Eaton Trail runs alongside the San Joaquin River.

Figure 1: Existing Trails and Paths in Fresno County

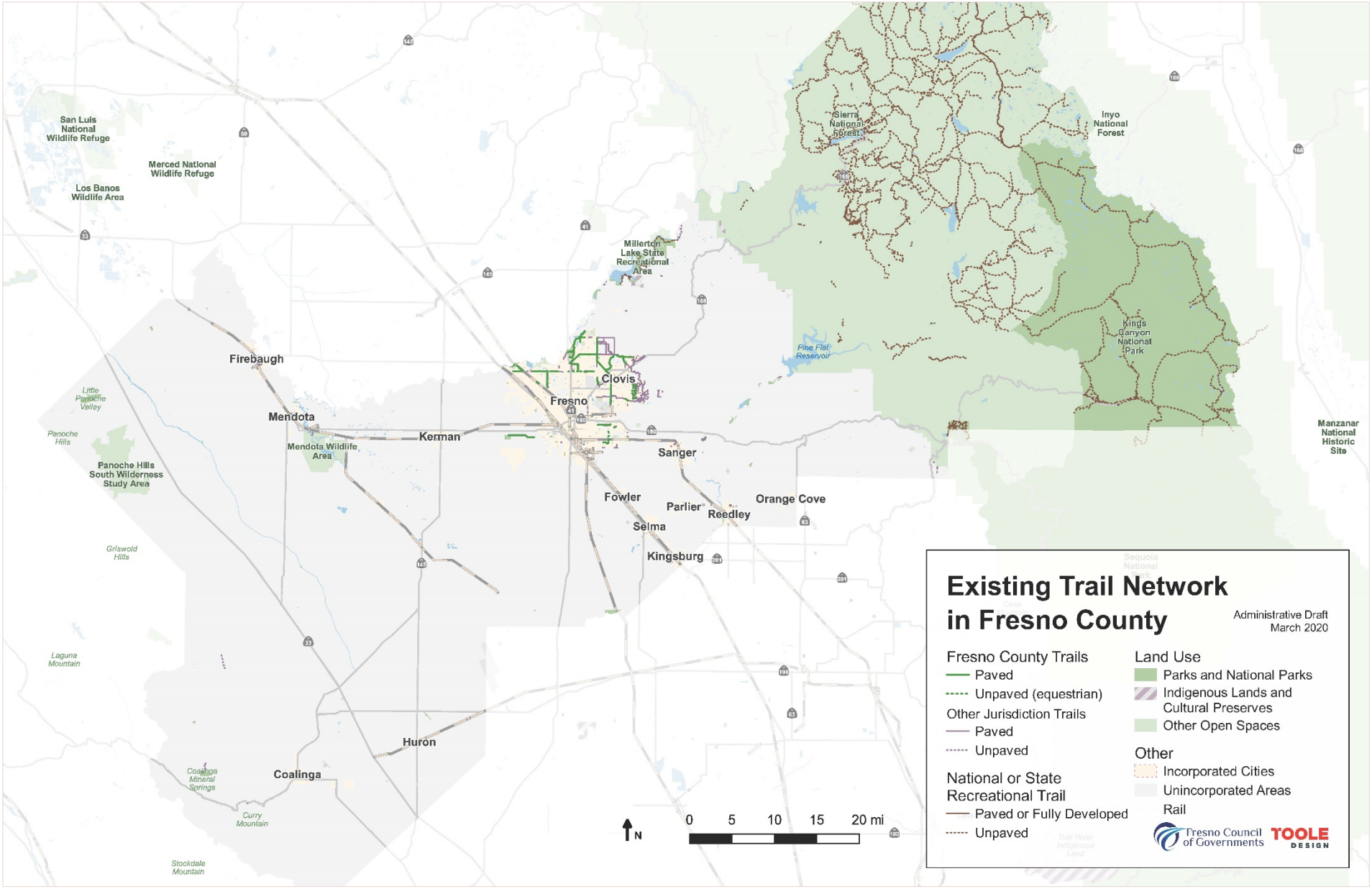
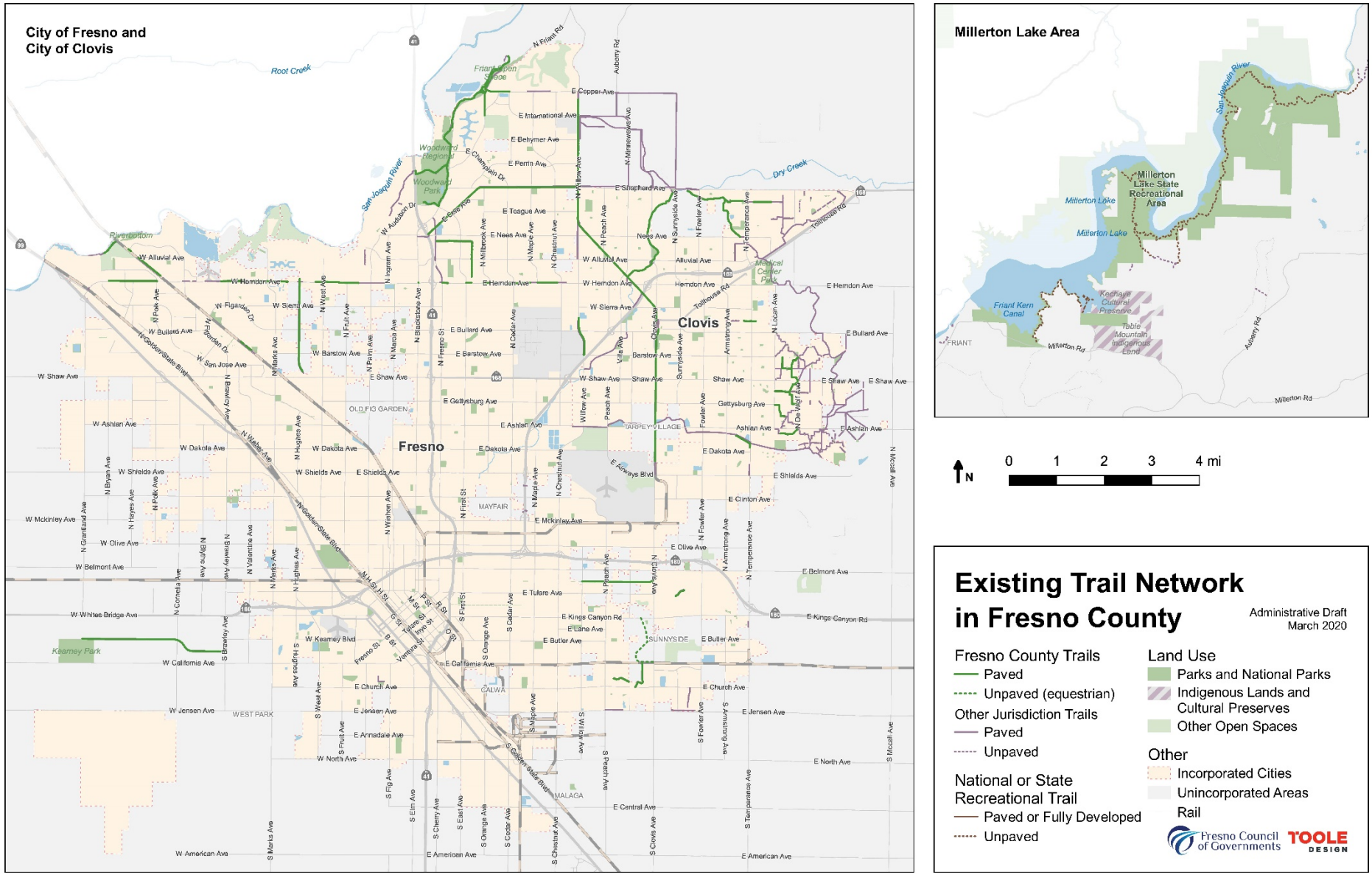


Figure 2: Existing Trails and Paths in the Cities of Fresno and Clovis



Trails and Agencies

Trails in Fresno County are owned and managed by a variety of agencies, such as local jurisdictions, the State of California, and the Federal government, as shown in Table 2 and detailed below.

Table 2: Existing Major Trails in Fresno County by Agency[3]

Agency	Trails
San Joaquin River Parkway and Conservation Trust	Lewis S Eaton Trail
San Joaquin River Conservancy, operated by City of Fresno	Tom MacMichael Sr. Trail
Fresno County	China Creek Trail
	Kearney Trail
	Lost Lake Park Audubon Trail (in partnership with Fresno Audubon Society)
	McKenzie Trail
San Joaquin River Trail Council	San Joaquin River Trail (on BLM land)
Bureau of Land Management	Coalinga Mineral Springs National Recreation Trail
US National Park Service	Sequoia & Kings Canyon National Park Trails
US Forest Service	Sierra National Forest Trails
City of Fresno	Sugar Pine Trail
Cities of Fresno and Clovis	Fresno-Clovis Rail Trail
City of Clovis	Clovis Old Town Trail
	Enterprise Canal Trail
	Gould Canal Trail
	Dry Creek Trail
	Jefferson Trail
	Sierra Gateway Trail

[3] Sources: http://www.gofresnocounty.com/trails
https://gisportal.co.fresno.ca.us/portal/home/
https://cityofclovis.com/wp-content/uploads/2018/10/Clovis-Parks-and-Trails-Map.pdf

Local Jurisdictions

Many cities own and maintain paved paths within their city limits. Many of these facilities are located along waterways and canals. Some paths are separated from adjacent vehicular traffic by a buffer. In some areas, short segments of paths are located along property lines that connect subdivisions to nearby streets. Other paths in local jurisdictions include converted railroad lines into trails, such as the Reedley Rail-Trail and Fresno-Clovis Trail. Connections to these trails are accessible as short-distance trips by walking, bicycling, public transit, or car.

State Park

Millerton Lake State Recreation Area is the only state park located in Fresno County. The park has recreational hiking-only trails and multi-use trails for hiking, mountain bicycling, and equestrian use. Trails are unpaved and connect to park facilities, camping areas, and boating and swimming spots. Outside of the park, off-street connections to these trails are limited and accessible only by car.

Federal Agencies

Federally owned and maintained trails in Fresno County include those located in Sequoia National Park, Kings Canyon National Park, and the Sierra National Forest, as shown in Table 3.

Table 3: Federally Owned Trails in Fresno County

Park	Agency	Trail Mileage
Sequoia National Park	National Parks Service	Approximately 690 miles
Kings Canyon National Park	National Parks Service	Approximately 400 miles
Sierra National Forest	US Forest Service	Over 600 miles

These trails connect users to natural and recreational areas and are maintained by park staff and volunteers. Connections to these trails from outside the parks are limited and accessible only by vehicle.

Planned Trail Projects

Currently, Fresno County is planning the construction of two new trail projects:

- **The Lost Lake Park Trail**, a Class I shared-used path located in Lost Lake Park in north Fresno County near the San Joaquin River, is currently under design. The trail is approximately one mile long, and the designs include a parking and picnic area.
- **The Fancher Creek Bridle Trail** is an equestrian trail in the city of Fresno. The trail will be located along a canal parallel to DeWitt Road.



Image: VRPA Technologies

Opportunities

Fresno County is currently home to many unpaved trails and Class I shared-use paths which are a pleasure for people of all ages and abilities to use. However, the county lacks a connected regional trail network and connections to smaller communities and unincorporated areas that would provide all county residents with opportunities for recreation and utilitarian trips.

To create more connections, this Plan will build upon the existing assets of the trail/path network and recreational opportunities throughout the county. To broaden these opportunities, the Plan will aim to:

- Provide stronger regional connectivity to key destinations
- Link together existing trails and paths to create a more comprehensive network
- Boost economic development and tourism through trail access and use
- Collaborate with partners across the county to coordinate a countywide trail system

Fresno County Regional Trails Plan

Appendix A Field Inentory Chart

ID	WEB_GRP	TRAIL BEGINNING	TRAIL TERMNI	LOCATION	LENGTH (MI)	CORRIDOR AREA	RIGHT OF WAY	SEPARATED OR IN ROADWAY	TRACK	SURFACE TYPE	MATERIAL	TERRAIN	TREAD WIDTH (FT)	TREAD CONDITION	VERTICAL CLEARANCE (FT)	NATURAL OBSTACLES	USER TYPES	ADA	SIGNAGE	ROADWAY CROSSINGS
ID	Web Group	Trail Begin	Trail Terminus	Location	Length (mi)	Area	Right of Way	Separated or in roadway	Track	Surface	Material	Terrain	Tread width	Tread Condition	Vertical Clearnce	Natural obstacles	User Types	ADA	Signage	Rdway Crossings
72	county paved	S. BRAWLEY AVE.	S. POLK AVE.	KEARNEY	1.61	RURAL	PUBLIC	SEPARATED	MULTI USERS	PAVED/ UNPAVED	ASPHALT	FLAT	6 - 10 FT	SMOOTH, FIRM	8 - 12 FT	CLEAR, NO OBSTACLES, FLAT GRADE	PEDESTRIAN, BICYCLE	NO	"BIKE ROUTE", "MOTOR VEHICLES/ BICYCLES PROHIBITED", "STOP"	MULTIPLE RESIDENTIAL DRIVEWAYS, NO VISIBLE SIGNAGE
73	county paved	S. POLK AVE.	S. GRANTLAND AVE.	KEARNEY	1.48	RURAL	PUBLIC	SEPARATED	MULTI USERS	PAVED	ASPHALT	FLAT	10 - 15 FT	SMOOTH, FIRM	8 - 12 FT	CLEAR, NO OBSTACLES, FLAT GRADE	PEDESTRIAN, BICYCLE	YES	"BIKE ROUTE", "MOTOR VEHICLES/ BICYCLES PROHIBITED", "STOP"	3 CROSSINGS W/ LOCAL ROAD, STOP SIGNS
88	county unpaved	E. KINGS CANYON RD.	S. CLOVIS AVE.	GOLDLEAF	1.4	URBAN	CANAL	SEPARATED / BUFFERED	MULTI USERS	UNPAVED	DIRT	FLAT	10-15 FT	ROUGH, FIRM	8 - 12 FT	CLEAR VEGETATION, NO OBSTACLES, FLAT GRADE	PEDESTRIAN, BICYCLE, MOTOR VEHICLE, EQUESTRIAN	NO	NONE	1 CROSSING, NO MARKINGS, NO ADV. WARNING
89	county unpaved	SMITH ROAD	SMITH ROAD	CENTERVILLE PARK	0.11	RURAL	COUNTY OF FRESNO	SEPARATED	SINGLE USERS (PASSING ALLOWED)	UNPAVED	DIRT	FLAT	7-10 FT	FLAT, ROUGH	8-12 FT	CLEAR VEGETATION, NO OBSTACLES, FLAT GRADE	PEDESTRIAN	NO	WAYFINDING/ INFORMATIONAL KIOSK @ ENTRANCE	NONE
90	county unpaved	SMITH ROAD	SMITH ROAD	CENTERVILLE PARK	0.14	RURAL	COUNTY OF FRESNO	SEPARATED	SINGLE USERS	UNPAVED	DIRT	FLAT	7-10 FT	FLAT, ROUGH	8-12 FT	CLEAR VEGETATION, NO OBSTACLES, FLAT GRADE	PEDESTRIAN	NO	WAYFINDING/ INFORMATIONAL KIOSK @ ENTRANCE	NONE
91	county unpaved	SMITH ROAD	SMITH ROAD	CENTERVILLE PARK	0.14	RURAL	COUNTY OF FRESNO	SEPARATED	MULTI USERS	PAVED	ASPHALT	FLAT	30 FT	SMOOTH, FIRM	8 - 12 FT	CLEAR VEGETATION, NO OBSTACLES, FLAT GRADE	PEDESTRIAN, BICYCLE	YES	WAYFINDING/ INFORMATIONAL KIOSK @ ENTRANCE	NONE
92	county unpaved	SMITH ROAD	SMITH ROAD	CENTERVILLE PARK	0.02	RURAL	COUNTY OF FRESNO	SEPARATED	SINGLE USERS	UNPAVED	DIRT	FLAT	7-10 FT	FLAT, ROUGH	8-12 FT	CLEAR VEGETATION, NO OBSTACLES, FLAT GRADE	PEDESTRIAN	NO	WAYFINDING/ INFORMATIONAL KIOSK @ ENTRANCE	NONE
93	county unpaved	SMITH ROAD	SMITH ROAD	CENTERVILLE PARK	0.07	RURAL	COUNTY OF FRESNO	SEPARATED	SINGLE USERS	UNPAVED	DIRT	FLAT	7-10 FT	FLAT, ROUGH	8-12 FT	CLEAR VEGETATION, NO OBSTACLES, FLAT GRADE	PEDESTRIAN	NO	WAYFINDING/ INFORMATIONAL KIOSK @ ENTRANCE	NONE
94	county unpaved	SMITH ROAD	SMITH ROAD	CENTERVILLE PARK	0.08	RURAL	COUNTY OF FRESNO	SEPARATED	SINGLE USERS	UNPAVED	DIRT	FLAT	7-10 FT	FLAT, ROUGH	8-12 FT	CLEAR VEGETATION, NO OBSTACLES, FLAT GRADE	PEDESTRIAN	NO	WAYFINDING/ INFORMATIONAL KIOSK @ ENTRANCE	NONE
95	county unpaved	SMITH ROAD	SMITH ROAD	CENTERVILLE PARK	0.12	RURAL	COUNTY OF FRESNO	SEPARATED	SINGLE USERS	UNPAVED	DIRT	FLAT	7-10 FT	FLAT, ROUGH	8-12 FT	CLEAR VEGETATION, NO OBSTACLES, FLAT GRADE	PEDESTRIAN	NO	WAYFINDING/ INFORMATIONAL KIOSK @ ENTRANCE	NONE
96	county unpaved	SMITH ROAD	SMITH ROAD	CENTERVILLE PARK	0.61	RURAL	COUNTY OF FRESNO	SEPARATED	SINGLE USERS (PASSING ALLOWED)	UNPAVED	DIRT	FLAT	6 FT	ROUGH, FIRM	8 - 12 FT	ENCROACHING VEGETATION, INFREQUENT OBSTACLES, FLAT GRADE	PEDESTRIAN, BICYCLE, EQUESTRIAN	NO	WAYFINDING/ INFORMATIONAL KIOSK @ ENTRANCE	NONE
97	county unpaved	SMITH ROAD	SMITH ROAD	CENTERVILLE PARK	0.62	RURAL	COUNTY OF FRESNO	SEPARATED	SINGLE USERS (PASSING ALLOWED)	UNPAVED	DIRT	FLAT	6 FT	ROUGH, FIRM	8 - 12 FT	ENCROACHING VEGETATION, INFREQUENT OBSTACLES, FLAT GRADE	PEDESTRIAN, BICYCLE, EQUESTRIAN	NO	WAYFINDING/ INFORMATIONAL KIOSK @ ENTRANCE	NONE
526	county paved	N/ A	N/ A	AVOCADO LAKE	2.4	RURAL	VARIOUS (STATE/ PUBLIC)	IN ROADWAY	MULTI USERS	PAVED	ASPHALT	FLAT	8-20 FT	SMOOTH, FIRM	8 - 12 FT	CLEAR, NO OBSTALCES, FLAT GRADE	PEDESTRIAN, BICYCLE, MOTOR VEHICLE	YES	YES?	3 CROSSINGS, MARKED "DO NOT ENTER"
1257	county paved	PINE FLAT RD.	PINE FLAT RD.	CHOINUMMI PARK	0.36	RURAL	COUNTY OF FRESNO	SEPARATED	MULTI USERS	PAVED	ASPHALT	FLAT	22 FT	SMOOTH, FIRM	9 - 12 FT	CLEAR, NO OBSTALCES, FLAT GRADE	PEDESTRIAN, BICYCLE, MOTOR VEHICLE	YES	NONE	"STOP", "STOP AHEAD"
1258	remove	PINE FLAT RD.	PINE FLAT RD.	CHOINUMMI PARK	0.29	RURAL	COUNTY OF FRESNO	SEPARATED	MULTI USERS	PAVED	ASPHALT	FLAT	22 FT	SMOOTH, FIRM	10 - 12 FT	CLEAR, NO OBSTALCES, FLAT GRADE	PEDESTRIAN, BICYCLE, MOTOR VEHICLE	YES	NONE	"STOP", "STOP AHEAD"
1259	remove	PINE FLAT RD.	PINE FLAT RD.	CHOINUMMI PARK	0.18	RURAL	COUNTY OF FRESNO	SEPARATED	MULTI USERS	PAVED	ASPHALT	FLAT	20 - 22 FT	SMOOTH, FIRM	11 - 12 FT	CLEAR, NO OBSTALCES, FLAT GRADE	PEDESTRIAN, BICYCLE, MOTOR VEHICLE	YES	NONE	"STOP", "STOP AHEAD"
1260	remove	PINE FLAT RD.	PINE FLAT RD.	CHOINUMMI PARK	0.13	RURAL	COUNTY OF FRESNO	SEPARATED	MULTI USERS	UNPAVED	DIRT	FLAT	15 - 25 FT	ROUGH, FIRM	12 - 12 FT	CLEAR, NO OBSTALCES, FLAT GRADE	PEDESTRIAN, BICYCLE, MOTOR VEHICLE	NO	NONE	NONE

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
22	1261	county unpaved	PINE FLAT RD.	PINE FLAT RD.	CHOINUMMI PARK	0.28	RURAL	COUNTY OF FRESNO	SEPARATED	MULTI USERS	PAVED/ UNPAVED	ASPHALT/ DIRT	FLAT	4 - 8 FT	ROUGH, FIRM	13 - 12 FT	VEGETATION, INFREQUENT OBSTACLES, FLAT GRADE	PEDESTRIAN, HIKER	PARTIAL	NONE	NONE
23	1262	remove	PINE FLAT RD.	PINE FLAT RD.	CHOINUMMI PARK	0.19	RURAL	COUNTY OF FRESNO	SEPARATED	MULTI USERS	UNPAVED	DIRT	FLAT	4 - 8 FT	ROUGH, FIRM	14 - 12 FT	ENCROACHING VEGETATION, INFREQUENT OBSTACLES, FLAT GRADE	PEDESTRIAN	NO	NONE	NONE
24	1263	county unpaved	LOST LAKE	LOST LAKE ROAD	LOST LAKE RECREATION AREA	0.55	RURAL	COUNTY OF FRESNO	SEPARATED	MULTI USERS	UNPAVED	DIRT, GRAVEL & SAND	FLAT	6 FT	ROUGH/ FIRM	6+	CLEAR, MINOR OBSTACLES, FLAT GRADE/ ROUGH AREAS	ALL	NO	NONE	MARKED CROSSWALKS NEAR ENTRANCE
25	1264	county paved	LOST LAKE ROAD	LOST LAKE CAMPGROUND	LOST LAKE RECREATION AREA	1.15	RURAL	COUNTY OF FRESNO/ STATE OF CA	IN ROADWAY	MULTI USERS	PAVED	ASPHALT	FLAT	20-24 FT	SMOOTH, FIRM	8-12 FT	CLEAR OF VEGETATION, NO OBSTACLES, FLAT GRADE	PEDESTRIAN, BICYCLE, ATV, EQUESTRIAN, MOTORCYCLE, 4-WHEEL DRIVE	YES	NONE	NONE
26	1265	county unpaved	KINGS RIVER CONSERVATION DISTRICT	NORTH RIVERSIDE ACCESS PARK	KINGS RIVER	0.49	RURAL	COUNTY OF FRESNO	SEPARATED	SINGLE USER	UNPAVED	DIRT, GRAVEL	FLAT	6 FT	ROUGH	5-6 FT	ENCROACHING VEGETATION, INFREQUENT OBSTACLES, FLAT GRADE	HIKER, PEDESTRIAN	NO	NONE	NONE

Appendix B: Existing Plans and Policy Review

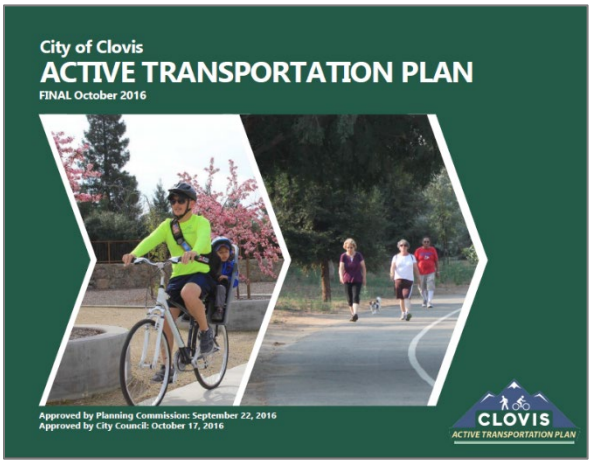
Table 1: Local Plans with Active Transportation Elements

Plan	Network Recommendations	Trail-related Content	Design Guidelines	Economic Benefits
Clovis Active Transportation Plan 2016	✓	✓		
Coalinga Active Transportation Plan 2017	✓	✓	✓	✓
Firebaugh General Plan 2006	✓			
Fowler General Plan 2004	✓			
Fresno Active Transportation Plan 2016	✓			
Huron General Plan 2007				
Kerman General Plan 2007				
Kingsburg Bicycle Transportation Plan 2017°	✓			
Mendota General Plan 2009				
Orange Cove General Plan 2003°	✓			
Parlier General Plan 2010°	✓			
Reedley Bicycle and Pedestrian Mobility Plan 2019	✓			
San Joaquin Community Plan 2011	✓			✓
Sanger Bicycle Plan 2005	✓	✓		
Selma Active Transportation Plan 2018	✓	✓		

°The information from this plan is sourced from the County Regional Active Transportation Plan of 2018 due to lack of online documentation.

Clovis Active Transportation Plan (2016)

The Clovis Active Transportation Plan documents the city's vision and supporting policies, planned bicycle and pedestrian networks, guidelines for facilities such as wayfinding and bicycle parking, and a prioritized list of projects to help develop an active transportation network. The three key goals of the project include:

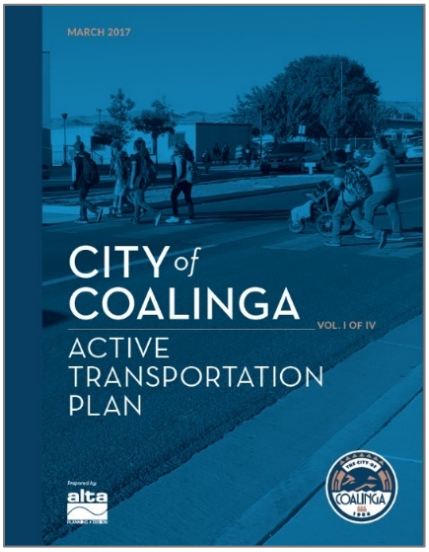


- Increase the share of residents who use walking and bicycling to get to work, school, shopping, and other activities.
- Reduce the number of collisions within the city involving pedestrians and bicyclists.
- Close gaps within the bicycle and pedestrian networks.

The Plan highlights the city's extensive, 27-mile-network of Class I Bike Paths and paseos, many of which follow the city's canals and waterways. The Plan recommends an additional 23 miles of Class I Bike Paths for future construction.

Coalinga Active Transportation Plan (2017)

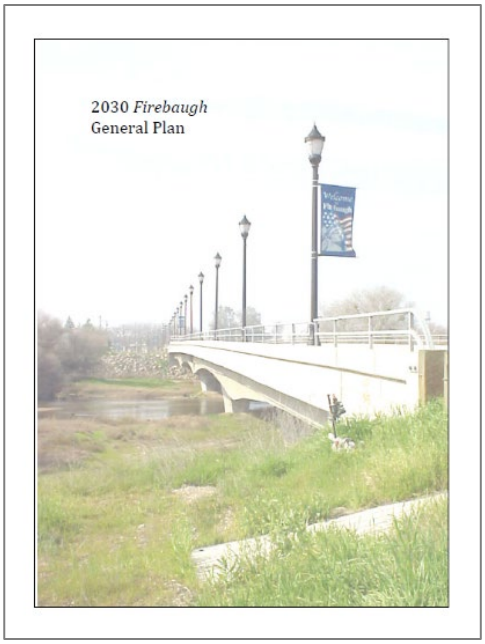
Coalinga's Active Transportation Plan presents a vision for walking and bicycling in Coalinga in four volumes, with the Trails Master Plan as Volume II. It documents existing conditions, needed network improvements, and a strategy for developing a more complete active transportation network. The Plan outlines the following four goals:



- Prioritize safety for the most vulnerable roadway users.
- Design active transportation projects that are accessible and comfortable for people of all ages and abilities.
- Identify and work to implement a complete and convenient active transportation network.
- Increase awareness and support of walking and bicycling through education, encouragement, and evaluation programs.

At the time the Plan was written, there were no Class I Bike Paths in the city. The Plan includes nine miles of recommended Class I Bike Paths that mostly run along the perimeter of the city. All on-street projects were divided into a three-phase implementation strategy and evaluated based on connectivity, safety, ease of implementation, and community-identified need. The Trails Master Plan focuses on feasibility analyses, design considerations, trail alternatives, and recommended trail segments.

Firebaugh General Plan (2006)

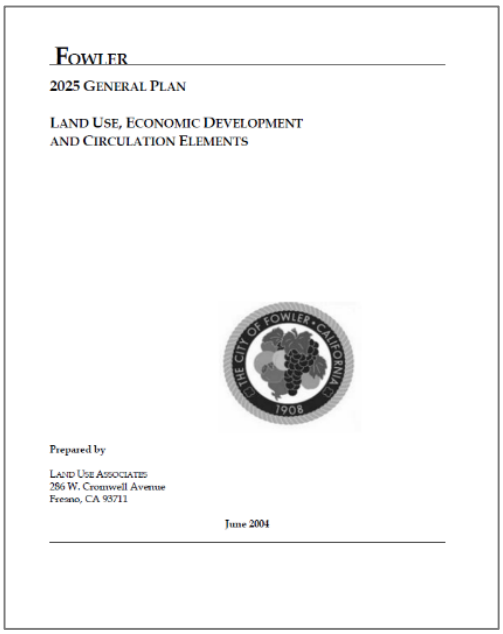


Firebaugh's General Plan includes a chapter on circulation which provides an overview of the existing conditions; a circulation map; circulation goals, policies, and programs; and roadway cross-sections. The circulation element of the Plan includes two goals which directly support active transportation:

- Encourage residents to walk and ride bikes for good health as well as for environmental reasons.
- Ensure that children have safe walking and bicycling routes to school.

These goals are supported by several policies that call for the development of new bicycle and pedestrian facilities. A supportive policy of the first goal specifically discusses an interest in working with the County to ensure Firebaugh's trails are connected to the regional bikeway network. At the time the Plan was written there was one Class I Bike Path along a short stretch of the San Joaquin River near the 13th Street Bridge. The Plan documents an interest in extending this path in both directions along the river. The Fresno County Regional Active Transportation Plan lists nearly two miles of existing Class I Bike Paths and nearly six miles of planned Class I Bike Paths for Firebaugh.

Fowler General Plan (2004)


FOWLER

2025 GENERAL PLAN

LAND USE, ECONOMIC DEVELOPMENT AND CIRCULATION ELEMENTS

Prepared by

LAND USE ASSOCIATES
256 W. Cromwell Avenue
Fresno, CA 93711

June 2004

Fowler's General Plan includes a chapter on circulation which identifies transportation needs and issues within the city, promotes the consideration of alternatives other than single-occupant vehicles as essential for transportation, and establishes policies that coordinate regional transportation planning. The circulation element of the Plan mentions the importance of providing bikeways and pedestrian facilities, especially near schools. Safety is also discussed as a concern for people walking to school. The circulation element of the Plan includes the following three goals which directly support active transportation:

- Design and implement a multi-modal transportation system that will serve projected future travel demand, minimize congestion, and address future growth in the city.
- Provide safe and convenient pedestrian access between residential neighborhoods, parks, open space, and schools that service those neighborhoods.
- Provide facilities for non-motorized modes of transportation that enhance the livability and character of the city.

At the time the Plan was written there were no Class I Bike Paths within city limits and the map of planned facilities includes only Class II and III Bikeways. The Fresno County Regional Active Transportation Plan also does not list any existing or planned Class I Bike Paths for Fowler.

Fresno Active Transportation Plan (2016)

The City of Fresno's Active Transportation Plan outlines the vision for active transportation throughout the city. The City hopes to use the Plan to address the following four key goals:

- Equitably improve the safety of active transportation,
- Increase walking and bicycling trips in Fresno by creating user-friendly facilities,
- Improve the geographic equity of access to walking and bicycling facilities, and
- Fill key gaps in Fresno's walking and bicycling networks.

The Plan also includes a map of existing bicycle facilities, including 38 miles of Class I Bike Paths; a level of traffic stress analysis; collision analysis; and a summary of supportive programs. A detailed prioritization framework is used to prioritize bicycle and pedestrian facilities for the recommended network. The Plan includes 166 miles of proposed Class I Bike Paths.

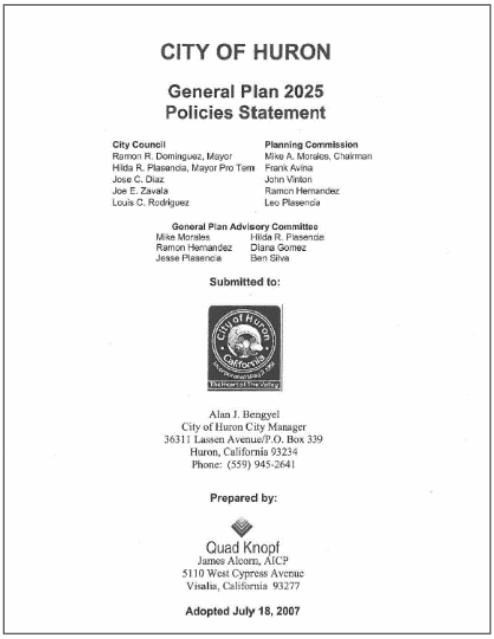


Huron General Plan (2007)

The circulation element of Huron's General Plan provides guidance to help the City plan a safe, efficient, and adequate circulation system. The overarching purpose of the Plan is to design and maintain a fully integrated local network that provides for safe and convenient circulation using a variety of transportation modes. There are several active transportation-related objectives in the circulation element, including:

- Enhance the availability and accessibility of alternative modes of transportation, such as walking, bicycling…
- Bicycle lanes and paths shall be established upon need
- Design bicycle and pedestrian paths so that interaction with vehicular traffic is minimized.
- Provide for the safe and convenient use of the bicycle as a means of transportation and recreation.

At the time the Plan was written there were no bikeways in Huron. The Fresno County Regional Active Transportation Plan does not list any existing Class I Bike Paths for Huron but does include nearly three miles of planned Class I Bike Paths.


CITY OF HURON

General Plan 2025
Policies Statement

City Council
Ramon R. Dominguez, Mayor
Hilda R. Plasencia, Mayor Pro Tem
Jose C. Diaz
Joe E. Zavala
Louis C. Rodriguez

Planning Commission
Mike A. Morales, Chairman
Frank Avina
John Vinton
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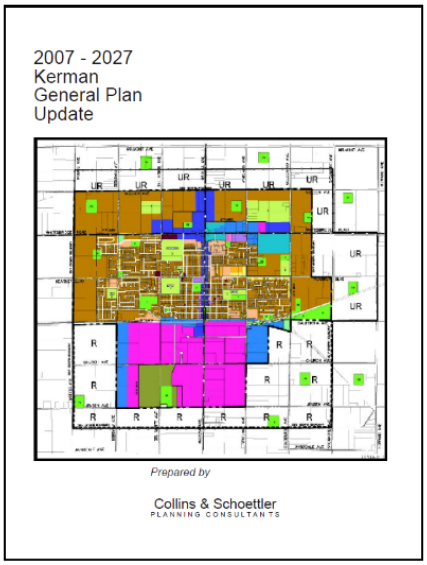
Adopted July 18, 2007

Kerman General Plan (2007)

Kerman's General Plan includes a chapter on circulation which summarizes and evaluates existing conditions and traffic projections. It also presents circulation goals, issues, and policies. The circulation element of the Plan highlights the importance of providing a transportation system that is safe for pedestrians and bicyclists, including young children. The circulation element of the Plan includes the following goal which directly supports active transportation:

- Promote alternative modes of transportation that will improve the environmental quality in Kerman and conserve resources such as bicycles, bus use, the use of alternative fuels, and walking.

At the time the Plan was written Kerman did not have any bikeways, nor a bicycle plan, however, the Plan includes a policy that the City of Kerman should prepare a bikeway plan. The Fresno County Regional Active Transportation Plan lists less than one mile of existing Class I Bike Paths and nearly nine miles of planned Class I Bike Paths for Kerman.



Kingsburg Bicycle Transportation Plan (2017) +

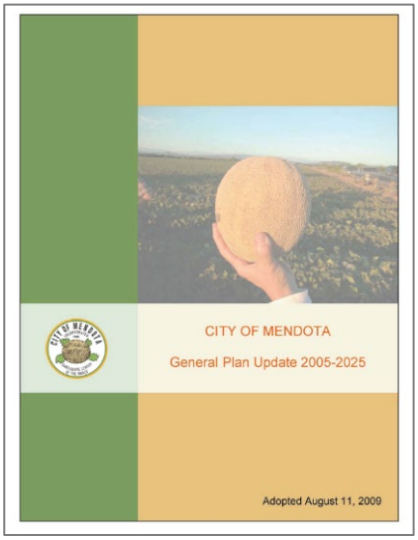
Kingsburg's Bicycle Transportation Plan discusses different types of bikeways, summarizes goals and policies from the circulation element of the City's General Plan, recommends bikeways for development, and presents an implementation and funding strategy to build the bike network. The city has nearly three miles of Class I Bike Paths. The planned network does not include any Class I Bike Paths, but it does include nearly 22 miles of Class II Bike Lanes. The Fresno County Regional Active Transportation Plan lists nearly three miles of existing Class I Bike Paths and no planned Class I Bike Paths for Kingsburg.

Mendota General Plan (2009)

Mendota's General Plan includes a chapter on circulation which provides an overview of the existing and planned transportation network. The Plan identifies the need for measures to improve pedestrian and bicyclist safety, more pedestrian- and bicyclist-friendly facilities, including bikeways that are desirable to a wide range of bicyclists. The circulation element of the Plan includes one goal which directly supports active transportation:

- Provide a city-wide system of safe, efficient, and attractive bicycle and pedestrian routes for commuter, school, and recreational use.

This goal is supported by several policies that call for the development of new paths. At the time the Plan was written there were no Class I Bike Paths within city limits, however, there is a designated regional bikeway route for intra-city circulation along SR 180 to its intersection with SR 33, proceeding north on SR 33 to Firebaugh. The Fresno County Regional Active Transportation Plan lists no existing Class I Bike Paths and nearly five miles of planned Class I Bike Paths for Mendota.



Orange Cove General Plan (2003) +

Orange Cove's General Plan includes a chapter on circulation which emphasizes the importance of active transportation, a well-designed bicycle network, and safe walking and bicycling routes to school. The Plan has several goals related to active transportation, including:

- Encourage person to ride bikes for good health as well as for environmental reasons.
- Ensure that Orange Cove's bike path system is consistent with Fresno County Regional Bicycle Transportation Plan.
- Encourage residents to walk in Orange Cove.
- Ensure that children have safe walking and bicycling routes to school.

The Fresno County Regional Active Transportation Plan lists approximately one mile of existing Class I Bike Paths and three miles of planned Class I Bike Paths for Orange Cove.

Parlier General Plan (2010) [+]

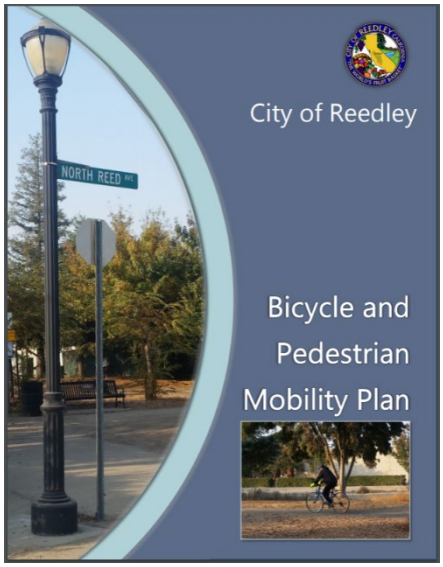
Parlier's General Plan includes a circulation element which discusses active transportation as a means of reducing demands on the transportation system and improving air quality. The Plan discusses an interest in installing bikeways near schools, parks, and along the abandoned rail line. The active transportation-related goal is as follows:

- Promote the use of bicycles as a viable means of transportation.

The Fresno County Regional Active Transportation Plan lists approximately one mile of existing Class I Bike Paths and an additional mile of planned Class I Bike Paths for Parlier.

Reedley Bicycle and Pedestrian Mobility Plan (2019)

The City of Reedley updated their active transportation planning with the 2019 Bicycle and Pedestrian Mobility Plan. The plan includes existing conditions; a planned network; recommended standards for biking and walking to integrate into land use planning, educational resources, and more; funding opportunities; and a summary of public participation. The goals for this plan include:



- Provide safe, accessible, and continuous bicycle and pedestrian facilities as an integral component of a multi-modal transportation network.
- Recognition of the bicycle and walking as viable alternative modes of transportation that necessitates inclusion in local, regional, and state transportation planning efforts.
- Promote bicycle and pedestrian safety through the education and enforcement of traffic laws.
- Advance the development of a continuous bicycle and pedestrian transportation network through the maximization of funding opportunities.
- Implementation of the Fresno County Regional Active Transportation Plan.

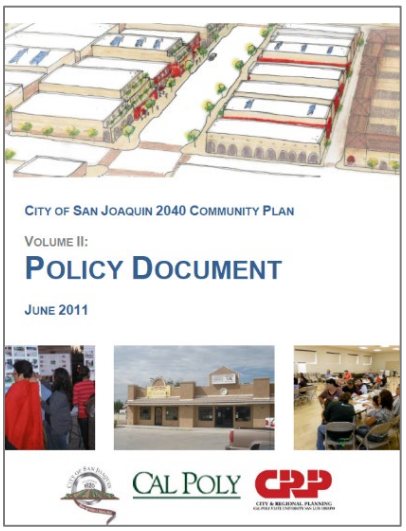
As of 2017, the City of Reedley has 3.5 miles of existing shared-use paths (as Class I Bicycle Paths), and has planned for 7 more miles of paved paths, the majority of which are a river-side path from north SOI to Reed Ave (5.3 miles). The plan noted the value of regional connectivity and opportunities to create safe and comfortable facilities, including the Kings River corridor.

San Joaquin Community Plan (2011)

San Joaquin's Community Plan includes a brief circulation element which provides a policy framework for the regulation and development of the transportation system in San Joaquin. The active transportation-related goals in the circulation are as follows:

- An environmentally sustainable and healthy transportation system.
- A safe transportation system.

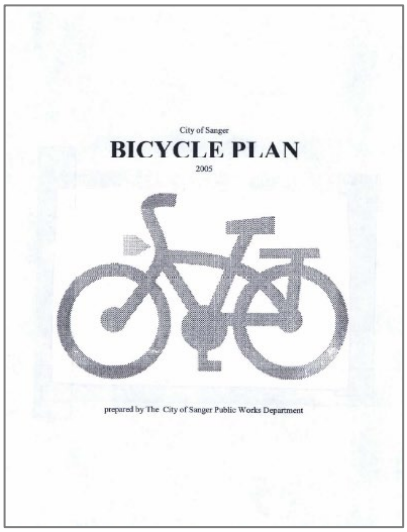
The Plan includes several policies to support these goals, including the development of a citywide bike network by 2040 and a Safe Routes to School program. The Plan does not provide a list of existing or planned bikeways. The Fresno County Regional Active Transportation Plan lists nearly one mile of existing Class I Bike Paths and three miles of planned Class I Bike Paths for San Joaquin.



Sanger Bicycle Plan (2005)

Sanger's Bicycle Plan includes five goals which were taken from the City's General Plan Update. The goals include:

- Develop a comprehensive circulation system that is coordinated with planned land use patterns contained in the "Land Use and Urban Form Element".
- The City's transportation system shall be designed, constructed, operated, and implemented in a manner that maintains a high level of environmental quality.
- The City's transportation system shall be maintained, designed, constructed, operated, and implemented in a manner which provides a roadway network which supports the economy and maintain personal mobility and promotes safety, convenience, and efficiency.
- Promote development of a safe, efficient, convenient, and economical community, inter-community, and citywide public transportation system.
- The City shall establish safe and convenient facilities to accommodate the use of non-motorized modes of transportation.

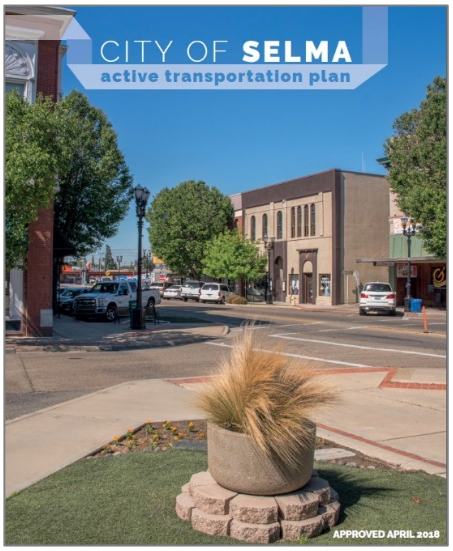


The plan also mentions design standards for Class I Bike Paths and discusses the potential for adding paths adjacent to the city's network of canals. Sanger has approximately two miles of Class I Bike Paths, however, there are recommendations for an additional 20 miles of Class I Bike Paths running through and outside city limits in the Fresno County Regional Active Transportation Plan.

Selma Active Transportation Plan (2018)

Selma's Active Transportation Plan will help the community apply for funding to build new trails, sidewalks, bike lanes, and other facilities to improve bicycling, walking, and overall community health. The Plan has the following three key goals:

- Create a network of safe and attractive trails, sidewalks, and bike lanes that connect Selma residents to key destinations, especially local schools, and parks.
- Increase walking and bicycling trips in Selma by creating user-friendly facilities.
- Increase safety by creating bicycle facilities and improving crosswalks and sidewalks for pedestrians.



The Plan summarizes different types of active transportation facilities including bikeways, sidewalks, and bike parking. A bicycle level of traffic stress map is presented for Selma's street network. At the time the Plan was written, there were no Class I Bike Paths in Selma. However, there are bike lanes just beyond city limits along Golden State Boulevard. The Plan includes five miles of recommended Class I Bike Paths.

[+] *The summary for this plan is based on the Fresno County Regional Active Transportation Plan (2018) due to lack of availability of the respective plans.*

Appendix C: Community Engagement Summary

Throughout the development process for the Fresno County Regional Trails Plan (Plan), the Fresno Council of Governments and County of Fresno used a variety of outreach and engagement strategies to publicize the Trails Plan process and gather input from residents, community members, and visitors on existing and desired trail conditions.

Input was solicited during three rounds of engagement – Phase 1 in Fall 2019, Phase 2 in Spring/Summer 2020, and Phase 3 in Fall 2020/Winter 2021. This input, paired with data-driven analyses of existing conditions, formed the basis of the Trail Plan's proposed trail network and supporting plans and policies.

Final advisory group was conducted Winter 2021, and a draft Trails Plan will be available for public comment as part of the Fresno County Regional Active Transportation Plan in Spring 2021 as well.

Community Engagement Goals

The main goal of the Plan's outreach activities was to engage a broad spectrum of residents who reside or visit in Fresno County, and to expand engagement beyond recreational trails enthusiasts or other bike and pedestrian trail stakeholders most interested in the Plan. Additional goals for public engagement included:

- Identify, contact, and inform key stakeholders and community members of the need for the Plan
- Provide the public and other community members multiple opportunities to learn about, and influence, the development of the Plan
- Seek opportunities to involve a broad range of community members, including those who may not typically participate in the public engagement process, to ensure that the Project Team understands the issues from all those who may be impacted
- Create and distribute public information that is user-friendly, easily understood, and culturally sensitive to communities that may be potentially affected
- Reach out to minority and low-income populations by producing materials in multiple languages if needed to address Environmental Justice requirements
- Provide policy makers with information about the public's opinions and values regarding the Plan

Community Engagement Plan

A community engagement plan was developed at the beginning of the planning process to guide engagement efforts. An overview of this engagement plan can be seen in Table 1. The engagement activities for this Plan, created and finalized in early March, were originally organized into three phases. However, during the project, the engagement plan shifted in response to COVID-19. Staff and consultants adjusted in-person outreach to online platforms to maintain social distancing and to comply with state and local health regulations. Efforts towards planning pop-up events were changed to organizing online engagement platforms.

Table 1. Overview of the Trail Plan's community engagement plan

Outreach Phase	Outreach Method	Time Period
Phase 1	Pop-up event	Fall 2019
	Project webpage	Ongoing

Phase 2	Advisory group meetings	April 2020
	Interactive online web map & survey	May - June 2020
Phase 3	Advisory group meetings	October 2020
	Interactive online web map & survey	September – October 2020
	Trailhead Signs	September – October 2020
	Bilingual Social Media Campaign	Fall 2020

Phase 1 (Fall 2019 – Spring 2020)

Big Fresno Fair (October 2019)

In-person engagement was minimal during the project; however, the project team was able to engage in a pop-up event at the Big Fresno Fair in October 2019 prior to the onset of COVID-19. Project staff set up a booth and solicited input from fair attendees about their experience using the trails in Fresno County. The project team spoke with over 130 people at the fair.

During this event, the project team received over 200 survey responses, in English and Spanish. Survey questions asked about the respondent's current use of trails, proximity to trails, and how to improve trails in Fresno County. Major takeaways include:

- A majority (87 percent) of respondents use the trails to walk or hike.
- Almost half (46 percent) use trails in or near the City of Fresno.
- Half of respondents use trails either a few times a month (28 precent) or a few times a year (24 percent). Twenty percent use trails once a week.
- A majority of respondents (76 percent) indicated they would like to see a map of existing trails. A third of respondents (29 percent) also indicated they would like to identify a funding program to maintain and enhance the existing and future trail systems.



Figure 1. Trail Plan outreach at the Big Fresno Fair, prior to COVID-19.

Project Website (Ongoing)

The Fresno County Regional Trails Plan included a webpage[4], hosted on the Fresno COG' website. The project webpage was developed this at the beginning of the Plan and updated it throughout the process. Information on the webpage included:

- Information about the Plan
- The 2018 Fresno County Regional Active Transportation Plan and its relation to the Regional Trails Plan
- General project updates
- Advisory groups presentations and meeting notes
- The online web map
- Project schedule
- Staff contact information

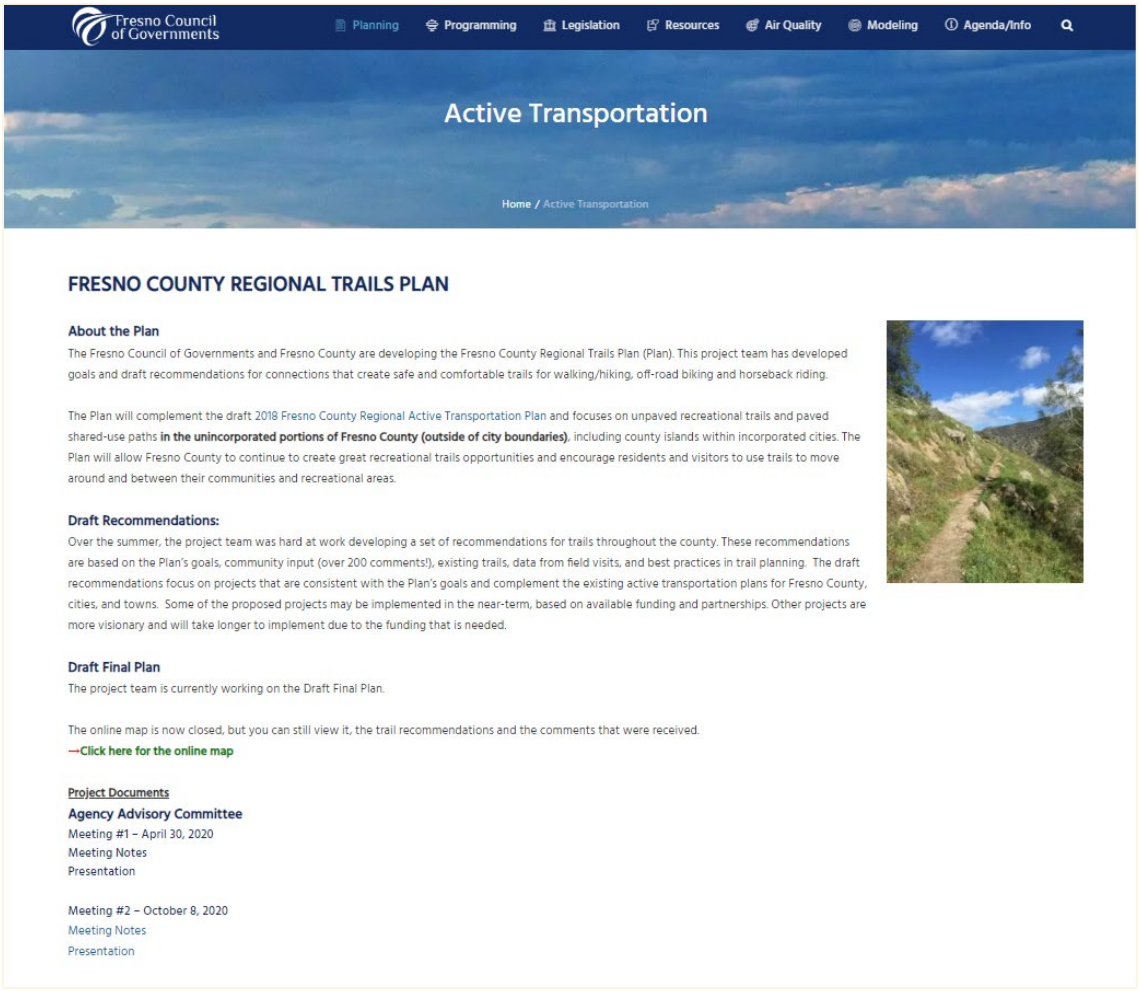


Figure 1. The Fresno County Regional Trail Plan project webpage.

[4] https://www.fresnocog.org/project/active-transportation/

Phase 2 (Spring/Summer 2020)

Advisory Groups Formation and Meeting (April 2020)

The Fresno County Regional Trails Plan formed two advisory groups – one for community organizations, the other for municipal and agency staff – to solicit more in-depth engagement, to provide guidance, and to develop partnerships to implement the plan. Fresno COG and County of Fresno invited community stakeholders to join the Community Advisory Group and invited municipal and agency staff to join the staff Advisory Group. Both groups participated in two advisory group meetings each – one in the spring and one in the fall – that focused on lending their knowledge and expertise with trails and the Fresno County region to guide the plan vision, goals, and strategies.

Fresno COG staff solicited feedback and discussion from the staff Advisory Group of trail projects, plans, and efforts by local jurisdictions to coordinate potential county trail efforts and leverage partnerships for trail implementation.

The Community Advisory Group consisted of community organizations and nonprofits that use trails recreationally, such as hiking and biking groups, as well as environmental nonprofits that focus on environmental preservation or improvements.

A full list of participants in each advisory group can be seen in Table 2.

Table 2. Agency and Community Advisory Groups Participants and Agency/Organization.

Name	Agency/Organization
Agency Advisory Group	
Peggy Arnest	Fresno Council of Governments
Brian Spaunhurst	County of Fresno
Gloria Hensley	County of Fresno
Mohammad Alimi	County of Fresno
Mohammad Khorsand	County of Fresno
Chris Bernal	County of Fresno
TJ Miller	City of Fresno
Jill Gormley	City of Fresno
Shelby MacNab	City of Fresno
Michelle Zumwalt	City of Fresno
Lachea Deamicis	City of Fresno
Dwight Kroll	City of Clovis
Renee Mathis	City of Clovis
Rob Terry	City of Reedley
Kari Schoettler	City of Firebaugh
Sonia Hall	City of Parlier
Stan Bulla	City of San Joaquin
Pedro Ramirez	Caltrans
Community Advisory Group	
Mona Cummings	Tree Fresno
Kermit Johansson	San Joaquin River Trail Organization

Mark Keppler	Coalition for Community Trails
John Shelton	San Joaquin River Conservancy
Robert Snow	Fresno Audubon Society
Tina Sumner	Fresno Cycling Club
Sarah Parks	San Joaquin River Parkway and Conservation Trust, Inc.
Vernon Crowder	Kings River Conservancy
Tony Gonzalez	CalViva Health
Laura Gromis	US Green Building Council – Central California
Laurence Kimur	Fresno Irrigation District
Tony Molina	Fresno County Bicycle Coalition

Online Webmap, Round 1 (May - June 2020)

Fresno COG and the project team created a web map and online survey[5] to solicit input from community members, available to the public from May to June 2020. Community members provided "pins" on the map and comments on locations they enjoy hiking, biking, and horseback riding. Overall, the web map solicited hundreds of responses from community members. One of the most effective engagement strategies to encourage participation on the web map was through "snowball" emails, asking Advisory Group committee members to email the web map link to at least 3 friends/colleagues/neighbors and asking them to share at least 3 comments.

Survey

A user survey accompanied the online web map. Demographically, the largest age group of survey respondents was 65 or older (27 percent), and half of respondents were 55 or older. Over 60% of the respondents were male. Respondents were overwhelmingly white (72 percent); the next largest group was Latinx/a/o (11 percent). Additionally, nearly half of respondents used Fresno County trails several times a week, and 85 percent used trails at least several times a month.

The most popular uses of Fresno County trails were walking (75 percent) and road biking (59 percent). Many respondents also wrote in "Running" or "Jogging" as their preferred trail activity. When asked why they don't use Fresno County trails, the most common response (30 percent) was "I don't know where trails and paths are, or how to access them". Off-street trails and paths where overwhelmingly preferred over protected bike lanes, with unpaved multi-use trails being the most popular type (75 percent). Paved scenic trails (71 percent), urban shared-use paths (68 percent), and natural trails (67 percent) followed closely.

Phase 3 (Fall 2020)

Advisory Group Meetings (October 2020)

Both the Community and Agency Advisory Groups reconvened in September to solicit further feedback on the development of the Plan. The meetings focused on project updates including the field inventory of trails and developing recommendations throughout the County. Advisory Groups discussed what makes a trail important to the countywide trail system, as well as the best path towards implementing the recommended trails. As with the first Advisory Group meetings, Committee members were key in soliciting comments via the web map through

[5] https://tooledesign.github.io/F0060-Fresno-County-Regional-Trails-Plan/

“snowball” emails, asking members to email three friends/colleagues/neighbors to comment on the web map and asking them to pass along the link to three more individuals.

During the discussion, the Agency Advisory Group emphasized connectivity, exercise, access to nature, access via public transit, safety and greenery as factors that made trails important to the countywide trail system. Regarding implementing trail recommendations, the group mentioned the importance of:

- Political will/stewardship
- Funding
- Collaboration between the County and other agencies
- Entry fee to bike park to use towards development and maintenance of trails throughout the County
- Community involvement
- A comprehensive planning effort that you are doing here (outreach, planning, then funding)

The Community Advisory Group emphasized a variety of factors that make a trail important to the countywide system, including, connectivity (including to destination centers), separation from traffic, proximity to users’ homes, beautiful scenery and views, easy-to-find trails with lots of information, length, and good maintenance. Members indicated support, partnerships, and resources regarding implementation.

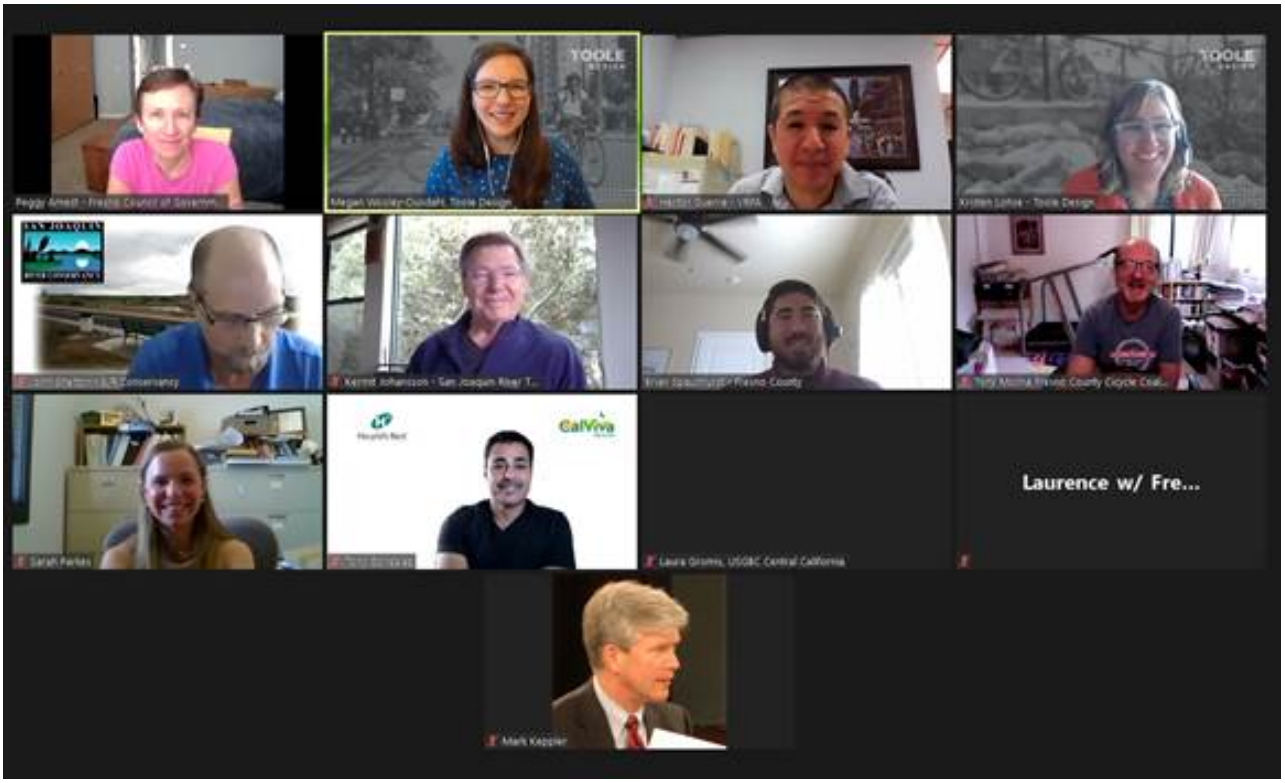


Figure 2. Snapshot of the second Community Advisory Group meeting.

Trailhead Signs (September - October 2020)

Trailhead signs were created and placed at key locations to spread awareness of the Trail Plan to trail users. Signs were placed at trailheads, trail parking lots, picnic shelters, playground areas, dog parks, campsite restrooms, and visitor centers. Signs were placed in September to coincide with the comment period for the web

map, accessed via the project website and a QR code for trail users to scan and provide. Figures 4 and5 show the trailhead signs.



Figure 4. A trailhead sign with QR code connecting trail users to the Master Plan.



Figure.5. Trailhead sign (center) at the Avocado Lake entrance.

Bilingual Social Media Campaign (Fall 2020)

The Fresno County Regional Trails Plan also conducted a bilingual social media campaign as part of the plan. Facebook posts and Tweets were translated and posted online back-to-back with English posts. Translated posts were published in October and December 2020 to align with the project engagement efforts for the online web map. These translated posts boosted awareness of the Trail Plan with the Spanish-speaking community in the region.

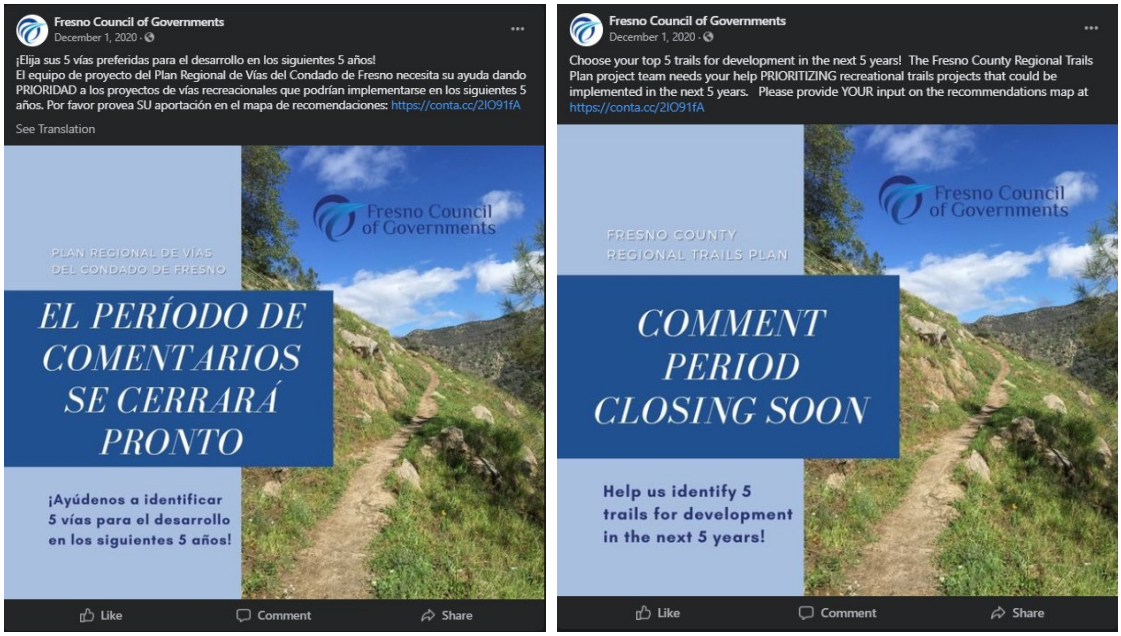


Figure 6. Facebook posts in Spanish (left) and English (right) for the Trail Plan.



Figure 7. Tweets in Spanish (left) and English (right) for the Trail Plan.

Online Web map, Round 2 (Fall 2020)

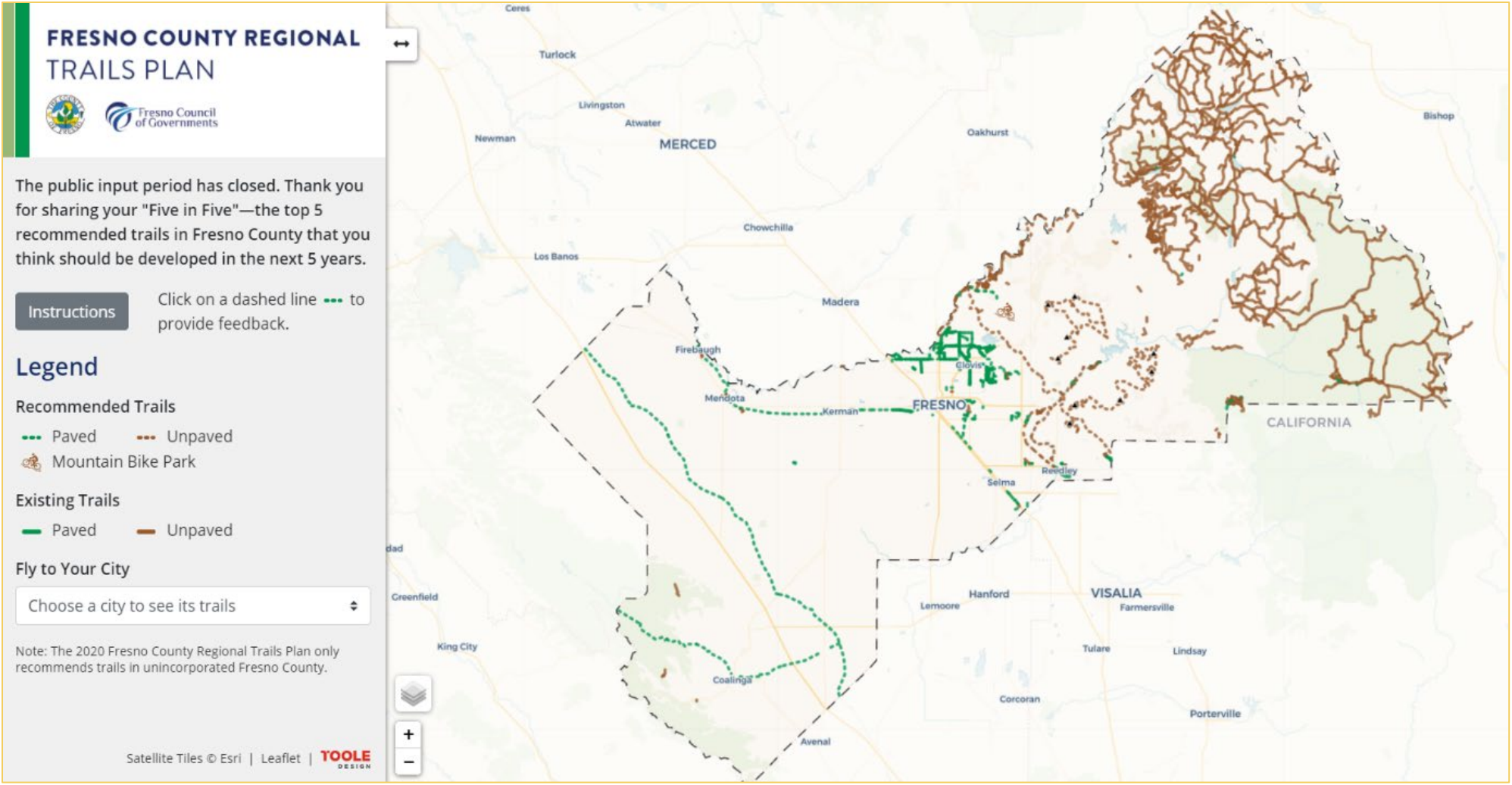
The online, interactive map was a map of the proposed network and included existing trails as well as new trail connections. The map was posted on Fresno COG's website during Phase 2 of the outreach. This map allowed people to leave "pinnable" comments about which trails they currently use, where they would like trails to be, and their thoughts about the proposed network. These comments helped the Fresno COG identify gaps, barriers, and desired connections. The web map was open for public comment from September to October 2020. See Figure for an image of the web map.

Survey

Similar to earlier engagement, a user survey accompanied the online web map. Overall, the survey received 499 individual comments, approximately 318 unique respondents. Forty-four percent of map users responded to demographic information. Respondents were fairly even across ages groups, with nearly half of respondents between ages 25 and 44. Respondents were fairly split between men and women, with slightly more responses from people identifying as male. Approximately 68 percent of respondents who provided demographic data were white, 18 percent were Latin/x/a/o or Hispanic, and 9 percent were Asian or Pacific Islander.

Webmap Highlights

Respondents overwhelmingly expressed positive support for recommended trail projects – there were 130 responses for "I would enjoy a trail here" versus 19 responses for "There shouldn't be a trail here". Trail recommendations with the most comments (and positive comments) included the San Joaquin River Trail, Enterprise Canal Trail and Enterprise Canal Connector Trail, and the Heritage Grove Canal. Trail that were ranked the highest in terms of priority included the Enterprise Canal Trail and the San Joaquin River Trail. No respondents commented on ADA accessibility issues, and very few responses related to worries about crime or crash/near miss experiences.


FRESNO COUNTY REGIONAL
TRAILS PLAN
Fresno Council of Governments
The public input period has closed. Thank you for sharing your "Five in Five"—the top 5 recommended trails in Fresno County that you think should be developed in the next 5 years.
Instructions
Click on a dashed line to provide feedback.
Legend
Recommended Trails
Paved
Unpaved
Mountain Bike Park
Existing Trails
Paved
Unpaved
Fly to Your City
Choose a city to see its trails
Note: The 2020 Fresno County Regional Trails Plan only recommends trails in unincorporated Fresno County.
Satellite Tiles © Esri | Leaflet | TOOLE DESIGN
Ceres
Turlock
Livingston
Atwater
Newman
MERCED
Oakhurst
Bishop
Chowchilla
Los Banos
Madera
Firebaugh
Clovis
Mendota
Kerman
FRESNO
CALIFORNIA
Reedley
Selma
Greenfield
Hanford
VISALIA
Lemoore
Farmersville
King City
Tulare
Lindsay
Coalinga
Corcoran
Porterville
Avenal

Appendix D: Path and Trail Design Guidelines

Federal Design Guidance

The Federal Highway Administration (FHWA) regulates Class I trail design through the Americans with Disabilities Act (ADA) Guidelines and American Association of State Highway and Transportation Officials (AASHTO) Design Guidelines. The FHWA also publishes the Manual on Uniform Traffic Control Devices (MUTCD), which provides standards for traffic control devices (signs and pavement markings) for roadways and bicycle and pedestrian facilities.

AASHTO's A Guide for the Development of Bicycle Facilities (2012)

The AASHTO guide provides design guidance for bicycle facilities and Class I shared-use paths. If no local or state guidelines exist, is generally required by permitting agencies.

Chapter 5 concerns the design standards for shared-use paths. The following design criteria are relevant for Class I shared-use paths:

- The minimum path width is 10 feet, with a typical range between 10 and 14 feet (11 feet accommodates passing maneuvers); 8 feet may be used in constrained circumstances.
- A minimum 2-foot wide shoulder should be provided on either side of the path, with a maximum grade of 1(v):6(h). Vertical objects (e.g., signs, poles) should be located outside of the 2-foot shoulder.
- The maximum profile grade for pathways is 8%; the minimum profile grade is 0.8%
- The design speed of the Class I paths should be set by site conditions.

United States Access Board's Public Rights-of-Way Accessibility Guidelines (PROWAG)

Class I shared-use facilities must accommodate wheeled users and pedestrians; as such, maximum cross slope and longitudinal slopes must meet the Americans with Disabilities Act (ADA). The following design guidelines are relevant for Class I shared-use paths:

- The path cross slope should not exceed 2 percent.
- The path longitudinal slope should not exceed 5 percent; if the slope is greater than 5 percent, the path is considered a ramp, and will necessitate landings every 30 inches of rise, and a railing.

It is important to note that recreational paths do not have to adhere to PROWAG guidelines.

State Guidance

Caltrans Highway Design Manual (HDM) Chapter 1000 Bicycle Transportation Design

Chapter 1000 of the Caltrans HDM addresses the design of Class I bikeways. The HDM mandates Class I bikeways as 8 feet wide minimum, 10 feet preferred, with 2-foot shoulders on either side. This is narrower than AASHTO recommends. However, the 8–10-foot width may be appropriate in rural parts of the county with lower trail volumes. The HDM dictates a number of other design parameters like cross slope, clearances, and design speed but defers to AASHTO for "detailed guidance for creating a forgiving Class I bikeway environment."

The HDM defines trails as "generally, unpaved multipurpose facilities suitable for recreational use by hikers, pedestrians, equestrians, and off-road bicyclists. While many Class I facilities are named as trails (e.g., Old Town Trail, Dry Creek Trail), trails as defined here do not meet Class I bikeways standards and should not be signed as

bicycle paths. Where equestrians are expected, a separate equestrian trail should be provided. See DIB 82 for trail requirements for ADA. See Index 208.7 for equestrian undercrossing guidance."[6] The HDM does not provide any additional design guidance for trails.

California Department of Parks and Recreation Trails Handbook (1991, 2019)

This comprehensive handbook addresses the layout and design requirements of multi-use trails, as well as most aspects of planning, construction, and maintenance. The handbook defines multi-use trails as trails that are designated for bicyclists, pedestrians, and equestrians—designed to accommodate a variety of users in the same trail space. The most important design considerations are accommodation of the intended user mix and consideration and protection of natural resources. The handbook addresses elements of design including trail length, circulation, tread width, trail layout, grades, sinuosity, structures, switchbacks and climbing turns, and provisions for drainage and watercourse crossings.

Local Design Standards

Fresno County Regional Bicycle and Recreational Trails Master Plan (2013)

The current County standards for Class I bikeways and trails are shown in Figures 1, 2, and 3. The County's Bicycle Master Plan is in the process of being updated but these standards are unlikely to change.

Appendix D shows the proposed standards for various design elements for trails and pathways in this plan.

[6] Caltrans Highway Design Manual. https://dot.ca.gov/-/media/dot-media/programs/design/documents/chp1000-a11y.pdf

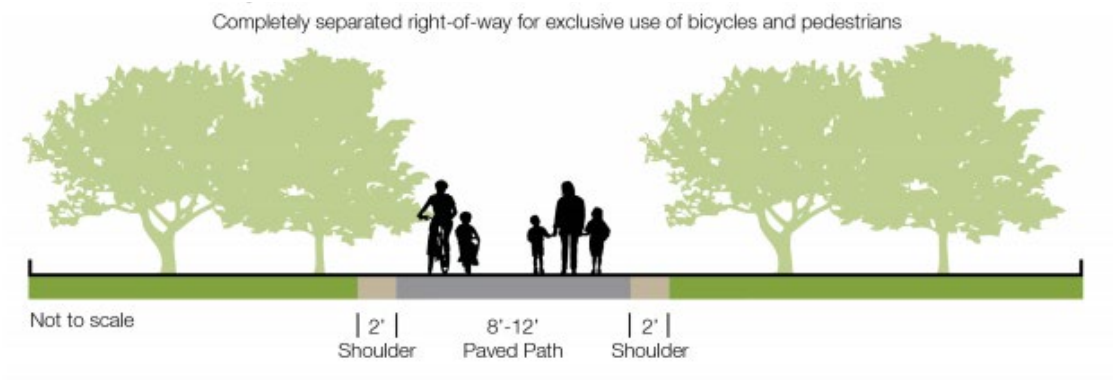


Figure 1. Class 1 Path, from the Fresno County Regional ATP.

Standards

- The minimum paved width for a two-way bike path shall be 8 feet. A minimum 2 foot wide graded area shall be provided adjacent to the pavement.
- The slope of the pathway should be 2% to provide adequate drainage.
- The grade should be at 2% to allow for all types of riders; the maximum grade is 5%.
- A minimum 2 foot horizontal clearance to obstructions shall be provided adjacent to the pavement.
- The vertical clearance to obstruction across the clear width of the path shall be a minimum of 8 feet.
- A dashed 4 inch yellow centerline stripe may be used to separate opposing directions of travel on paved/multi-purpose paths.
- A R44A sign may be used to mark the path.
- The minimum design speed for bike paths shall be 25 mph dependent on the expected use and type of terrain.

Figure 2. Class I design standards from Fresno County Regional Bicycle and Recreational Trails Master Plan, 2013

Recreational Trails

Hiking/Pedestrian/Equestrian/Off-Road Cyclists

- Exclusive right-of-way.
- Trail completely separated from the roadway.
- Typically located along rivers, streams, canal banks, RR corridors, and green belts etc.
- Where possible, shade trees should be placed to address the afternoon sun in the summer.
- Generally unpaved multipurpose facilities suitable for recreational use by hikers, pedestrians, equestrians, and off road bicyclists.
- To help horses not be surprised by an off-road bicyclist, good visibility should be provided at all points on equestrian paths.

Standards

- Depending on the type of recreational trail, (Hiking/Pedestrian/Equestrian/Off-Road Cyclists), the trail width shall vary from 2 to 10 feet with 2 feet clearance on either side.
- The cross slope of the trail should be 2% to provide adequate drainage.
- A minimum 2 foot horizontal clearance to obstructions shall be provided adjacent to the pathway.
- The vertical clearance to obstructions across the clear width of the path shall be a minimum of 10 feet for equestrian uses in urban areas and 8 feet for all other uses or in rural areas.

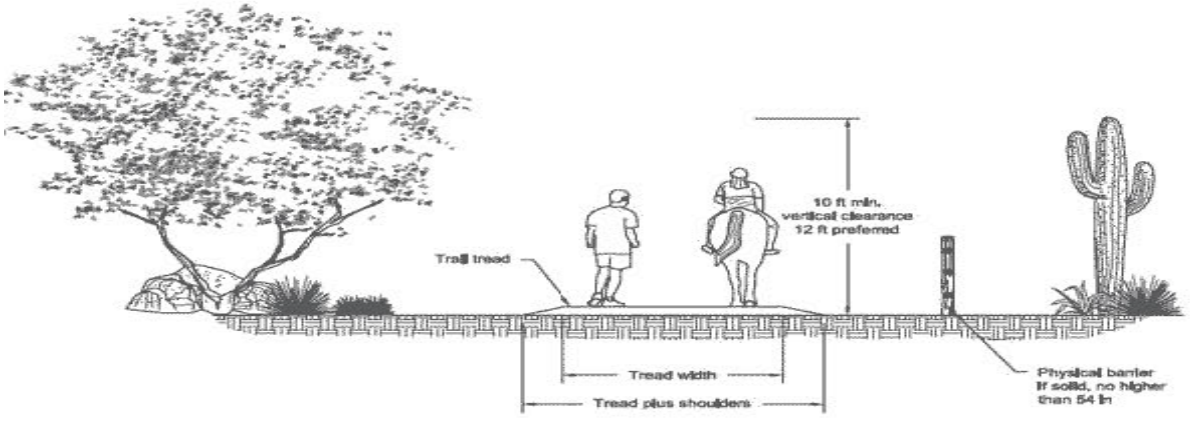


Figure 3. Recreational trail design standards from Fresno County Regional Bicycle and Recreational Trails Master Plan, 2013

Trail Classification System + Design Assumptions | Fresno County Regional Trails Master Plan

	SURFACING and CROSS-SECTION	WIDTH	HORIZONTAL ALIGNMENT	TREAD and VERTICAL ALIGNMENT	SIGNS AND AMENITIES	TYPICAL USERS
SIDEPATH (Class I) Within roadway right-of-way but beyond the paved width of the roadway (i.e. at back of curb or roadway edge)	Paved Asphalt on aggregate base (typical) Concrete on aggregate base (special cases)	12-16 ft wide: – 8 ft wide minimum with 2 ft shoulders – 12 ft wide preferred with 2 ft shoulders Buffer from roadway (typically vegetated) – 5 ft minimum buffer on roadways over 45 mph – 2-3 ft minimum buffer on roadways under 45 mph	Per Caltrans standards: – Gentle curves; minimum radius 90 ft (design speed 20 mph) – 2% cross slope (maximum) – Infrequent surface and trail obstacles – Meets ADA standards/accessible Additional design elements as needed: – Signalized crossings and lighting at arterials – Specialized treatments at lower volume/speed street crossings (signs and pavement markings at a minimum) – Concrete retaining walls – Culverts and ditches	– Wide, smooth, gentle tread – Average grade </= 5% 8 ft minimum vertical clearance (7 ft over the shoulder), 10 ft where practical *Grades can exceed 5% as long as ADA-compliant landings are provided every 200 ft.	– Signs and pavement markings – Lighting at roadway crossings – Simple amenities (benches, trash receptacles) common – Shade trees and other landscaping desirable – Other amenities (water bottle filling stations, informational kiosks, etc.) less common	Multi-use; recreational and active transportation for bicyclists, pedestrians, other wheeled users
SHARED USE PATH (Class I) Off-road, typically in an independent right-of-way	Paved Asphalt on aggregate base (typical) Concrete on aggregate base (canals)	12-14 ft wide: -8 ft wide minimum with 2 ft shoulders -10 ft wide preferred with 2 ft shoulders	Per Caltrans standards: – Meets ADA standards/accessible – Gentle curves; minimum radius 90 ft (design speed 20 mph) – 2% cross slope (maximum) – Infrequent surface and trail obstacles – Meets ADA standards/accessible Additional design elements as needed: – Signalized crossings and lighting at arterials (design to minimize intersections) – Specialized treatments at lower volume/speed street crossings (signs and pavement markings at a minimum) – Concrete retaining walls – Culverts and ditches	– Wide, smooth, gentle tread – Average grade </= 5% – 12 ft vertical clearance	– Signs and pavement markings – Lighting at roadway crossings – Amenities common: benches, trash receptacles, drinking fountains, informational kiosks, interpretive signage – Shade trees and other landscaping – Rest stop/wayside every 1.5 miles (bench, trash receptacle, shade, signs)	Multi-use; recreational and active transportation for bicyclists, pedestrians, other wheeled users
MULTI-USE TRAIL* Off-road, in an independent right-of-way	Soft surface (Native soil and rock / decomposed granite)	6-8 ft wide or 8-10 ft wide Trail width will vary depending on terrain and other physical constraints.	– Follow contours to the degree possible with fewer long switchbacks vs. frequent short switchbacks – Rest area approx. every 600 ft – Climbing turn radius 15-20 ft – Switchback radius over 10 ft – Provide trail drainage (e.g. grade reversals or other methods) by out sloping 1%-3% (so water sheets across instead of down tread) but avoid excessive pull to one side – Common surface and trail obstacles: vegetation encroachment, roots – Accessible if possible	– Continuous and obvious, generally wider tread – Grade may vary from level to somewhat steep, average grade </= 5% – 10% grade max – 12 ft vertical clearance	– Signs common – Trailhead at each location (parking, informational kiosk, portable or pit toilet, and trash receptacles; depending on site conditions, water fountains, picnic benches or share structures)	Multi-use; recreational use for hikers, mountain bikers, and equestrians. Note that to be considered “multi-use”, by the CA State Parks Trails Handbook, a trail must be designated for cyclists, equestrians, and pedestrians. Trails that allow cyclists and pedestrians or trails that allow equestrians and pedestrians are not considered “multi-use”.

SINGLE-USE TRAIL Off-road, in an independent right-of-way	Soft surface (Native soil)	4-6 ft wide	– Follow contours to the degree possible – Rest area approx. every 900 ft. – Climbing turn radius 7-15 ft – Switchback radius over 3-8 ft – Provide trail drainage (e.g. grade reversals or other methods) by out sloping 1%-3% (so water sheets across instead of down tread) but avoid excessive pull to one side – Common and substantial surface and trail obstacles: vegetation encroachment, roots – Not accessible	– Continuous but narrow and rough tread – Grade varies from level to somewhat steep – average grade </= 5% – 15% grade max – 12 ft vertical clearance	– Limited signs, simple trailhead at each location (parking, informational kiosk, portable or pit toilet, trash receptacles)	Single use: hikers and equestrians, or hikers and off-road cyclists

*Multi-use trail guidelines were developed based on the U.S. Forest Service Standard Trail Plans and Specifications, CA State Parks Trails Handbook, and local guidelines.

Fresno County Regional Trails Plan
Appendix E: Prioritized Trail Project List

February 19, 2021

These projects present a high-level concept, actual mileage and costs may vary during more details project definition and design.

bottom 33%	High = >$5 million
25	Medium = > $1 million and < $ 5 million
top 33%	Low = < $1 millio ,
51.9	

The values in these gray cells impact columns M and N

Updated 2.19.29.

Project ID	Name	From	To	Type	Length (miles)	Cost Estimate	Prioritization										
							Livability and Equity	Connectivity and Mobility	Collaboration	Public Support	Total	Priority Rank	Cost Rank	Priority Rank	Cost Rank	Overall Priority Level	Top 10
9	San Joaquin River	North Lanes Rd	Lost Lake	Trail	8.10	$ 8,230,000	15	30	10	20	**75**	high priority	high cost	1	3	high priority, high cost	
13	Enterprise Canal	Alluvial Ave	North Academy Ave	Class I	9.67	$ 13,560,000	0	30	10	20	**60**	high priority	high cost	1	3	high priority, high cost	
25	Sanger-Reedley Rail Trail	East Goodfellow Ave	Reedley western City Limits	Trail	7.00	$ 6,800,000	15	30	10	0	**55**	high priority	high cost	1	3	high priority, high cost	
31	W Kearney Blvd	South Grantland Ave	East of South Goldenrod Ave	Class I	6.02	$ 7,650,000	15	30	0	20	**65**	high priority	high cost	1	3	high priority, high cost	
12	Enterprise Canal Connector	Dry Creek Trail	Enterprise Trail near Glen Kippen Ln	Class I	0.61	$ 820,000	0	30	10	20	**60**	high priority	low cost	1	1	high priority, low cost	X
2	Kechaye Preserve	East of Winchell Cove Rd	Existing trail near Sky Harbour Rd	Trail	3.43	$ 3,430,000	0	30	10	20	**60**	high priority	medium cost	1	2	high priority, medium cost	X
7	Lost Lake Park	North Fork Rd	Lost Lake	Trail	2.74	$ 2,670,000	15	30	10	0	**55**	high priority	medium cost	1	2	high priority, medium cost	X
15	Wooten Creek	Anchor Ave	Proposed Friant-Kern Canal	Trail	1.16	$ 1,830,000	15	30	10	0	**55**	high priority	medium cost	1	2	high priority, medium cost	X
22	Kings River, Segment 3	Reedley Northern City Limits	Northwest of Reedley (proposed project 23)	Trail	1.46	$ 1,430,000	15	30	10	0	**55**	high priority	medium cost	1	2	high priority, medium cost	X
23	Rainbow Rte	China Creek Park	South Rainbow Rte	Trail	2.76	$ 2,690,000	15	30	10	0	**55**	high priority	medium cost	1	2	high priority, medium cost	X
24	Lonetree Channel	South Rainbow Rte	South Rainbow Ave	Class I	1.00	$ 1,250,000	15	30	10	0	**55**	high priority	medium cost	1	2	high priority, medium cost	X
26	Julian J. Miley Trail	East Parlier Ave	South Mendocino Ave	Trail	1.10	$ 1,080,000	15	30	10	0	**55**	high priority	medium cost	1	2	high priority, medium cost	X
27	Washington Canal	East Jensen Ave	South Golden State Boulevard	Class I	3.08	$ 4,230,000	15	30	10	0	**55**	high priority	medium cost	1	2	high priority, medium cost	X
30	Kearney Blvd	South Brawley Ave	South Marks Ave	Class I	1.02	$ 1,150,000	15	30	10	0	**55**	high priority	medium cost	1	2	high priority, medium cost	X
16	Green Mountain	-	-	Trail	54.31	$ 52,800,000	0	0	0	0	**0**	low priority	high cost	3	3	low priority, high cost	
17	Oat Mountain	Oat Mountain	Jesse Morrow Mountain	Trail	47.60	$ 46,290,000	0	0	0	0	**0**	low priority	high cost	3	3	low priority, high cost	
19	Campbell Mountain	Wahtoke Park	Campbell Mountain	Trail	5.69	$ 5,850,000	15	0	0	0	**15**	low priority	high cost	3	3	low priority, high cost	
36	California Aqueduct	Fresno County northern County Limits	Fresno County Southern County Limits	Class I	72.01	$ 80,710,000	15	0	0	0	**15**	low priority	high cost	3	3	low priority, high cost	
38	Los Gatos Creek Rd	Southwest Fresno County Limits	Coalinga northwest City Limits	Class I	24.50	$ 222,640,000	0	0	10	0	**10**	low priority	high cost	3	3	low priority, high cost	
0	Mountain Bike Park	TBD	TBD	Trail	TBD	$ 810,000	0	0	0	0	**0**						
18	Wahtoke Lake	Muscat Ave	Central Ave	Trail	1.00	$ 1,070,000	15	0	0	0	**15**	low priority	medium cost	3	2	low priority, medium cost	
41	Los Gatos Creek 2	Proposed Huron Rail Trail	Proposed California Aqueduct Trail	Class I	7.10	$ 4,110,000	15	0	0	0	**15**	low priority	medium cost	3	2	low priority, medium cost	
1	San Joaquin River Gorge	Northeastern most section, Small Valley Rd	North of Redlinger Lake	Trail	17.60	$ 17,090,000	0	30	10	0	**40**	medium priority	high cost	2	3	medium priority, high cost	
5	Millerton Rd	Auberry Rd	N Friant Rd	Class I	5.66	$ 24,200,000	0	30	0	0	**30**	medium priority	high cost	2	3	medium priority, high cost	
14	Friant-Kern Canal	San Joaquin River (Millerton Rd)	Orange Cove City Limits (Auberry Rd)	Trail	42.60	$ 54,050,000	0	30	0	20	**50**	medium priority	high cost	2	3	medium priority, high cost	
20	Kings River, Segment 1	China Creek Park	Pine Flat Recreation Area/ Choinumni Park	Trail	12.60	$ 23,760,000	15	30	0	0	**45**	medium priority	high cost	2	3	medium priority, high cost	
21	Kings River, Segment 2	Rio Vista Park	Northwest of Reedley	Trail	12.50	$ 12,630,000	15	0	0	20	**35**	medium priority	high cost	2	3	medium priority, high cost	
32	Alkali Sink Rail Trail	Guillan Park Dr	South Modoc Ave	Class I	16.00	$ 18,450,000	15	0	10	0	**25**	medium priority	high cost	2	3	medium priority, high cost	
33	Bass Ave	Mendota Pool Park	Mendota City Limits	Class I	0.87	$ 5,240,000	15	0	10	0	**25**	medium priority	high cost	2	3	medium priority, high cost	
35	Helm Canal	Helm Ditch Rd	Firebaugh southeastern City Limits	Class I	5.00	$ 5,440,000	15	0	10	0	**25**	medium priority	high cost	2	3	medium priority, high cost	
37	Los Gatos Creek	Coalinga eastern City Limits	Huron western City Limits	Class I	14.70	$ 17,130,000	15	0	10	0	**25**	medium priority	high cost	2	3	medium priority, high cost	
3	Millerton Marina Connector	-	-	Trail	0.22	$ 230,000	0	30	10	0	**40**	medium priority	low cost	2	1	medium priority, low cost	
6	Millerton Rd Connector	Millerton Rd	San Joaquin River	Trail	0.55	$ 550,000	0	30	10	0	**40**	medium priority	low cost	2	1	medium priority, low cost	
8	Lost Lake Connector	North Friant Rd	Proposed Lost Lake River Trail	Class I	0.42	$ 260,000	0	30	10	0	**40**	medium priority	low cost	2	1	medium priority, low cost	
28	Dry Creek Canal	North Millbrooke Ave	North of East McKinley Ave	Class I	0.72	$ 940,000	15	0	10	0	**25**	medium priority	low cost	2	1	medium priority, low cost	
29	Skaggs Bridge Park	N Madera Ave at San Joaquin River	-	Trail	0.76	$ 750,000	15	0	10	0	**25**	medium priority	low cost	2	1	medium priority, low cost	
4	Fort Miller Trail	Millerton Rd	East of N Friant Rd	Trail	2.26	$ 2,210,000	0	30	10	0	**40**	medium priority	medium cost	2	2	medium priority, medium cost	
10	Copper Ave	North Willow Ave	Sunnyside Ave	Class I	2.00	$ 2,340,000	0	30	10	0	**40**	medium priority	medium cost	2	2	medium priority, medium cost	
11	Sunnyside Ave	Copper Ave	East Shepherd Ave	Class I	2.00	$ 2,400,000	0	30	10	0	**40**	medium priority	medium cost	2	2	medium priority, medium cost	
34	Mendota Pool Park	Mendota Pool Park (via Bass Ave)	Helm Canal Rd	Class I	0.56	$ 4,280,000	15	0	10	0	**25**	medium priority	medium cost	2	2	medium priority, medium cost	
39	Huron Rail Trail	Siskiyou Ave	Proposed California Aqueduct Trail	Class I	1.41	$ 3,670,000	15	0	10	0	**25**	medium priority	medium cost	2	2	medium priority, medium cost	
40	Lassen Avenue	Huron northern City Limits	Proposed Los Gatos Creek 2	Class I	1.38	$ 1,600,000	15	0	10	0	**25**	medium priority	medium cost	2	2	medium priority, medium cost	

Appendix F: Funding Sources

Federal Funding Sources

GRANT OPPORTUNITY	FUNDING SOURCE	FOR MORE INFORMATION
Congestion Mitigation and Air Quality Improvement Program*	US Department of Transportation	https://www.fresnocog.org/wp-content/uploads/2016/03/2019-20-CMAQ-Guidelines-Final-1.pdf
Surface Transportation Block Grant	US Department of Transportation	https://www.fresnocog.org/wp-content/uploads/2016/06/A.-2019-20-Final-STBG-Guidelines.pdf

**The Fresno Council of Governments has the responsibility of distributing this funding (both STBD and Regional ATP, via different funding source) to local agencies.*

State Funding Sources

GRANT OPPORTUNITY	FUNDING SOURCE	FOR MORE INFORMATION
Recreational Trails Program	California Department of Parks and Recreation	https://www.parks.ca.gov/?page_id=24324
Office of Grants and Local Services	California Department of Parks and Recreation	https://www.parks.ca.gov/?page_id=1008
Regional Parks Program	California Department of Parks and Recreation	https://www.parks.ca.gov/?page_id=29940
Rural Recreation and Tourism Program	California Department of Parks and Recreation	https://www.parks.ca.gov/?page_id=28439
Land and Water Conservation Fund	California Department of Parks and Recreation	https://www.parks.ca.gov/?page_id=21360
Habitat Conservation Fund	California Department of Parks and Recreation	https://www.parks.ca.gov/?page_id=21361
Outdoor Equity Grants Program	California Department of Parks and Recreation	https://www.parks.ca.gov/?page_id=30443
Per Capita Program	California Department of Parks and Recreation	https://www.parks.ca.gov/?page_id=30095
Recreational Infrastructure Revenue Enhancement (RIRE)	California Department of Parks and Recreation	https://www.parks.ca.gov/?page_id=30162
Active Transportation Program	Caltrans	https://dot.ca.gov/programs/localassistance/fed-andstateprograms/activetransportationprogram/cycle5
Sustainable Transportation Planning Grant	Caltrans	https://dot.ca.gov/programs/transportation-planning/regional-planning/sustainable-transportation-planning-grants

GRANT OPPORTUNITY	FUNDING SOURCE	FOR MORE INFORMATION
Highway Safety Improvement Program	Caltrans	https://dot.ca.gov/programs/local-assistance/fed-and-state-programs/highway-safety-improvement-program
State Transportation Improvements Program	California Transportation Commission	https://catc.ca.gov/programs/state-transportation-improvement-program
California Gas Tax (Proposition 111, Street Maintenance for Traffic Signals and Streetlight)	California Transportation Commission	https://sco.ca.gov/Files-AUD/gas_tax_guidelines31219.pdf
SB 1 Gas Tax	State of California; administered locally by Fresno COG	https://www.fresnocog.org/project/senate-bill-1/
Urban Greening Grants	California Natural Resources Agency	https://resources.ca.gov/grants/urban-greening
Transformative Climate Communities Program	California Strategic Growth Council	https://sgc.ca.gov/programs/tcc/resources/application.html
Affordable Housing and Sustainable Communities Program	California Strategic Growth Council	http://sgc.ca.gov/pro grams/ahsc/

Regional Funding Sources

GRANT OPPORTUNITY	FUNDING SOURCE	FOR MORE INFORMATION
Measure C Transit Oriented Development Program	County of Fresno Transportation Authority	https://measurec.com/
Measure C Extension (including pedestrian trails, bicycle facilities, and ADA compliance)	County of Fresno Transportation Authority	https://www.fresnocog.org/wp-content/uploads/files/C%20Exp%20Plan_Final%20for%20Printing%20062206.pdf
Regional Sustainable Infrastructure Planning Grant*	Fresno Council of Governments	https://www.fresnocog.org/project/fresno-cog-administered-grant-programs/
Regional Transportation Development Act Article 3*	Fresno Council of Governments	https://www.fresnocog.org/project/transportation-development-act-tda/
San Joaquin Valley Air Pollution Control District's Bikeway Incentive Program	California Air Pollution Control Board	http://valleyair.org/grants/bikepaths.htm

**The Fresno Council of Governments has the responsibility of distributing this funding to local agencies.*

Other Funding Sources

GRANT OPPORTUNITY	FUNDING SOURCE	FOR MORE INFORMATION
Community Grant Program	PeopleForBikes	https://www.peopleforbikes.org/grant-guidelines
Conservation Loans	Conservation Fund	https://www.conservationfund.org/our-work/conservation-loans
Local Community Grants	Walmart	https://walmart.org/how-we-give/local-community-grants
National Trails Funds	American Hiking Society	https://americanhiking.org/National-Trails-Fund/
The Conservation Alliance	The Conservation Alliance	http://www.conservationalliance.com/grants/?yearly=2020

The grants listed above are not inclusive of all the grant opportunities from private sources, and Fresno County should continue to look for additional opportunities and cultivate relationships with non-profits, businesses, and other potential funding partners, many of which are identified in the section below.

APPENDIX G – PROBABLE COST ESTIMATE METHODOLOGY

FEBRUARY 18, 2021

Toole Design has identified a preferred network of regional trail facilities as part of the ***Fresno County Regional Trails Plan.*** Mark Thomas was tasked with creating planning level cost estimates for the 46 recommended routes of regional significance throughout the county. Due to the complex nature of each facility classification, as well as the varied location of these paths, cost assumptions were made to create estimates for each of the projects. This memo outlines the methodology and assumptions made for the planning level cost estimates that can be used in the development and implementation of these Plan facilities. Below is a list of the different facility classifications used in the Plan along with a brief description:

- A ***Sidepath (Class I)*** is a wide, smooth trail that runs along a roadway within the public right-of-way. The trail is 12-ft wide and separated from the roadway by a 2 to 5-ft landscaped buffer. The path is ADA compliant with a 2% maximum cross slope and 5% maximum running slope. It is a multi-use, recreational trail for bicyclists, pedestrians, and other wheeled users.

- A ***Shared-Use Path (Class I)*** is a wide, smooth trail that exists within independent right-of-way. Like a Sidepath facility, the trail is 12-ft wide and is ADA compliant with a maximum cross slope and running slope of 2% and 5%, respectively. It is also a multi-use, recreational trail for bicyclists, pedestrians, and other wheeled users. This classification of trail can be installed along canals and abandoned railroad lines.

- A ***Multi-Use Trail*** is an unpaved, recreational path that follows the contours of the surrounding terrain maintaining a 6 to 10-ft wide tread that is both continuous and obvious to its users. Depending on the terrain, the grade may be level or somewhat steep. The maximum grade along these paths is 10%. At remote, isolated locations these trails will also include a trailhead with features like a parking lot and day use facilities.

- A ***Single-Use Trail*** is an unpaved, recreational path designed for equestrians, hikers, and mountain bikers. Like the Multi-Use Trail, this path follows the contours of the surrounding terrain but maintains only a 4 to 6-ft wide tread. The path should be continuous and obvious to the users with a maximum grade of 15%.

Additional features necessary for the implementation of these trail facilities have also been identified within the routes. These improvements include items like crosswalks and ADA compliant curb ramps.

METHODOLOGY

The following section details the information and assumptions that were used to develop the planning level project cost estimates for each of the 46 routes. The data is organized by facility or improvement type.

SIDEPATH (CLASS I)

Sidepaths are Class I roadside facilities that are within the public right-of-way. The facility's cross section consists of a 12-ft wide path and a 2 to 5-ft wide buffer, depending on speed limit of the adjacent roadway. It was assumed that these facilities would not require right-of-way acquisition because the standard cross section would be varied to fit within the public right-of-way.

The unit cost for the Sidepath facility was based on the following cross section: a 5-ft wide graded buffer, an 8-ft wide paved path, and 2-ft wide shoulders constructed of decomposed granite. The pavement section is comprised of 2-in of Hot Mix Asphalt Concrete (HMAC) over 4-in of Class II Aggregate Base (AB). The unit cost for a ***Sidepath (Class I)*** facility was estimated to be $55/LF.

SHARED-USE PATH (CLASS I)

Shared-Use Paths are off-road Class I facilities that exist within independent right-of-way. The proposed shared-use path can be located along a canal or abandoned rail line but may also require the acquisition of its own right-of-way. It was assumed for all canal and rail trails that the right-of-way would not need to be acquired. Please note that the unit costs stated below do not include any right-of-way acquisition costs for those trails that may need independent right-of-way.

Shared-use paths have a paved width of 8-ft with 2-ft wide shoulders constructed of decomposed granite. The pavement section is 2-in of Hot Mix Asphalt Concrete (HMAC) over 4-in of Class II Aggregate Base (AB). The cost of barrier was added to the unit cost of paths alongside a canal. The total estimated unit cost for a shared-use path alongside a canal is $100/LF and $50/LF for all other shared-use paths.

MULTI-USE TRAILS

Multi-Use Trails are unpaved facilities that range from 6 to 10-ft wide and are located within independent right-of-way. The terrain and type of soil can have a large effect on the cost of these trails. Therefore, it was assumed that all multi-use trails were in rolling or mountainous terrain and would follow natural contours. Please note that the unit costs stated below do not include any right-of-way acquisition costs for those trails that may need independent right-of-way.

The cost for the multi-use trails includes clearing and grubbing, excavation and rough and fine grading for an average width of 8-ft. The excavation expense covers the cost of cutting, moving and compacting the soil. No excavation was necessary for those multi-use trails along a canal. Canal paths were also assumed to be composed of decomposed granite with graded shoulders and includes the installation of a barrier along the canal. The total cost to install a multi-use trail was determined to be $45/LF and $90/LF when along a canal.

SINGLE-USE TRAILS

Single-Use Trails are unpaved facilities that range from 4 to 6-ft wide and are located within independent right-of-way. The terrain and type of soil can have a large effect on the cost of these trails. Therefore, it was assumed that all single-use trails were in rolling or mountainous terrain and would follow natural contours. Please note that the unit costs stated below do not include any right-of-way acquisition costs.

The cost for the single-use trails includes clearing and grubbing, excavation and rough and fine grading for a width of 6-ft. The excavation expense covers the cost of cutting, moving and compacting the soil. The estimated unit cost for single-use trails is $30/LF.

PEDESTRIAN AND HIGH-COST FACILITIES

There are various pedestrian and high-cost improvements that are needed along some of these routes to install the trail. Below is a summary of the specific items and the assumptions associated with each one.

- *High-visibility Crosswalks* were assumed to be 12-ft wide continental crosswalks. The cost was based on a 2-lane roadway cross section and is estimated to cost $1,000/EA.

- *Mid-Block Crossings* include a high-visibility crosswalk, the proper advance warning pavement markings, installation of two curb ramps with truncated domes, and signage. The cost for the crossing is $11,000/EA.

- *Rectangular Rapid Flashing Beacon (RRFB)* includes the installation of a pedestrian-actuated system providing enhanced visibility to drivers in each direction. The cost for each of these enhancements only accounts for the addition of the system to the crossing and does not include the installation of other crossing elements. The RRFB is estimated to cost $60,000/EA.

- *Wayfinding Signage* is assumed to be included on all recommended routes spaced every 1,000-ft and is estimated to cost $300/EA.

- *Tread Hardening* involves the placement of rocks or pavers at locations throughout unpaved trails that are more susceptible to erosion or degradation. For the unpaved trail estimates it was assumed that 25% of the length would need this treatment. The cost is estimated to be $200/SY.

- *Trailheads* were added to the isolated trails that were not connected to a town or other destination. It was assumed that the trailhead would consist of a parking lot with a 30-car capacity, an information kiosk and trail sign, 3 picnic tables, a shade structure and a compost toilet. The estimated lump sum cost of the trailhead is $42,000/EA.

- *Structures*
    - *Prefabricated Pedestrian Bridges* were utilized at canal, creek, and river crossings that were less than 150 feet. The estimated unit cost is $150/SF.

- ***Pedestrian Overcrossings*** were utilized at creek and river crossings longer than 150 feet. The estimated unit cost is $500/SF.
- ***Bridge Widening*** will be necessary at locations with an existing roadway structure that needs to be modified to accommodate the additional trail width. The estimated unit cost is $500/SF.

- ***Railroad Crossing*** improvements were identified at locations where pedestrians would have to navigate a railroad crossing. The improvements can include a vehicular device with gate arms, a pedestrian device with gate arms, a pedestrian emergency exit gate, a pedestrian channelizing device, and detectable warning strips. The cost can vary from $150,000 to $300,000 depending on the location. For this estimate an average unit price of $200,000/EA was used.

- ***Landscape and Irrigation*** was assumed to be installed within the buffer area along all roadside Class I trails. To be consistent with the Sidepath (Class I) assumed cross section, the width of the buffer area was assumed to be the maximum 5-ft. The cost was estimated at $10/SF.

NOTE: *None of the estimated costs listed in the above section account for the following items: minor items (10%), mobilization (10%), drainage (8%), contingency (30%), engineering design (10%), construction management (10%) or administration (10%). All of these costs were added to the total construction cost and can be seen applied to each route in the project probable cost estimate summary sheet (Attachment 1).*

COST DATA

Unit cost assumptions and the applicable percentages that were applied to each of the total costs are shown in the table below. These values were taken from recent bid results and Mark Thomas' relevant project experience in the area. All costs are assumed to be in 2021 dollars.

ESTIMATE ITEM	PRICE/UNIT*
Hot Mix Asphalt Concrete (HMAC)	$100/TON
Aggregate Base (Class II)	$85/CY
Roadway Excavation	$40/CY
Thermoplastic Stripe	$1/LF
Expressway Barrier	$50/LF
Import Borrow	$30/CY
Decomposed Granite	$5/SF
Clearing and Grubbing	$1/SY
Rough and Fine Grading	$1/SY
Retaining Wall	$200/SF
Sidewalk	$13/SF
Curb and Gutter	$45/LF
Thermoplastic Marking	$6/SF
Detectable Warning Surface	$450/EA
Install Roadside Sign	$300/EA
Signal Modification	$15,000/INTERSECTION

ESTIMATE ITEM	PRICE/UNIT*
Rectangular Rapid Flashing Beacon (RRFB)	$60,000/EA
Landscape and Irrigation	$10/SF
Drainage Items (8% of Line Items Above)	
Minor Items (10% of Line Items Above)	
Mobilization (10% of Line Items Above)	
Contingency (30% of All Items Above)	
Design Engineering (10% of All Items including Contingency)	
Construction Management (10% of All Items including Contingency)	
Administration (10% of All Items including Contingency)	

NOTES:
Unit Costs were derived utilizing the Caltrans Cost data as well as recent construction cost estimates from projects located in Caltrans District 6 and 10 (Stanislaus, Fresno, Kern, Kings, Madera, and Tulare Counties)

CY = Cubic Yards, SY = Square Yards, SF = Square Foot, LF = Linear Foot, EA = Each

* All costs are assumed to be in 2021 dollars.

The probable project costs for each of the 46 proposed routes are attached to this memo.

ATTACHMENTS

Attachment 1 – Project Probable Cost Estimates: Summary Sheet
Attachment 2 – Project Probable Cost Estimates: Itemized Improvements List
Attachment 3 – Project Information Sheet

PROJECT PROBABLE COST ESTIMATES - SUMMARY SHEET

ROUTE ID	CORRIDOR	FROM	TO	PROPOSED PATH CLASS	LENGTH (MI)	IMPROVEMENT COSTS SUBTOTAL	DRAINAGE (8%)	MINOR ITEMS (10%)	MOBILIZATION (10%)	CONSTRUCTION SUBTOTAL	CONTINGENCY (30%)	SOFT COSTS** (30%)	GRAND TOTAL PROJECT COST	ROUTE ID
1	San Joaquin River Gorge	Small Valley Rd	North of Redlinger Lake	Trail	17.6	$8,342,000	$668,000	$835,000	$835,000	$10,680,000	$3,204,000	$3,204,000	$17,090,000	1
2	Kechaye Preserve	East of Winchell Cove Rd	Existing trail near Sky Harbour Rd	Trail	3.43	$1,670,000	$134,000	$167,000	$167,000	$2,138,000	$642,000	$642,000	$3,430,000	2
3	Millerton Marina Connector	-	-	Trail	0.22	$106,000	$9,000	$11,000	$11,000	$137,000	$42,000	$42,000	$230,000	3
4	Fort Miller Trail	Millerton Rd	East of N Friant Rd	Trail	2.26	$1,073,000	$86,000	$108,000	$108,000	$1,375,000	$413,000	$413,000	$2,210,000	4
5	Millerton Rd	Auberry Rd	N Friant Rd	Class I	5.66	$11,811,000	$945,000	$1,182,000	$1,182,000	$15,120,000	$4,536,000	$4,536,000	$24,200,000	5
6	Millerton Rd Connector	Millerton Rd	San Joaquin River	Trail	0.55	$262,000	$21,000	$27,000	$27,000	$337,000	$102,000	$102,000	$550,000	6
7	Lost Lake Park	North Fork Rd	Lost Lake	Trail	2.74	$1,300,000	$104,000	$130,000	$130,000	$1,664,000	$500,000	$500,000	$2,670,000	7
8	Lost Lake Connector	North Friant Rd	Proposed Lost Lake River Trail	Class I	0.42	$121,000	$10,000	$13,000	$13,000	$157,000	$48,000	$48,000	$260,000	8
9	San Joaquin River	North Lanes Rd	Lost Lake	Trail	8.1	$4,013,000	$322,000	$402,000	$402,000	$5,139,000	$1,542,000	$1,542,000	$8,230,000	9
10	Copper Ave	North Willow Ave	Sunnyside Ave	Class I	2	$1,137,000	$91,000	$114,000	$114,000	$1,456,000	$437,000	$437,000	$2,330,000	10
11	Sunnyside Ave	Copper Ave	East Shepherd Ave	Class I	2	$1,169,000	$94,000	$117,000	$117,000	$1,497,000	$450,000	$450,000	$2,400,000	11
12	Enterprise Canal Connector	Dry Creek Trail	Enterprise Trail near Glen Kippen Ln	Class I	0.61	$398,000	$32,000	$40,000	$40,000	$510,000	$153,000	$153,000	$820,000	12
13	Enterprise Canal	Alluvial Ave	North Academy Ave	Class I	9.67	$6,613,000	$530,000	$662,000	$662,000	$8,467,000	$2,541,000	$2,541,000	$13,550,000	13
14	Friant-Kern Canal	San Joaquin River (Millerton Rd)	Orange Cove City Limits (Auberry Rd)	Trail	42.6	$24,130,000	$1,931,000	$2,413,000	$2,413,000	$30,887,000	$9,267,000	$9,267,000	$49,430,000	14
15	Wooten Creek	Anchor Ave	Proposed Friant-Kern Canal	Trail	1.16	$828,000	$67,000	$83,000	$83,000	$1,061,000	$319,000	$319,000	$1,700,000	15
16	Green Mountain	-	-	Trail	54.31	$25,779,000	$2,063,000	$2,578,000	$2,578,000	$32,998,000	$9,900,000	$9,900,000	$52,800,000	16
17	Oat Mountain	Oat Mountain	Jesse Morrow Mountain	Trail	47.6	$22,600,000	$1,808,000	$2,260,000	$2,260,000	$28,928,000	$8,679,000	$8,679,000	$46,290,000	17
18	Wahtoke Lake	Muscat Ave	Central Ave	Trail	1	$518,000	$42,000	$52,000	$52,000	$664,000	$200,000	$200,000	$1,070,000	18
19	Campbell Mountain	Wahtoke Park	Campbell Mountain	Trail	5.69	$2,853,000	$229,000	$286,000	$286,000	$3,654,000	$1,097,000	$1,097,000	$5,850,000	19
20	Kings River, Segment 1	China Creek Park	Pine Flat Recreation Area/ Choinumni Park	Trail	12.6	$11,597,000	$928,000	$1,160,000	$1,160,000	$14,845,000	$4,454,000	$4,454,000	$23,760,000	20
21	Kings River, Segment 2	Rio Vista Park	Northwest of Reedley	Trail	12.5	$6,164,000	$494,000	$617,000	$617,000	$7,892,000	$2,368,000	$2,368,000	$12,630,000	21
22	Kings River, Segment 3	Reedley Northern City Limits	Northwest of Reedley	Trail	1.46	$694,000	$56,000	$70,000	$70,000	$890,000	$267,000	$267,000	$1,430,000	22
23	Rainbow Rte	China Creek Park	South Rainbow Rte	Trail	2.76	$1,309,000	$105,000	$131,000	$131,000	$1,676,000	$503,000	$503,000	$2,690,000	23
24	Lonetree Channel	South Rainbow Rte	South Rainbow Ave	Class I	1	$608,000	$49,000	$61,000	$61,000	$779,000	$234,000	$234,000	$1,250,000	24
25	Sanger-Reedley Rail Trail	East Goodfellow Ave	Reedley western City Limits	Trail	7	$3,319,000	$266,000	$332,000	$332,000	$4,249,000	$1,275,000	$1,275,000	$6,800,000	25
26	Julian J. Miley Trail	East Parlier Ave	South Mendocino Ave	Trail	1.1	$524,000	$42,000	$53,000	$53,000	$672,000	$202,000	$202,000	$1,080,000	26
27	Washington Canal	East Jensen Ave	South Golden State Boulevard	Class I	3.08	$2,060,000	$165,000	$206,000	$206,000	$2,637,000	$792,000	$792,000	$4,230,000	27
28	Dry Creek Canal	North Millbrooke Ave	North of East McKinley Ave	Class I	0.72	$452,000	$37,000	$46,000	$46,000	$581,000	$175,000	$175,000	$940,000	28
29	Skaggs Bridge Park	N Madera Ave at San Joaquin River	-	Trail	0.76	$363,000	$30,000	$37,000	$37,000	$467,000	$141,000	$141,000	$750,000	29
30	Kearney Blvd	South Brawley Ave	South Marks Ave	Class I	1.02	$559,000	$45,000	$56,000	$56,000	$716,000	$215,000	$215,000	$1,150,000	30
31	W Kearney Blvd	South Grantland Ave	East of South Goldenrod Ave	Class I	6.12	$3,727,000	$299,000	$373,000	$373,000	$4,772,000	$1,432,000	$1,432,000	$7,640,000	31
32	Alkali Sink Rail Trail	Guillan Park Dr	South Modoc Ave	Class I	16	$8,846,000	$708,000	$885,000	$885,000	$11,324,000	$3,398,000	$3,398,000	$18,120,000	32

ROUTE ID	CORRIDOR	FROM	TO	PROPOSED PATH CLASS	LENGTH (MI)	IMPROVEMENT COSTS SUBTOTAL	DRAINAGE (8%)	MINOR ITEMS (10%)	MOBILIZATION (10%)	CONSTRUCTION SUBTOTAL	CONTINGENCY (30%)	SOFT COSTS** (30%)	GRAND TOTAL PROJECT COST	ROUTE ID
33	Bass Ave	Mendota Pool Park	Mendota City Limits	Class I	0.87	**$2,554,000**	**$205,000**	**$256,000**	**$256,000**	**$3,271,000**	**$982,000**	**$982,000**	**$5,240,000**	33
34	Mendota Pool Park	Mendota Pool Park (via Bass Ave)	Helm Canal Rd	Class I	0.56	**$2,087,000**	**$167,000**	**$209,000**	**$209,000**	**$2,672,000**	**$802,000**	**$802,000**	**$4,280,000**	34
35	Helm Canal	Helm Ditch Rd	Firebaugh southeastern City Limits	Class I	5	**$2,653,000**	**$213,000**	**$266,000**	**$266,000**	**$3,398,000**	**$1,020,000**	**$1,020,000**	**$5,440,000**	35
36	California Aqueduct	Fresno County northern County Limits	Fresno County Southern County Limits	Class I	72.01	**$39,401,000**	**$3,153,000**	**$3,941,000**	**$3,941,000**	**$50,436,000**	**$15,131,000**	**$15,131,000**	**$80,700,000**	36
37	Los Gatos Creek	Coalinga eastern City Limits	Huron western City Limits	Class I	14.7	**$8,359,000**	**$669,000**	**$836,000**	**$836,000**	**$10,700,000**	**$3,210,000**	**$3,210,000**	**$17,120,000**	37
38	Los Gatos Creek Rd	Southwest Fresno County Limits	Coalinga northwest City Limits	Class I	24.5	**$108,704,000**	**$8,697,000**	**$10,871,000**	**$10,871,000**	**$139,143,000**	**$41,743,000**	**$41,743,000**	**$222,630,000**	38
39	Huron Rail Trail	Siskiyou Ave	Proposed California Aqueduct Trail	Class I	1.41	**$1,789,000**	**$144,000**	**$179,000**	**$179,000**	**$2,291,000**	**$688,000**	**$688,000**	**$3,670,000**	39
40	Lassen Avenue	Huron northern City Limits	Proposed Los Gatos Creek 2	Class I	1.38	**$777,000**	**$63,000**	**$78,000**	**$78,000**	**$996,000**	**$299,000**	**$299,000**	**$1,600,000**	40
41	Los Gatos Creek 2	Proposed Huron Rail Trail	Proposed California Aqueduct Trail	Class I	7.1	**$2,002,000**	**$161,000**	**$201,000**	**$201,000**	**$2,565,000**	**$770,000**	**$770,000**	**$4,110,000**	41
												GRAND TOTAL =	**$662,370,000**	

*** Soft Costs includes design engineering, environmental, construction management, administration, financing and legal fees, and other pre- and post- construction expenses.*

PROJECT PROBABLE COST ESTIMATES - ITEMIZED IMPROVEMENTS LIST

ROUTE ID	CORRIDOR	FROM	TO	PROPOSED PATH CLASSIFICATION	PROPOSED PATH CLASS	LENGTH (MI)	SIDEPATH (CLASS I) ROADSIDE (LF)	SHARED-USE PATH (CLASS II) (LF)	SHARED USE PATH (CLASS I) CANAL (LF)	MULTI-USE TRAIL (LF)	MULTI USE TRAIL CANAL (LF)	SINGLE-USE TRAIL (LF)	TRAIL HARDENING (SY)	TRAILHEAD (EA)	WAYFINDING SIGNAGE (EA)	CURB RAMPS (EA)	MID-BLOCK CROSSING (EA)	INSTALL RRFB (EA)	INSTALL HI-VIS CROSSWALK (EA)	INSTALL PED OVERCROSSING (SF)	INSTALL PRE-FAB PED BRIDGE (SF)	RAILROAD CROSSING (EA)	BRIDGE WIDENING (SF)	RETAINING WALL (SF)	IMPORT BORROW (CY)	LANDSCAPE AND IRRIGATION (SF)	SIGNAL MODIFICATIONS (EA)	IMPROVEMENT COSTS SUBTOTAL *	ROUTE ID
							$55	$50	$100	$45	$90	$30	$200	$42,000	$300	$4,200	$11,000	$60,000	$1,000	$500	$150	$200,000	$500	$200	$30	$10	$15,000		
1	San Joaquin River Gorge	Small Valley Rd	North of Redlinger Lake	MULTI-USE TRAIL	Trail	17.6				92,930			20,660		93													**$8,342,000**	1
2	Kechaye Preserve	East of Winchell Cove Rd	Existing trail near Sky Harbour Rd	MULTI-USE TRAIL	Trail	3.43				18,120			4,030	1	19													**$1,670,000**	2
3	Millerton Marina Connector	-	-	MULTI-USE TRAIL	Trail	0.22				1,170			260		2													**$106,000**	3
4	Fort Miller Trail	Millerton Rd	East of N Friant Rd	MULTI-USE TRAIL	Trail	2.26				11,940			2,660		12													**$1,073,000**	4
5	Millerton Rd	Auberry Rd	N Friant Rd	SIDEPATH	Class I	5.66	29,890								30	12	1	1	6					6,150	26,375	6,197	149,450		**$11,811,000**	5
6	Millerton Rd Connector	Millerton Rd	San Joaquin River	MULTI-USE TRAIL	Trail	0.55				2,910			650		3													**$262,000**	6
7	Lost Lake Park	North Fork Rd	Lost Lake	MULTI-USE TRAIL	Trail	2.74				14,470			3,220		15													**$1,300,000**	7
8	Lost Lake Connector	North Friant Rd	Proposed Lost Lake River Trail	SHARED-USE PATH	Class I	0.42		2,220							3	2												**$121,000**	8
9	San Joaquin River	North Lanes Rd	Lost Lake	MULTI-USE TRAIL	Trail	8.1				42,770			9,510		43						1,150							**$4,013,000**	9
10	Copper Ave	North Willow Ave	Sunnyside Ave	SIDEPATH	Class I	2	10,560								11	5			3								52,800		**$1,137,000**	10
11	Sunnyside Ave	Copper Ave	East Shepherd Ave	SIDEPATH / SHARED-USE PATH	Class I	2	3,400	7,160							11	7		1	3								52,800		**$1,169,000**	11
12	Enterprise Canal Connector	Dry Creek Trail	Enterprise Trail near Glen Kippen Ln	SHARED-USE PATH	Class I	0.61			3,230						4	3		1	1										**$398,000**	12
13	Enterprise Canal	Alluvial Ave	North Academy Ave	SHARED-USE PATH	Class I	9.67			51,060						52	26	1	7	11		1,000		1,580						**$6,613,000**	13
14	Friant-Kern Canal	San Joaquin River (Millerton Rd)	Orange Cove City Limits (Auberry Rd)	MULTI-USE TRAIL	Trail	42.6					224,930				225	37		17	18	4,950	1,000								**$24,130,000**	14
15	Wooten Creek	Anchor Ave	Proposed Friant-Kern Canal	MULTI-USE TRAIL	Trail	1.16					6,130				7	7		4	4										**$828,000**	15
16	Green Mountain	-	-	MULTI-USE TRAIL	Trail	54.31				286,760			63,730	1	287														**$25,779,000**	16
17	Oat Mountain	Oat Mountain	Jesse Morrow Mountain	MULTI-USE TRAIL	Trail	47.6				251,330			55,860	1	252														**$22,600,000**	17
18	Wahtoke Lake	Muscat Ave	Central Ave	MULTI-USE TRAIL	Trail	1				5,280			1,180	1	6														**$518,000**	18
19	Campbell Mountain	Wahtoke Park	Campbell Mountain	MULTI-USE TRAIL	Trail	5.69				30,050			6,680	1	31						750								**$2,853,000**	19
20	Kings River, Segment 1	China Creek Park	Pine Flat Recreation Area/ Choinumni Park	MULTI-USE TRAIL	Trail	12.6				66,530			14,790		67					10,800	1,500								**$11,597,000**	20
21	Kings River, Segment 2	Rio Vista Park	Northwest of Reedley	MULTI-USE TRAIL	Trail	12.5				66,000			14,670		66						1,600								**$6,164,000**	21
22	Kings River, Segment 3	Reedley Northern City Limits	Northwest of Reedley	MULTI-USE TRAIL	Trail	1.46				7,710			1,720		8														**$694,000**	22
23	Rainbow Rte	China Creek Park	South Rainbow Rte	MULTI-USE TRAIL	Trail	2.76				14,580			3,240		15														**$1,309,000**	23
24	Lonetree Channel	South Rainbow Rte	South Rainbow Ave	SHARED-USE PATH	Class I	1			5,280						6	4		1	1										**$608,000**	24
25	Sanger-Reedley Rail Trail	East Goodfellow Ave	Reedley western City Limits	MULTI-USE TRAIL	Trail	7				36,960			8,220		37														**$3,319,000**	25
26	Julian J. Miley Trail	East Parlier Ave	South Mendocino Ave	MULTI-USE TRAIL	Trail	1.1				5,810			1,300		6														**$524,000**	26
27	Washington Canal	East Jensen Ave	South Golden State Boulevard	SHARED-USE PATH	Class I	3.08			16,270						17	10		3	5				1						**$2,060,000**	27
28	Dry Creek Canal	North Millbrooke Ave	North of East McKinley Ave	SHARED-USE PATH	Class I	0.72			3,810						4	2		1	1										**$452,000**	28
29	Skaggs Bridge Park	N Madera Ave at San Joaquin River	-	MULTI-USE TRAIL	Trail	0.76				4,020			900		5														**$363,000**	29
30	Kearney Blvd	South Brawley Ave	South Marks Ave	SHARED-USE PATH	Class I	1.02			5,390						6	4			1										**$559,000**	30
31	W Kearney Blvd	South Grantland Ave	East of South Goldenrod Ave	SIDEPATH	Class I	6.12	32,320								33	21			10					450			161,600		**$3,727,000**	31
32	Alkali Sink Rail Trail	Guillan Park Dr	South Modoc Ave	SHARED-USE PATH	Class I	16		84,480							85	8		3	3		1,750	1	7,650		3,057			**$8,846,000**	32
33	Bass Ave	Mendota Pool Park	Mendota City Limits	SIDEPATH	Class I	0.87	4,600								5	1							4,130			23,000		**$2,554,000**	33
34	Mendota Pool Park	Mendota Pool Park (via Bass Ave)	Helm Canal Rd	SIDEPATH	Class I	0.56	2,960								3	2			1				3,530			14,800		**$2,087,000**	34
35	Helm Canal	Helm Ditch Rd	Firebaugh southeastern City Limits	SHARED-USE PATH	Class I	5			26,400						27	1													**$2,653,000**	35
36	California Aqueduct	Fresno County northern County Limits	Fresno County Southern County Limits	SHARED-USE PATH	Class I	72.01			380,220						381	21		16	16			1							**$39,401,000**	36
37	Los Gatos Creek	Coalinga eastern City Limits	Huron western City Limits	SIDEPATH / SHARED-USE PATH	Class I	14.7	52,170	25,450							78	9		2	4		1,000					388,100		**$8,359,000**	37
38	Los Gatos Creek Rd	Southwest Fresno County Limits	Coalinga northwest City Limits	SIDEPATH / SHARED-USE PATH	Class I	24.5	102,960	26,400							130	8		5	3				32,550	391,760	8,339	646,800		**$108,704,000**	38
39	Huron Rail Trail	Siskiyou Ave	Proposed California Aqueduct Trail	SHARED-USE PATH	Class I	1.41		7,450							8	2							2,810						**$1,789,000**	39
40	Lassen Avenue	Huron northern City Limits	Proposed Los Gatos Creek 2	SIDEPATH	Class I	1.38	7,290								8	2										36,450			**$777,000**	40
41	Los Gatos Creek 2	Proposed Huron Rail Trail	Proposed California Aqueduct Trail	SHARED-USE PATH	Class I	7.1		37,490						1	38	3		1	1										**$2,002,000**	41

** Total Improvement Cost does not include construction management, design engineering, environmental or administration costs (see Summary Pag*

PROJECT INFORMATION SHEET

ROUTE ID	CORRIDOR	FROM	TO	PROPOSED PATH CLASSIFICATION	CLASS I / TRAIL	CANAL	SURFACE	LENGTH (MI)	PROJECT INFORMATION
1	San Joaquin River Gorge	Small Valley Rd	North of Redlinger Lake	**MULTI-USE TRAIL**	Trail		Unpaved	17.6	
2	Kechaye Preserve	East of Winchell Cove Rd	Existing trail near Sky Harbour Rd	**MULTI-USE TRAIL**	Trail		Unpaved	3.43	
3	Millerton Marina Connector	-	-	**MULTI-USE TRAIL**	Trail		Unpaved	0.22	
4	Fort Miller Trail	Millerton Rd	East of N Friant Rd	**MULTI-USE TRAIL**	Trail		Unpaved	2.26	
5	Millerton Rd	Auberry Rd	N Friant Rd	**SIDEPATH**	Class I		Paved	5.66	• Existing public right of way cannot currently accommodate the proposed trail cross section, therefore a variance in the standard Sidepath Class I trail cross section will be necessary. • Various segments of the corridor will require retaining walls. (Assumed Avg. Height = 5-ft) • Import borrow will also be required to fill existing roadside ditches at several locations.
6	Millerton Rd Connector	Millerton Rd	San Joaquin River	**MULTI-USE TRAIL**	Trail		Unpaved	0.55	
7	Lost Lake Park	North Fork Rd	Lost Lake	**MULTI-USE TRAIL**	Trail		Unpaved	2.74	
8	Lost Lake Connector	North Friant Rd	Proposed Lost Lake River Trail	**SHARED-USE PATH**	Class I		Paved	0.42	
9	San Joaquin River	North Lanes Rd	Lost Lake	**MULTI-USE TRAIL**	Trail		Unpaved	8.1	
10	Copper Ave	North Willow Ave	Sunnyside Ave	**SIDEPATH**	Class I		Paved	2	• A variance in the standard cross section of Class I trail would be necessary where the public right of way cannot accommodate the width of the trail. Some right of waythat may need to be acquired includes orchards.
11	Sunnyside Ave	Copper Ave	East Shepherd Ave	**SIDEPATH / SHARED-USE PATH**	Class I		Paved	2	• A variance in the standard cross section of Class I trail would be necessary. Right of way is tight along the southern limits and is mostly private property north of Behymer Ave.
12	Enterprise Canal Connector	Dry Creek Trail	Enterprise Trail near Glen Kippen Ln	**SHARED-USE PATH**	Class I	X	Paved	0.61	
13	Enterprise Canal	Alluvial Ave	North Academy Ave	**SHARED-USE PATH**	Class I	X	Paved	9.67	• There is an ongoing project for the design of the SR 168 overcrossing. Therefore the cost associated with that specific pedestrian crossing is not included in this project's estimate.
14	Friant-Kern Canal	San Joaquin River (Millerton Rd)	Orange Cove City Limits (Auberry Rd)	**MULTI-USE TRAIL**	Trail	X	Unpaved	42.6	
15	Wooten Creek	Anchor Ave	Proposed Friant-Kern Canal	**MULTI-USE TRAIL**	Trail	X	Unpaved	1.16	
16	Green Mountain	-	-	**MULTI-USE TRAIL**	Trail		Unpaved	54.31	
17	Oat Mountain	Oat Mountain	Jesse Morrow Mountain	**MULTI-USE TRAIL**	Trail		Unpaved	47.6	
18	Wahtoke Lake	Muscat Ave	Central Ave	**MULTI-USE TRAIL**	Trail		Unpaved	1	• There may be significant right of way impacts if adjacent private property extends up to the river edge.
19	Campbell Mountain	Wahtoke Park	Campbell Mountain	**MULTI-USE TRAIL**	Trail		Unpaved	5.69	
20	Kings River, Segment 1	China Creek Park	Pine Flat Recreation Area/ Choinumni Park	**MULTI-USE TRAIL**	Trail		Unpaved	12.6	
21	Kings River, Segment 2	Rio Vista Park	Northwest of Reedley	**MULTI-USE TRAIL**	Trail		Unpaved	12.5	
22	Kings River, Segment 3	Reedley Northern City Limits	Northwest of Reedley	**MULTI-USE TRAIL**	Trail		Unpaved	1.46	
23	Rainbow Rte	China Creek Park	South Rainbow Rte	**MULTI-USE TRAIL**	Trail		Unpaved	2.76	
24	Lonetree Channel	South Rainbow Rte	South Rainbow Ave	**SHARED-USE PATH**	Class I	X	Paved	1	• There is a project currently in design for a pedestrian bridge crossing SR 168. The associated cost for that crossing is not included in the trail estimate.

ROUTE ID	CORRIDOR	FROM	TO	PROPOSED PATH CLASSIFICATION	CLASS I / TRAIL	CANAL	SURFACE	LENGTH (MI)	PROJECT INFORMATION
25	Sanger-Reedley Rail Trail	East Goodfellow Ave	Reedley western City Limits	**MULTI-USE TRAIL**	Trail		Unpaved	7	• It is assumed that Union Pacific Railroad will not require any specific barrier between pedestrian trail and railway.
26	Julian J. Miley Trail	East Parlier Ave	South Mendocino Ave	**MULTI-USE TRAIL**	Trail		Unpaved	1.1	
27	Washington Canal	East Jensen Ave	South Golden State Boulevard	**SHARED-USE PATH**	Class I	X	Paved	3.08	
28	Dry Creek Canal	North Millbrooke Ave	North of East McKinley Ave	**SHARED-USE PATH**	Class I	X	Paved	0.72	
29	Skaggs Bridge Park	N Madera Ave at San Joaquin River	-	**MULTI-USE TRAIL**	Trail		Unpaved	0.76	
30	Kearney Blvd	South Brawley Ave	South Marks Ave	**SHARED-USE PATH**	Class I	X	Paved	1.02	
31	W Kearney Blvd	South Grantland Ave	East of South Goldenrod Ave	**SIDEPATH**	Class I		Paved	6.12	• A variance in the standard Class I trail cross section may be necessary. Orchards and palm trees lie in the path of the trail and therefore costs for clearing, grubbing, and right of way acquisition may be more costly.
32	Alkali Sink Rail Trail	Guillan Park Dr	South Modoc Ave	**SHARED-USE PATH**	Class I		Paved	16	
33	Bass Ave	Mendota Pool Park	Mendota City Limits	**SIDEPATH**	Class I		Paved	0.87	
34	Mendota Pool Park	Mendota Pool Park (via Bass Ave)	Helm Canal Rd	**SIDEPATH**	Class I		Paved	0.56	
35	Helm Canal	Helm Ditch Rd	Firebaugh southeastern City Limits	**SHARED-USE PATH**	Class I	X	Paved	5	
36	California Aqueduct	Fresno County northern County Limits	Fresno County Southern County Limits	**SHARED-USE PATH**	Class I	X	Paved	72.01	
37	Los Gatos Creek	Coalinga eastern City Limits	Huron western City Limits	**SIDEPATH / SHARED-USE PATH**	Class I		Paved	14.7	
38	Los Gatos Creek Rd	Southwest Fresno County Limits	Coalinga northwest City Limits	**SIDEPATH / SHARED-USE PATH**	Class I		Paved	24.5	• This trail cuts through mostly mountainous terrain and will require long stretches of retaining wall that were assumed to be an average of 10 feet tall.
39	Huron Rail Trail	Siskiyou Ave	Proposed California Aqueduct Trail	**SHARED-USE PATH**	Class I		Paved	1.41	
40	Lassen Avenue	Huron northern City Limits	Proposed Los Gatos Creek 2	**SIDEPATH**	Class I		Paved	1.38	
41	Los Gatos Creek 2	Proposed Huron Rail Trail	Proposed California Aqueduct Trail	**SHARED-USE PATH**	Class I		Paved	7.1	• There may be potentially significant right of way impacts along proposed route as much of the adjacent property appears to be privately owned. Clearing and grubbing may be costly as the trail follows alongside the creek and is surrounded by agricultural land.