



# Tehachapi Bicycle Master Plan

Draft Final Plan

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# 1 Introduction

This chapter presents the setting, land use, and population characteristics for the City of Tehachapi.

## 1.1 Setting

Tehachapi is a small city located in the mountains of central Kern County along Highway 58, approximately 40 miles southeast of Bakersfield. Tehachapi has a population of 11,884<sup>1</sup> residents, while the Greater Tehachapi Area has approximately 35,000 residents<sup>2</sup> and includes the unincorporated communities of Alpine Forest, Bear Valley Springs, Brite Valley, Cummings Ranch, Cummings Valley, Golden Hills, Mendiburu Springs, Monolith, Old Towne, and Stallion Springs.

Tehachapi's location in the Tehachapi Mountains creates a climate that can vary drastically within a 24 hour period. The City typically experiences warm summers, which creates an environment

conducive to bicycling. In the winter, Tehachapi often has inclement weather, including rain and snow, which can be a barrier to bicycling.

## 1.2 Land Use

Land use within Tehachapi is regulated by a traditional use-based zoning ordinance that produces a relatively low-density land use pattern dominated by single uses, as shown in **Figure 1-1**. This land use pattern often places trip origins (such as housing) and destinations relatively far apart from one another. These distances may create barriers for bicycle travel because they are perceived as being too far to travel by bicycle. Many of the commercial, retail, or educational destinations within the City, for example, may not be located within a convenient distance or easily accessible from residential neighborhoods. Much of the undeveloped land within Tehachapi is privately owned.

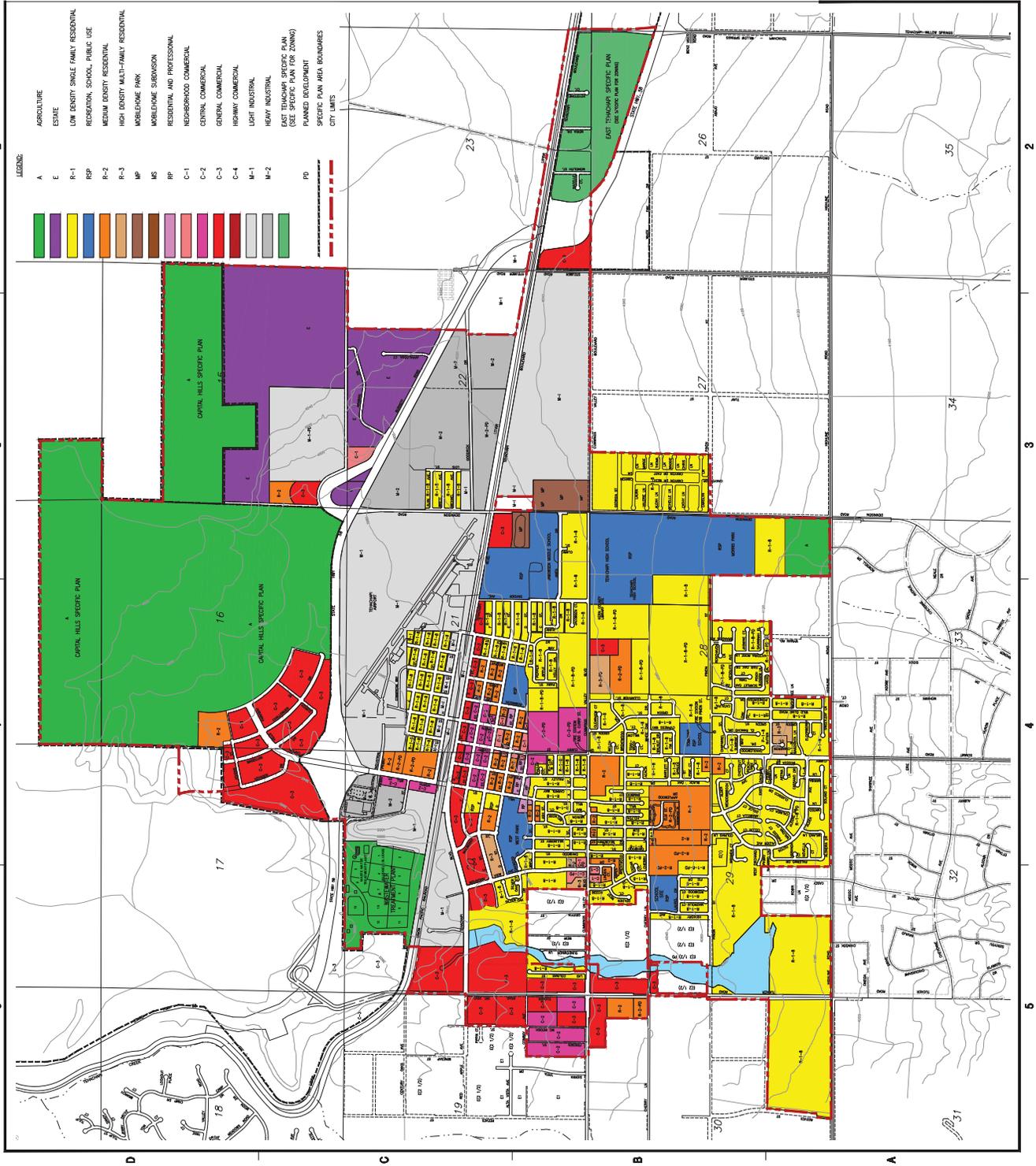


1 U.S. Census Bureau, 2005-2009 American Community Survey

2 Greater Tehachapi Area Specific Plan

# 1 Introduction

Figure 1-1: City of Tehachapi Zoning Map



### 1.3 Purpose of the Bicycle Master Plan

The Tehachapi Bicycle Master Plan provides a broad vision for encouraging increased bicycle travel, as well as strategies and actions, to improve conditions for bicycling throughout the city. This Plan provides direction for expanding the existing bikeway network and connecting gaps within the city and Greater Tehachapi Area as a means of bettering the bicycling environment. In addition to providing recommendations for bikeways and support facilities, the Tehachapi Bicycle Master Plan offers recommendations for education, encouragement, enforcement, and evaluation programs.

In its recommendations, the Tehachapi Bicycle Master Plan includes facilities and programs that will encourage people of all ages and levels of ability to bike more frequently. Supported by data collected nationally since 2006, planners developed categories to address Americans' varying attitudes towards bicycling, which are shown in **Figure 1-2**.

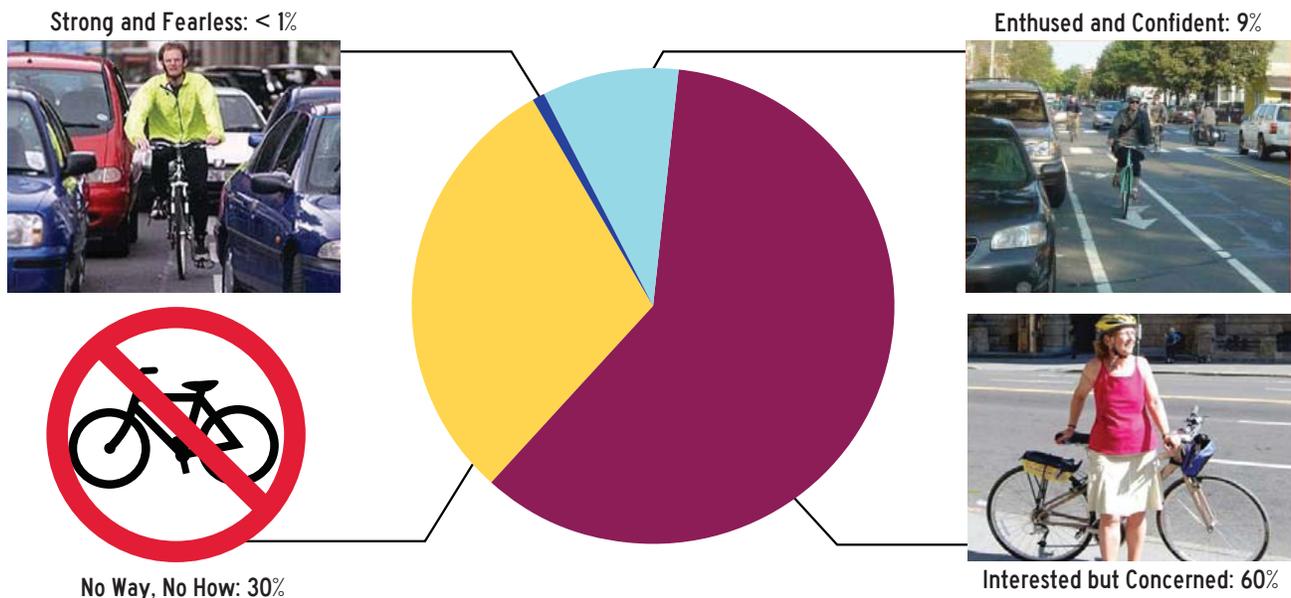
The illustration shows that less than one percent of Americans comprise a group of bicyclists who are *Strong and Fearless*. These bicyclists typically ride



anywhere on any roadway regardless of roadway conditions, weather, or the availability of bicycle facilities. The strong and fearless bicyclists can ride faster than other user types, prefer direct routes, and will typically choose roadway connections – even if shared with vehicles – over separate bicycle facilities such as bicycle paths. This category of bicyclists will be less affected by this Plan than the following groups.

Approximately nine percent of Americans fall under the category of *Enthusied & Confident* bicyclists who are confident and mostly comfortable riding on all types of bicycle facilities, but will usually prefer

Figure 1-2: Bicyclist Types



low traffic streets or multi-use pathways when available. These bicyclists may deviate from a more direct route in favor of a preferred facility type. This group includes all kinds of bicyclists including commuters, recreationalists, racers, and utilitarian bicyclists. The Tehachapi Bicycle Master Plan will provide this group of bicyclists more bicycle facility options, which should create a more comfortable bicycling environment for them.



The remainder of the American population does not currently ride a bicycle regularly, in large part due to perceived safety risks from riding with automobile traffic. Approximately 60 percent of the population can be categorized as *Interested but Concerned* and represents bicyclists who typically only ride a bicycle on low traffic streets or bicycle paths under favorable conditions and weather. These bicyclists may ride more regularly with encouragement, education, experience, and the availability of bicycle infrastructure. This Plan will affect the interested but concerned bicyclists the most as it will provide for the facilities and programs that should encourage them to ride or ride more often.

Approximately 30 percent of Americans are not bicyclists. They are referred to in the diagram as *No Way, No How*. Some people in this group may eventually consider bicycling and may progress to one of the user types above. A significant portion

of these people will never ride a bicycle under any circumstances.

According to voting at the Tehachapi Bicycle Master Plan public workshop (discussed in Chapter 3), 42 percent of attendees identified themselves as Strong and Fearless, 42 percent of attendees identified themselves as Enthused and Confident, and 16 percent of attendees identified themselves as Interested but Concerned. This Plan provides recommendations for facilities, support facilities, and programs that are appealing to the varying types of bicyclists in Tehachapi.

## 1.4 Benefits of Bicycling

Planning to create a more bicycle friendly city contributes to resolving several complex and interrelated issues, including traffic congestion, air quality, climate change, public health, and livability. By guiding the city toward bicycle friendly development, this plan can affect all of these issue areas, which collectively can have a profound influence on the existing and future quality of life in Tehachapi.

### 1.4.1 Environmental/Climate Change Benefits

Replacing vehicular trips with bicycle trips has a measurable impact on reducing human-generated greenhouse gases (GHGs) in the atmosphere that contribute to climate change.<sup>3</sup> Fewer vehicle trips and vehicle miles traveled (VMT) translates into reduced fuel consumption and subsequently fewer mobile source pollutants, such as carbon dioxide, nitrogen oxides, and hydrocarbons, being released into the air. Providing transportation options that reduce VMT is an important component of decreasing greenhouse gas emissions and improving air quality.

<sup>3</sup> Gotschi, Thomas (2011). Costs and Benefits of Bicycling Investments in Portland, Oregon. *Journal of Physical Activity and Health* (8), S49-S58.

### 1.4.2 Public Health Benefits

Public health professionals have become increasingly aware that the impacts of automobiles on public health extend far beyond asthma and other respiratory conditions caused by air pollution. There is a much deeper understanding of the connection between the lack of physical activity resulting from auto-oriented community designs and various health-related problems. Although diet and genetic predisposition contribute to these conditions, physical inactivity is now widely understood to play a significant role in the most common chronic diseases in the United States, including heart disease, stroke, and diabetes. Also, approximately 280,000 adults in the US die prematurely due to obesity-related illnesses every year.<sup>4</sup>

### 1.4.3 Economic Benefits

Bicycling is economically advantageous to individuals and communities. Replacing driving with bicycling reduces a person's expenses on vehicle maintenance, fuel costs, and insurance fees. These savings are accompanied by potential reductions in health care costs by participating in regular exercise and minimizing health complications associated with an inactive lifestyle. On a community scale, bicycle infrastructure projects are generally far less expensive than automobile-related infrastructure. Further, shifting a greater share of daily trips to bike trips reduces the impact on the region's transportation system, thus reducing the need for improvements and expansion projects. Increased bicycling also has the potential to increase sales at local businesses. Bicyclists might have more disposable income from fewer vehicle-related expenditures and as seen in Toronto's Bloor

4 Allison D.B., Fontaine K.R., Manson J.E., Stevens J., VanItallie T.B. Annual deaths attributable to obesity in the United States. *JAMA* 1999(282), 1530-1538.

Street, bicyclists visit their local shops and spend more than their motorist counterparts.<sup>5</sup>

### 1.4.4 Community/Quality of Life Benefits

Fostering conditions where bicycling is accepted and encouraged increases a city's livability from a number of different perspectives that are often difficult to measure, but nevertheless important. The design, land use patterns, and transportation systems that comprise the built environment have a profound impact on quality of life issues. Studies have found that people living in communities with built environments that promote bicycling and walking tend to be more socially active, civically engaged, and are more likely to know their neighbors<sup>6</sup>; whereas urban sprawl has been correlated with social and mental health problems, including stress.<sup>7</sup> The aesthetic quality of a community improves when visual and noise pollution caused by automobiles is reduced and



5 Sztabinski, F. (2009). Bike Lanes, On-Street Parking and Business. *Clean Air Partnership* 18-20.

6 Leyden, K. 2003. Social Capital and the Built Environment: The Importance of Walkable Neighborhoods. *American Journal of Public Health* 93: 1546-51.

7 Frumkin, H. 2002. Urban Sprawl and Public Health. *Public Health Reports* 117: 201-17.

when green space is reserved for facilities that enable people of all ages to recreate and commute in pleasant settings.

### 1.4.5 Safety Benefits

Conflicts between bicyclists and motorists result from poor riding and/or driving behavior, as well as insufficient or ineffective facility design. Encouraging development and redevelopment in which bicycle travel is fostered improves the overall safety of the roadway environment for all users. Well-designed bicycle facilities improve security for current bicyclists and also encourage more people to bike. This in turn can further improve bicycling safety. Studies have shown that the frequency of bicycle collisions has an inverse relationship to bicycling rates – more people on bicycles equates to fewer crashes.<sup>8</sup> Providing information and educational opportunities about safe and lawful interactions between bicyclists and other roadway users also improves safety.

## 1.5 Bicycle Transportation Account (BTA) Compliance

The Bicycle Transportation Account (BTA) is discretionary funding program administered by the Caltrans Bicycle Facility Unit. The BTA provides funding to local jurisdictions for the planning and implementation of bicycle projects that demonstrate a benefit for bicycle commuting. In order for Tehachapi to qualify for BTA funds, the Tehachapi Bicycle Master Plan must contain specific elements. **Table 1-1** displays the requisite BTA components and their location within this plan. The table includes “Approved” and “Notes/Comments” columns for the convenience of the official responsible for reviewing compliance.

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<sup>8</sup> Jacobsen, P. Safety in Numbers: More Walkers and Bicyclists, Safer Walking and Bicycling. Injury Prevention, 9: 205-209. 2003.

## 1.6 Plan Organization

The Tehachapi Bicycle Master Plan is organized by the following chapters:

- Chapter 2: Goals, Objectives, and Policies
- Chapter 3: Existing Conditions
- Chapter 4: Needs Analysis
- Chapter 5: Recommended Improvements
- Chapter 6: Funding

Table 1-1: BTA Compliance

Approved	Requirement	Page(s)	Notes/Comments
	a) The estimated number of existing bicycle commuters in the plan area and the estimated increase in the number of bicycle commuters resulting from implementation of the plan.	30-33	
	b) A map and description of existing and proposed land use and settlement patterns which shall include, but not be limited to, locations of residential neighborhoods, schools, shopping centers, public buildings, and major employment centers.	1-2	
	c) A map and description of existing and proposed bikeways.	17-23, 39-43	
	d) A map and description of existing and proposed end-of-trip bicycle parking facilities. These shall include, but not be limited to, parking at schools, shopping centers, public buildings, and major employment centers.	23-25, 43-45	
	e) A map and description of existing and proposed bicycle transport and parking facilities for connections with and use of other transportation modes. These shall include, but not be limited to, parking facilities at transit stops, rail and transit terminals, ferry docks and landings, park and ride lots, and provisions for transporting bicyclists and bicycles on transit or rail vehicles or ferry vessels.	25-26, 43-45	
	f) A map and description of existing and proposed facilities for changing and storing clothes and equipment. These shall include, but not be limited to, locker, restroom, and shower facilities near bicycle parking facilities.	23-25, 43-45	
	g) A description of bicycle safety and education programs conducted in the area included within the plan, efforts by the law enforcement agency having primary traffic law enforcement responsibility in the area to enforce provisions of the Vehicle Code pertaining to bicycle operation, and the resulting effect on accidents involving bicyclists.	25, 27, 30-35, 47-55	
	h) A description of the extent of citizen and community involvement in development of the plan, including, but not limited to, letters of support.	29	
	i) A description of how the bicycle transportation plan has been coordinated and is consistent with other local or regional transportation, air quality, or energy conservation plans, including, but not limited to, programs that provide incentives for bicycle commuting.	13-19	
	j) A description of the projects proposed in the plan and a listing of their priorities for implementation.	45-53	
	k) A description of past expenditures for bicycle facilities and future financial needs for projects that improve safety and convenience for bicycle commuters in the plan area.	27, 45-46	

# 1 Introduction

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## 2 Goals, Objectives, and Policies

The vision of the Tehachapi Bicycle Master Plan is to create a bicycle-friendly city in which bicycling is a safe and viable transportation and recreation option for all levels of bicycling abilities, and that Tehachapi is well-connected to the adjacent unincorporated communities by bicycle. This chapter outlines the goals, objectives, and policies that support this vision and will serve as guidelines in the development of a bicycle-friendly Tehachapi. In order to ensure a thorough and successful planning process, it is important to establish a set of goals, objectives, and policies that will serve as the basis for the recommendations in this Plan. The goals, objectives, and policies in this chapter are derived from information gathered over the course

of the planning process, including community input from public workshops and a review of bicycle master plans from other cities. **Table 2-1** presents the goals, objectives, and policies for the Tehachapi Bicycle Master Plan.

Goals are broad statements that express general public priorities. Goals are formulated based on the identification of key issues, opportunities, and problems that affect the bikeway system and were formed by public input.

Objectives are more specific than goals and are usually attainable through strategic planning and implementation activities. Implementation of an objective contributes to the fulfillment of a goal.

Policies are rules and courses of action used to ensure plan implementation and often accomplish a number of objectives. Policies are generally carried out by the City.



Table 2-1: Goals, Objectives, and Policies

<b>Goal 1: Bicycle Network</b>	
<b>Create a bicycle network in Tehachapi for all types of bicycle riders and all trip purposes</b>	
<b>Objective 1.1</b>	<b>Expand the existing bicycle network to provide a comprehensive network of Class I, Class II, and Class III facilities</b>
<b>Policies</b>	<ul style="list-style-type: none"> <li>Plan and install new bicycle lanes on major arterials with sufficient width</li> <li>Plan and install new bicycle paths along railroad tracks and in utility corridors, and the extension of existing bicycle paths</li> <li>Plan and install shared lane markings (“sharrows”) and signage on bicycle routes where bicycle lane implementation is demonstrated to be infeasible</li> <li>Encourage reallocation of roadway rights-of-way where appropriate to accommodate bicycling and bicycle facilities</li> <li>Ensure that all facilities are designed consistently in accordance with the latest Federal, State, and local standards</li> <li>Promote consistent signage that directs bicyclists to neighborhood destinations and increases the visibility of the bicycle network</li> </ul>
<b>Objective 1.2</b>	<b>Expand the existing bicycle network to increase connectivity between homes, jobs, public transit, recreational resources, and adjacent communities</b>
<b>Policies</b>	<ul style="list-style-type: none"> <li>Plan and install bicycle facilities adjacent to schools</li> <li>Plan and install bicycle facilities adjacent to major employment and shopping centers</li> <li>Plan and install bicycle facilities that will connect to regional facilities</li> <li>Work cooperatively with Kern County to coordinate bicycle planning and implementation activities</li> <li>Support the development of bicycle facilities that provide access to regional and local public transit services wherever possible</li> <li>Coordinate with transit providers to ensure bicycles can be accommodated on all forms of transit vehicles and that adequate space is devoted to their storage on board whenever possible</li> <li>Coordinate with transit agencies to install and maintain convenient and secure short-term and long-term bike parking facilities – racks, on-demand bike lockers, in-station bike storage, and staffed bicycle parking facilities – at transit stops, stations, and terminal</li> </ul>
<b>Objective 1.3</b>	<b>Coordinate with developers to provide bicycle facilities that encourage biking and link to key destinations</b>
<b>Policies</b>	<ul style="list-style-type: none"> <li>Require the implementation of bike lane and bicycle support facilities along key corridors</li> <li>Require bicycle parking at key locations, such as employment centers, parks, transit centers, schools, and shopping centers</li> </ul>
<b>Objective 1.4</b>	<b>Support efforts to develop a Complete Streets policy that accounts for the needs of bicyclists, pedestrians, disabled persons, and public transit users</b>
<b>Policies</b>	<ul style="list-style-type: none"> <li>Prioritize opportunities that improve walkability and bikeability by utilizing Complete Streets standards for all Capital Improvement Projects</li> </ul>
<b>Objective 1.5</b>	<b>Develop a bicycle parking policy</b>
<b>Policies</b>	<ul style="list-style-type: none"> <li>Establish bicycle parking design standards and requirements for all bicycle parking on City property and for private development</li> <li>Identify where bicycle parking facilities are needed and identify the appropriate type for each site</li> <li>Install and support short-term, long-term, and high capacity bicycle parking within the public right-of-way and on public property, especially in high demand locations, such as near commercial centers</li> <li>Provide bicycle parking that is sheltered from inclement weather</li> </ul>

<b>Goal 2: Safety</b>	
Improve safety for all road users through bikeway implementation, education, enforcement, and bikeway maintenance	
<b>Objective 2.1</b>	<b>Implement projects that improve the safety of bicyclists at key locations</b>
Policies	<ul style="list-style-type: none"> <li>Review bicyclist-related automobile crashes to identify potential problem areas</li> <li>Widen high-speed and high-volume roads that lack right-of-way for separated bicycle facilities</li> <li>Implement bicycle facilities on low-speed and low-volume roads</li> <li>Identify opportunities to remove travel lanes from roads where there is excess capacity in order to provide bicycle facilities</li> </ul>
<b>Objective 2.2</b>	<b>Increase education of bicycle safety through programs and trainings of the general public</b>
Policies	<ul style="list-style-type: none"> <li>Create, fund, and implement bicycle-safety curricula and provide to the general public and targeted populations, including diverse age, income, and ethnic groups</li> <li>Partner with neighboring communities to distribute bicycle-safety education materials</li> <li>Encourage elementary, middle, and high schools to develop and provide bicycle-safety curricula</li> <li>Support marketing and public awareness campaigns aimed at improving safety</li> <li>Implement a Safe Routes to School program for elementary and middle schools</li> <li>Educate the public about the hazards of riding bicycles on the sidewalk and adopt a policy prohibiting it</li> </ul>
<b>Objective 2.3</b>	<b>Increase education of bicycle safety through programs and trainings of City employees</b>
Policies	<ul style="list-style-type: none"> <li>Train City staff working on street design, construction, and maintenance projects to consider the safety of bicyclists in their work</li> <li>Develop bicycle-safety classes for City employees</li> <li>Develop bicycle-safety workshop for City-operated transit operators and other large fleet-vehicle operators</li> <li>Provide bicycle safety education to police and those cited for moving violations that focuses on safe cycling, relevant traffic laws, and safe sharing of the roadway</li> </ul>
<b>Objective 2.4</b>	<b>Increase enforcement activities that enhance safety of bicyclists on bike paths and roadways</b>
Policies	<ul style="list-style-type: none"> <li>Increase enforcement efforts on City-streets and bikeways</li> <li>Increase enforcement of unsafe bicyclist and motorist behaviors and laws that reduce bicycle/motor vehicle collisions and conflicts</li> <li>Consider using bicycle-mounted patrol officers</li> <li>Develop and promote efficient mechanisms for reporting behaviors that endanger cyclists</li> <li>Encourage targeted enforcement activities in areas with high bicycle volumes</li> </ul>
<b>Objective 2.5</b>	<b>Maintain bikeways that are clear of debris and provide safe riding conditions</b>
Policies	<ul style="list-style-type: none"> <li>Establish routine maintenance schedule/standards for bikeways for sweeping, litter removal, landscaping, repainting of striping, signage, and signal actuation devices</li> <li>Plan for cyclist safety during construction and maintenance activities</li> <li>Establish a routine maintenance program, such as a “bike hotline”, which responds to both citizen and city employee reports</li> </ul>
<b>Goal 3: Community Support</b>	
Develop a City-wide culture that respects and accommodates all users of the road	
<b>Objective 3.1</b>	<b>Support community involvement</b>
Policies	<ul style="list-style-type: none"> <li>Establish a Bicycle Advisory Committee to assist with the implementation of the Bicycle Master Plan</li> <li>Encourage citizen participation and stakeholder input in the planning and implementation of bikeways and other bicycle related improvements by holding public meetings and workshops to solicit community input</li> <li>Conduct periodic online surveys to gauge interest in bicycling and related issues throughout the City</li> </ul>

## 2 Goals, Objectives, and Policies

Objective 3.2	Create an online presence to improve visibility of bicycling issues in the City
Policies	<ul style="list-style-type: none"> <li>• Provide updates to the community about planned projects</li> <li>• Provide closure updates to the community about City and regional bikeways</li> </ul>
Objective 3.3	Foster community support for bicycling by raising public awareness about bicycling and supporting programs that encourage more people to bicycle
Policies	<ul style="list-style-type: none"> <li>• Support marketing and public awareness campaigns through a variety of media aimed at promoting bicycling as a safe, healthy, cost-effective, environmentally beneficial transportation choice</li> <li>• Support programs aimed at increasing bicycle trips by providing incentives, recognition, or services that make bicycling a more convenient transportation mode</li> <li>• Promote bicycling at City-sponsored and public events, such as Earth Day, Bike to Work Day/Month, farmer's markets, public health fairs, art walks, craft fairs, civic events</li> <li>• Create a monthly, quarterly, or biannual street-closure event, such as a "ciclovía", to encourage bicycling and walking</li> <li>• Encourage and promote bicycle related businesses within Tehachapi</li> <li>• Apply for the designation as "Bicycle Friendly Community" through the League of American Bicyclists</li> </ul>
<b>Goal 4: Implementation and Funding</b>	
Ensure adequate funds are pursued in order to implement proposed bikeways and support facilities in this Plan	
Objective 4.1	Integrate consideration of bicycle travel into all roadway planning, design, and construction
Policies	<ul style="list-style-type: none"> <li>• Incorporate the Tehachapi Bicycle Master Plan in whole by reference into the City's General Plan and amend sections of the General Plan that are relevant to bicycling according to the goals of this Plan</li> <li>• Ensure that all current and proposed Area Plans' objectives and policies are consistent with the goals of the Tehachapi Bicycle Master Plan.</li> <li>• Support the incorporation of bicycle facilities into other capital improvement projects, where appropriate, to ensure maximum leveraging of funds from outside sources</li> </ul>
Objective 4.2	Continuously monitor and evaluate Tehachapi's implementation progress of Bicycle Master Plan policies, programs, and projects
Policies	<ul style="list-style-type: none"> <li>• Establish a staff mobility coordinator position</li> <li>• Track trends in bicycle commuting through the use of Census data, travel surveys, and bicycle counts</li> <li>• Regularly monitor bicycle safety and seek a continuous reduction in bicycle-related collisions on a per capita or per bicyclist basis over the next twenty years</li> </ul>
Objective 4.3	Fund the Bicycle Master Plan
Policies	<ul style="list-style-type: none"> <li>• Pursue diverse sources of funding and support efforts to maintain or increase federal, state and local funding for the implementation of Bicycle Master Plan programs and infrastructure</li> <li>• Support innovative funding mechanisms to implement this Bicycle Master Plan</li> <li>• Support new funding opportunities for bicycle facilities that are proposed at the Federal, State, and Local level that impact the City</li> <li>• Identify and apply for grant funding to support the development of bicycle facilities</li> <li>• Consider using bikeways as mitigation for project-related vehicle trips</li> </ul>

## 3 Existing Conditions

This chapter presents the existing conditions in the City of Tehachapi. The chapter includes a discussion of relevant plans and policies, as well as the existing bicycle network and bicycle support facilities, bicycle detection, multi-modal connections, education and enforcement strategies, and past bicycle-related expenditures.

### 3.1 Relevant Plans and Policies

This chapter presents existing plans and policies relevant to the City of Tehachapi Bicycle Master Plan. It is organized by City of Tehachapi, Kern County, and other plans and policies.

#### 3.1.1 City of Tehachapi

The Mobility Elements and the Public Realm Element of the Tehachapi General Plan are relevant to the Tehachapi Bicycle Master Plan. These Elements are discussed below.

#### Tehachapi General Plan (2011)

The City of Tehachapi's Mobility Element stresses the importance of a multi-modal transportation network that facilitates non-motorized travel. The Mobility Element highlights two issues related to bicycling that are relevant to this planning effort:

- Multiple options for transportation modes must be provided, including an efficient transit system that is coordinated with the towns emerging structure of neighborhood activity centers
- A complete bicycle and equestrian network is needed

**Table 3-1** presents portions of objectives and policies presented in the Mobility Element that are relevant to bicycling in Tehachapi.

The City of Tehachapi's Public Realm Element addresses bicycling in several of its objectives and policies, which are presented in **Table 3-2**.

**Table 3-1: Mobility Element Objectives and Policies**

Objective	Policy
<b>Objective 1: Connect as many streets as possible</b>	
Improving the connectivity of the street network will better integrate the City's existing neighborhoods and future land uses. The connectivity is important to reduce congestion while maintaining the small town character of each roadway without widening them to suburban standards.	Extended bicycle and equestrian routes where appropriate
<b>Objective 2: Coordinate street function to exhibit a hierarchy of streets</b>	
Tehachapi's hierarchy of streets needs to be as physically varied and clear in order to manage circulation and keep vehicle speed in balance with pedestrians, cyclists, and adjacent uses.	Reserve or acquire right of way for future roadway improvements consistent with the Mobility Element
<b>Objective 8: Enhance the pedestrian and bicycle network</b>	
Walking and cycling are important modes of transportation to the long-term health and viability of Tehachapi. In order to make these modes a more viable option, pedestrians and bicyclists must have a connected infrastructure network to provide greater access to activity centers.	<ul style="list-style-type: none"> <li>• Maintain a bicycle network that connects bikeways with activity centers</li> <li>• Enable streets with short pedestrian crossings</li> <li>• Require pedestrian infrastructure consistent with the street hierarchy and intended physical context.</li> </ul>

Table 3-2: Public Realm Element Objectives and Policies

Objective	Policy
<b>Objective 1: Connect with nature</b>	
Tehachapi’s physical proximity to the Tehachapi mountain range and its overall setting within a high altitude valley create a dramatic backdrop while reminding one that nature is nearby and very much a defining quality for the town. The manner in which the town connects to and is enhanced by nature is vitally important to both Tehachapi’s identity and appeal.	Incorporate bicycle and pedestrian access into all thoroughfare types, according to the intended context they are to generate or support
<b>Objective 2: Enhance access and walkability</b>	
The need for pedestrians to have access throughout Tehachapi and to feel comfortable while walking, biking or running is fundamental to the success of the public realm.	Maintain bicycle access-types (class 1, 2 or 3) on all thoroughfare types including grade-separations
<b>Objective 5: Enable Temporary Open Space</b>	
In addition to the various formal and informal open spaces throughout Tehachapi, there is the opportunity to temporarily convert areas primarily used for other purposes to open space use. Similar to how a parade route temporarily uses public right-of-way for community purposes, Tehachapi can regularly use part of the thoroughfare network for public recreation purposes while not needing to acquire land or expand the network of paths for such purposes.	During non-peak hours (e.g., Sunday mornings), convert one side of principal and/or secondary thoroughfares to temporary bicycle and pedestrian/jogging paths and link them to form a route that enables as many Tehachapians to participate as possible;

**Downtown Tehachapi Master Plan**

The Downtown Tehachapi Master Plan is intended to support the coordinated future development of the downtown area in a way that helps achieve the community’s vision of “an attractive destination within the greater community with a special and distinctive feeling”. The Master Plan’s bicycle-related circulation concepts include the creation of bike connections to locations including Golden Hills, Old Town, the high school, Valley Boulevard, surrounding neighborhoods, and open space elements.

**Tehachapi City-Wide Traffic Model Memorandum**

The Tehachapi City-Wide Traffic Model Memorandum presents level of service (LOS) results at intersections and roadway segments within the City. The results are based on the development of

a city-wide static traffic model, which examines transportation and traffic conditions for Existing Conditions (2011), Interim Conditions (2016), and Future Conditions (2021) scenarios.

In the existing conditions scenario, intersection LOS is level C or better. The LOS drops to D at the majority of intersections in the interim conditions scenario. In the future conditions scenario some intersections drop to E from existing conditions. Existing conditions roadway segment daily and peak hour LOS is a level B or higher. In the interim conditions, LOS remains at levels A and B, except for a few locations where LOS drops to F. In the future conditions, several additional locations drop to level C.

The forecasted reduction in LOS is a result of increased trip generation due to growth and development in Tehachapi. This bicycle master

plan has the potential to improve future traffic conditions in the city by creating bicycling as a viable transportation alternative to driving.

**Municipal Code**

The City’s Municipal Code contains three ordinances relevant to bicycle planning, shown in **Table 3-3**. According to the Municipal Code, bicycles

are restricted on selected sidewalks and certain land uses have bicycle parking requirements.

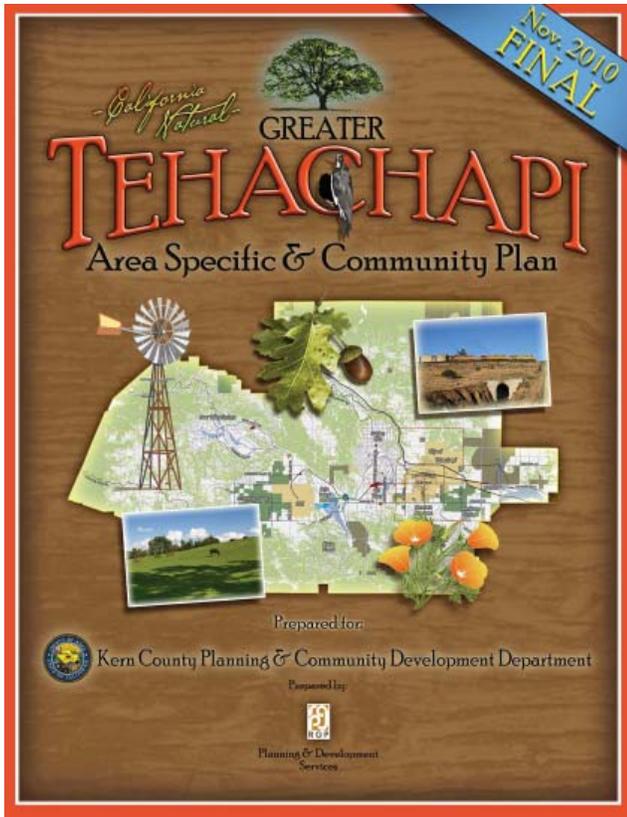
**3.1.2 Kern County**

**Kern County Bicycle Master Plan and Complete Streets Recommendations (in progress)**

The Kern Council of Governments is currently developing a Kern County Bicycle Master Plan

**Table 3-3: Bicycle-Related Municipal Code Ordinances**

Ordinance	Description
9.04.010 Riding motorcycles, bicycles, and toy vehicles on streets or sidewalks restricted	<p>Every person who rides or operates a bicycle or tricycle on any of the following described sidewalks and other property in any manner or speed is guilty of an infraction, provided such sidewalk or property is posted notifying the public of such prohibition; the sidewalks on either side of the following streets and the other property described as follows:</p> <ul style="list-style-type: none"> <li>• Tehachapi Boulevard between Mulberry Street extended and Snyder Avenue</li> <li>• “F” Street between Mulberry Street and Robinson Street</li> <li>• “E” Street between Mulberry Street and Robinson Street</li> <li>• “D” Street between Mulberry Street and Mill Street</li> <li>• “C” Street between Mill Street and Pauley Street</li> <li>• Mill Street between Maple Street and Tehachapi Boulevard</li> <li>• Pauley Street between “E” Street and Tehachapi Boulevard</li> <li>• Curry Street between “C” Street and Tehachapi Boulevard</li> <li>• Green Street between “D” Street and Tehachapi Boulevard</li> <li>• Robinson Street between “E” Street and Tehachapi Boulevard</li> <li>• Anita Drive from Snyder Avenue for a distance of four hundred feet east thereof</li> <li>• Sidewalks adjacent to the Senior Citizens Center located at the southeast corner of South Hayes and East “F” Streets</li> <li>• All church and hospital parking lots and other paved areas provided the owners thereof agree therewith and request such restrictions and enforcement in writing</li> <li>• All other sidewalks and property hereafter designated by a resolution of the city council.</li> </ul>
5.12.070 Bicycle Parking	<p>The person to whom a license is issued by the city for an arcade business shall provide adequate parking space for bicycles, either inside or outside the business premises, and shall not permit the parking of bicycles or other obstruction on any portion of the public right-of-way for pedestrians adjoining the business premises.</p>
18.82.020 Required Parking Spaces	<ul style="list-style-type: none"> <li>• Swimming pool: One per one hundred square feet of pool and deck area plus bicycle parking racks containing a minimum of ten spaces</li> <li>• Video games arcade: One per one hundred square feet of gross building area plus bicycle parking racks containing a minimum of ten spaces.</li> </ul>



and Complete Streets Recommendations. The Bicycle Master Plan includes proposed bicycle facilities, locations for end-of-trip facilities, and programmatic improvements to encourage bicycling throughout Kern County. The Complete Streets Recommendations provides guidance to communities in Kern County of how to effectively provide facilities for all road users and thus making their streets more multi-modal. The City of Tehachapi's Bicycle Master Plan should be coordinated with this effort to provide proposed regional connections between Tehachapi and adjacent communities.

#### Greater Tehachapi Area Specific and Community Plan (2010)

The Board of Supervisors of Kern County adopted the Greater Tehachapi Area Specific and Community Plan in 2010. The intent of the Plan is to provide guidance and recommendations for the development of the area in accordance with the provisions of the Kern County General Plan.

The Greater Tehachapi Area encompasses approximately 275 square miles of unincorporated communities located in eastern Kern County between the San Joaquin Valley and the Mojave Desert. The Plan establishes planning goals, policies and implementation measures to guide future growth and ensure sustainability of the Greater Tehachapi Area (GTA) from 2010-2030.

The Circulation Element of the Plan identifies the location for existing and proposed expansion of the transportation network in the GTA, including infrastructure for alternative transportation modes. The Circulation Element identifies the following issues relevant to the development of alternative transportation facilities, including bicycle, trail, and pedestrian networks:

- Limited number of roadway facilities, and lack of connectivity between the GTA communities
- Coordination between multiple land management agencies, and property owners within the GTS region for the development of connected trails
- The future establishment and realignment of trails, including the Pacific Crest Trail, may be impacted by property rights of private and public property owners
- Opportunities for new bicycle and pedestrian facilities can be studied along existing railroad right-of-ways and open space areas
- Opportunities for the implementation of the Complete Streets Act (CA-AB1358) requirements specified in the Kern County General Plan- it is anticipated that improved facilities for alternative transportation modes will be more readily available
- Most of the existing and planned facilities are located within the City of Tehachapi. The existing "Freedom Trail," that runs from Golden Hills into the City and connects to a Class I bicycle path.

### Destination 2030 – Kern County Regional Transportation Plan and Federal Transportation Improvement Program (2004)

The Kern Council of Governments (COG) Federal Transportation Improvement Program (FTIP) functions as the implementation document for the County's Long-Range Transportation Plan, Destination 2030. The FTIP identifies the popularity and growth of bicycling in Kern County, and supports the development of mixed-use zoning to support and expand bicycling. The FTIP identifies key funding sources that will help build the bikeway network in Kern County, including:

- Transportation Enhancements Program (TE)
- Recreational Trails Program (RTP)

The FTIP identifies recommended projects for TE and RTP funding sources. The recommended projects for TE funds include various bike paths throughout Tehachapi.

In public workshops for Destination 2030, Kern COG asked attendees where they would like to see future projects implemented. 13 percent of respondents noted that they would like a path between Golden Hills and Tehachapi.

### Kern County Bicycle Facilities Plan (2001)

The Kern County Bicycle Facilities Plan is a compendium of bicycle transportation facilities, both constructed and planned, within Kern County incorporated cities including Arvin, Metropolitan Bakersfield, California City, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Taft, Tehachapi, Wasco, and Lake Isabella.

The Goals of the Plan include:

- Provide a balanced and efficient transportation system that maximizes the reduction of air pollution

- Provide safe, accessible and convenient bicycling facilities
- Support and encourage increased levels of bicycling and walking
- Promote the use of bicycles as an integral component of the regional multi-modal transportation network

**Table 3-4** displays proposed bicycle facilities in Tehachapi as part of the Kern County Bicycle Facilities Plan. Proposed facilities are also shown in **Figure 3-1**. Some of the facilities have been built since the adoption of the Kern County Bicycle Facilities Plan. These include:

- Curry Street bike path (C Street to Valley Boulevard)
- Mt View Avenue bike lanes (Tehachapi Boulevard to D Street)
- Robinson Street bike lanes (Tehachapi Boulevard to C Street)
- Valley Boulevard bike paths and bike lanes (Tucker Road to Snyder Avenue)
- D Street bike lanes and bike route (Mt View Avenue to Mill Street)
- Red Apple Avenue bike lanes (Westwood Boulevard to Tucker Road)



# 3 Existing Conditions

Figure 3-1: Kern County Bicycle Facilities Plan Proposed Facilities in Tehachapi

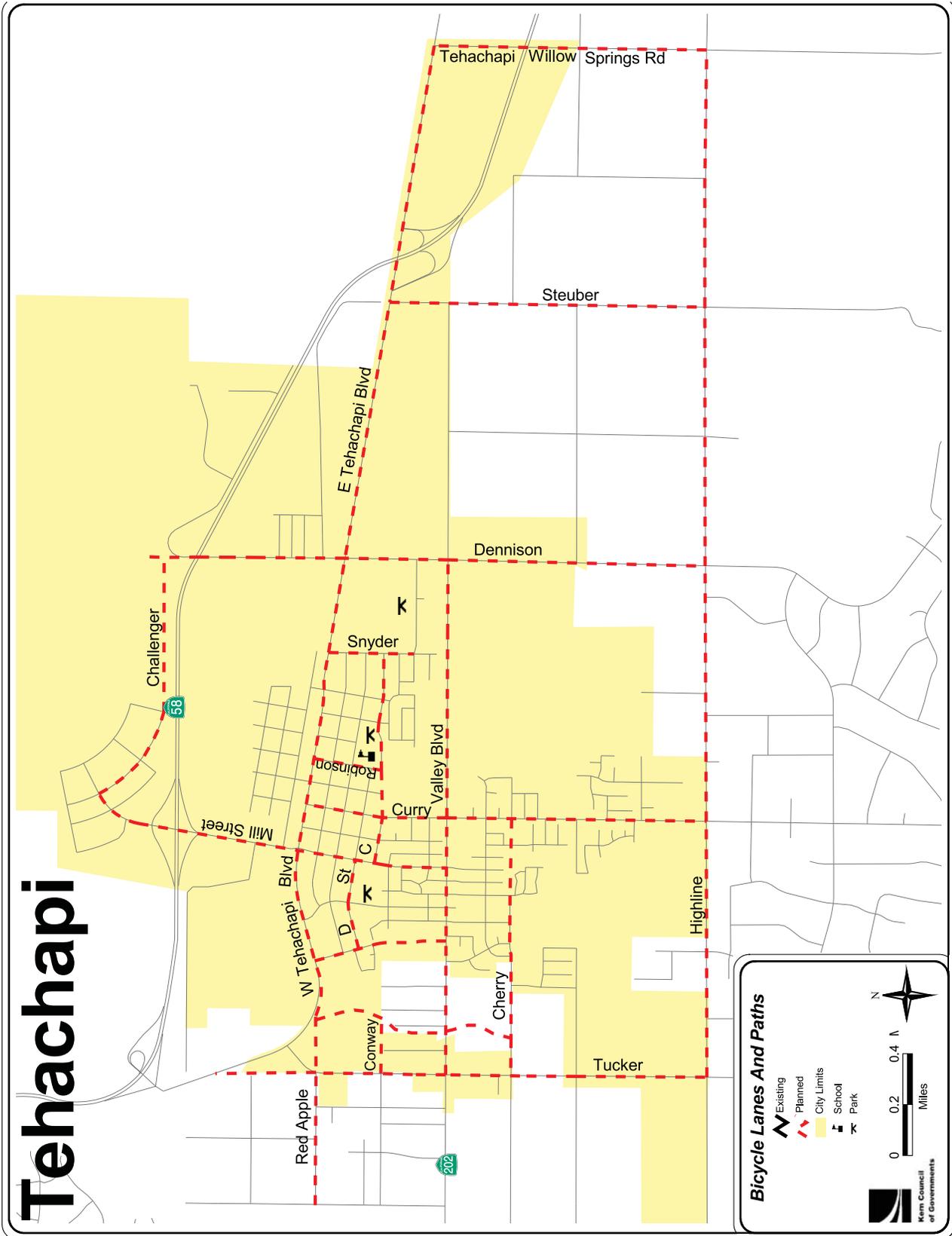


Table 3-4: Proposed Bicycle Facilities in Tehachapi

Street	From	To
<b>North-South Routes</b>		
Tucker Road	Highline Road	Tehachapi Boulevard
Summit Road	Highline Road	Valley Boulevard
Curry Street	Valley Boulevard	Tehachapi Boulevard
Mt. View Avenue	Valley Boulevard	Tehachapi Boulevard
Mill Street	Valley Boulevard	Capital Hills Drive
Robinson Street	C Street	Tehachapi Boulevard
Snyder Avenue	Anita Drive	Tehachapi Boulevard
Dennison Road	Highline Road	Tehachapi Boulevard
Stueber Road	Highline Road	Tehachapi Boulevard
Tehachapi-Willow Springs Road	Highline Road	Tehachapi Boulevard
<b>East-West Routes</b>		
Highline Road	Tucker Road	Tehachapi-Willow Springs Road
Cherry Lane	Tucker Road	Brentwood Street
Valley Boulevard	Tucker Road	Summit Road
D Street	Mt. View Road	Mill Street
C Street	Robinson Street	Snyder Street
Tehachapi Boulevard	Tucker Road	Tehachapi-Willow Springs Road
Red Apple Avenue	Westwood Boulevard	Tucker Road

### 3.1.3 Other Plans and Policies

#### California Green Code (2011)

The City of Tehachapi uses the California Green Code standards for bicycle parking requirements for new development. The California Green Code requirements are presented in Table 3-5.

### 3.2 Existing Bicycle Network

Standard Caltrans bicycle facility types in Tehachapi are shown in Figure 3-2. Bicycle facility types include Class I Bike Paths, Class II Bike Lanes, and Class III Bike Routes, as well as non-standard bike paths. Figure 3-3 shows the locations of existing bicycle facilities in Tehachapi.

Table 3-5: California Green Code Bicycle Parking Requirements

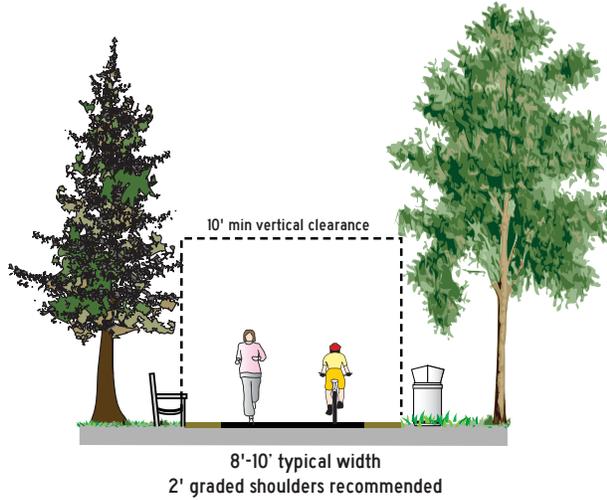
Category	Description
Bicycle Parking and Changing Rooms	Comply with sections 5.106.4.1 and 5.106.4.2; or meet local ordinance or the University of California Policy on Sustainable Practices, whichever is stricter.
Short-Term Bicycle Parking	If the project is expected to generate visitor traffic, provide permanently anchored bicycle racks within 100 feet of the visitors' entrance, readily visible to passers-by, for 5 percent of visitor motorized vehicle parking capacity, with a minimum of one two-bike capacity rack.
Long-Term Bicycle Parking	For buildings with over 10 tenant-occupants, provide secure bicycle parking for 5 percent of motorized vehicle parking capacity, with a minimum of one space. Acceptable parking facilities shall be convenient from the street and may include: <ul style="list-style-type: none"> <li>• Covered, lockable enclosures with permanently anchored racks for bicycles</li> <li>• Lockable bicycle rooms with permanently anchored racks</li> <li>• Lockable, permanently anchored bicycle lockers</li> </ul>

Figure 3-2: Bikeway Types

### Shared-Use Path



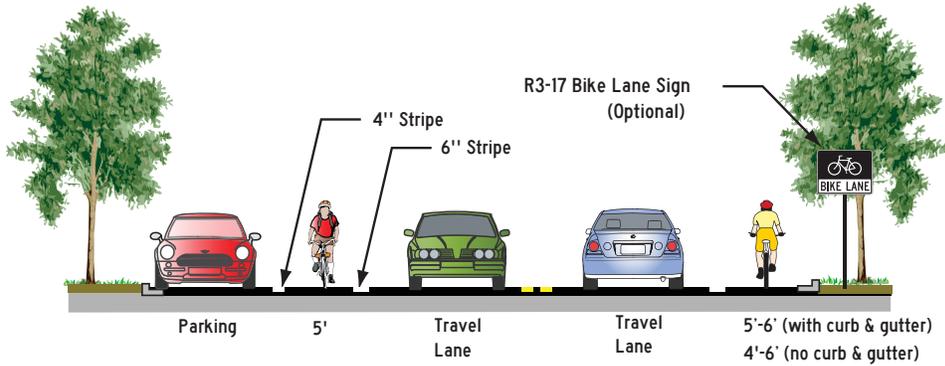
Provides completely separated right-of-way for exclusive use by bicycles and pedestrians with cross-flow minimized



### Bike Lane



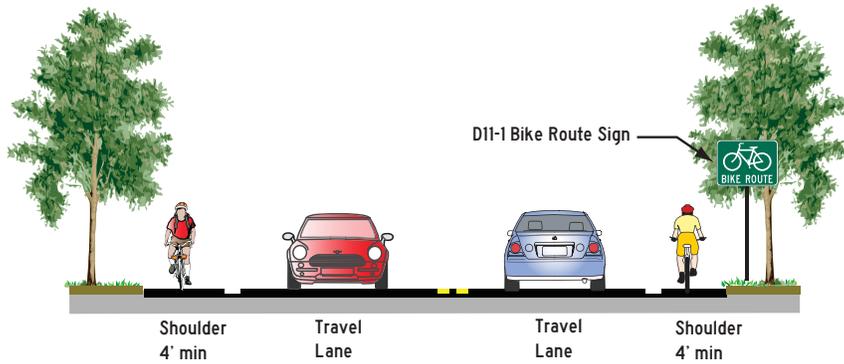
Provides striped lane for one-way bike travel on a street or highway



### Bike Route



Provides for shared-use with motor vehicles, typically on lower volume roadways



Optional Shared Lane Marking 11' (min) center to curb

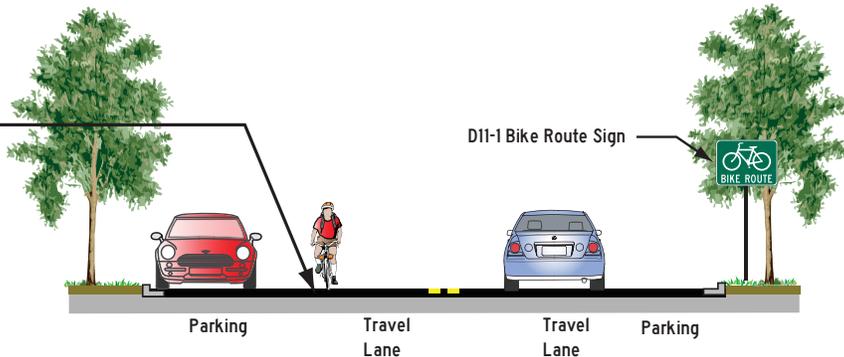
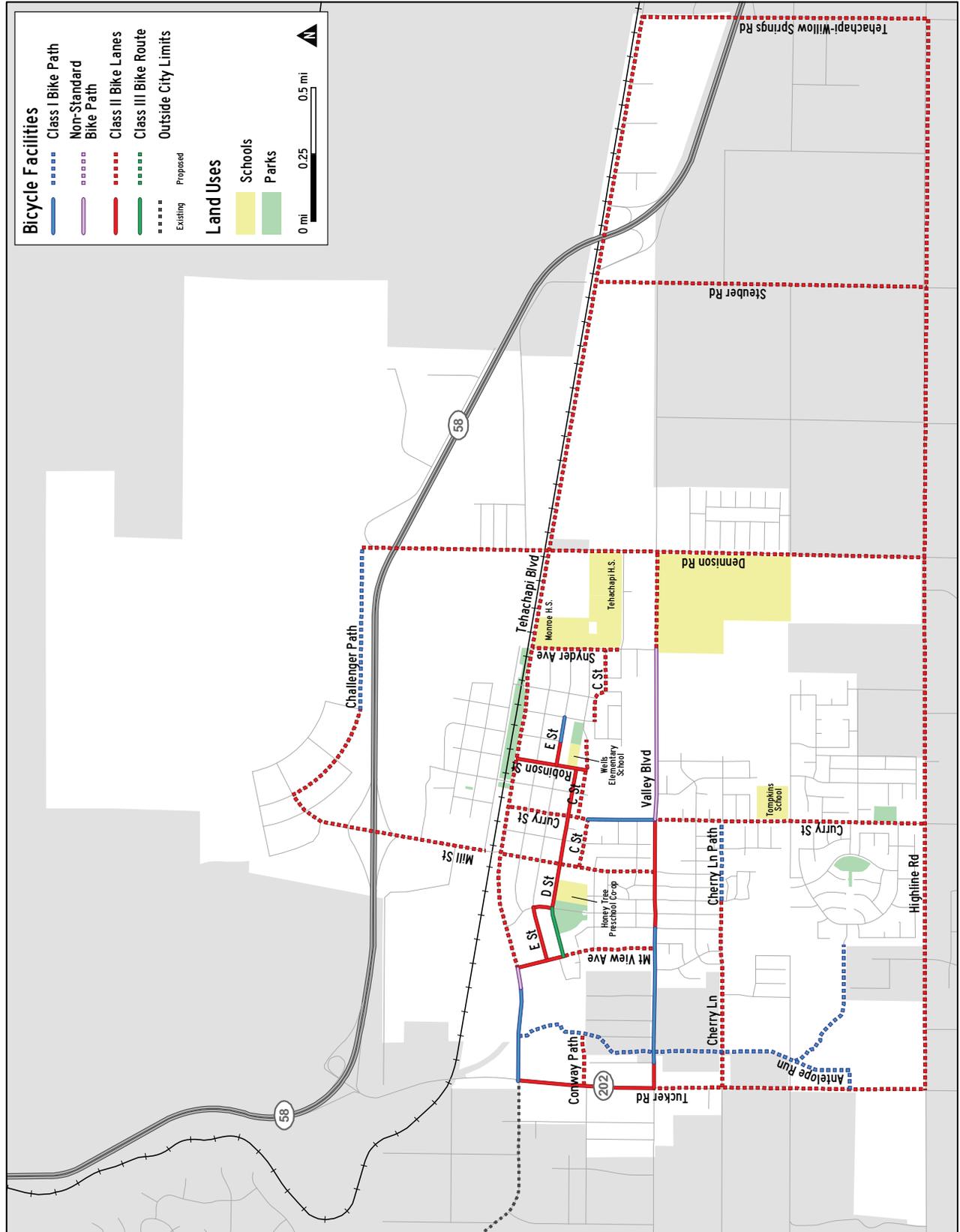


Figure 3-3: Existing and Proposed Bicycle Facilities in Tehachapi



### 3.2.1 Class I Bike Paths

Class I bike paths are paved rights-of-way for exclusive use by bicyclists, pedestrians, and those using non-motorized modes of transportation. Class I facilities can be constructed in roadway rights-of-way or can have exclusive off-street right-of-way, such as in utility corridors. Bike paths are a key element of a bicycle network because they provide an alternative for bicyclists that do not feel comfortable riding with automobile traffic. As shown in **Table 3-6**, Tehachapi currently has approximately 1.15 miles of Class I bike paths.

#### Non-Standard Bike Paths

Non-standard bicycle paths in Tehachapi are those that do not meet Caltrans standards to be considered a Class I bicycle path. They are paved pathways that provide a completely separated right of way for the exclusive use of bicycles and pedestrians, but do not meet minimum width requirements. As shown in **Table 3-7**, Tehachapi has approximately 0.72 miles of non-standard bike paths.

### 3.2.2 Class II Bike Lanes

Class II Bike Lanes are striped and signed on-street travel lanes exclusively for bicycles. Bike lanes provide physical separation from automobile traffic and appeal to bicyclists with moderate to high levels of experience. Because they often provide the most direct connections, these facilities tend to be most popular with experienced bicycle commuters. As shown in **Table 3-8**, Tehachapi has approximately 2.35 miles of Class II bike lanes.

### 3.2.3 Class III Bike Routes

Bike routes use signage and optional shared lane markings to indicate that the road is a shared use facility between vehicles and bicyclists. These facilities are typically recommended for:

- Streets with relatively low traffic speeds

(25 mph or less) and lower traffic volumes (<3,000 ADT) such that less experienced bicyclists will feel comfortable bicycling with mixed traffic

- Streets with traffic speeds in excess of 25 mph and traffic volumes greater than 3,000 ADT that normally warrant bike lanes but because of curb-to-curb or other right-of-way constraints, bicyclists must share traffic lanes with motorists; careful consideration must be given to designating these streets as shared roadways to ensure that roadway conditions are safe for bicyclists

As shown in **Table 3-9**, Tehachapi has one 0.18-mile Class III bike route. This bike route has “Share the Road” signage to inform all road users of its designation.

### 3.2.4 Proposed Facilities

Proposed bikeways shown in **Figure 3-3** are taken from the 1999 Tehachapi General Plan. The City has plans to construct an approximately 2 mile long multi-use path adjacent to the Antelope Run channelized stream. In late 2011, the County of Kern received a Transportation Enhancement grant to construct the southern portion of the path (between Valley and Highline) in the year 2013. In



Table 3-6: Class I Bike Path Mileage

Street	From	To	Mileage
Curry Street	C Street	Valley Boulevard	0.25
E Street	Davis Street	Mojave Street	0.09
Tehachapi Blvd	Tucker Road	West of Mt View Avenue	0.30
Valley Boulevard	Las Colinas Street	Oakwood Street	0.51
<b>Total</b>			<b>1.15</b>

Table 3-7: Non-Standard Bike Path Mileage

Street	From	To	Mileage
Tehachapi Boulevard	West of Mt View Avenue	Mt View Avenue	0.08
Valley Blvd	Curry Street	Snyder Avenue	0.64
<b>Total</b>			<b>0.72</b>

Table 3-8: Class II Bike Lane Mileage

Street	From	To	Mileage
D Street	Mulberry Street	Robinson Street	0.53
E Street	Mt View Avenue	Mulberry Street	0.20
E Street	Robinson Street	Davis Street	0.10
Mt View Avenue	Tehachapi Boulevard	D Street	0.18
Mulberry Street	E Street	D Street	0.07
Robinson Street	Tehachapi Boulevard	C Street	0.27
Tucker Road	Tehachapi Boulevard	Valley Boulevard	0.50
Valley Boulevard	Tucker Road	Las Colinas Street	0.09
Valley Boulevard	Oakwood Street	Curry Street	0.41
<b>Total</b>			<b>2.35</b>

Table 3-9: Class III Bike Route Mileage

Street	From	To	Mileage
D Street	Mt View Avenue	Mulberry Street	0.18
<b>Total</b>			<b>0.18</b>

fall 2011, Tehachapi submitted an application to the California Resources Agency for Proposition 84 funding to construct the path between Valley Boulevard and Tehachapi Boulevard.

### 3.3 Existing End-of-Trip Facilities

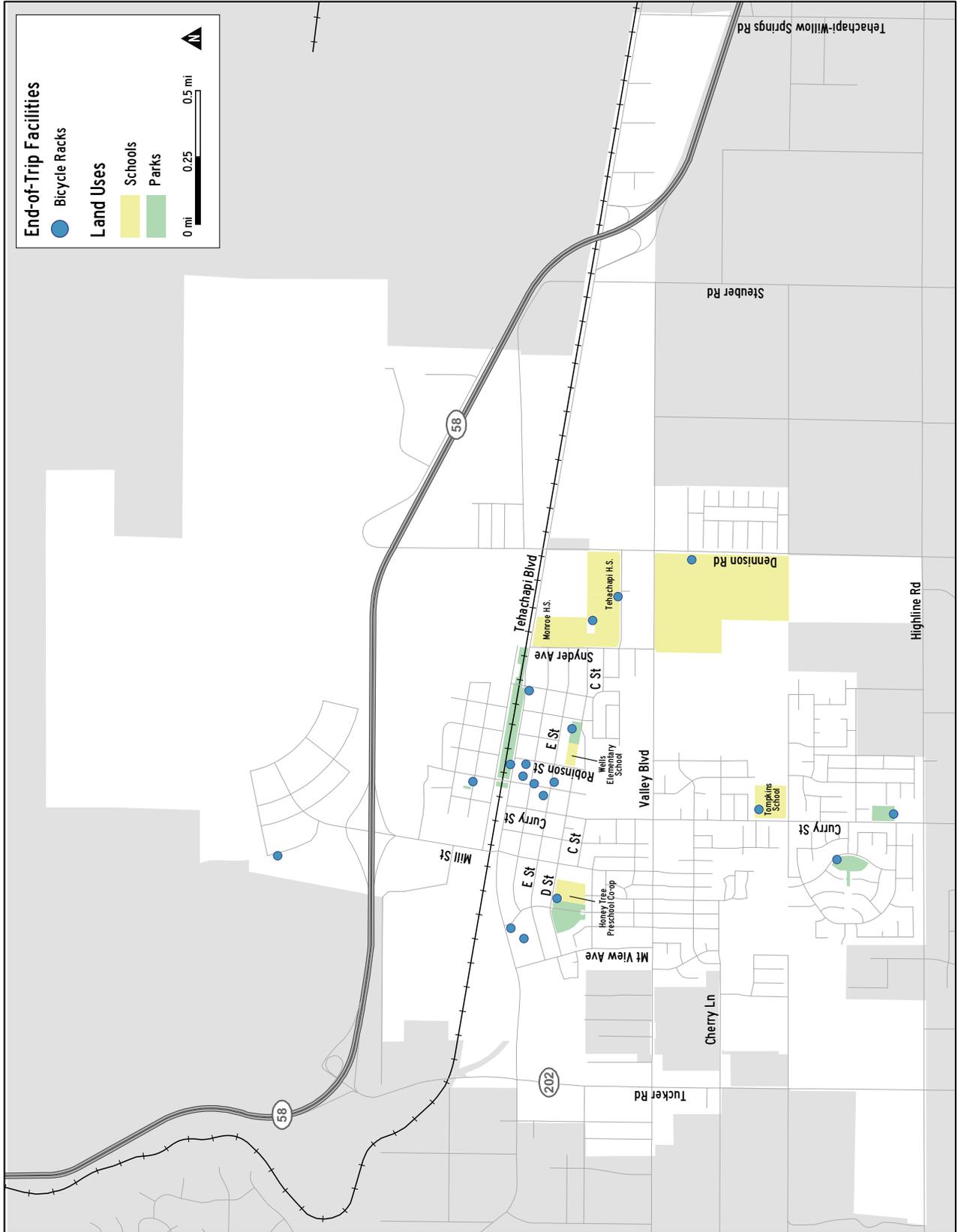
Tehachapi has existing bicycle parking in the form of short-term bicycle racks throughout the city. Bicycle rack locations are shown in **Figure 3-4**, which includes parks, shopping centers, and schools. Short-term bicycle parking is meant for

visitors, customers, and others seeking storage of bicycles for several hours. Bicycle racks provide a high level of convenience and moderate level of security. Most racks in Tehachapi are “wave racks.” These racks are not a recommended rack style as they do not provide contact with the bicycle at two points. Two points of contact provides stability for the bicycle and allows the bicyclists to lock both the front and back wheels.

Tehachapi has no existing long-term bicycle parking. Long-term bicycle parking facilities

# 3 Existing Conditions

Figure 3-4: Existing Bicycle Parking Locations



include lockable, enclosed spaces that protect the entire bicycle, its components, and its accessories against theft and inclement weather, such as rain and snow. These facilities are more secure than short-term facilities.

The City also has no existing facilities for changing and storing clothes or for showering. These facilities help encourage bicycle commuting by providing a place for bicyclists to clean-up before work.

### 3.4 Bicycle Detection

In-ground loop detectors and video detection are common methods used to detect vehicles at traffic signals. Due to their smaller size, bicyclists are often not detected by vehicular detectors and thus never trigger a green light. At some intersections in Tehachapi, the City installed R62C (CA) “Bicycle Push Button for Green Light” signage, which directs bicyclists to use the pedestrian push button to trigger the signal. Though signage is helpful in informing bicyclists that the signal likely will not detect them, using a push button is less convenient for bicyclists than well-calibrated in-ground loop detectors and video detection, and does not comply with Caltrans policy<sup>9</sup>.

## 3.5 Multi-Modal Connections

### 3.5.1 Bus Service

Combining bicycle trips with transit trips can increase the distance traveled and provide a level of mobility comparable to automobile travel. Transit service in Tehachapi consists of regional, statewide, and national bus service.

#### Regional Transit

Kern Regional Transit operates the East Kern Express bus service between Bakersfield and Lancaster with one stop in Tehachapi. The bus stop is located on Mulberry Street in front of K-Mart and

is shown in **Figure 3-5**. Some Kern Regional Transit buses are equipped with bicycle racks that are available on a first-come first-served basis. Though the bus stop lacks existing bicycle parking, there are bicycle racks located in the adjacent commercial center at Burger King and K-Mart.

Orange Belt Stages operates coach service from Las Vegas, NV to Hanford, CA, which stops in Tehachapi at the Mulberry Street bus stop.

#### Statewide and National Bus Service

Amtrak California and Greyhound provide thruway bus service, which stops at the Mulberry Street bus stop several times per day. Some Amtrak California busses are equipped with bicycle racks. Busses without bicycle racks provide bicycle storage in the luggage compartment on the underside of the busses. Greyhound requires bicycles to be packed in a secure container, but permits them on busses.

### 3.5.2 Tehachapi Municipal Airport

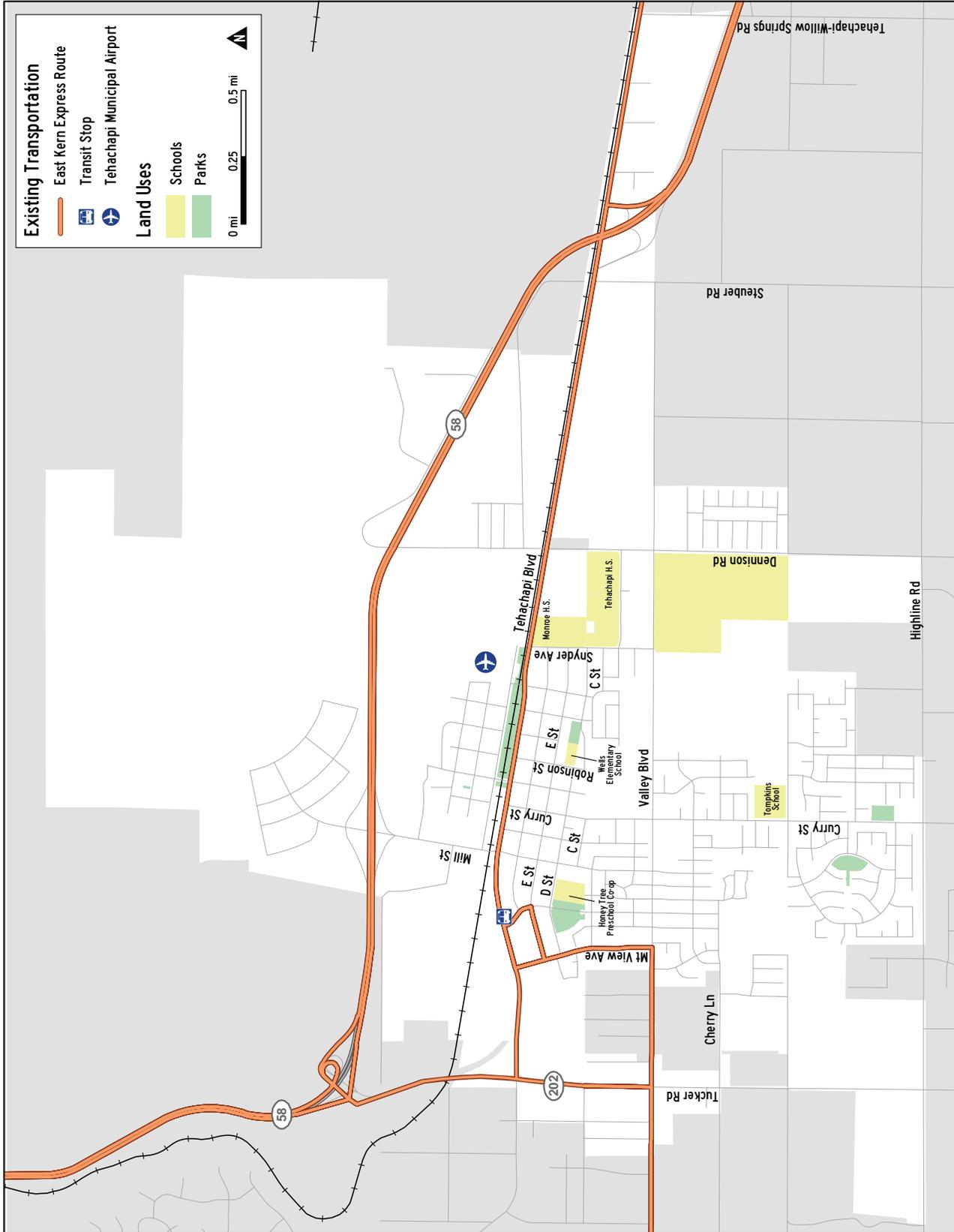
Tehachapi operates a general aviation airport located between Highway 58 and Tehachapi Boulevard, which is in close proximity to the downtown. The airport is shown on **Figure 3-5**. There are no existing bicycle facilities connecting the airport to Tehachapi. The City has considered looking into the feasibility of a bike share program at the airport to encourage tourists to bicycle into the city.

## 3.6 Education and Enforcement Strategies

The City of Tehachapi receives \$1,000 per year in Transportation Development Act (TDA) funds for bicycle safety. There is no consistent program that this funding is allocated towards. In the past, the City has used the money on bicycle equipment giveaways, such as bicycle helmets and lights.

# 3 Existing Conditions

Figure 3-5: Existing Multi-Modal Connections



The Tehachapi Police Department also has conducted a bicycle rodeo to teach bicycle safety to children.

### 3.7 Past Expenditures

From 2007-2011, the City of Tehachapi has spent the following amounts on bicycle related activities:

- \$281.55 on a “bike rodeo” held by the Tehachapi Police Department
- \$3,170.62 to install 11 bike racks at various locations throughout the city

## 3 Existing Conditions

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## 4 Needs Analysis

### 4.1 Public Outreach

The City of Tehachapi held a Bicycle Master Plan public workshop on January 18, 2012 from 6:00-8:00 pm. 30 people attended the workshop, including City staff, residents, and members of the Tehachapi Mountain Trails Association. The workshop was organized as an open house and asked attendees to vote with “workshop currency dots” on bicycle facilities, bicycle support facilities, signage, programs, and other information they would like to see implemented in Tehachapi. Attendees could also provide input on comment cards and flip charts, and draw on large-scale maps.



The results of the voting determined that Tehachapi residents are most interested in the following facilities, signage, and programs being included in the plan:

- Class I and Class II facilities
- Curb extension bicycle racks
- Bicycle lockers
- Share the Road signage
- Bicycle skills courses
- Safe Routes to School program

Workshop attendees highlighted other key issues with existing bicycling conditions in Tehachapi on comment cards and flip charts. These comments include:

- Lack of shoulders on high-speed roads (i.e. Highline Road, Tehachapi Boulevard, and Highway 202)
- Missing local and regional connections (i.e. to Sand Canyon and Golden Hills)
- Lack of convenient bike parking, especially downtown
- Lack of connections to schools, commercial centers, and the airport
- Desire for education, encouragement, and safety programs
- Roads should be maintained more frequently to reduce flat tires and increase safety for bicyclists

Streets that workshop attendees commonly identified on the large-scale maps as in need of bicycle facilities include:

- Highline Road
- Tehachapi Boulevard
- Tucker Road
- H Street
- E Street
- Mill Street
- Highway 202 / Valley Boulevard

### 4.2 Bicycle Commuter Estimates

United States Census American Community Survey “Commuting to Work” data provides an indication of current bicycle system usage. **Table 4-1** provides means of transportation to work data for Tehachapi. Most of Tehachapi’s workers (88.6 percent) either drive alone or carpool to work, as compared with only 0.6 percent of the city’s workers who travel by bicycle. While this existing bicycle mode share is low, it is slightly higher than the bicycle mode shares of Kern County and the United States.

Table 4-1: Means of Transportation to Work

Mode	Tehachapi	Kern County	California	United States
Bicycle	0.6 %	0.4 %	0.9 %	0.5 %
Drove alone	80.1 %	75.0 %	72.9 %	75.8 %
Carpooled	8.5 %	17.2 %	12.0 %	10.6 %
Public transportation (excluding taxicab)	0 %	1.2 %	5.2 %	4.9 %
Walked	3.1 %	1.7 %	2.8 %	2.8 %
Other means	5.0 %	1.8 %	1.4 %	1.4 %
Worked at home	2.7 %	2.7 %	4.8 %	4.0 %
Total Population (16 and over)	2,269	291,232	16,172,152	138,541,405

Source: US Census Bureau, 2005-2009 American Community Survey

It is important to note that this figure likely underestimates the true amount of bicycling that occurs in Tehachapi for several reasons. First, data reflects respondents' (workers 16 years and older only) dominant commute mode and therefore does not capture trips to school, for errands, or other bike trips that would replace vehicular trips. Also, American Community Survey data collection methods only enable a respondent to select one mode of travel, thus excluding bicycle trips if they constitute part of a longer multimodal trip.

**Table 4-2** presents an estimate of current bicycling within Tehachapi using US Census data along with several adjustments for likely bicycle commuter underestimations, as discussed above. **Table 4-3** presents the associated air quality benefits from bicycling.

**Table 4-4** presents projected year 2030 bicycling activity within Tehachapi using California Department of Finance population and school enrollment projections. The projection contains the assumption that bicycle mode share will double by 2030, due in part to bicycle network implementation. Actual bicycle mode share in 2030 will depend on many factors, including the extent of network implementation.

**Table 4-5** presents the associated year 2030 air quality benefit forecasts. The calculations follow in a straightforward manner from the Projected Year 2030 Bicycling Demand.

### 4.3 Bicycle Counts

Kern Council of Governments (COG) coordinated a bicycle count in unincorporated Kern County in November 2011. Counts were collected on both a weekday and weekend day (Saturday). Weekday counts were collected between the hours of 6:30 am and 9:00 am, and weekend counts were collected between 9:00 am and 12:00 noon.

One of the count locations was at Westwood Boulevard and Golden Hills Boulevard, just west of Tehachapi city limits. Results from this count location are shown in **Table 4-6**. There were more male than female bicyclists on both the weekday and the weekend count. On the weekday count, there were higher instances of riding without a helmet, on the sidewalk, and on the wrong side of the street. This suggests that bicyclists riding during the week may be less educated about bicycle safety or proper riding than those that ride on the weekend.

### 4.4 Collision Analysis

Safety is a major concern for both existing and potential bicyclists. Concern about safety is the most common reason given for not riding a bicycle (or not riding more often), according to local and national surveys. Identifying bicycle collision sites can draw attention to areas that warrant improvement, particularly if multiple collisions occur at the same location.

Table 4-2: Existing Bicycling Demand

Variable	Figure	Source
Existing study area population	11,884	2005-2009 American Community Survey, S0101 5-Year Estimates
Existing employed population	2,269	2005-2009 American Community Survey, B08301 5-Year Estimates
Existing bike-to-work mode share	0.6%	2005-2009 American Community Survey, B08301 5-Year Estimates
Existing number of bike-to-work commuters	13	Employed persons multiplied by bike-to-work mode share
Existing work-at-home mode share	2.69%	2005-2009 American Community Survey, B08301 5-Year Estimates
Existing number of work-at-home bike commuters	31	Assumes 50% of population working at home makes at least one daily bicycle trip
Existing transit-to-work mode share	0.0%	2005-2009 American Community Survey, B08301 5-Year Estimates
Existing transit bicycle commuters	0	Employed persons multiplied by transit mode share. Assumes 25% of transit riders access transit by bicycle
Existing school children, ages 5-14 (grades K-8)	713	2005-2009 American Community Survey, S0101 5-Year Estimates
Existing school children bicycling mode share	2.0%	National Safe Routes to School surveys, 2003.
Existing school children bike commuters	14	School children population multiplied by school children bike mode share
Existing total number of bike commuters	58	Total bike-to-work, school, and utilitarian bike trips. Does not include recreation.
Total daily bicycling trips	116	Total bicycle commuters x 2 (for round trips)

Table 4-3: Existing Bicycling Air Quality Impact

Variable	Figure	Source
<b>Current Estimated VMT Reductions</b>		
Reduced Vehicle Trips per Weekday	39	Assumes 73% of bicycle trips replace vehicle trips for adults/college students and 53% for school children
Reduced Vehicle Trips per Year	10,251	Reduced number of weekday vehicle trips multiplied by 261 (weekdays / year)
Reduced Vehicle Miles per Weekday	261	Assumes average round trip travel length of 8 miles for adults/college students and 1 mile for schoolchildren
Reduced Vehicle Miles per Year	68,203	Reduced number of weekday vehicle miles multiplied by 261 (weekdays / year)

Variable	Figure	Source
<b>Current Air Quality Benefits</b>		
Reduced Hydrocarbons (lbs/wkday)	1	Daily mileage reduction x 1.36 grams / mi
Reduced PM10 (lbs/wkday)	0	Daily mileage reduction x 0.0052 grams / mi
Reduced PM2.5 (lbs/wkday)	0	Daily mileage reduction x 0.0049 grams / mi
Reduced NOX (lbs/wkday)	1	Daily mileage reduction x 0.95 grams / mi
Reduced CO (lbs/wkday)	7	Daily mileage reduction x 12.4 grams / mi
Reduced CO2 (lbs/wkday)	213	Daily mileage reduction x 369 grams / mi
Reduced Hydrocarbons (lbs/yr)	204	Yearly mileage reduction x 1.36 grams / mi
Reduced PM10 (lbs/yr)	1	Yearly mileage reduction x 0.0052 grams / mi
Reduced PM2.5 (lbs/yr)	1	Yearly mileage reduction x 0.0049 grams / mi
Reduced NOX (lbs/yr)	143	Yearly mileage reduction x 0.95 grams / mi
Reduced CO (lbs/yr)	1,864	Yearly mileage reduction x 12.4 grams / mi
Reduced CO2 (lbs/yr)	55,483	Yearly mileage reduction x 369 grams / mi

Source:

Emissions rates from EPA report 420-F-05-022 Emission Facts: Average Annual Emissions and Fuel Consumption for Gasoline-Fueled Passenger Cars and Light Trucks. 2005.

Table 4-4: Projected Year 2030 Bicycling Demand

Variable	Figure	Source
Future study area population	18,440	Calculated based on CA Dept. of Finance, Population Projections for California and Its Counties 2000-2050.
Future employed population	3,521	Calculated based on CA Dept. of Finance, Population Projections for California and Its Counties 2000-2050,
Future bike-to-work mode share	1.1%	Double the rate from 2005-2009 American Community Survey, B08301 5-Year Estimates
Future number of bike-to-work commuters	40	Employed persons multiplied by bike-to-work mode share
Future work-at-home mode share	1.8%	Calculated based on change in mode share from 2000 US Census to 2005-2009 American Community Survey, B08301 5-Year Estimates
Future number of work-at-home bike commuters	32	Assumes 10% of population working at home makes at least one daily bicycle trip
Future transit-to-work mode share	1.0%	Increase from the rate from 2005-2009 American Community Survey, B08301 5-Year Estimates
Future transit bicycle commuters	9	Employed persons multiplied by transit mode share. Assumes 25% of transit riders access transit by bicycle
Future school children, ages 5-14 (grades K-8)	1,106	Calculated based on CA Dept. of Finance, Population Projections for California and Its Counties 2000-2050.
Future school children bicycling mode share	4.0%	Double the rate of national school commute trends. National Safe Routes to School surveys, 2003.
Future school children bike commuters	44	School children population multiplied by school children bicycling mode share

Variable	Figure	Source
Future total number of bike commuters	126	Total bike-to-work, school, and utilitarian biking trips. Does not include recreation.
Total daily bicycling trips	252	Total bike commuters x 2 (for round trips)

Table 4-5: Projected Year 2030 Bicycling Air Quality Impact

Variable	Figure	Source
<b>Forecasted VMT Reductions</b>		
Reduced Vehicle Trips per Weekday	76	Assumes 73% of biking trips replace vehicle trips for adults/ college students and 53% for school children
Reduced Vehicle Trips per Year	19,953	Reduced number of weekday vehicle trips x 261 (weekdays / year)
Reduced Vehicle Miles per Weekday	447	Assumes average round trip travel length of 8 miles for adults / college students and 1 mile for schoolchildren
Reduced Vehicle Miles per Year	116,769	Reduced number of weekday vehicle miles x 261 (weekdays / year)
<b>Forecasted Air Quality Benefits</b>		
Reduced Hydrocarbons (lbs/wkday)	1	Daily mileage reduction x by 1.36 grams / mi
Reduced PM10 (lbs/wkday)	0	Daily mileage reduction x by 0.0052 grams / mi
Reduced PM2.5 (lbs/wkday)	0	Daily mileage reduction x by 0.0049 grams / mi
Reduced NOX (lbs/wkday)	1	Daily mileage reduction x by 0.95 grams / mi
Reduced CO (lbs/wkday)	12	Daily mileage reduction x by 12.4 grams / mi
Reduced CO2 (lbs/wkday)	364	Daily mileage reduction x by 369 grams / mi
Reduced Hydrocarbons (lbs/yr)	350	Yearly mileage reduction x by 1.36 grams / mi
Reduced PM10 (lbs/yr)	1	Yearly mileage reduction x by 0.0052 grams / mi
Reduced PM2.5 (lbs/yr)	1	Yearly mileage reduction x by 0.0049 grams / mi
Reduced NOX (lbs/yr)	245	Yearly mileage reduction x by 0.95 grams / mi
Reduced CO (lbs/yr)	3,192	Yearly mileage reduction x by 12.4 grams / mi
Reduced CO2 (lbs/yr)	94,993	Yearly mileage reduction x by 369 grams / mi
Source: Emissions rates from EPA report 420-F-05-022 Emission Facts: Average Annual Emissions and Fuel Consumption for Gasoline-Fueled Passenger Cars and Light Trucks. 2005.		

Table 4-6: Bicycle Count Results

Count Day	Male	Female	Child	Total	No Helmet	Sidewalk	Wrong Side of Street
Weekday	3	1	2	6	50 %	33 %	50 %
Weekend	6	2	0	8	0 %	0 %	0 %

Table 4-7 presents the reported bicycle collisions in Tehachapi from 2005-2009, which are also shown in Figure 4-1. Between 2005 and 2009, there were seven reported collisions, of which the majority were broadside collisions. All collisions were injury collisions, though none were severe. Often bicycle collisions go unreported, so this data is likely a subset of all bicycle collisions in Tehachapi during this time period.

Table 4-7: Collision Details, 2005-2009

Collision Factor	Number	Total
<b>Type of Collision</b>		
Broadside	4	57 %
Sideswipe	2	29 %
Other	1	14 %
Total	7	100 %
<b>Violation Category</b>		
Automobile right-of-way	4	57 %
Wrong side of road	1	14 %
Pedestrian right-of-way	1	14 %
Other improper driving	1	14 %
Total	7	100 %
<b>Injury Severity</b>		
Fatal	0	0 %
Severe injury	0	0 %
Other visible injury	4	57 %
Complaint of pain	3	43 %
Total	7	100 %

Source: SWITRS, 2005-2009

## 4.5 Gap Analysis

Bikeway gaps exist in various forms, ranging from short “missing links” on a specific street or path corridor, to larger geographic areas with few or no bicycle facilities. Gaps can be organized based on length and other characteristics. For the purposes of this analysis, bikeway gaps are classified into

five main categories, described below. Gaps in Tehachapi are shown in Figure 4-2.

### 4.5.1 Spot Gaps

Spot gaps refer to point-specific locations lacking dedicated bicycle facilities or other treatments to accommodate safe and comfortable bicycle travel. Spot gaps primarily include intersections and other vehicle/bicycle conflict areas posing challenges for riders. Examples include bike lanes on a major street “dropping” to make way for right turn lanes at the intersection, or a lack of intersection crossing treatments for a route or path as it approaches a major street.

There is one spot gap in Tehachapi located at the intersection of Robinson Street and F Street. Bike lanes drop at this intersection to accommodate curb extensions. Bicyclists must merge with vehicular traffic to navigate around the curb extensions.

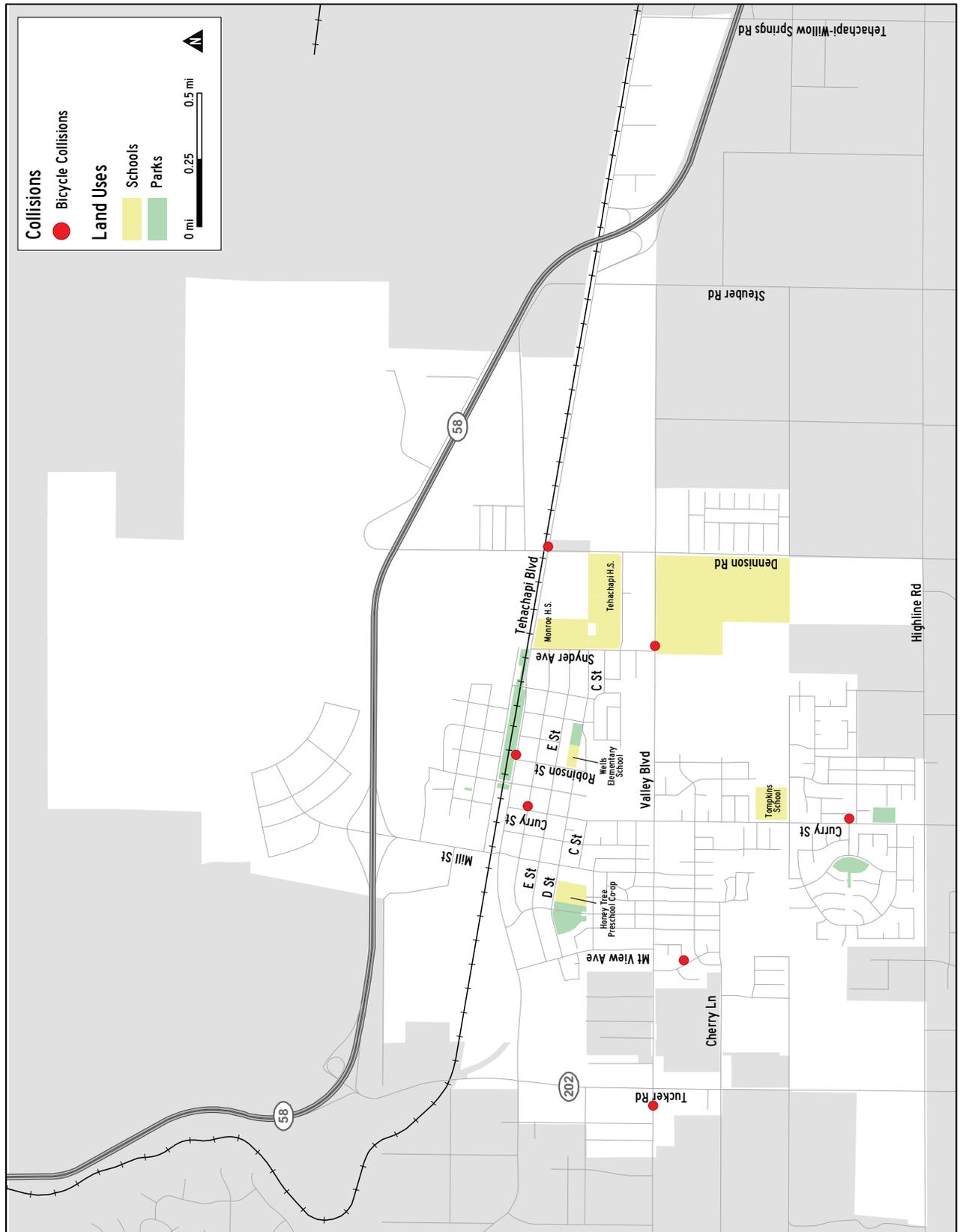
### 4.5.2 Connection Gaps

Connection gaps are missing segments (½ mile long or less) on a clearly defined and otherwise well-connected bikeway. Major barriers standing between bicycle destinations and clearly defined routes also represent connection gaps. Examples include bike lanes on a major street “dropping” for several blocks to make way for on-street parking; a discontinuous off-street path; or a freeway standing between a major bicycle route and a school. Table 4-8 presents connection gaps in Tehachapi.

### 4.5.3 Lineal Gaps

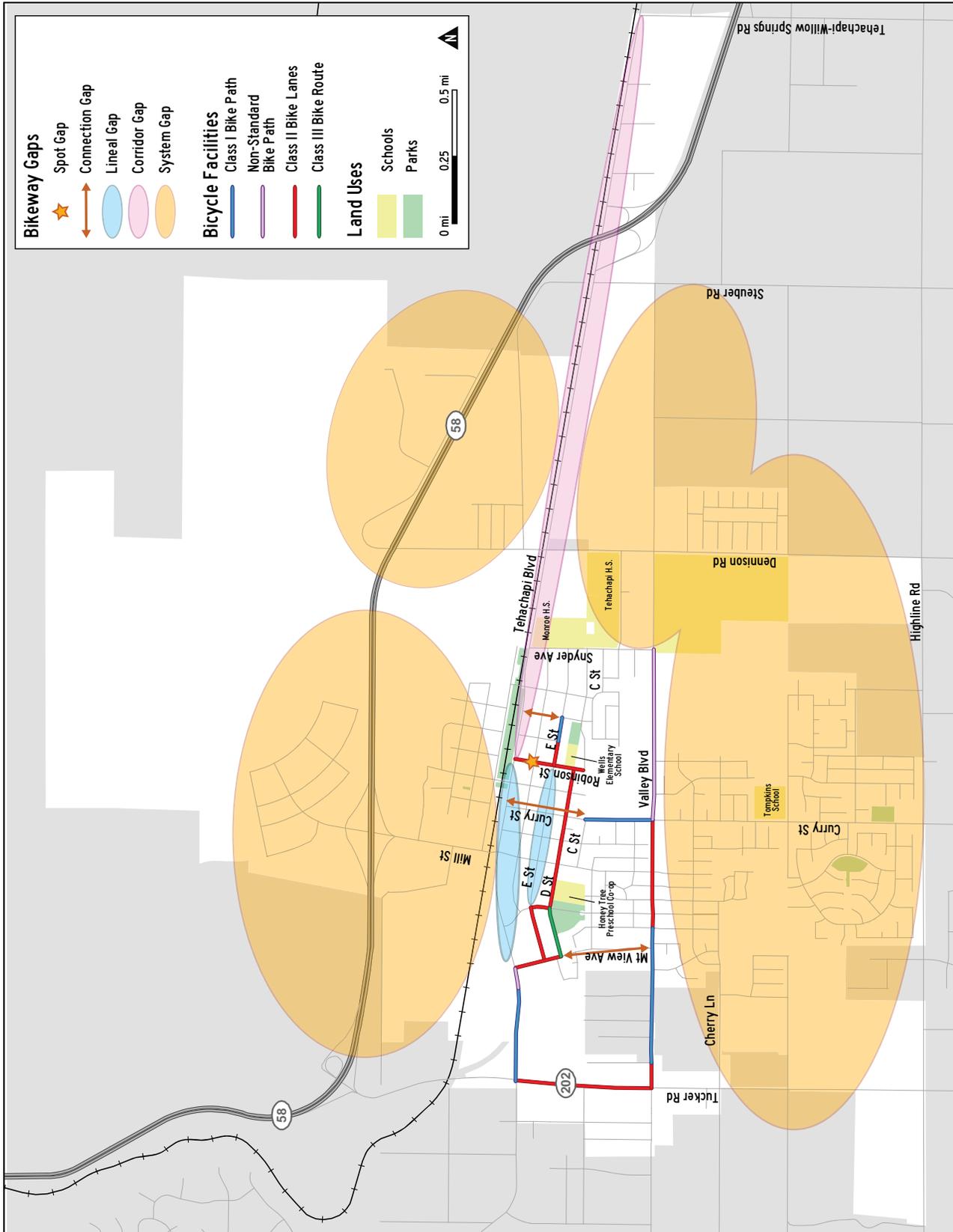
Similar to connection gaps, lineal gaps are ½- to one-mile long missing link segments on a clearly

Figure 4-1: Bicycle Collisions, 2005-2009



# 4 Needs Analysis

Figure 4-2: Bikeway Gaps



defined and otherwise well-connected bikeway. **Table 4-9** displays lineal gaps in Tehachapi.

#### 4.5.4 Corridor Gaps

On clearly defined and otherwise well-connected bikeways, corridor gaps are missing links longer than one mile. These gaps will sometimes encompass an entire street corridor where bicycle facilities are desired but do not currently exist. **Table 4-10** shows the corridor gaps in Tehachapi.

#### 4.5.5 System Gaps

Larger geographic areas (e.g., a neighborhood or business district) where few or no bikeways exist would be identified as system gaps. System gaps exist in areas where a minimum of two intersecting bikeways would be required to achieve the target network density. Tehachapi has three system gaps in its existing bicycle network. These are in the northwest, the northeast, and the southern portions of the city.

**Table 4-8: Connection Gaps**

Street	From	To	Mileage
Curry Street	Tehachapi Boulevard	C Street	0.31
Mojave Street	Tehachapi Boulevard	E Street	0.15
Mt View Avenue	D Street	Valley Boulevard	0.34
<b>Total</b>			<b>0.80</b>

**Table 4-9: Lineal Gaps**

Street	From	To	Mileage
Tehachapi Boulevard	Mt View Avenue	Robinson Street	0.80
E Street	Mulberry Street	Robinson Street	0.54
<b>Total</b>			<b>1.34</b>

**Table 4-10: Corridor Gaps**

Street	From	To	Mileage
Tehachapi Boulevard	Robinson Street	East City Limits	2.84
<b>Total</b>			<b>2.84</b>

## 4 Needs Analysis

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## 5 Recommended Improvements

This chapter presents the proposed bicycle network, bicycle support facilities, and programmatic improvements for the City of Tehachapi. In addition to creating a comprehensive network of bikeways within the city, the recommended system ties into the proposed bicycle facilities in Kern County as part of the Kern County Bicycle Master Plan and Complete Streets Recommendations. Once the county-wide bicycle network is complete, bicyclists from nearby communities will have the opportunity to more easily travel to Tehachapi by bicycle. Bikeway recommendations are based on existing regional bicycle plans, public input, traffic volumes, and traffic speeds.

### 5.1 Proposed Bikeways

**Table 5-1** presents the type, location, extents, and length of each proposed bicycle facility in Tehachapi, also shown in **Figure 5-1**. This Plan proposes 31.69 total miles of bikeways, including Class I Bike Paths, Class II Bike Lanes, Class III Bike Routes, and Bike Boulevards (discussed below).

#### 5.1.1 Class I Bike Paths

This Plan recommends 4.66 miles of Class I bike paths to close gaps, and increase safer transportation and recreation options. Proposed bike paths include updating non-standard bicycle paths to meet Class I standards. This Plan also recommends that Tehachapi convert the Valley Boulevard bike path from two-way to one-way and provide an eastbound bike lane to reduce conflicts associated with wrong-way riding.

In implementation of recommended bike paths, the City should install a separated pedestrian zone adjacent to bike paths where right-of-way is available. Separation of modes reduces potential conflicts between bicyclists and pedestrians.



#### 5.1.2 Class II Bike Lanes

This Plan recommends 25.24 miles of Class II bike lanes. Tehachapi has wide roadways throughout much of the city, which provides opportunity to implement a comprehensive network of bike lanes.

This Plan recommends the City study the feasibility of installing buffered bike lanes and cycle tracks where excess roadway width exists. Where there is lack of existing roadway right-of-way, especially on high-volume/high-speed roads, Tehachapi should widen shoulders to accommodate bike lanes.

#### 5.1.3 Class III Bike Routes

This plan recommends 0.54 miles of Class III bike routes where right-of-way cannot accommodate bike lanes. Per the policies outlined in Chapter 2, the City should install shared lane markings (“sharrows”) on all existing and proposed bike routes.

As shared lane markings are a relatively new bikeway marking in American cities, guidance on application will continue to evolve over time. Shared lane markings should not be considered a substitute for bike lanes, cycle tracks, or other separation treatments where these types of facilities are otherwise warranted or space permits. Desirable shared lane marking applications include:

Table 5-1: Proposed Bicycle Facilities

Street	From	To	Mileage
<b>Class I Bike Paths</b>			
Antelope Run (north-south)	Tehachapi Boulevard	Tucker Road	1.37
Antelope Run (east-west)	Antelope Run (north-south)	Alder Avenue	0.52
C Street	C Street (cul-de-sac)	Mojave Street	0.07
Challenger Path	Challenger Drive	Dennison Road	0.61
Cherry Lane	Elm Street	Curry Street	0.30
Conway Path	Tucker Road	Antelope Run (north-south)	0.20
Orchard Parkway	Alder Avenue	Clasico Drive	0.34
Pinon Street	Brandon Lane	Dennison Road	0.53
Tehachapi Boulevard	Existing bike path (west)	Mt View Avenue	0.08
Valley Boulevard	Curry Street	Snyder Avenue	0.64
<b>Total</b>			<b>4.66</b>
<b>Class II Bike Lanes</b>			
Alder Avenue	Highland Orchard Parkway	Curry Street	0.72
Anita Drive	Snyder Avenue	Dennison Road	0.37
Burnett Road	Dennison Road	Appaloosa Court	0.81
C Street	Mill Street	End of road (east)	0.49
C Street	Pepper Drive	Snyder Avenue	0.16
Capitol Hills Parkway	Challenger Drive	Mill Street	0.24
Challenger Drive	Capitol Hills Parkway	Vienna Street	0.43
Cherry Lane	Tucker Road	Elm Street	0.70
Curry Street	Tehachapi Boulevard	C Street	0.30
Curry Street	Valley Boulevard	Highline Road	1.02
Dennison Road	Burnett Road	Highline Road	2.12
E Street	Mulberry Street	Robinson Street	0.54
E Street	Davis Street	Snyder Avenue	0.35
Green Street	J Street	Tehachapi Boulevard	0.21
H Street	Mill Street	Mojave Street	0.54
Highland Orchard Parkway	Pinon Street	Alder Avenue	0.04
Highline Road	Tucker Road	Tehachapi-Willow Springs Road	4.03
I Street	Curry Street	Mojave Street	0.37
J Street	Curry Street	Hayes Street	0.43
Mill Street	Capitol Hills Parkway	Tehachapi Boulevard	0.53
Mill Street	Tehachapi Boulevard	Valley Boulevard	0.58
Mojave Street	J Street	H Street	0.15
Mojave Street	Tehachapi Boulevard	Pepper Drive	0.26
Mt View Avenue	D Street	Valley Boulevard	0.34
Mulberry Street	Tehachapi Boulevard	E Street	0.13
Orchard Parkway	Clasico Drive	Curry Street	0.12
Pepper Drive	Mojave Street	C Street	0.14
Pinon Street	Curry Street	Brandon Lane	0.47

Street	From	To	Mileage
<b>Class II Bike Lanes (continued)</b>			
Pinon Street	Highland Orchard Parkway	Applewood Drive	0.06
Snyder Avenue	Tehachapi Boulevard	Valley Boulevard	0.47
Steuber Road	Tehachapi Boulevard	Highline Road	1.25
Tehachapi Boulevard	Mt View Avenue	Tehachapi-Willow Springs Road	3.67
Tehachapi-Willow Springs Road	Tehachapi Boulevard	Highline Road	1.06
Tucker Road	Valley Boulevard	Highline Road	1.02
Valley Boulevard	West city limits	Tucker Road	0.25
Valley Boulevard (north side)	Las Colinas Street	Oakwood Street	0.50
Valley Boulevard	Snyder Avenue	Dennison Road	0.37
<b>Total</b>			<b>25.24</b>
<b>Class III Bike Routes</b>			
Applewood Drive	Elm Street	Pinon Street	0.20
Elm Street	Cherry Lane	Applewood Drive	0.15
Pinon Street	Applewood Drive	Curry Street	0.19
<b>Total</b>			<b>0.54</b>
<b>Bike Boulevards</b>			
Clearview Street	Valley Boulevard	White Oak Drive	0.25
Elm Street	Maple Street	Cherry Lane	0.48
Maple Street	Mt View Avenue	Mill Street	0.30
White Oak Drive	Curry Street	Clearview Street	0.22
<b>Total</b>			<b>1.25</b>
<b>Total Network Mileage</b>			<b>31.69</b>

- To indicate a shared lane situation where the speed differential between bicyclist and motorist travel speeds is very low (designed speed of < 25 mph)
- On downhill segments, preferably paired with an uphill bike lane
- On streets where the traffic signals are timed for a bicycling travel speed of 12 to 15 miles per hour
- Along front-in angled parking, where a bike lane is undesirable
- To fill a gap in an otherwise continuous bike path or bike lane, generally for a short distance
- To transition bicyclists from across traffic lanes or from conventional bike lanes or cycle tracks to a shared lane environment

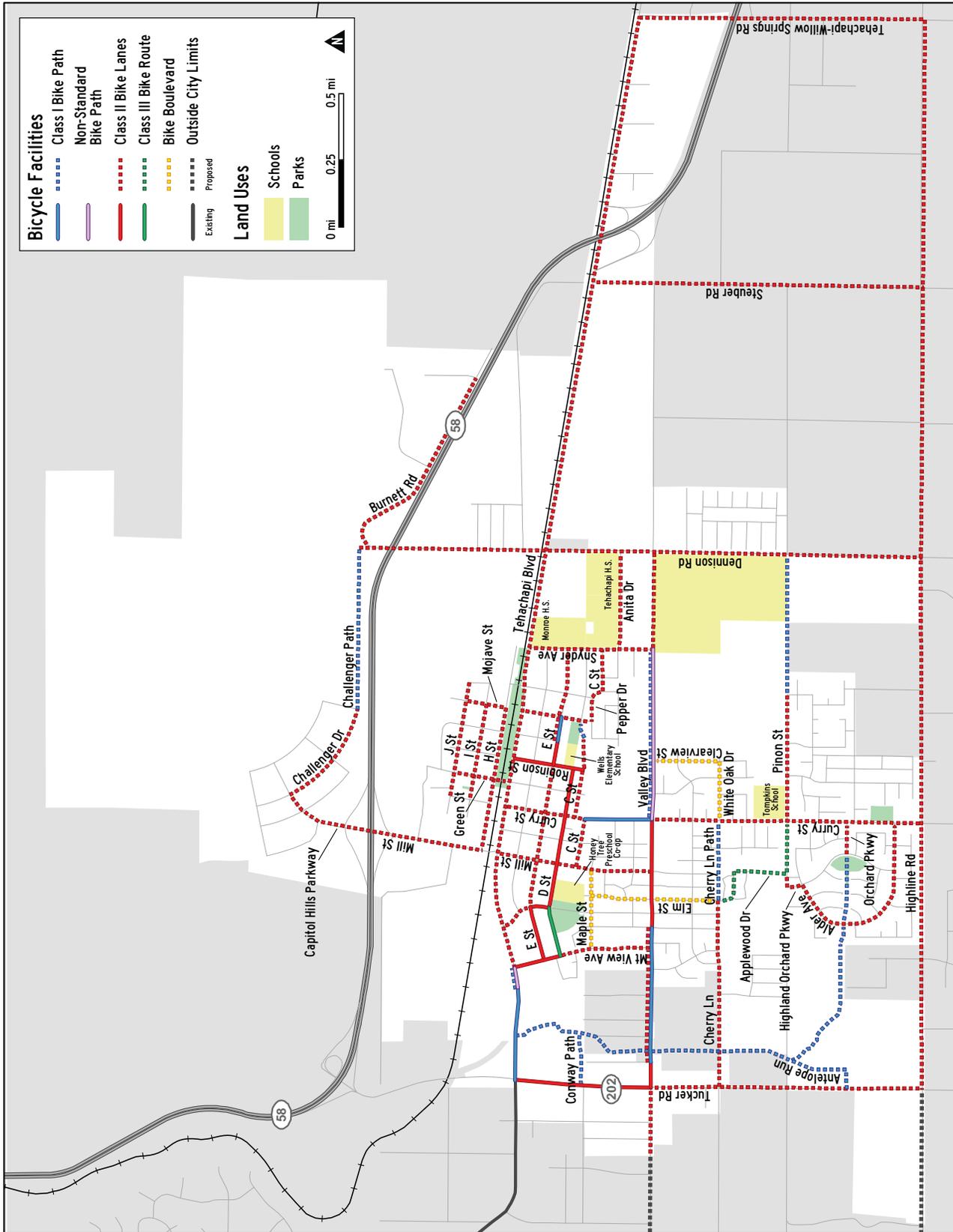
### 5.1.3 Bike Boulevards

This Plan recommends 1.25 miles of bike boulevards. A bike boulevard is not officially recognized by Caltrans as a bikeway type, though it functions as an enhanced Class III bike route. A bike boulevard is a local or neighborhood street that prioritizes pedestrians, neighborhood traffic, and bicycles, and discourages cut-through traffic. Bike boulevards include a wide range of treatment options including the following:

- Wayfinding signage
- Pavement markings
- Speed reduction measures (bulb-outs, traffic circles, traffic diverters, chicanes, speed humps)
- Traffic volume reduction measures
- High visibility pedestrian crosswalks

# 5 Recommended Improvements

Figure 5-1: Proposed Bikeways in Tehachapi



- Bicycle detectors at intersections
- Bicycle crossing signals

## 5.2 Proposed Bicycle Support Facilities

### 5.2 End-of-Trip Facilities

Support facilities are essential components of a bicycle system because they enhance safety and convenience for bicyclists at the end of every trip. With nearly all utilitarian and many recreational bike trips, bicyclists need secure and well-located bicycle parking. A comprehensive bicycle parking strategy is one of the most important things that a jurisdiction can apply to immediately enhance the bicycling environment. Bicycle parking, like automobile parking, is a key element of a transportation network. Moreover, a bicycle parking strategy with connections to public transit will further the geographical range that residents can travel without using an automobile.

The Tehachapi Municipal Code currently requires bicycle parking at arcades and swimming pools (see **Table 3-3**). This Plan recommends that the City amend its Municipal Code to include bicycle parking requirements for all land uses. Examples of units used in recommended bicycle parking requirements and associated land uses are listed below. Percent of automobile parking is not a recommended unit.

- Square footage of building (most land uses)
- Unit count (residential buildings)
- Building occupancy (schools, religious buildings, etc.)

This Plan recommends that the City also update its Municipal Code to include requirements on types of short-term and long-term bicycle parking facility designs. Recommended short-term facilities include bicycle racks that provide two points of contact with the bicycle so that it can be locked from both the front wheel/frame and the rear wheel. This will

provide a higher degree of security and support for the bicycle. Recommended rack styles include:

- Inverted U racks
- Post and ring racks
- Coathanger racks
- Custom racks providing two points of contact

Recommended long-term facilities consist of more permanent, lockable enclosures that provide for storage of the bicycle and associated equipment and clothing. Recommended designs include:

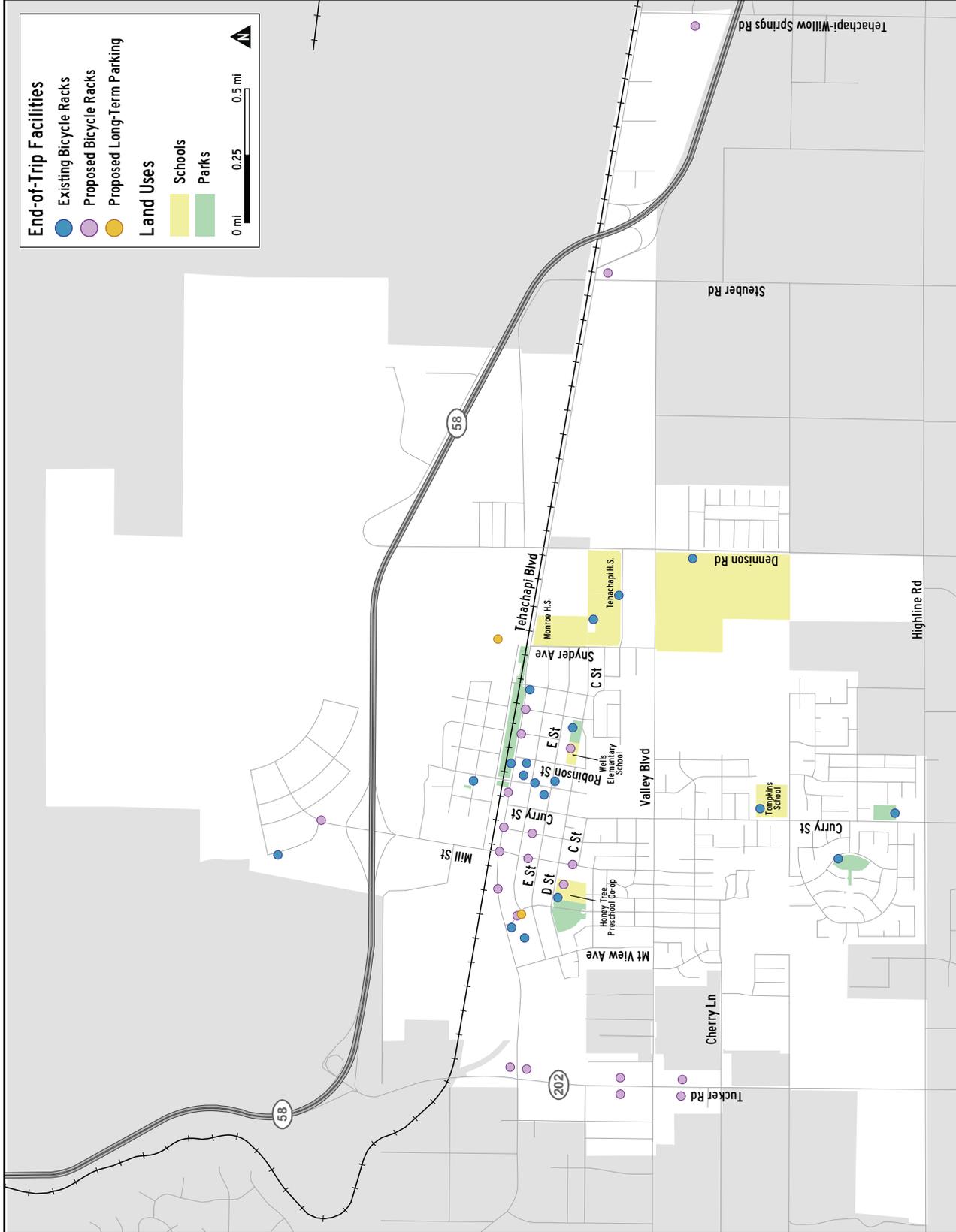
- Covered, lockable enclosures with permanently anchored racks for bicycles
- Lockable bicycle rooms with permanently anchored racks or
- Lockable, permanently anchored bicycle lockers

When people commute by bicycle they often sweat or become dirty from weather or road conditions. Providing changing and storing facilities encourages commuters to travel by bicycle because they have a place to clean up before work or school. This Plan recommends that Tehachapi's Municipal Code require all new mid-size and large employers, offices, and businesses to supply changing and



# 5 Recommended Improvements

Figure 5-2: Proposed End-of-Trip Facilities in Tehachapi



storing facilities, by providing showers and clothes lockers within the buildings or arranging agreements with nearby recreation centers to allow commuters to use their facilities.

**Figure 5-2** displays proposed bicycle parking locations in Tehachapi. These locations are based on the City's land use designations and will need to go through further review when implementing exact placement. The City should ensure there is adequate short-term bicycle parking at all major trip attractors, including commercial and civic activity centers and transit hubs. The City should prioritize the installation of bicycle parking throughout the city, with particular attention directed at the following locations:

- Parks
- Schools
- Commercial/office areas
- Civic/government buildings
- Public transit stations

Tehachapi has the opportunity to install sidewalk racks throughout the city and curb extension bicycle racks in the downtown area. In areas where sidewalk width is constrained, this Plan recommends the City study the feasibility of installing bicycle corrals, which involves removing an on-street parking space to provide bicycle racks. This Plan also recommends that high-activity locations such as transit stops, offices, and major commercial districts provide more secure, long-term bicycle parking options, such as bicycle lockers. Any future transit hubs and intermodal facilities should include secure bicycle parking areas as part of their design.

Upon implementation of this Plan, it is recommended that Tehachapi install bicycle parking based on the guidelines presented in the Association of Pedestrian and Bicycle Professional (APBP) Bike Parking Guide 2nd Edition, 2010, which provides guidance on appropriate and accessible placement and positioning of bike racks.

## 5.2 Bicycle Detection

Traffic signals control traffic by either using timers or actuation (detection). Bicycle detection at actuated traffic signals can provide a substantial improvement for bicycle access and mobility. California Assembly Bill 1581 requires all new and replacement actuated traffic signals have the ability to detect bicyclists. Caltrans Policy Directive 09-06 clarifies the requirements and permits loop and video detection.

This Plan recommends the City, at minimum, install bicycle detection at actuated intersections along all existing and proposed bikeways in this Plan. Where loop detection is used, a pavement stencil of the bicycle detection marking should be used to show bicyclists where to position themselves.

## 5.3 Project Cost Estimates

**Table 5-2** displays the planning-level capital unit cost estimates for each facility type proposed in this plan and **Table 5-3** displays the cost to implement the proposed network in Tehachapi based on the unit costs. As shown, it will cost approximately \$4,773,800 to implement the network.

Estimated unit costs may vary from what is provided in this Plan depending on environmental conditions of a given facility, unforeseen construction cost variations, and similar considerations. Cost assumptions also exclude specific treatments that may vary by site and must be determined by field review, such as traffic calming measures, restriping of existing travel lanes, and sign removal.

## 5.4 Project Prioritization

### 5.4.1 Prioritization Strategy

A prioritized list of bicycle projects will help guide the City of Tehachapi in implementing the proposed bicycle facilities presented in this Plan. Proposed bicycle facilities are ranked by criteria that define a facility's ability to address an existing or future

Table 5-2: Bikeway Unit Cost Estimates

Facility Type	Description	Estimated Cost
Class I Bike Path	Paving, striping and signage	\$800,000 / mile
Class II Bike Lanes	Striping, signage, and travel lane restriping	\$40,000 / mile
Class III Bike Routes	Pavement markings and signage	\$25,000 / mile
Bike Boulevard	Pavement markings, signage, and limited traffic calming	\$30,000 / mile

Table 5-3: Estimated Cost of Proposed Bicycle Network

Facility Type	Unit Cost per Mile	Length of Proposed Network	Estimated Cost
Class I Bike Path	\$800,000 / mile	4.66	\$3,728,000
Class II Bike Lanes	\$40,000 / mile	25.4	\$994,800
Class III Bike Routes	\$25,000 / mile	0.54	\$13,500
Bike Boulevard	\$30,000 / mile	1.25	\$37,500
<b>Total Cost</b>			<b>\$4,773,800</b>

need in Tehachapi. The following criteria are used to evaluate each proposed bicycle facility.

#### Gap Closure

Gaps in the bicycle network come in a variety of forms, ranging from a “missing link” on a roadway to larger geographic areas without bicycle facilities. Gaps in the bikeway network discourage bicycle use because they limit access to key destinations and land uses. Facilities that fill a gap in the existing and proposed bicycle network are of high priority.

#### Connectivity to Existing Facilities

Proposed bikeways that connect to existing bicycle facilities in Tehachapi and to the Greater Tehachapi Area network increase the convenience of bicycling. Proposed facilities that fit this criterion are of high importance to the City.

#### Connectivity to Regional Proposed Facilities

Proposed bikeways in Kern County will eventually become existing bicycle facilities. Thus, facilities that link to them will enhance future connectivity by improving bicycle travel between cities or destinations in other cities. This will continue to enhance bicycle travel in Tehachapi.

#### Connectivity to Activity Centers

Activity centers include major commuter destinations, such as commercial and retail centers, schools, parks, and downtowns. These locations generate many trips which could be made by bicycle if the proper facilities were available. Bicycle facilities on roadways that connect to activity centers are of priority to the City.

#### Connectivity to Multi-Modal Transportation Centers

Bicycle facilities that link to modes of public transportation increase the geographical distance that bicyclists are able to travel. Proposed bicycle facilities that connect to transit stops and centers improve bicyclist mobility and are therefore key pieces of the bicycle network.

#### Safety

Bicycle facilities have the potential to increase safety by reducing the potential conflicts between bicyclists and motorists that often result in collisions. Proposed facilities that are located on roadways with past bicycle-automobile collisions are important to Tehachapi.

## Public Input

The City solicited public input through a community workshop. Facilities that community members identified as desirable for future bicycle facilities are of priority to the network because they address the needs of the public.

## Project Cost

Projects that are less expensive do not require as much funding as other projects and are therefore easier to implement. Projects that cost less are of higher priority to the City.

### 5.4.2 Project Ranking

**Table 5-4** shows how the criteria described in the previous section translate into weights for project prioritization and ranking. Weights are based on direct, secondary, or no service at all. Direct service means that a facility intersects with a facility/destination, whereas secondary access occurs when the primary facility is located in close proximity to an existing facility/destination.

**Table 5-5** presents the list of prioritized bikeway projects in Tehachapi. The projects that ranked the highest should generally be implemented first. However, if the opportunity arises to implement projects that ranked lower, such as through street resurfacing projects, the City should implement those bikeways. Projects with lower rankings may also be combined with other projects to increase connectivity.

## 5.5 Recommended Programs

### 5.5.1 Education

#### Bicycle Skills Courses

Target Audience: General public

Most bicyclists do not receive comprehensive instruction on safe and effective bicycling



techniques, laws, or bicycle maintenance. Bike skills training courses are an excellent way to improve both bicyclist confidence and safety. The League of American Bicyclists (LAB) developed a comprehensive bicycle skills curriculum which is considered the national standard for adults seeking to improve their on-bike skills. The classes available include bicycle safety checks and basic maintenance, basic and advanced on-road skills, commuting, and driver education.<sup>1</sup>

This Plan recommends Tehachapi partner with non-profits, advocacy groups, or other organizations to offer bicycle skills courses for all ages, and incorporate them into recreation center programs or other city programs. Bicycle skills courses that target children should to the extent feasible be fully integrated into school curriculum through PE classes, general assembly, and other means of instruction.

#### Drivers Education Training

Target Audience: General public, motorists

Interacting with bicyclists on the road is often not included in training for new drivers. Teaching

<sup>1</sup> Additional program information is available online at [www.bikeleague.org/programs/education/courses.php](http://www.bikeleague.org/programs/education/courses.php)

Table 5-4: Prioritization Criteria

Criteria	Score	Multiplier	Total	Description
Gap Closure	2	3	6	Fills a network gap between two existing facilities
	1	3	3	Fills a network gap between an existing facility and a proposed facility
	0	3	0	Does not directly or indirectly fill a network gap
Connectivity: Existing	2	3	6	Provides direct access to an existing bicycle facility
	1	3	3	Provides secondary connectivity to an existing bicycle facility
	0	3	0	Does not directly or indirectly access an existing bicycle facility
Connectivity: Regional Proposed	2	1	2	Provides direct access to a regional proposed bicycle facility
	1	1	1	Provides secondary connectivity to a regional proposed bicycle facility
	0	1	0	Does not directly or indirectly access a regional proposed bicycle facility
Connectivity: Activity Centers	2	2	4	Provides direct access to a major trip-generating destination
	1	2	2	Provides secondary connectivity to a major trip-generating destination
	0	2	0	Does not directly or indirectly access an Activity Center
Connectivity: Multi-Modal	2	2	4	Provides direct access to a multi-modal transportation center
	1	2	2	Provides secondary connectivity to a multi-modal transportation center
	0	2	0	Does not directly or indirectly access a multi-modal transportation center
Safety	2	1	2	Provides a bicycle facility on a roadway that experienced 1 or more bicycle collisions between 2007-2009
	1	1	1	Provides a bicycle facility on a roadway with secondary access to a roadway with a bicycle collisions between 2007-2009
	0	1	0	Provides a bicycle facility on a roadway or secondary access to a roadway that did not experience any bicycle collisions between 2007-2009
Public Input	2	1	2	Roadway was identified by the public as a desirable for a future facility multiple times
	1	1	1	Roadway was identified by the public as desirable for a future facility once
	0	1	0	Roadway was not identified by the public as desirable for a future facility
Project Cost	2	1	2	Will cost less than \$15,000 to implement
	1	1	1	Will cost between \$15,001 and \$100,000 to implement
	0	1	0	Will cost over \$100,000 to implement

motorists how to share the road from the start can help reduce potential conflicts between drivers and bicyclists. The League of American Bicyclists (LAB) offers a three-hour motorist education classroom session that teaches participants topics including roadway positioning of bicyclists, traffic and hand signals, principles of right-of-way, and left and

right turn problems.<sup>2</sup> Tehachapi should encourage instructors of driver education courses to add this class to their curriculum. The City should also work with the Department of Motor Vehicles and Superior Court to explore opportunities to offer

2 <http://www.bikeleague.org/programs/education/courses.php#motorist>

this class as a diversion course for motorists who receive citations for reckless driving or as a training session for local professional drivers.

### Bicycle Rodeos

Target Audience: Children

Bicycle Rodeos are individual events that help students develop basic bicycling techniques and safety skills through the use of a bicycle safety course. Rodeos use playgrounds or parking lots set-up with stop signs, traffic cones, and other props to simulate the roadway environment. Students receive instruction on how to maneuver, observe stop signs, and look for on-coming traffic before proceeding through intersections. Bicycle Rodeos also provide an opportunity for instructors to ensure children's helmets and bicycles are appropriately sized. Events can include free or low-cost helmet distribution and bike safety checks.

Trained adult volunteers, local police, and the fire department can administer Rodeos. Bicycle Rodeos can be stand-alone events or can be incorporated into health fairs, back-to-school events, and Walk and Bike to School days.

The Tehachapi Police Department has conducted a bicycle rodeo in the past. This plan recommends the Police Department conduct bicycle rodeos at all elementary and middle schools at least once per academic year. Bicycle Rodeos should also be held at community events, such as Earth Day celebrations.

### Public Awareness Campaign

Target Audience: General public

Bicyclists often come into conflict with other modes of transportation because the general public is not expecting to see them on the road. A public awareness campaign can increase visibility of bicyclists and highlight their rights and responsibilities to all modes. New York City has a



“Look” campaign that uses various media formats to remind residents to look for bicyclists.<sup>3</sup> A similar campaign that educates the public on the presence of bicyclists will reduce potential conflicts in Tehachapi and create a more bicycle-friendly city. The campaign should be conducted using a wide range of media to reach a diverse population.

### 5.5.2 Encouragement

#### Safe Routes to School (SR2S)

Target Audience: Children

Helping children walk and bicycle to school is good for children's health and can reduce congestion, traffic dangers, and air pollution caused by parents driving children to school. Safe Routes to School programs use a “5 Es” approach using Engineering, Education, Enforcement, Encouragement, and Evaluation strategies to improve safety and encourage children walking and biking to school. The programs are usually run by a coalition of city government, school and school district officials, teachers, parents, students, and neighborhood volunteers. A Tehachapi Safe Routes to School program will be a key element to implementing this Plan.

<sup>3</sup> [http://www.nyc.gov/html/look/html/about/what\\_we\\_do\\_text.shtml](http://www.nyc.gov/html/look/html/about/what_we_do_text.shtml)

Table 5-5: Prioritized Bikeway Projects

Project No.	Facility Type*	Street	From
1	BP	Tehachapi Boulevard	Existing bike path (west)
2	BL	Tehachapi Boulevard	Mt View Avenue
3	BL	Valley Boulevard (north side)	Las Colinas Street
4	BL	E Street	Mulberry Street
5	BL	Valley Boulevard	West city limits
6	BL	Mulberry Street	Tehachapi Boulevard
7	BL	Tucker Road	Valley Boulevard
8	BL	Curry Street	Tehachapi Boulevard
9	BL	Mill Street	Tehachapi Boulevard
10	BP	Valley Boulevard	Curry Street
11	BL	Curry Street	Valley Boulevard
12	BL	Mt View Avenue	D Street
13	BL	Valley Boulevard	Snyder Avenue
14	BP	Antelope Run (north-south, east-west)	Tehachapi Boulevard
15	BL	Mojave Street	Tehachapi Boulevard
16	BB	Clearview Street-White Oak Drive	Valley Boulevard
17	BL	Snyder Avenue	Tehachapi Boulevard
18	BB	Elm Street	Maple Street
19	BP	Conway Path	Tucker Road
20	BL	E Street	Davis Street
21	BL	Cherry Lane	Tucker Road
22	BL	Dennison Road	Burnett Road
23	BL	C Street	Mill Street
24	BR	Elm Street-Applewood Street-Pinon Street	Cherry Lane
25	BP	Cherry Lane	Elm Street
26	BL	Anita Drive	Snyder Avenue
27	BL	Green Street	J Street
28	BL	Highline Road	Tucker Road
29	BL	C Street-Pepper Drive	Mojave Street
30	BB	Maple Street	Mt View Avenue
31	BL	Burnett Road	Dennison Road
32	BL	Mill Street-Capitol Hills Parkway-Challenger Drive	Vienna Street
33	BL	Mojave Street	J Street
34	BL	Orchard Parkway	Clasico Drive
35	BL	Pinon Street	Curry Street

\*BP=Bike path, BL=Bike lane, BR=Bike route, BB=Bike boulevard

5 Recommended Improvements

To	Gap Closure	Connectivity: Existing	Connectivity: Regional	Connectivity: Activity Centers	Connectivity: Multi-Modal	Safety	Public Input	Project Cost	Total
Mt View Avenue	6	6	1	4	2	2	2	1	24
Tehachapi-Willow Springs Road	6	6	1	4	2	2	2	0	23
Oakwood Street	6	6	1	4	0	2	2	1	22
Robinson Street	6	6	0	4	2	1	1	1	21
Tucker Road	3	6	2	4	0	2	2	2	21
E Street	3	6	0	4	4	1	0	2	20
Highline Road	3	6	2	4	0	1	2	1	19
C Street	3	6	0	4	0	2	1	2	18
Valley Boulevard	6	6	0	4	0	0	1	1	18
Snyder Avenue	3	6	0	4	0	2	2	0	17
Highline Road	3	6	0	4	0	2	1	1	17
Valley Boulevard	6	6	0	2	0	1	0	2	17
Dennison Road	3	6	0	2	0	2	2	2	17
Tucker Road/Alder Avenue	3	6	1	4	0	1	1	0	16
Pepper Drive	3	6	0	4	0	1	0	2	16
Curry Street	3	6	0	4	0	1	0	2	16
Valley Boulevard	3	6	0	4	0	1	0	1	15
Cherry Lane	3	6	0	4	0	0	0	2	15
Antelope Run (north-south)	3	6	1	4	0	0	0	0	14
Snyder Avenue	3	6	0	2	0	0	1	2	14
Elm Street	0	3	1	4	0	1	1	1	11
Highline Road	0	3	0	4	0	1	2	1	11
End of road (east)	3	3	0	2	0	1	0	1	10
Curry Street	0	3	0	4	0	1	0	2	10
Curry Street	0	3	0	4	0	0	1	0	8
Dennison Road	0	3	0	2	0	1	0	2	8
Tehachapi Boulevard	0	3	0	0	2	1	0	2	8
Tehachapi-Willow Springs Road	0	3	2	0	0	1	2	0	8
Snyder Avenue	0	3	0	2	0	0	0	2	7
Mill Street	0	3	0	2	0	0	0	2	7
Appaloosa Court	0	0	0	4	0	1	0	1	6
Tehachapi Boulevard	0	0	0	4	0	0	1	1	6
H Street	0	0	0	0	4	0	0	2	6
Curry Street	0	0	0	2	0	2	0	2	6
Brandon Lane	0	0	0	4	0	1	0	1	6

Project No.	Facility Type*	Street	From
36	BL	Steuber Road	Tehachapi Boulevard
37	BL	J Street	Curry Street
38	BP	C Street	C Street (cul-de-sac)
39	BP	Challenger Path	Challenger Drive
40	BL	H Street	Mill Street
41	BL	I Street	Curry Street
42	BL	Pinon Street-Highland Orchard Parkway-Alder Avenue	Curry Street
43	BL	Tehachapi-Willow Springs Road	Tehachapi Boulevard
44	BP	Orchard Parkway	Alder Avenue
45	BP	Pinon Street	Brandon Lane

\*BP=Bike path, BL=Bike lane, BR=Bike route, BB=Bike boulevard

### Event Valet Bicycle Parking

Target Audience: General public

Providing safe and secure bicycle parking helps encourage individuals to bicycle. San Francisco passed a city ordinance that requires all major city events to provide bike parking and pioneered an innovative tool for stacking hundreds of bicycles without racks.<sup>4</sup> This Plan recommends Tehachapi provide, or require of event organizers, temporary valet bicycle parking at regularly occurring events with expected large attendance, such as the Mountain Festival or Farmers Market. Tehachapi could work with local advocacy groups or non-profits to provide this service at their events.

### Bicycling Maps

Target Audience: General public

One of the most effective ways of encouraging people to bike and walk is through the use of maps

and guides to show that the infrastructure exists, to demonstrate how easy it is to access different parts of the city by bike or on foot, and to highlight unique areas, shopping districts or recreational areas. Biking and walking maps can be used to promote tourism to an area, to encourage residents to walk, or to promote local business districts. Maps can be citywide, district-specific, or neighborhood/family-friendly maps.

### Fly and Ride

Target Audience: General public, pilots

Vacationing by plane often includes renting a vehicle upon arrival at a destination. The Oceano Airport in San Luis Obispo County has a “Fly and Ride” program in which pilots and their friends/families can use bicycles owned by the airport to ride into town. The Tehachapi Municipal Airport is located in close proximity to the downtown and by providing this service has the potential to increase tourism and business in the City.

4 [www.sfbike.org/?valet](http://www.sfbike.org/?valet)

To	Gap Closure	Connectivity: Existing	Connectivity: Regional	Connectivity: Activity Centers	Connectivity: Multi-Modal	Safety	Public Input	Project Cost	Total
Highline Road	0	0	0	4	0	1	0	1	6
Hayes Street	0	0	0	0	4	0	0	1	5
Mojave Street	0	3	0	0	0	0	0	1	4
Dennison Road	0	0	0	4	0	0	0	0	4
Mojave Street	0	0	0	0	2	0	1	1	4
Mojave Street	0	0	0	0	2	0	0	2	4
Applewood Drive	0	0	0	2	0	1	0	1	4
Highline Road	0	0	0	2	0	1	0	1	4
Clasico Drive	0	0	0	2	0	1	0	0	3
Dennison Road	0	0	0	2	0	0	0	0	2

### 5.5.3 Enforcement

#### Targeted Bicycling Enforcement

Target Audience: Bicyclists and motorists

Traffic enforcement agencies enforce laws pertaining to bicycles as part of their responsible normal operations. Directed enforcement is one way to publicize bicycle laws in a highly visible and public manner. Examples of directed enforcement actions include intersection patrols, handing out informational sheets to motorists, bicyclists and pedestrians; and enforcing speed limits and right-of-way.

#### Targeted Driving Enforcement

Much like directed enforcement for bicyclists, police departments can target enforcement of motorists for bicycle-related violations. Common actions of drivers that create potential conflicts with bicyclists include parking in bike lanes and not sharing the road. Directing enforcement at these actions can create a safer bicycling environment in Tehachapi.

#### Speed Radar Trailer/Speed Feedback Signs

Target Audience: Motorists

Speed radar trailers can help reduce traffic speeds and enforce speed limits in areas with speeding problems. Police set up an unmanned trailer that displays the speed of approaching motorists along with a speed limit sign. Speed trailers may be effective on busier arterial roads without bikeway facilities or near schools with reported speeding. The speed trailer’s roadway placement should not obstruct bicycle traffic.

Speed trailers work as both an educational and enforcement tool. By itself, the unmanned trailer educates motorists about their current speed in relation to the speed limit.

Speed trailers can transport easily to streets where local residents complain about speeding problems. The Tehachapi Police Department should station officers near the trailer to issue speeding citations when speeding continues to occur.

It is recommended that City staff provide the management role for this program, working with the public to determine which locations are in most need. This program can be administered randomly, cyclically, or as demand necessitates because of the speed trailers' portability.

### Bicycle Patrol Units

Target Audience: Bicyclists and motorists

On-bike officers are an excellent tool for community and neighborhood policing because they are more accessible to the public and able to mobilize in areas where patrol cars cannot (e.g., overcrossings and paths). Bike officers undergo special training in bicycle safety and bicycle-related traffic laws and are therefore especially equipped to enforce laws pertaining to bicycling. Bicycle officers help educate bicyclists and motorists through enforcement and also serve as excellent outreach personnel to the public at parades, street fairs, and other gatherings.

## 5.5.4 Evaluation and Monitoring

### Annual Bicycle Counts and Surveys

Partnering with local advocacy groups and volunteers to conduct annual bicycle counts is a mechanism for tracking bicycling trends over time



and for evaluating the impact of bicycle projects, policies, and programs from the Tehachapi Bicycle Master Plan. Ongoing count data will enable the City to analyze changes in bicycling levels and to track the impact of new bicycle infrastructure.

Annual surveys measure "attitudes" about bicycling. These surveys could be either online surveys or intercept surveys. Surveys should determine if bicyclists are reacting positively or negatively to bicycle facilities and programs implemented. Results of the counts and surveys can inform future bicycling planning efforts and be presented to the Bicycle Advisory Committee at regular meetings.

### Bicycle Advisory Committee

After adoption of the Tehachapi Bicycle Master Plan, it is crucial to implement the proposed projects and programs. A bicycle advisory committee will help to advise the City on bicycling issues that are important to plan implementation. The committee is typically charged with technical issues, such as project feasibility. Committee members can include transportation staff, elected officials, bicycling advocates, and other appropriate persons.

### Mobility Coordinator Position

A number of cities around the country staff a part- or full-time Mobility Coordinator position. Cities with such a position usually experience relative success in bike plan implementation. An ongoing mobility coordinator position in Tehachapi will assist with the current bicycle planning and safety efforts, implementation of the bicycle plan, and pursuing grant funding efforts. In addition to supporting existing programs, such as bicycling parking provision and educational activities, potential job duties for this staff position are listed below.

- Monitoring facility planning, design, and construction that may impact bicycling

- Staffing bicycle advisory committee meetings
- Coordinating the implementation of the recommended projects and programs listed in this Plan
- Identifying new projects and programs that would improve the city's bicycling environment and improve safety for bicyclists, pedestrians, and motorists
- Coordinating evaluation of projects and programs, such as bicycle counts
- Pursuing funding sources for project and program implementation

### Bicycling Report Card

A bicycling report card will provide an annual snapshot of relevant bicycling metrics to track the efforts of the Tehachapi Bicycle Master Plan. Results from bicycle counts and user surveys should be included in the report card, as well as recently completed improvement projects and new bikeway miles. The report card should compare the changes and accomplishments from year to year, which will help focus the following year's improvements and goals.



## 5 Recommended Improvements

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## 6 Funding Sources

All levels of government contain programs that can potentially fund bicycle projects, programs, and plans. This section covers federal, state, and regional sources of bicycle funding. Many funding sources are highly competitive. Therefore, it is not possible to determine exactly which projects will receive funding from specific funding sources. **Table 6-1** serves as a general guide to funding sources. Staff should refer to current guidelines provided by the granting agency when pursuing any funding opportunity.



Table 6-1: Funding Sources

Funding Source	Due Date	Administering Agency	Annual Total	Matching Requirement	Eligible Applicants
<b>Federally-Administered Funding</b>					
Paul S. Sarbanes Transit in Parks and Public Lands Program	Varies, generally October	Federal Transit Administration	\$27 mil in 2010	None	Federal, State, local and tribal agencies that manage federal lands
Rivers, Trails and Conservation Assistance Program	Aug 1 for the following fiscal year	National Parks Service	Staff time is awarded for technical assistance	Not applicable	Public agencies
Transportation, Community and System Preservation Program	Varies, generally January or February	Federal Transit Administration	\$29 mil in 2012	20%	States, MPOs, local governments and tribal agencies
<b>State-Administered Funding</b>					
Bicycle Transportation Account	March	Caltrans	\$7.2 mil (\$1.8 per applicant)	Minimum 10% local match on construction	Public agencies
California Conservation Corps	On-going	California Conservation Corps	CCC donates labor hours	None	Federal and state agencies, city, county, school district, NPO, private industry
Community Based Transportation Planning Grants	March/April	Caltrans	\$3 mil, each project not to exceed \$300,000	10%	MPO, RPTA, city, county
Community Development Block Grants	Varies between grants	CA Department of Housing and Urban Development	Up to \$500,000 per applicant	Varies between grants	"Non-entitlement" cities (under 50,000) and counties (under 200,000)
Environmental Enhancement and Mitigation Program	September/October (sign up on website for notification)	California Natural Resources Agency	\$10 mil	None	Federal, State, local agencies and MPO
Environmental Justice: Context-Sensitive Planning	March/April	Caltrans	\$3 mil, each grant not to exceed \$250,000	10%	MPO, RPTA, city, county

Planning	Construction	Other	Notes
X	X		Funds transportation modes that reduce congestion in parks and public lands.
		X	RTCA staff provides technical assistance to communities so they can conserve rivers, preserve open space, and develop trails and greenways.
X	X	X	The program provides funding for a comprehensive initiative including planning grants, implementation grants, and research to investigate and address the relationships among transportation, community, and system preservation plans and practices.
X	X	X	Eligible projects must improve safety and convenience of bicycle commuters. In addition to construction and planning, funds may be used for right of way acquisition.
	X	X	CCC provides labor assistance on construction projects and annual maintenance.
	X		Eligible projects that exemplify livable community concepts including enhancing bicycle and pedestrian access.
X	X	X	Funds local community development activities such as affordable housing, anti-poverty programs, and infrastructure development. Can be used to build sidewalks, recreational facilities.
	X	X	EEMP funds projects in California, at an annual project average of \$250,000. Funds may be used for land acquisition.
X		X	Funds projects that foster sustainable economies, encourage transit oriented and mixed use development, and expand transportation choices, including walking and biking. Projects can be design and education, as well as planning.

## 6 Funding Sources

Funding Source	Due Date	Administering Agency	Annual Total	Matching Requirement	Eligible Applicants
Habitat Conservation Fund	October	CA Department of Parks and Recreation	\$2 mil (grants for trails usually under \$200,000)	100%	City, county, district
Highway Safety Improvement Program	October	Caltrans	\$75 mil in CA in 2011	Varies between 0% and 10%	City, county or federal land manager
Land and Water Conservation Fund	March	NPS, CA Dept. of Parks and Recreation	\$1.7 mil	50% + 2-6% administration surcharge	Cities, counties and districts authorized to operate, acquire, develop and maintain park and recreation facilities
Office of Traffic Safety (OTS) Grants	January	Caltrans	Varies annually	None	Government agencies, state colleges, state universities, city, county, school district, fire department, public emergency service provider
Petroleum Violation Escrow Account	Not Applicable	Caltrans	Varies annually	None	Local and regional agencies
Public Access Program	On-going	Wildlife Conservation Board (WCB)	\$1 mil, \$200,000 per project	50% preferred	Federal, state, counties, cities, non-profit organizations or public districts and corporations
Recreational Trails Program	October	CA Department of Parks and Recreation	\$2.1 mil in 2011	12%	Agencies and organizations that manage public lands
Safe Routes to School (California)	Varies	Caltrans	\$24.25 mil	10%	City, county
Safe Routes to School (Federal)	Mid-July	Caltrans	\$23 mil	None	State, city, county, MPOs, RTPAs and other organizations that partner with one of the above
State Coastal Conservancy	Rolling	State Coastal Conservancy	Varies	None	Public agencies, non-profit organizations
State Highway Operations and Protection Program (SHOPP)	Not Available	Caltrans	\$1.69 mil statewide annually through FY 2013/14	Not Available	Local and regional agencies

Planning	Construction	Other	Notes
X	X	X	Provides funds to local entities to protect threatened species, to address wildlife corridors, to create trails, and to provide for nature interpretation programs which bring urban residents into park and wildlife areas.
X	X	X	Projects must address a safety issue and may include education and enforcement programs. This program includes the Railroad-Highway Crossings and High Risk Rural Roads programs.
X		X	Fund provides matching grants to state and local governments for the acquisition and development of land for outdoor recreation areas. Lands acquired through program must be retained in perpetuity for public recreational use. Individual project awards are not available. The Department of Parks and Recreation levies a surcharge for administering the funds.
		X	Funds safety improvements to existing facilities, safety promotions including bicycle helmet giveaways and studies to improve traffic safety.
	X	X	Funds programs based on public transportation, computerized bus routing and ride sharing, home weatherization, energy assistance and building energy audits, highway and bridge maintenance, and reducing airport user fees.
	X		Funds the protection and development of public access areas in support of wildlife oriented uses, including helping to fund construction of ADA trails.
X	X	X	Funds can be used for acquisition of easements for trails from willing sellers, maintenance, and education.
	X	X	SR2S is primarily a construction program to enhance safety of pedestrian and bicycle facilities near schools. A small percentage of funds can be used for programmatic improvements.
	X	X	Construction, education, encouragement and enforcement program to encourage walking and bicycling to school.
X	X	X	Projects must be in accordance with Division 21 and meet the goals and objectives of the Conservancy's strategic plan. More information can be found at <a href="http://scc.ca.gov/applying-for-grants-and-assistance/forms">http://scc.ca.gov/applying-for-grants-and-assistance/forms</a> .
	X	X	Capital improvements and maintenance projects that relate to maintenance, safety and rehabilitation of state highways and bridges.

## 6 Funding Sources

Funding Source	Due Date	Administering Agency	Annual Total	Matching Requirement	Eligible Applicants
<b>Regionally-Administered Funding</b>					
Congestion Mitigation Air Quality (CMAQ)	Not available	Kern Council of Governments	\$1.8 mil nationally in 2009	None	Cities
Resurfacing and Repaving (through existing funds)	Not applicable	City	Not applicable	Not applicable	Not applicable
TDA Article 3 funds	Not applicable	Kern Council of Governments	\$75-85 mil	None	Cities
Transportation Enhancements	Not available	Kern Council of Governments	\$75 mil	Not available	Cities
<b>Other Funding Sources</b>					
Bikes Belong Grant	Multiple dates throughout year	Bikes Belong	Not Available	50% minimum	Organizations and agencies
Community Action for a Renewed Environment	March	US EPA	Varies	Not Available	Applicant must fall within the statutory terms of EPA's research and demonstration grant authorities
Volunteer and Public-Private Partnerships	Not Applicable	City, county, joint powers authority	Varies	Not Applicable	Public agency, private industry, schools, community groups

Planning	Construction	Other	Notes
	X	X	Funds are allocated for transportation projects that aim to reduce transportation-related emissions. Funds can be used for construction of bicycle facilities and pedestrian walkways or for non-construction projects related to safe bicycling and walking (i.e. maps and brochures).
	X		The City should take advantage of street resurfacing and repaving projects to stripe bicycle lanes or markings. These types of upgrades are low cost, but require coordination between Planning and Public Works departments,
X	X	X	Funds can be used for engineering expenses leading to construction, right-of-way aquisition, retrofitting existing bicycle facilities, route improvements, and purchase and installation of bicycle facilities.
X	X	X	Funds are a set-aside of Surface Transportation Program (STP) monies designated for Transportation Enhancement (TE) activities, which include the pedestrians and bicycles facilities, safety and educational activities for pedestrians and bicyclists, and the preservation of abandoned railway corridors (including the conversion and use thereof for pedestrian and bicycle trails).
	X	X	Bikes Belong provides grants for up to \$10,000 with a 50% match that recipients may use towards paths, bridges and parks.
X		X	Grant program to help community organize and take action to reduce toxic pollution in its local environment
	X	X	Requires community-based initiative to implement improvements.