

FRESNO COUNTY REGIONAL ACTIVE TRANSPORTATION PLAN



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Acknowledgements:

The Fresno Council of Governments thanks the jurisdiction staff members and community members who contributed to the creation of this plan.



MARK THOMAS

*Front Cover: Crosswalks with bulb outs and brick paving
at Draper St, Kingsburg*

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EXECUTIVE SUMMARY

The Fresno County Regional Active Transportation Plan (ATP) is a comprehensive guide outlining the vision for biking, walking, and other human-powered transportation in Fresno County and a roadmap for achieving that vision. The ATP envisions a complete, safe, and comfortable network of trails, sidewalks, and bikeways that serves all who live and work in the region. This plan seeks to achieve the following goals:

- create a network of safe and attractive trails, sidewalks, and bikeways that connect Fresno County residents to key destinations, especially local schools, parks, and transit;
- create a network of regional bikeways that allows bicyclists to safely ride between cities and other regional destinations;
- increase walking and bicycling trips in the region by creating user-friendly facilities; and
- increase safety by creating bicycle facilities and improving crosswalks and sidewalks for pedestrians.

To achieve these goals, the ATP proposes a comprehensive network of citywide bikeways trails, and sidewalks; crossing improvements at key intersections; and locations for recommended bicycle parking. At build out, the recommended network would add

- 248 miles of Class I Bikeways (bike paths),
- 1,591 miles of Class II Bikeways (bike lanes),

- 59 miles of Class III Bikeways (bike routes),
- 11 miles of Class IV Separated Bikeways, and
- 89 miles of sidewalks.

Build-out of the plan would also

- improve 80 intersections and street crossings for pedestrians and
- add 175 bicycle parking locations.

The estimated total cost of the proposed network is \$506 million. Implementation of the entire network will occur over several decades and require much funding to complete. Some improvements can be implemented relatively easily; however, other improvements are more complex and are not anticipated to occur in the near future. Facilities will be constructed in conjunction with adjacent land development, roadway maintenance and capacity enhancement projects, as well as active transportation infrastructure projects using funds available from several different local, state, and federal funding sources.



Trail crossing in downtown Reedley



Public workshop review of proposed Fresno Regional ATP projects

Chapter 1

INTRODUCTION

Active transportation is human-powered travel, including walking and bicycling. These activities have many important health, economic, environmental, and social benefits. Active transportation

- helps families get to schools, parks, work, shopping, restaurants, and bus stops;
- improves health and reduces the incidence of disease and obesity;
- reduces air pollution; and
- saves money on gas and car maintenance.

However, many parts of the Fresno County region were developed without good trails, sidewalks, or bike lanes that make walking and biking safe and comfortable for everyone. Disadvantaged communities are also less likely to have these facilities than other neighborhoods. This active transportation plan is an important step toward addressing these needs.

The plan will make each jurisdiction eligible for new funding to create new trails, sidewalks, bike lanes, and other improvements for bicycling and walking. The plan will support applications for funding from the statewide Active Transportation Program. The plan will also be used by the Fresno Council of Governments to identify projects for the Fresno County Regional Transportation Plan and support the use of funds provided through sources such as the Fresno County Measure C program.

This plan meets all requirements for active transportation plans as specified by the California Transportation Commission's 2017 Active Transportation Program Guidelines. A summary of these requirements and where they are addressed within this plan is provided in Appendix A, Plan Conformance with ATP Guidelines.

VISION AND GOALS

The Fresno County Regional Active Transportation Plan envisions a complete, safe, and comfortable network of trails, sidewalks, and bikeways that serves all residents of Fresno County. Specifically, this plan has been developed to accomplish the following goals:

- create a network of safe and attractive trails, sidewalks, and bikeways that connect Fresno County residents to key destinations, especially local schools and parks;
- create a network of regional bikeways that allows bicyclists to safely ride between cities and other regional destinations;
- increase walking and bicycling trips in the region by creating user-friendly facilities; and
- increase safety by creating bicycle facilities and improving crosswalks and sidewalks for pedestrians.

STRUCTURE OF THE ACTIVE TRANSPORTATION PLAN

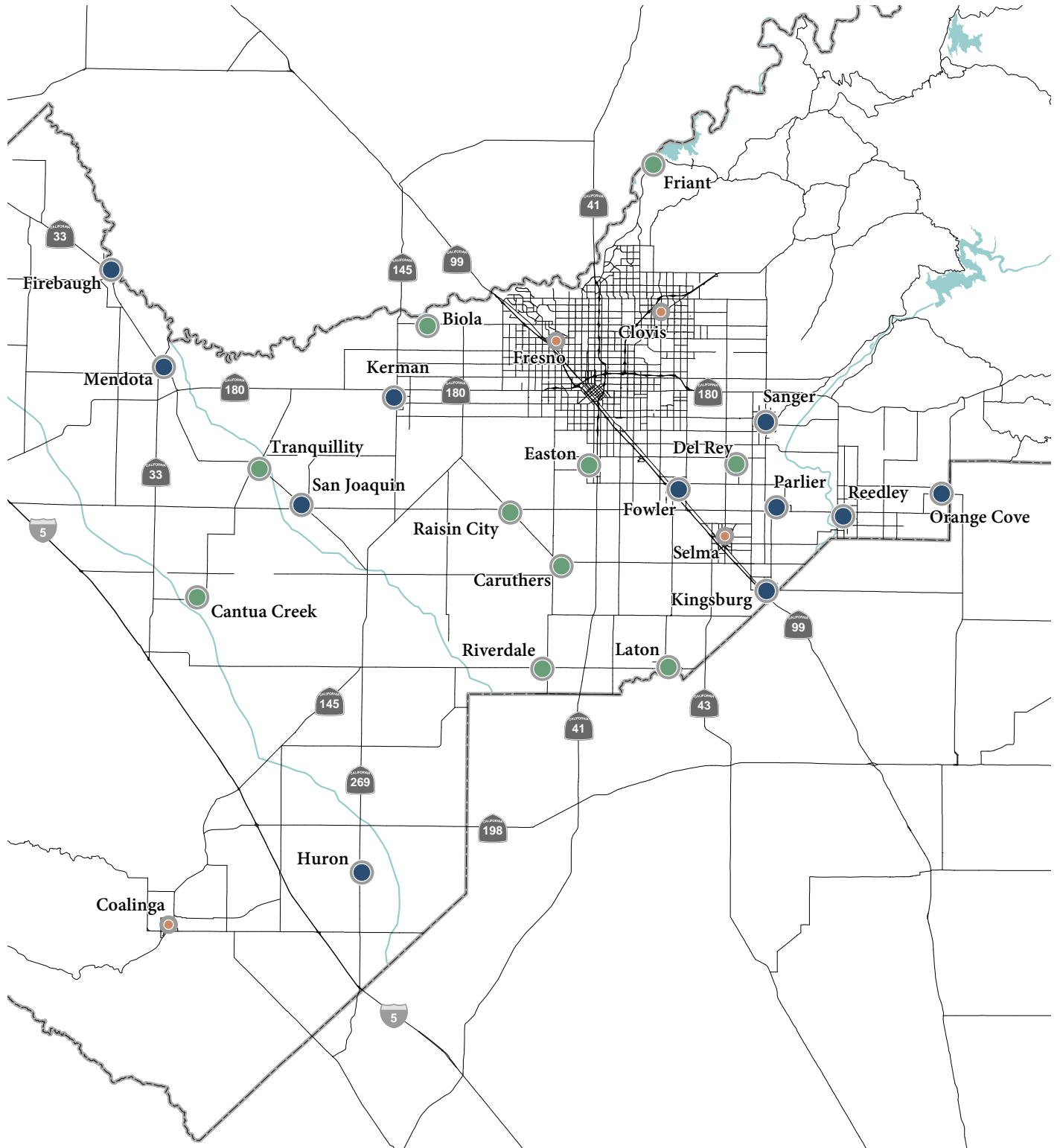
This Active Transportation Plan is a regional document, covering Fresno County and incorporated cities within the County (Figure 1-1). Separate recommendations are made for each area of the region:

- A countywide bikeway and trail system connecting communities within the County and other regional destinations
- Bicycle and pedestrian networks for each of the incorporated cities within the County which do not have current active transportation plans:
 - Firebaugh
 - Fowler
 - Huron
 - Mendota
 - Orange Cove
 - Kerman
 - Kingsburg
 - Parlier
 - Reedley
 - San Joaquin
 - Sanger
- Bicycle and pedestrian networks for the largest unincorporated communities within the county:
 - Biola
 - Cantua Creek
 - Caruthers
 - Del Rey
 - Easton
 - Friant
 - Laton
 - Raisin City
 - Riverdale
 - Tranquillity
- Bicycle and pedestrian networks for unincorporated county islands bordering the City of Clovis and the City of Fresno

Four cities in Fresno County have recently created their own active transportation plans. The recommended projects from these plans are also included in this plan:

- Coalinga
- Clovis
- Fresno
- Selma

Fig 1-1: Fresno County



Source: Fresno Council of Governments, 2017, Fehr & Peers, 2017

- Incorporated City Included in this ATP
- Unincorporated Community Included in this ATP
- Cities with Existing ATPs
- Waterway
- County Boundary

PUBLIC PARTICIPATION

Obtaining input from the residents of the Fresno region was an important part of the ATP development process. The public helped identify recommended improvements to the bicycling and walking facilities as well as priorities for projects. Participation was solicited through

- interactive workshops held in each city early in the planning process with city staff, local schools, local interest groups, and the public;
- an online crowdsourced interactive map, with both English and Spanish captions;
- outreach via email and local community groups;
- inclusion of the ATP in workshops held across the county to receive input on the development of the 2018 Fresno COG regional transportation plan;
- a website hosted by Fresno COG to communicate the project schedule, share project documents, and provide general information about the plan process; and
- workshops in each city to obtain public input on recommended networks.

Appendix B, Public Participation, provides additional details on the public input received.

BICYCLE FACILITIES

Bicycle facilities have many components. This section describes the bikeways and supporting facilities that comprise a complete bicycle network.

Bikeways are classified in Chapter 1000 of the Highway Design Manual (Caltrans, 2015) into four primary types: Class I bike paths (including shared use paths), Class II bike lanes, Class III bike routes, and Class IV separated bikeways.



Walking path and bike rack in Reedley

Class I Bikeway: Bike Path

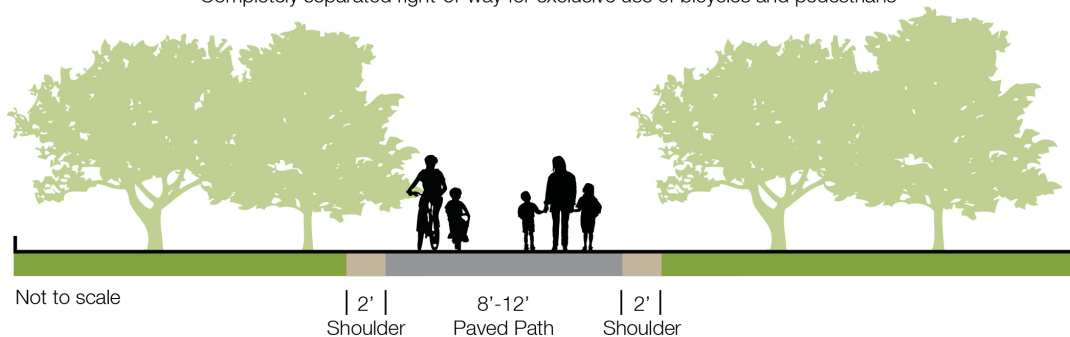
Bike paths, often referred to as shared-use paths or trails, are off-street facilities that provide exclusive use for non-motorized travel, including bicyclists and pedestrians (Figure 1-2). Bike paths have minimal cross flow with motorists and are typically located along landscaped corridors. Bike paths can be utilized for both recreational and commute trips. These paths provide an important recreational amenity for bicyclists, pedestrians, dog walkers, runners, skaters, and those using other non-motorized forms of travel. They are frequently designed to offer a benefit to users, such as a connection not previously included in the bicycle or pedestrian network, or traversing a barrier such as a freeway or river. Unless specifically allowed by local laws, equestrians are generally prohibited from using bike paths. If horses and riders are allowed to use the facility, paths should be designed to accommodate all users, typically with wider widths than traditional multi-use paths.

Key considerations when designing a Class I Bikeway:

- Separation from traffic.
- Scenic attributes such as landscaping and trail placement highlighting views.
- Shade to encourage use.
- Connections with other bikeways and activity centers.
- Well-designed street crossings with measures such as grade separated crossings, bike and pedestrian activated traffic signals, median islands, and warning signs.
- Curb ramps and curb cuts that are convenient and conform to the Americans with Disabilities Act (ADA).
- Adequate trail width, sight distance, and drainage.
- Pavement markings and wayfinding signs.
- Long-term maintenance needs.

Figure 1-2: Class I Bikeway - Bike Path

Completely separated right-of-way for exclusive use of bicycles and pedestrians



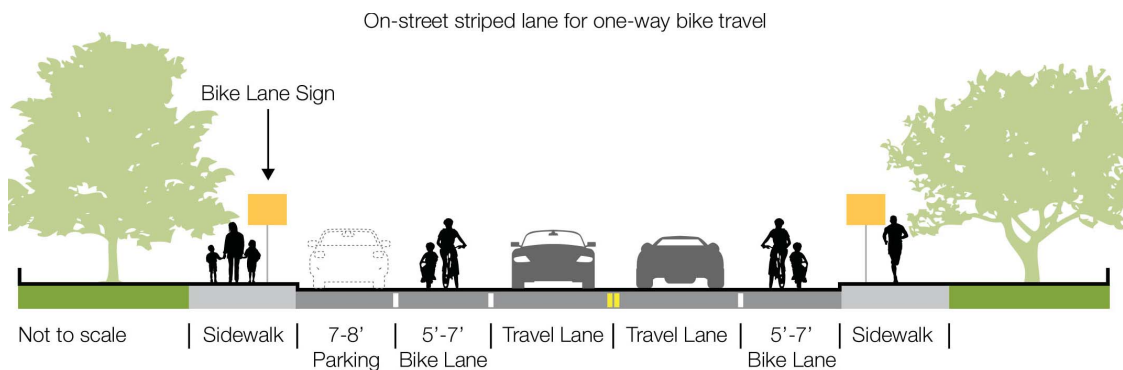
Class II Bikeway: Bike Lane

Class II bike lanes are on-street facilities that use striping, stencils, and signage to denote preferential or exclusive use by bicyclists. On-street bike lanes are located adjacent to motor vehicle traffic (Figure 1-3). Bike lanes are intended to alert drivers about the predictable movements of bicyclists and provide adequate space for comfortable riding.

Key considerations when designing a Class II Bikeway:

- Existing conditions:
 - Bike lanes are most helpful on streets with greater than 3,000 vehicle average daily traffic (ADT) and a posted speed that is greater than 25 mph.
 - Curb-to-curb width and parking considerations in older neighborhoods can present challenges to design due to narrow roadways.
- Design principles:
 - Provide the maximum bike lane widths available to allow bicyclists to pass other riders safely and navigate around parked cars and other road hazards.
- Lane striping (six inches wide) should be dashed through heavily trafficked merging areas, including turn lanes at intersection approaches.
- Skipped green markings may also be used in conflict zones.
- Drainage grates must be designed to avoid catching bicycle tires.
- Left-side painted buffers on bike lanes improve separation between bicycles and vehicles in cases with speeds that are greater than 35 mph and high vehicle volumes.
- Right-side painted buffers can be added between parallel parked cars and the bike lane to create a separation in the door zone, an area in which a driver may open their car door and hit a bicyclist.
- Maintenance needs:
 - Conduct maintenance frequently to avoid roadway hazards such as potholes and debris.
 - Refresh faded striping and repair or replace damaged or faded signage.

Figure 1-3: Class II Bikeway – Bike Lane



Class III Bikeway: Bike Route

Class III bike routes are streets with pavement markings or signage where bicyclists travel on the shoulder or share a lane with motor vehicles (Figure 2-3). Class III bike routes can be utilized on low-speed and low-volume streets to connect bike lanes or paths along corridors that do not provide enough space for dedicated lanes. Shoulders are preferable but not required on streets with Class III bike routes. In addition to alerting motorists to the presence of bicyclists, bike routes help bike riders find their way to other bikeways or regional destinations like schools and parks.

Shared-lane markings, or sharrows, are a common Class III pavement marking that alerts drivers that bicyclists are sharing the road and facilitate wayfinding through neighborhoods. They are best used on streets with less than 3,000 ADT.

The chevrons in sharrow markings should be painted near the center of the travel lane, out of the parked vehicle door zone.

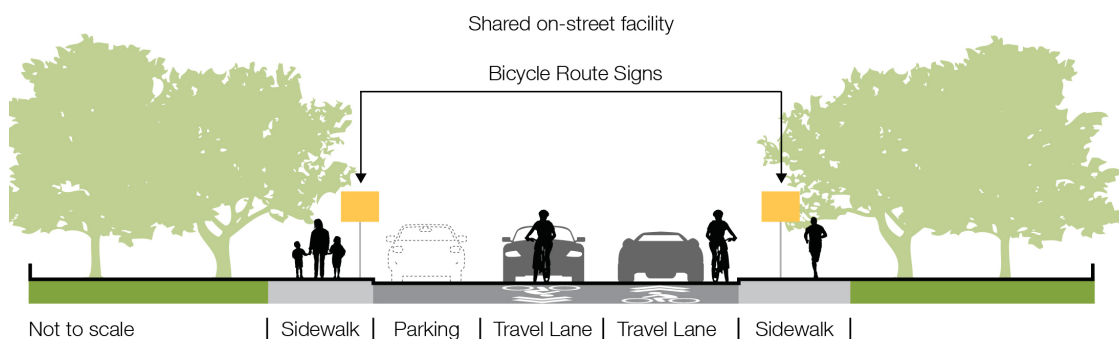
Key considerations when designing a Class III Bikeway include:

- Existing conditions:
 - Best on streets with less than 3,000 ADT and a posted speed equal to or less than 25 mph.
- Design principles:
 - Shoulders are preferable but not required
 - Sharrow marking can be used to alert drivers to presence of bikes
- Maintenance needs:
 - Conduct maintenance frequently to avoid roadway hazards such as potholes and debris.



Sharrow Markings

Figure 1-4: Class III Bikeway – Bike Route



Class IV Bikeway: Separated Bikeway

Class IV separated bikeways, commonly known as cycle tracks, are physically separated bicycle facilities that are distinct from the sidewalk and designed for exclusive use by bicyclists. They are located within the street right-of-way, but provide comfort similar to Class I bike paths. The key feature of a separated bikeway is a vertical element that provides further separation from motor vehicle traffic. Common vertical elements used for separation include a vertical curb, a painted buffer with flexible posts, parked cars, a landscaped area, large planters, or a fixed barrier. Separated bikeways may also be constructed by creating a bike lane at a height above the vehicular lanes, with a continuous sloped transition. Separated bikeways can be either one-way or two-way, accommodating a single direction of travel or both (Figure 1-5).

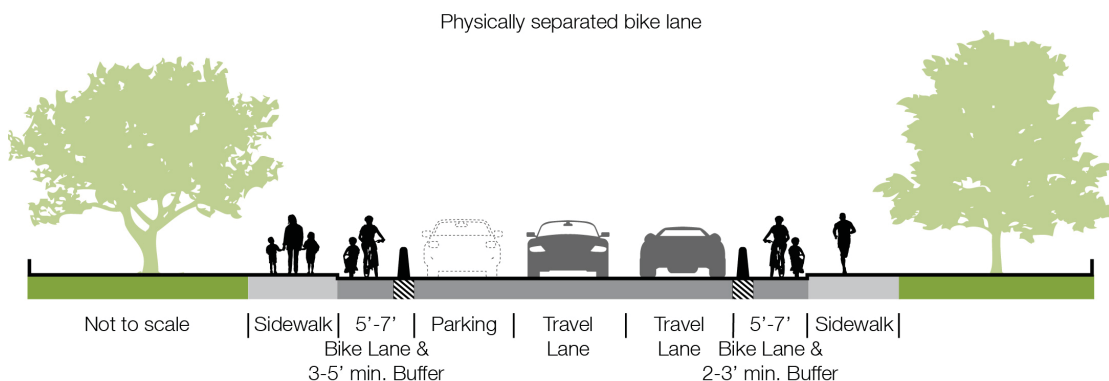
The preferred bike lane width for a separated bikeway is seven feet to allow for passing and maintenance. Minimum buffer width should be two to three feet.

Streets with high vehicular volumes and speeds are appropriate candidates for separated bikeways since they increase the separation between bicyclists and motor vehicle traffic. Separated bikeways necessitate wider right-of-way than Class II and III facilities and are best placed in areas with fewer driveways, and thus require careful planning.

Key considerations when designing a Class IV Bikeway include:

- Existing conditions:
 - Especially useful on streets with high ADT and a posted speed greater than 30 mph
 - Curb to curb width and post considerations can present challenges to design due to narrow roadway
- Design principles
 - The preferred bike lane width for a separated bikeway is seven feet to allow for passing and maintenance. Minimum buffer width should be three feet
 - Appropriate intersection treatments should be paired with separated bikeways
 - Skipped green markings may also be used in conflict zones
 - Drainage grates must be designed to avoid catching bicycle tires
 - Careful planning required
- Maintenance needs:
 - Conduct maintenance frequently to avoid roadway hazards such as potholes and debris
 - Maintain posts, bollards, or other physical buffer
 - Refresh striping and repair or replace damaged or faded signage
 - Smaller street cleaning equipment may be required

Figure 1-5: Class IV Separated Bikeways



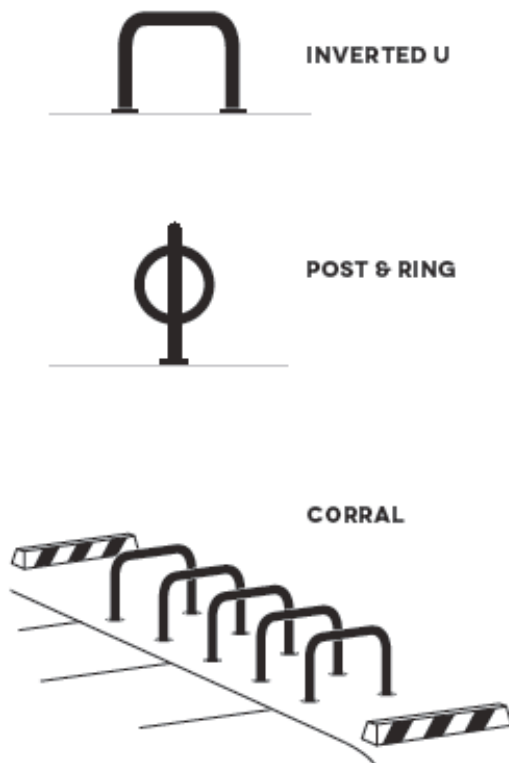
Bicycle Parking

Bicycle parking is a key component to encouraging ridership by supporting the final stage of a bicycle trip. Locations with high ridership are excellent candidates for bicycle parking, including civic, residential, commercial, and office spaces. At these locations, both short-term and long-term parking should be accommodated. Bicycle parking can be classified into two types:

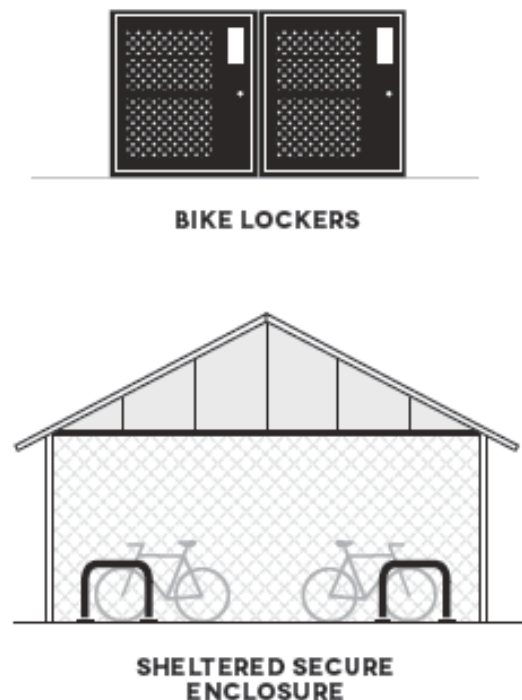
Short-term bicycle parking is temporary bicycle parking intended for visitors. Bicycle racks are a common form of short-term parking. Bicycle racks in front of stores and other destinations allow patrons to park their bike for short periods. Bike parking should be located in well-lit areas to discourage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

Long-term bicycle parking is intended for employees, students, commuters, and residents to protect bicycles for long periods. Long-term facilities are more secure than short-term bicycle parking and should fully protect bicycles from theft and weather. Long-term bicycle parking includes bike lockers, bike cages, and bike rooms. Bike lockers are outdoor enclosures that accommodate one or two bicycles and are usually leased on a monthly basis or paid short-term use. Bike cages are fully enclosed, roofed shelters that house racks of bicycle parking, typically found at schools. Bicycle rooms are commonly found inside office or residential buildings, and provide secure indoor parking. Bicycle rooms may feature amenities such as bike pumps and quick-fix tools for employees and residents.

Short-Term Bicycle Parking



Long-Term Bicycle Parking



Types of Bicycle Parking¹

¹ Images from APBP Essentials of Bike Parking: Selecting and Installing Bike Parking that Works (2015), pages 2-3, www.apbp.org, used with permission from the copyright holder.

PEDESTRIAN FACILITIES

Trails

Class I bikeways, or bike paths, are also used by pedestrians and thus frequently known as shared-use trails.

Sidewalks

Sidewalks are paved areas immediately adjacent to the vehicular right-of-way for the exclusive use of pedestrians, and may be used by people riding bicycles unless prohibited. Unlike shared-use paths, they are directly adjacent to the main right-of-way. As with trails, shade is important to encourage walking in Fresno County's hot summer climate.



Sidewalk on J Street in Parlier.

Crosswalks

Marked crosswalks feature striping and other enhancements to delineate a street crossing for pedestrians. There are two types of marked crosswalks:

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

The preferred bike lane width for a separated bikeway is seven feet to allow for passing and maintenance. Minimum



Crosswalk with Rectangular Rapid Flashing Beacon across Anchor Avenue in Orange Cove