CITY OF CITRUS HEIGHTS
BIKEWAY MASTER PLAN

Updated December 10, 2015

CITY OF CITRUS HEIGHTS
COMMUNITY AND ECONOMIC DEVELOPMENT
AND
GENERAL SERVICES DEPARTMENTS

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I. INTRODUCTION

The City of Citrus Heights Bicycle Master Plan (BMP) was originally prepared by Fehr & Peers Associates, Inc. under contract to the City of Citrus Heights and later updated by City staff in 2009 and 2011. It provides a blueprint for developing a bikeway system that includes both on-street and off-street facilities throughout the City as well as support facilities and programs.

STUDY AREA

The study area includes all of the incorporated area within the City of Citrus Heights. The major portion of the City lies between Madison Avenue to the south, Sacramento/Placer County line to the north, I-80 to the West, and Fair Oaks Boulevard and Kenneth Avenue to the east. Citrus Heights is the first new city in Sacramento County in 50 years. With a population of [1]83,301residents, Citrus Heights is 95 percent developed. Although it is essentially a suburb of the metropolitan Sacramento area, Citrus Heights has a strong commercial office business base within its 14.2 square-mile perimeter. Citrus Heights is home to the Sunrise Market Place, a regional shopping area containing Sunrise Mall and Marketplace at Birdcage. Other shopping centers are also located on major arterials throughout the City. Recreation programs and parks are provided by The Sunrise Recreation and Parks District maintains 22 park sites covering 410 acres in the City. In addition to serving the Citrus Heights residents the district serves residents from other jurisdictions who regional service parks located in the City, such as Rusch Park. Housing is mixed and affordable with an average of 2.5 persons per household (US Census Bureau 2006 data).

PLANNING AND DESIGN STANDARDS

Bikeway planning and design in California rely on the guidelines and design standards established by the California Department of Transportation (Caltrans) as documented in the Chapter 1000: Bikeway Planning and Design contained in the Highway Design Manual, Sixth Edition, California Department of Transportation, 2015. This chapter of the design manual was the original basis for standards of the American Association of State Highway and Transportation Officials (AASHTO) and the Federal Highway Administration (FHWA).

Chapter 1000 identifies specific design standards for various conditions and the relationship of bikeways to roadways. The Caltrans standards provide for three distinct types of bikeway facilities as generally described below and show in Figure1.

- Class I Bikeway (Bike Path) – Provides a completely separated right of way for the exclusive use of bicycles and pedestrians with cross-flow minimized.

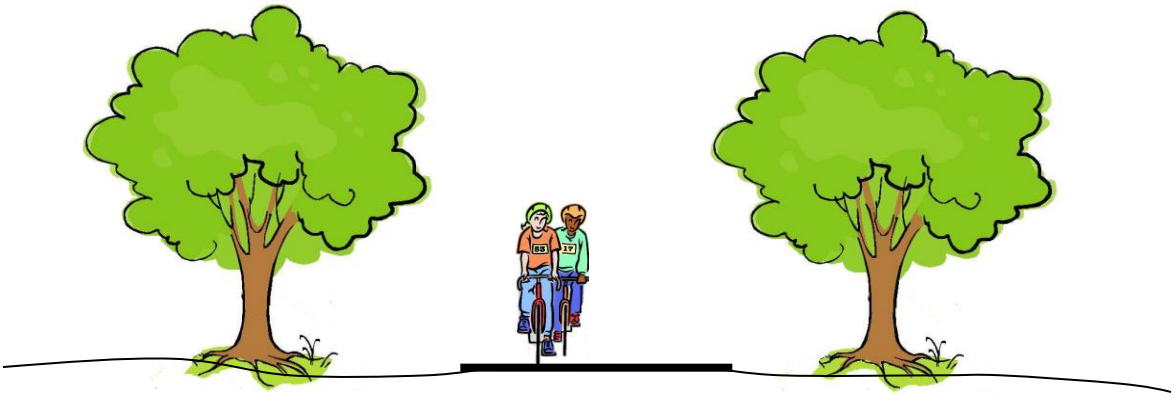
- Class II Bikeway (Bike Lane) – Provides a six inch striped lane with a 4-5 foot paved shoulder for one-way bike travel on a street or highway.

- Class III Bikeway (Bike Route) – Are signed and provide for shared use with pedestrian or motor vehicle traffic within the same right-of-way.

Other important policy documents that affect bikeway planning and design include the California Streets and Highways Code and Vehicle Code as well as the California Bicycle Transportation Act (1994). The California Bicycle Transportation Act (1994) re-codifies the Streets and Highways Code (Chapter 517) and requires Caltrans to take certain actions that further promote bicycle programs. A key component of this act is the requirement for cities and counties to complete bikeway master plans containing the following eleven elements as a condition of applying for state funding through the Bicycle Transportation Act (BTA):

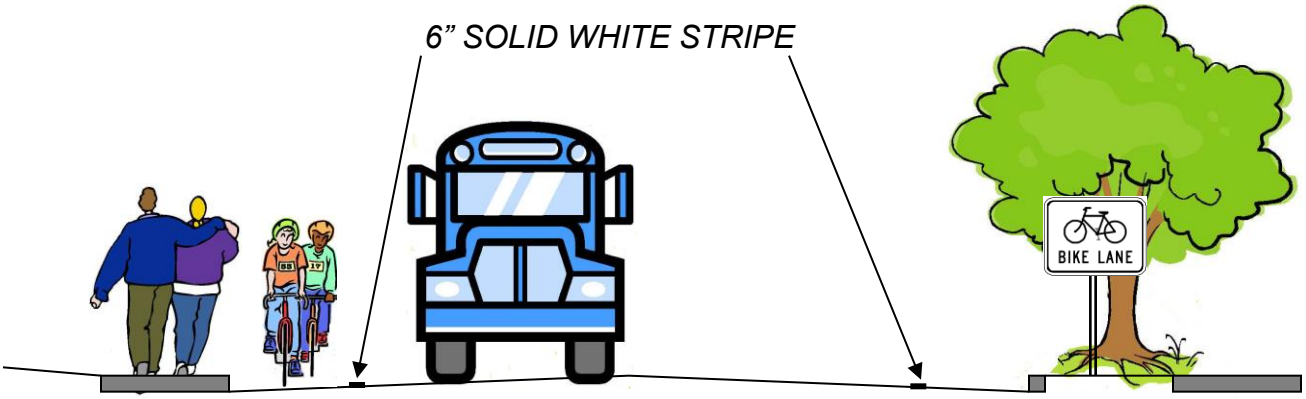
1) The estimated number of existing and future bicycle commuters;
2) Land use and population density;
3) Existing and proposed bikeways;
4) Existing and proposed bicycle parking facilities;
5) Existing and proposed multi-model connections;
6) Existing and proposed facilities for changing and storing clothes and equipment;
7) Bicycle safety and education programs;
8) Citizen and community participation;
9) Consistency with transportation, air quality, and energy plans;
10) Project descriptions and priority listings; and
11) Past expenditures and future financial needs.

FIGURE 1



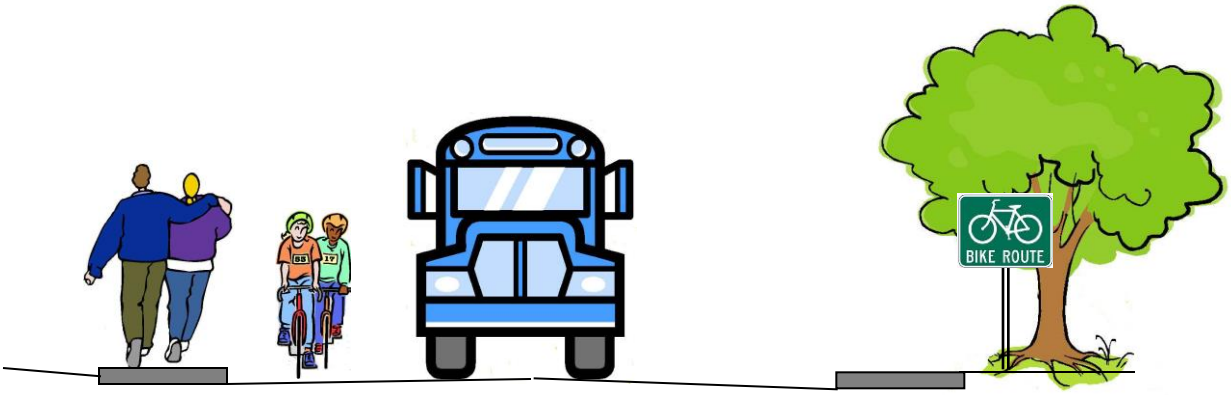
CLASS I BIKEWAY (Bike Path)

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



CLASS II BIKEWAY (Bike Lane)

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



CLASS III BIKEWAY (Bike Route)

Provides a shared use with pedestrian or motor vehicle traffic.

This plan addresses each of the eleven components in the remaining sections of this document, which are outlined below.

CONSISTENCY WITH OTHER PLANS

The original preparation of this plan update included a review of the City of Citrus Heights General Plan, adopted November 15, 2000 and the 2010 Sacramento City/County Bikeway Master Plan. Goals and policies from both of these documents were reviewed for incorporation into this plan document. The General Plan was updated in 2011 and included Goal 29: Plan, design, construct, and manage a Complete Streets transportation network that accommodates the needs of all mobility types, users, and ability levels. Policies 29.1 through 30.4 address bicycle and pedestrian development in the City of Citrus Heights. The plan includes Priority 1 Creek Corridor Trails as directed by City Council (See additional discussion below). The plan is consistent with the DRAFT Pedestrian Master Plan which is scheduled to be adopted in late 2015 or early 2016.

COMMUNITY PARTICIPATION

Community participation was an important component of this plan update for the purpose of obtaining input on existing bicycling facilities, potential roadways for improvement to accommodate bicycles, and the type of support facilities or programs needed to improve bicycling in the City of Citrus Heights.

In October 1999, staff held a public workshop to receive input from neighborhood residents regarding the existing and proposed bicycling facilities in the City of Citrus Heights. Approximately 25 people attended the workshop including representatives from the Citrus Heights General Plan Advisory Committee. Participants provided comments concerning specific bike routes and facility improvements. Recommendations from the workshop were incorporated into the draft bicycle system map and reviewed by the Citrus Heights Bikeway Master Plan Technical Advisory Committee (TAC).

From early Fall 2003 to Spring 2004, General Services staff made presentations of the Bikeway Master Plan to various Neighborhood Associations. Specifically, presentations were made to the following Neighborhood Association: Areas 2, 3, 5, 6, 7, 8 & 10. All neighborhoods were given an opportunity to schedule a meeting with City staff for the proposed Bikeway Master Plan.

The City's first General Plan included several goals and policies related to bicycles, including the creation of a Bikeway Master Plan and Goal 38: *Establish a system of creek side trails, passive open space, and parks for public us*e.

The initial Draft Bicycle Master Plan identified potential Class 1 trails located along all City creeks; however, the feasibility, costs, design parameters, and maintenance

requirements were unknown. Due to the unknowns and concerns expressed by the community associated with this approach, City Staff focused the Bikeway Master Plan towards on-street bike facilities, until such a time that the feasibility of creek trails could be explored in greater detail.

In 2011, the City adopted a Genreral Plan Update focused on sustainability, including a Greenhouse Gas Reduction Plan (GGRP), which calls for a variety of measures to reduce greenhouse gas emissions in the community. Alternative transportation modes, such as bicycling and walking, are identified in the GGRP as a key strategy, reaffirming the important role the Bikeway Master Plan played towards improved mobility and quality of life within the City.

In order to assess the feasibility of creekside trails called for in Goal 38 and in support of the GGRP, the City determined that a comprehensive approach to evaluating potential trail locations, including a robust community outreach component, was needed.

In 2012 the City created the Creek Corridor Trail Project as the comprehensive approach necessary to determine the feasibility of creekside trails in the City in over 26 miles of creek and SMUD utility corridors. This year-long process included over 40 community meetings with community stakeholders including development of a Trail Advisory Group, two large community workshops, and the largest outreach and a significant community engagement effort.

The end product of the Creek Corridor Trail Project is the Creek Corridor Trail Project Feasibility Report. This extensive technical document identifies approximately 16 miles of feasible trail segments throughout the City including Arcade Creek, Brooktree Creek, Cripple Creek and the SMUD utility Corridor. Throughout the process, the City identified over 10 miles of corridors that are not suitable for trail development, thus focusing the City's future efforts on trail segments that are worthy of exploring in much greater detail.

In March 2014, the City Council accepted the Creek Corridor Trail Project Feasibility Report and directed staff to incorporate the Priority 1 Trail Segments into the City's General Plan, Bikeway Master Plan, and future Pedestrian Master Plan.

The 2014 Update of the Bikeway Master Plan is focused on updating the document to reflect projects that have been completed, minor technical changes, and incorporation of the Priority 1 Trail segments along portions of Arcade Creek and the SMUD Utility Corridor.

ORGANIZATION OF THE PLAN

The remainder of this document includes the following components:

- Bikeway Goals and Policies;

- Existing Conditions;
- Analysis of Demand;
- Proposed System;
- Cost and Funding Analysis; and
- Implementation.

The information presented for each of these components is the result of data collection efforts by the City of Citrus Heights staff, Sunrise Parks and Recreation District staff, San Juan School District staff, Caltrans, California Highway Patrol SWITRS staff, and the consultant.

II. GOALS, OBJECTIVES, AND POLICIES

The development of goals, objectives, and policies for this plan are intended to provide specific direction on the necessary actions involved in planning, designing, funding, and constructing bikeway facilities. The following information relies on an understanding of the relationship between the proposed bikeway system, key issues facing implementation of specific routes, and the requirements of local, state, and federal funding programs. To create a user-friendly document, this section is organized by topic areas that relate to specific implementation issues. These topic areas include:

- Overall System;
- Future Development
- Commuting;
- Safety Education;
- Environmental Considerations; and
- Funding.

The purpose of organizing this section by topic area is to provide users such as local agency staff, developers, decision makers, and citizens with clear and concise policy direction on how to implement the bikeway facilities proposed in this plan. In many cases, geographic location affects implementation, but in other situations, institutional arrangements or the preferences of local residents may play a greater role. Within each topic area addressed below, the reader will find an overall goal, measureable objective, and policies with specific action statements related to the development of specific facilities or programs.

OVERALL SYSTEM

The following goal and policy statements express the philosophy behind this plan and the proposed system. They stem from the City's desire to provide citizens and visitors with a bikeway and path system that can accommodate all trip purposes.

Goal I: Provide a connected bikeway system in the City of Citrus Heights to improve the quality of life for all residents and visitors.

Objective: Construct bikeways identified in the proposed system and provide for the maintenance of both existing and new facilities.

Policies

1.1 Prepare and maintain a bicycle master plan that identifies existing and future needs, and provides specific recommendations for facilities and programs including adequate provisions for bicycle use and bikeways in all new developments.

1.2 Create a bikeway system that is cost effective to construct and maintain; respects landowners, utilities, and special district' property rights; and minimizes the potential for conflicts with other types of vehicles, pedestrians; and users.

1.3 Require all bikeways to conform to design standards contained in the latest version of the Highway Design Manual, Chapter 1000: Bikeway Planning and Design, Caltrans, unless otherwise established by the City of Citrus Heights.

1.4 Update local roadway design standards to include sufficient pavement sections to accommodate bikeway facilities.

1.5 Consider a proposed routes importance in providing access to regional bikeway facilities when recommending local routes for implementation.

1.6 Coordinate with agencies such as Caltrans, County of Sacramento, City of Roseville, Placer County, San Juan Unified School District, and Sunrise Parks and Recreation District regarding the implementation of the proposed system.

1.7 Emphasize the development and construction of off-street bikeways to promote safety and recreational opportunities.

1.8 Integrate the Bicycle Master Plan into the City's General Plan.

Implementation Measures

1.9i All bikeway construction projects should conform as applicable to the City of Citrus Heights Construction Standards and state and federal standards.

1.10i All City projects shall be reviewed by City staff for conformance with the goals, policies and implementation measures of the Bicycle Master Plan.

1.11i The General Services Department should work with other Departments to create a checklist for the evaluation of Capital Improvement Projects (CIPs) for conformity to the Bicycle Master Plan.

1.12i Participate in regional bicycle and pedestrian planning activities.

1.13i Coordinate bikeway system implementation projects internally and with adjacent jurisdictions.

1.14i Provide training for General Services Department, Planning Department, and Sunrise Parks & Recreation Department staff, REACH and commissions on the guiding principles of bicycle and pedestrian system transportation planning, design and maintenance.

1.15i Where necessary to meet the needs of users and where not provided by other public facilities, plan for the installation of bike path amenities.

1.16i Designated bike routes shall include signs informing motorists of the presence of bicyclists and information signs informing cyclists of upcoming destinations in accordance with California MUTCD and the Design/Construction Standards.

1.17i Provide destination signs, trail maps, mile markers, open space and bikeway regulation signs on bike paths where appropriate.

LAND DEVELOPMENT

As new development or redevelopment occurs in the City of Citrus Heights, individual projects should be reviewed to ensure consistency with the proposed system. In addition, development projects should adhere to the policy statements below regarding access, mobility, and support facilities for bicyclists and pedestrians.

Goal 2: Include bikeway facilities in all appropriate development projects to facilitate on-site circulation for bicycle and pedestrian travel, on-site bicycle parking, and connections to the proposed system.

Objective: Maximize the number of daily trips made by bicycling to and from new development projects.

Policies

2.1 Require development projects to construct bikeways included in the proposed system as a condition of development. (Dedication of bicycle easements may be required by the City due to the timing of future connectivity.)

2.2 Encourage commercial development to provide bicycle access to surrounding residential areas.

2.3 Require commercial development to place bike racks near entrances for employees and customers.

2.4 Consider landowner concerns when planning and acquiring off-street bikeway easements.

2.5 Meet the requirements of the Americans with Disabilities Act when constructing facilities contained in the proposed system, where applicable.

2.6 Encourage development projects to consider schools as important destinations for bicyclists when designing circulation systems within new developments.

Implementation Measures

2.7i Consider updating the Municipal Code (Zoning Ordinance and TSM Ordinance) and Community Design Guidelines to enhance bike parking for new development.

2.8i All development projects shall be reviewed by City staff for conformance with the goals, policies and implementation measures of the Bicycle Master Plan.

2.9i The General Services Department should work with other Departments to create a checklist for the evaluation of development projects for conformity to the Bicycle Master Plan.

COMMUTING

Commuters that bicycle to work can represent a larger percentage of total commute trips if a comprehensive network of bikeway facilities is developed. This plan proposes to implement such a system as defined by the following goal and policy statements.

Goal 3: Develop a bikeway system that enhances safety and convenience of bicycling to and from work and school.

Objective: Increase bicycle trips to work and school to reduce vehicle congestion, improve air quality, and improve individual physical fitness.

Policies

3.1 Support facilities that encourage bicycling should, to the extent feasible, be made a standard component of all private and public projects.

3.2 Provide short term bike parking (bike racks) conveniently located at business entrances and safe, secure and covered long term bike parking (bike lockers, bike rooms, bike cages) at employment sites.

3.3 Promote showers and changing facilities at major employment sites.

Implementation Measures

3.4i Consider increasing capacity of bike racks on Regional Transit vehicles if a need is demonstrated. Explore options with Regional Transit for allowing (if racks are full) bikes on buses under limited conditions such as off -peak hours or last bus of the day.

3.5i Adopt guidelines for and encourage the installation of showers and changing facilities for employees at major employment sites.

3.6i Consider funding an annual bike parking project to install long term bicycle parking at park-and-ride facilities, commuter bus stops, transit transfer points, and short-term bike parking at existing businesses with a demonstrated need.

3.7i If warranted by demand, consider partnerships with public and private facilities for use of showers and changing rooms by commuting or touring bicyclists.

SAFETY

Safety is an important aspect of increasing bicycle use. If residents perceive the bikeway system to be unsafe, they will be discouraged from using it. Therefore, the following goal and policy statements are intended to improve the public's knowledge of how to use the bikeway system safely,

Goal 4: Educate and inform all residents and visitors to the City of Citrus Heights about how to use bikeway facilities safely and create a climate of acceptance for bike riding.

Objective: Improve bicycle conditions in the City of Citrus Heights by reducing collisions and increasing the number of bikeway system users.

Policies

4.1 Incorporate standard signing and traffic controls as established by Caltrans to ensure a high level of safety for the bicyclist and motorist.

4.2 Use available collision data to monitor bicycle-related collision levels annually, and target a 50 percent reduction on a per capita basis over the next twenty years.

4.3 Encourage local law enforcement agencies and local school districts to cooperatively develop a comprehensive bicycle education program that is taught to all school children in the City of Citrus Heights.

4.4 Education programs targeted to adults and children should explain safe bike

riding techniques and the importance of proper helmet use, and provide information on the bikeway system and support facilities.

Implementation Measures

4.5i Inspect bikeways and support facilities on a regular basis.

4.6i Establish an on-line system for reporting, evaluating, tracking and responding to maintenance and safety concerns on bikeways.

4.7i Consider updating the Design/Construction Standards to include standard provisions for Traffic Control Plans per the following:
- Construction signs should be placed outside bike lanes where feasible;
- Where a bike lane will be closed for an extended period, advance warning signs may be provided for bicyclists; and
- Where a bike lane is closed, if feasible, an area between the construction zone and vehicle lane may be provided for bicyclists.

4.8i Create a coordinated and comprehensive bicycle safety education program that provides bicycle education annually to all school-age children. As appropriate and as staffing allows, add education and encouragement components to the City's successful Safe Routes to School programs.

4.9i Create a coordinated and comprehensive bicycle education program targeted to adult bike riders with information regarding bike rider rights and responsibilities and proper bike riding techniques.

4.10i Expand and support a citywide helmet promotion program.

4.11i Create a public education campaign targeting motorists that provides information on the rights and responsibilities of bicyclists. Work with the Police Department to identify opportunities for incorporating bicycle safety curriculum into motorist education and training.

4.12i. Develop education materials (e.g. handouts, videos) for presentation to media, schools, neighborhood groups, businesses and other groups that promote bicycle safety.

4.13i. Develop criteria and promote trail etiquette for use of off -street bike paths by bicyclists, pedestrians, equestrians (if applicable), skaters, and persons with disabilities.

4.14i. Coordinate education and encouragement efforts with the Sunrise Recreation & Parks Department, public health agencies and/or other groups as opportunities arise.

ENFORCEMENT

A key component to increasing safety is acting on the enforcement aspect of biking. Vehicle, pedestrian and bike traffic must see and experience the long reach of the law.

Goal 5: Enhance enforcement programs with the goal of reducing violations and bicycle injuries and fatalities by 10% over 10 years.

Objective: Improve bicycle conditions in the City of Citrus Heights by reducing collisions and increasing the number of bikeway system users.

Policies

5.1 Enforcement efforts directed at bicyclists should focus on child helmet law, failure to stop/yield, wrong way bike riding, and night riding without lights and/or reflectors.

5.2 Enforcement efforts directed at motorists and related to bicycle safety should address motorist failure to yield or stop for cyclists, excessive motor vehicle speed, and driving under the influence.

Implementation Measures

5.3i Assist the Police Department in their officer training efforts related to bicycle issues and laws.

5.4i Coordinate with the Police Department to determine enforcement strategies for bike riders.

5.5i Assist the ongoing efforts of the Sunrise Recreation & Park District and Police Department to provide enhanced oversight of open space areas and off - street bike paths.

ENVIRONMENTAL CONSIDERATIONS

Bikeway facilities are generally considered to benefit the environment because their use reduces demand for motorized travel and promotes beneficial life style changes. Nevertheless, the construction of specific facilities may adversely affect the physical environment. The following goal and policy statements have been developed to avoid and minimize potential impacts to the environment.

Goal 6: Avoid adverse environmental impacts associated with the implementation of the proposed system.

Objective: Mitigate potentially significant impacts to a level of less than significant.

Policies

6.1 Conduct site-specific environmental review consistent with the California Environmental Quality Act for individual bicycle projects as they advance to the implementation stage of development.

6.2 Solicit and consider community input in the design and location of bikeway facilities.

6.3 Consider the effect on other transportation facilities such as travel lane widths, turn lanes, on-street parking, and on-site circulation when planning and designing on-street bikeways.

Implementation Measures

6.4i As appropriate, coordinate the planning, environmental review, design, construction and maintenance of open space bike trail projects with City departments, local, state and federal agencies, and local interest groups.

6.5i. Partner with health organizations where appropriate to promote bicycling.

FUNDING

To obtain the funding required to implement the proposed system, local and regional agencies in the City of Citrus Heights must take advantage of funding sources at the state and federal level. It will also require a commitment of local funding.

Goal 7: Acquire sufficient funding to construct the proposed system within the next 30 years.

Objective: Maximize the amount of local, state, and federal sources for bikeway facilities that can be used by agencies in the City of Citrus Heights.

Policies

7.1 Maintain current information regarding regional, state, and federal funding programs for bikeway facilities along with specific funding requirements and deadlines.

7.2 Prepare joint grant applications with other local agencies, such as the Sunrise Parks and Recreation District and San Juan School District, for state and federal funds.

7.3 Under the Complete Streets Law and subsequent Caltrans Policy (State Law AB 1358 and Caltrans' Deputy Directive 64-R1) and Sacramento County Measure A funding ordinance, transportation projects must accommodate bicycles and pedestrians.

Implementation Measures

7.4i Submit grant applications when opportunities become available.

7.5i Coordinate bikeway projects internally and with other agencies to determine partnering potential.

7.6i Where determined appropriate, adopt fee programs for bikeways.

ENCOURAGEMENT

To significantly increase biking within the community will take more than just efforts to increase the amount of bike lanes, trails and support facilities.

Goal 8: Increase transportation and recreation bicycle riding to work, school, play and other destinations by 50 percent by 2030, and gain acceptance of bicycle commuting as a mainstream activity through incentive and encouragement efforts.

Objective: Maximize participation in bicycling through coalitions, incentives, and added support facilities.

Policies

8.1 Encourage public participation through local coordination with City staff.

8.2 Build coalitions with local businesses, schools, clubs, bike shops and organizations

8.3 Explore alternatives to provide incentives to bicycle commuters.

8.4. Support recreational bikeway facilities, programs and events as an important part of the effort to cultivate acceptance of bicycling among the general populace.

Implementation Measures

8.5i Support regional efforts to promote biking such as May Bike Commute Month, International Walk/Bike to School day and other local events.

8.6i. As feasible, enhance incentives for bicycle commuting such as Bucks for Bikes and Bike Commute Month.

8.7i. Sponsor in association with local bicycle organizations bicycle parking at special events.

8.8i. Sponsor in association with local bicycle organizations or other groups bicycle/triathlon events and races, or other similar events.

8.9i Identify public and/or private locations/workplaces where a bike loan program may be successful, and obtain funding (public/private partnerships), etc.

8.10i. Update the Citrus Heights Bikeway Map as necessary to stay current with changes to the bikeway system.

III. EXISTING CONDITIONS

This summary of existing conditions describes the current status of bikeway facilities and programs in the City of Citrus Heights. The discussion focuses on existing bikeway, regional and multi-modal connections, and bikeway support facilities and programs.

EXISTING BIKEWAYS

During the preparation of the first Bicycle Master Plan, the City conducted field observations to identify and verify existing bicycle facilities within the City of Citrus Heights. The only existing Class I bike paths are located in Tempo Park and Stock Ranch. Approximately 75% of the roadways identified in the master plan include Class II bicycle lands (on-street delineated lanes with appropriate signing and striping). However, major gaps have been identified on several major arterials within the City including Sunrise Boulevard, Greenback Lane, Madison Avenue, Auburn Boulevard, and Mariposa Avenue.. The vast majority of the Class III bikeways identified in the Bikeway Master Plan have been established. In 2013 the City installed over 11 miles of Class II and Class III bikeways funded by a Bicycle Transportation Account (BTA) grant from Caltrans.

REGIONAL AND MULTI-MODAL CONNECTIONS

To encourage bicycle use, a bikeway plan should contain connections to other communities outside of the City of Citrus Heights, and it should contain connections to other forms of travel such as pedestrian and public transit and transfer locations. They extent of existing regional and multi-modal connections is discussed below.

Regional Connections

The City of Citrus Heights is bordered by the City of Roseville (Placer County) to the north, and by unincorporated Sacramento County, which includes the communities of Fair Oaks and Carmichael to the south; Orangevale to the east; and Antelope, Foothill Farms, and North Highlands to the west. Interstate 80 and Greenback Lane, Madison Avenue, Sunrise Boulevard, San Juan Avenue, and Auburn Boulevard all provide regional roadway connections to these adjacent areas. Sunrise Boulevard has the potential of providing a direct connection to the American River Parkway that parallels U.S. Highway 50 and the American River. The American River Parkway provides a seamless Class I bike path from Folsom Lake to downtown Sacramento. The proposed Dry Creek Parkway class I bike path in Roseville and Placer County also has the potential of not only connecting the American River Parkway but also a large area west of Interstate 80 to include Antelope, Roseville, North Highlands and Natomas. The City's will have an access point just north of Old Auburn Road and Wachtel Road. Most of the proposed trails may be found in the Sacramento Area Council of Governments (SACOG) Regional Bicycle, Pedestrian and Trails Master Plan.

Multi-modal Connections

Multi-modal connections in the City of Citrus Heights are especially important due to barriers for continuous bicycle travel such as the lack of existing continuous bikeway facilities and sidewalks. Sacramento Regional Transit (RT) worked with the City of Citrus Heights to establish the City's Shuttle Service. .

Sacramento RT routes 1, 23, 24, 25, and 103, also provide fixed-route service on segments of Greenback Lane, Sunrise Boulevard, Fair Oaks Boulevard, Madison Avenue, San Juan Avenue, and Coyle Avenue. In 2013 Regional Transit created a new shuttle service for travel in Citrus Heights for everyone called "City Ride." City Ride offers curb-to-curb service to any destination within the boundaries of the city of Citrus Heights and Mercy San Juan Medical Center on Coyle Avenue in Carmichael, and Kaiser Medical Offices on Riverside Avenue in Roseville.

City Ride connects passengers to all destinations throughout the City of Citrus Heights including shopping centers, restaurants, movie theaters, community centers, parks, schools and medical facilities from 7 a.m. to 7 p.m., Monday through Friday. The service is open to the general public, and regular RT Basic and Discount fares apply.

Transit centers exist on Arcadia Drive in Sunrise MarketPlace, and on Auburn Boulevard at Whyte Avenue just beyond the north City limits. The Arcadia Drive transit center provides connections to other RT routes, while the Auburn Boulevard transit center connects with Roseville and Placer County Transit.

Bicyclists often rely on transit service to transfer them to destinations safely when barriers to continuous travel are present. Bicycle racks are provided on RT buses for bicycle transport.

Other potential multi-model transfer points typically include park-and-ride lots. The City of Citrus Heights does not have any official park and ride lots. Some unofficial park and ride activity occurs at the Sunrise Mall. The extent of this activity is unknown at the present.

SUPPORT FACILITIES

Bikeway support facilities include physical infrastructure designed to accommodate or promote the use of bicycles. Examples include bicycle racks, bicycle lockers, restrooms, and shower facilities. A windshield survey of major shopping centers, schools, parks, and employment centers found bike racks located at most major commercial centers in the City. However, other support facilities such as bicycle lockers, restrooms, or shower facilities dedicated for bicyclists were not observed. Support facilities are important because potential riders can be discouraged from riding if they think that their bicycle may be stolen, vandalized or if sufficient facilities are not provided to make bicycling convenient, particularly for commute purposes.

In many cities and counties the installation of secure bicycle parking is required as part of local transportation system management plans or the zoning code. As part of the City's off-street parking standards each multi-unit project and nonresidential land use must provide bicycle parking in compliance with the Citrus Heights Zoning Code. In addition each required bicycle parking space must provide a stationary parking device to secure the bicycle.

BICYCLE SAFETY

As part of this plan update, bicycle safety was evaluated. In particular, existing and available bicycle collision data was reviewed to identify collision locations and local law enforcement agencies and school districts were contacted to determine the types of bicycle safety programs that were being conducted in the City of Citrus Heights.

Collision Data

The City of Citrus Heights Police Department provided bicycle collision data from January 1, 2004 through September 30, 2014. Table 1I, shown on the following page, summarizes the collision data by year, severity and the primary collision factor (PCF) that occurred most frequently.

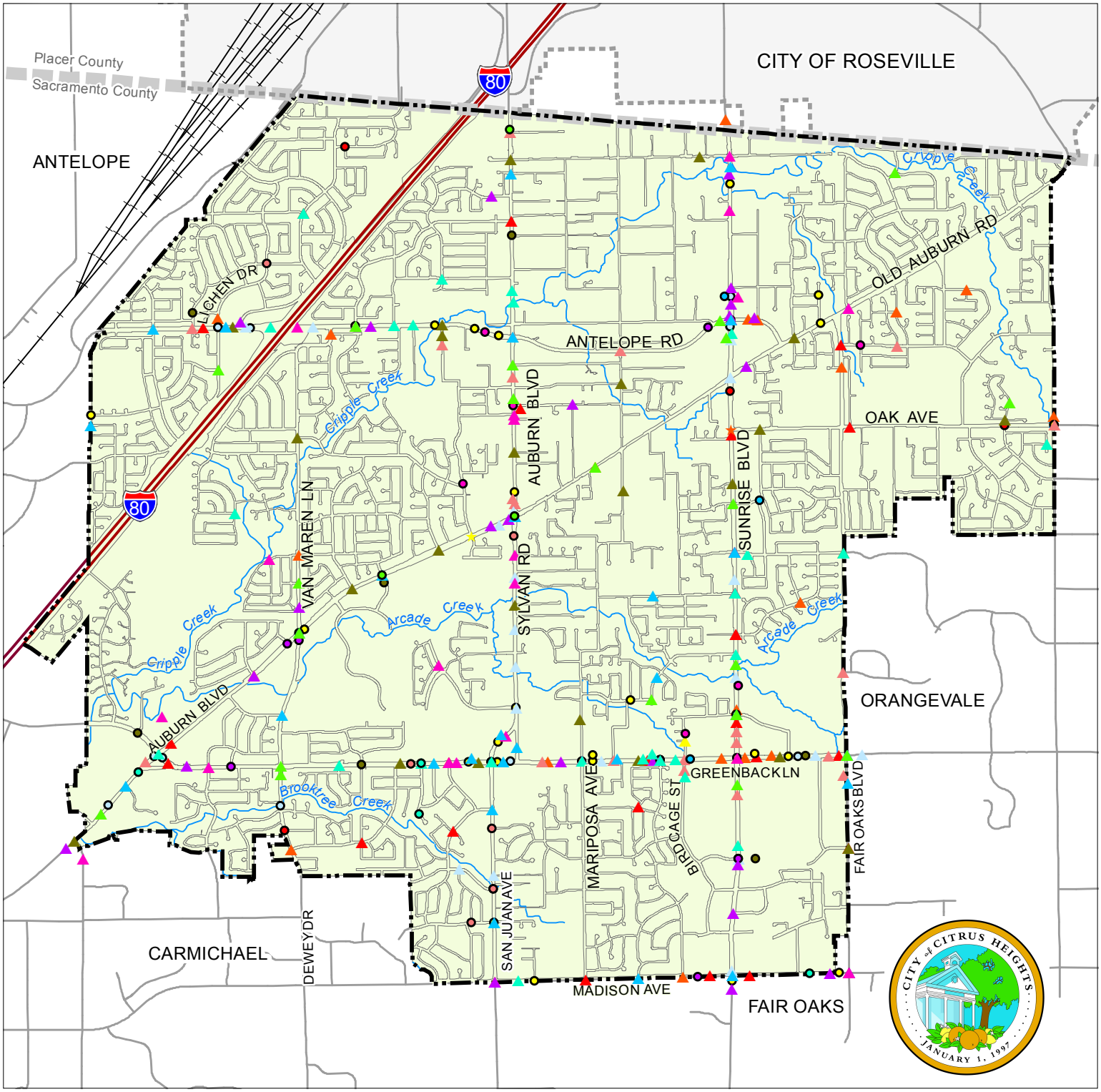
Table 1 Bicycle Collisions

City of Citrus Heights Bicycle Collision Report Summary
2004-2014

Year	Total	Injuries	Fatalities	Primary Collision Factor
2004	33	29		Wrong side of road/improper turning
2005	28	27	2	Wrong side of road/improper turning
2006	35	38	1	Wrong side of road/improper turning
2007	33	26	0	Wrong side of road/improper turning
2008	36	29	0	Wrong side of road/improper turning
2009	39	28	0	Wrong side of road/improper turning
2010	35	27	0	Wrong side of road/improper turning
2011	32	24	0	Wrong side of road/improper turning
2012	35	30	0	Wrong side of road/improper turning
2013	32	28	0	Wrong side of road/improper turning
2014*	23	21	0	Wrong side of road/improper turning
TOTAL	361	307	3	
Per Yr Avg	32.8	27.9	0.3	

Source: City of Citrus Heights 2014
*Through 9/30/2014

As shown in Table 1, 361 bicycle collisions were reported between January 2004 and September 2014. Three fatalities occurred during this period. In the majority of collisions, the primary collision factor was driving on the wrong side of the road or an illegal turning maneuver by the bicyclist. This information suggests that increased education and enforcement should be an important tool in decreasing bicycle collisions overall. Figure 2 shows the location of each reported bicycle collision by year from Table 1. The information shown also indicates the severity of the collision.



LEGEND

- City of Citrus Heights
- Other Cities
- County Boundary
- Railroad

Collision Type

- Collision without injury ▲
- Collision with injury ●
- Collision with fatality ★

Collision Year

2004	2010
2005	2011
2006	2012
2007	2013
2008	2014
2009	

NORTH

0 0.25 0.5 1 MILES

FIGURE 2

Bicycle Collisions 2004-2014

CITY OF CITRUS HEIGHTS

SAFETY PROGRAM

The review of bicycle safety programs in Citrus Heights included discussions with Detective Sergeant Jason Russo, Citrus Heights Police Department, Mary Cahill, Sunrise Park and Recreation District, Skip Amerine, Sacramento Area Bicycle Advocates (SABA), and Loni Mellerup, Principal, Grand Oaks Elementary School. All persons interviewed emphasized the need for bicycle safety and education programs for schools and for citizens. This review revealed that the California Highway Patrol and Sacramento County Sheriff's Office turned over bicycle safety functions to the Citrus Heights Police Department upon the City's incorporation in January 1997. Table 2 below provides a description of the bicycle safety program administered by the Citrus Heights Police Department.

Table 2 Bicycle Safety Education

Bicycle Safety Education Program Summary		
Agency	Contact Person	Program Functions
Citrus Heights Police Department	Detective Sergeant Jason Russo Phone: (916)727-5578	The Bicycle Safety Program is comprehensive and designed for elementary schools. Bicycle safety presentations are given annually at the elementary schools by the Citrus Heights Police Department's Bicycle Team. It has been in existence since the City's incorporation in January 1997. The program includes instruction on bicycle operations including helmet instruction, rules of the road, proper hand signals, and a mock bicycle trip utilizing the bicycle safety skills learned. Student participation is encouraged in every aspect of the program. Course tools include handouts and visual displays as well as "good tickets" which are coupons for free food or ice cream. Several schools have adopted the program as part of their school assembly program.

In addition, several future "bicycle safety programs" are being implemented in the Sacramento region. These programs are designed to increase public awareness and education about bicycle safety issues. Information about these programs was gathered from the City of Citrus Heights Police Department and from local government and school sources.

- Traffic Safety Plan - has been developed by Sacramento County as “traveling” traffic safety program aimed at reducing the number of bicycle and pedestrian collisions involving children. The program is funded through a federal grant and includes a presentation on traffic rules.

- Bicycle Rodeos – are sponsored by the Greater Sacramento Area Safe Kids Coalition, the Snell Memorial Foundation, and in the future, Mercy San Juan Hospital. Bicycle Rodeos are designed to teach the rules of the road and safe riding practices to school age bike riders.

IV. ANALYSIS OF DEMAND

The objective of analyzing bicycle travel demand is to identify existing bicycle ridership levels and travel patterns, along with projected future use and possible methods for stimulating additional ridership. This section identifies the location of existing major activity centers likely to attract bicycle trips, and provides information about population and employment trends and their influence on bicycle travel demand.

EXISTING MAJOR ACTIVITY CENTERS

One purpose of a bikeway master plan is to provide facilities that connect residential areas to employment, commercial, education, and recreational centers. These facilities support bicycle travel demand for both commuter and recreational trip purposes. Major activity centers in Citrus Heights include regional commercial areas such as Sunrise Mall and the Birdcage shopping area near Greenback and Sunrise Boulevard, various employment centers, schools, and parks as identified in Figure 4.

POPULATION AND EMPLOYMENT TRENDS

The following discussion contains estimates of existing and forecasts of future, population and employment levels to determine trends and how they affect demand for bikeway facilities.

Existing Population

In 2001, the City of Citrus Heights had an estimated total population of 86,800 persons and an estimated total employment level of 18,000 persons. Table 3 show a comparison of population estimates for Citrus Heights and several surrounding cities.

Table 3 Population Trends

Population Trends-Surrounding Cities						
					Change (1980 - 2010)[3]	
City	1980	1990	2000	2010	Number	Percent
Sacramento	275,741	339,365	407,018	466,488	190,747	69.18%
Citrus Heights[1]	**63,848**	**82,045**	**85,071**	**83,301**	**19,453**	30.47%
Roseville	24,347	44,685	79,921	118,788	94,441	387.90%
Rancho Cordova	--	51,322	53,605	64,776	13,454	26.21%
Elk Grove[2]	--	33,348	72,685	153,015	119,667	358.84%
Folsom	11,003	29,802	51,884	72,203	61,200	556.21%
West Sacramento	24,482	28,898	31,615	48,744	24,262	99.10%

Source: US Census, Rancho Cordova Needs Assessment

(1) 1980 and 1990 Citrus Heights counts are based on census blocks within current incorporation limits, aggregated by SACOG 3/01

(2) Elk Grove counts are based on census blocks within current incorporation limits, aggregated by SACOG 3/01

(3) Elk Grove and Rancho Cordova change is 1990 - 2010

During the thirty-year period from 1980 through 2010, population in the City of Citrus Heights increased approximately 30 percent. This average has slowed dramatically from growth experienced during the 1980s and is the result of the city approaching build out of planned development.

Existing Employment

Total employment for the City of Citrus Heights has increase from 44,700 workers in 2000 to 50,200 in 2007 (a twelve percent increase).

Source: http://sacog.org/demographics/employment/cities/sacr.cfm#citrus

EXISTING BICYCLE RIDERSHIP

Bicycle ridership levels are not easily measured or projected for an entire City without extensive data collection efforts. Existing and available data for Citrus Heights currently includes the 2000 Census data on mode split, and Department of Finance data on population and employment. With this limited amount of information, the following discussion describes both existing and future bicycle ridership levels and their relationship to the availability of a comprehensive bikeway system in the City of Citrus Heights.

According to a recent Lou Harris Public Opinion Poll, nearly 3 million adults, or about one in 60, already commute by bike. This number could rise to 35 million if more

bicycle friendly transportation systems existed (USDOT, 1994). The concept of "demand" for bicycle facilities is difficult to measure. Unlike automobile use, where historical trip generation studies for different types of land uses allows an estimate of future "demand" for travel, no such methodology exists for bicycles.

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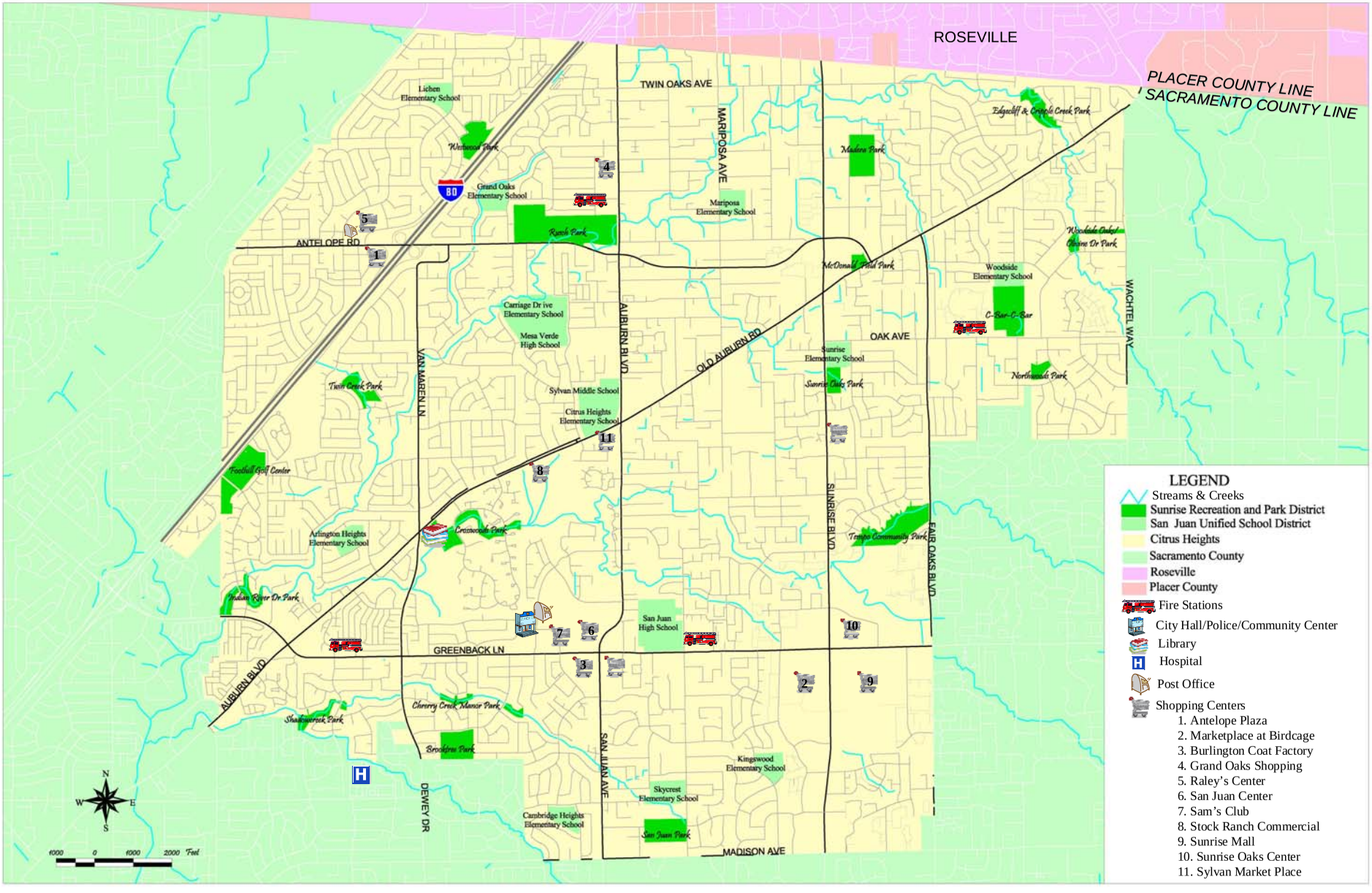

ROSEVILLE
PLACER COUNTY LINE
SACRAMENTO COUNTY LINE
TWIN OAKS AVE
MARIPOSA AVE
ANTELOPE RD
AUBURN BLVD
OLD AUBURN RD
OAK AVE
WACHTEL WAY
VAN MAREN LN
SUNRISE BLVD
FAIR OAKS BLVD
GREENBACK LN
SAN JUAN AVE
MADISON AVE
DEWEY DR
Lichen Elementary School
Grand Oaks Elementary School
Mariposa Elementary School
Carriage Dr ive Elementary School
Mesa Verde High School
Sylvan Middle School
Citrus Heights Elementary School
Arlington Heights Elementary School
San Juan High School
Kingswood Elementary School
Skycrest Elementary School
Cambridge Heights Elementary School
Woodside Elementary School
Sunrise Elementary School
Westwood Park
Rusch Park
Twin Creek Park
Football Golf Center
Creekwood Park
Indian River Dr Park
Shadowcreek Park
Cherry Creek Manor Park
Brookfox Park
San Juan Park
Madera Park
Edgecliff & Cripple Creek Park
McDonald Field Park
C-Bar-C-Bar
Northwoods Park
Sunrise Oaks Park
Tempo Community Park
Woodside Oaks Chevere Dr Park
1000 0 1000 2000 Feet
LEGEND
Streams & Creeks
Sunrise Recreation and Park District
San Juan Unified School District
Citrus Heights
Sacramento County
Roseville
Placer County
Fire Stations
City Hall/Police/Community Center
Library
Hospital
Post Office
Shopping Centers
1. Antelope Plaza
2. Marketplace at Birdcage
3. Burlington Coat Factory
4. Grand Oaks Shopping
5. Raley's Center
6. San Juan Center
7. Sam's Club
8. Stock Ranch Commercial
9. Sunrise Mall
10. Sunrise Oaks Center
11. Sylvan Market Place

A common term used in describing travel demand is “mode split.” Mode split refers to the form of transportation a person chooses to take when making a trip, be that walking, bicycling, using public transit, or driving. Mode split is often used in evaluating commuter alternatives such as bicycling, where the objective is to increase the “split” or percentage of people selecting an alternative means of transportation. From the 2013 mode split information is available for the journey-to-work. This information is presented in Table 3for the City of Citrus Heights.

Table 4 Mode of Travel to Work

2013 American Community Survey 1-Year Estimates	
Means of Transportation to Work	
Mode	**%**
Drive Alone	82.7
Carpool	9.6
Public Transportation	2.9
Bicycle	0.4
Walk	1.1
Work at Home	2.6
Other	0.6

Source: 2013 American Community Survey 1-Year Estimates

As shown in Table 4, less than one-percent of commuter work trips for City of Citrus Heights residents are made by bicycle. This is not surprising given the lack of existing bikeway facilities in the City, limited public transportation, and the fact that the Census data does not include trips from home-to-school in the journey-to-work data set. This is an important omission because home-to-school trips occur during the same morning peak hours as typical commuter trips. Since many children ride bicycles to school, the actual number of bicycle trips during the morning peak hour associated with commuters is expected to be slightly higher. Nevertheless, with just a few miles of existing bikeways in the City coupled with the lack of connectivity between existing routes, residents may be discouraged from riding due to perceptions of safety or the lack of a complete bikeway system with connections to their desired destination.

FUTURE POPULATION AND EMPLOYMENT

According to the growth projections from the SACOG publication, *2035 Projections for Households and Population by Housing Type and Employment by Sector,* the population for City of Citrus Heights is projected to grow to 115,869 by 2035, an annual increase of slightly more than one percent. However, employment is forecast to increase from approximately 16,407 to 36,621 (a 2.2 percent annual increase) during the same period.

FUTURE BICYCLE RIDERSHIP

Future bicycle ridership levels will depend on a number of factors such as population and employment trends as discussed above, the availability of bikeway facilities, trip making, and the location, density, and type of future land development. The latest (September2006) traffic counts for the City of Citrus Heights indicate that Greenback Lane, between Auburn Boulevard and the western city limits, carry 69,000 vehicles per day. Even with only modest population and employment growth, and assuming the existing mode split of 0.4 percent for bicycles does not change, bicycle commute trips to/from work in Citrus Heights will increase.

According to *The National Bicycling and Walking Study: Transportation Choices for a Changing America*, a much larger increase, upwards of two percent of all daily trips, could occur if balanced, connected systems of bikeways are implemented (Federal Highway Administration, 1994). The proposed system of bikeways for the City of Citrus Heights, as described in the following section, helps to achieve a balanced and connected system and therefore will contribute to a higher share of bicycle trips.

As individuals are influenced by the environmental issues of vehicle pollution as well as the increase in fuel prices, bicycle ridership may increase. Bicycling offers a low-cost, quiet, non-polluting, sustainable and healthy form of transportation ideal for many trips. The individual benefits of bicycling include improved health through increased physical activity, stress reduction, and lower transportation costs. The social benefits of bicycling include improved air quality through reduced vehicular emissions, improved traffic, reduced use of non-renewable fuel resources, and reduced health care costs via a healthier citizenry.

V. PROPOSED SYSTEM

This section describes the proposed system of bikeways for the City of Citrus Heights that was developed for this plan. The development of the proposed system was based on an advocacy planning process involving the TAC, interested agencies, and members of the public. The planning process consisted of an extensive review of the *2010 Sacramento City/County Bikeway Master Plan*, direct input from the TAC, and a public presentation/workshop.

PROPOSED SYSTEM DEVELOPMENT

Based on the review of the *2010 Sacramento City/County Bikeway Master Plan* by the TAC, and initial proposed system of bikeway routes was identified. This initial system was refined by the TAC according to the following bikeway planning criteria:

- Local Input – Local information should be considered in the bikeway planning process, including input from bicycle club members, bike shop owners, current riders, and the general public.

- Use – Bikeways contained in the proposed system should reflect use levels that are commensurate with the level of investment required for construction and maintenance.

- Coverage – The system should provide balanced access from all portions of the City's population centers for both commuting and recreation routes.

- Safety – The system should provide the highest level of safety possible for bicyclists and pedestrians while eliminating major safety concerns such as narrow roadways.

- Connectivity – The system should provide bikeway and pedestrian connections to major activity centers, multi-modal transfer locations, and to routes that provide access to regional connections. Activity centers include residential neighborhoods, schools, regional parks, shopping centers, employment centers, government centers, transit centers, and other recreational opportunities. Major gaps and barriers, including narrow bridges, lack of sidewalks, roadways, and sensitive environmental areas should be targeted as high priority items.

- On-Street Bikeways – Class II bike lanes should be provided as the preferred on-street bikeway facility. Where possible, sidewalks should be added for pedestrians. Class III bike routes should be used when Class II bike lanes are not feasible due to existing physical or environmental constrains. As with bike lanes, the designation of bike routes should indicate to bicyclists that there are particular advantages to using these routes as compared with alternative routes. This means that responsible agencies have taken actions to assure that these routes are suitable as shared routes and will be maintained in a manner consistent with the needs of bicyclists.

- Off-Street Bikeways – Where feasible, Class I bike paths on grade-separated rights-of-way should be implemented. These bikeways provide a higher degree of safety and recreational benefit than bikeways located on streets. They can also become linear parks, adding to the range of amenities for local communities. In, many areas of the City, the cost of constructing off-street bikeways may be competitive with that for on-street facilities due to the physical characteristics of the existing roadway system.

After refining the proposed system according to the bikeway planning criteria, the proposed map was distributed to local agencies and interested individuals or groups to obtain their comments about specific routes. In addition, the proposed system map was presented to the general public, various neighborhood groups, REACH and planning commission. Based on comments received through this review

process, and additional review at various community workshops, the proposed system map shown in Figure 5 developed.

The proposed system includes a total of about 73miles (88 km) of bikeway facilities. The system is comprised of approximately 49 miles of existing bikeways, and an additional 23.8 miles of proposed bikeways. The system connects residential areas with major activity centers in Citrus Heights, and it provides regional connections to other communities adjacent to the City. Each route is classified according to standards defined in Chapter 1000: Bikeway Planning and Design contained in the Highway Design Manual, Fifth Edition, California Department of Transportation, July 1, 2015 and presented earlier in Figure I.

For the purposes of this study, a minimum shoulder width of four to five feet is desirable but physical conditions in the City may dictate a narrower lane width for individual projects depending on the findings of the General Services Department.

Table 5 shows the number of proposed miles for each bikeway classification.

Table 5 Proposed Bikeway System

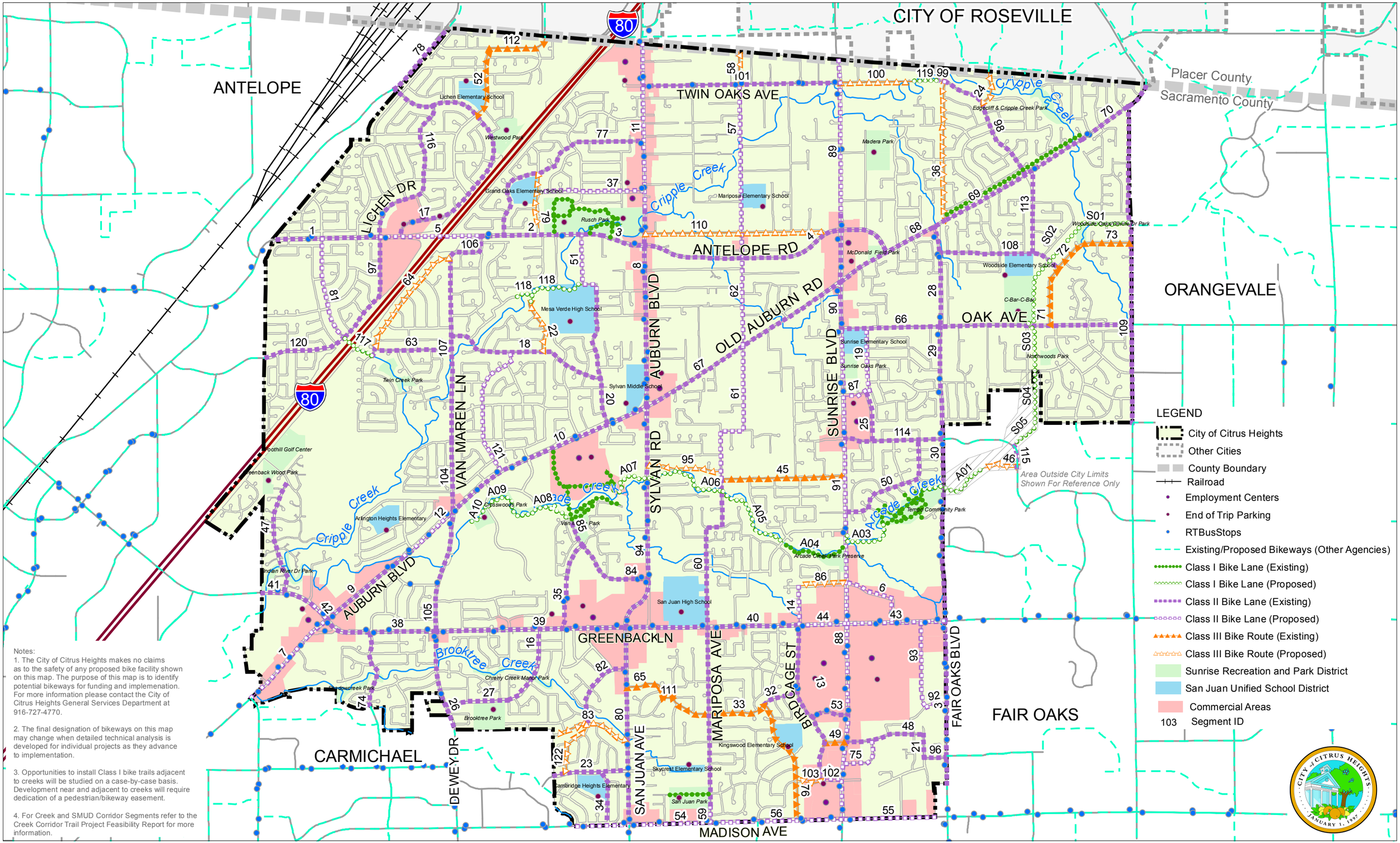
Length of Proposed System by Bikeway Classification			
Bikeway Classification	Existing	Proposed	Total
Class I	4.5 miles	4.9 miles	9.4 miles
Class II	40.9 miles	14.5 miles	55.4 miles
Class III	3.5	4.4 miles	7.9miles
Total	48.9 miles	23.8 miles	72.7 miles

Note: the final designation of Class II Bike Lanes and Class III Bike Routes may change when detailed technical analysis is developed for individual projects as they advance to implementation.

The proposed system consists of Class I, II, and III bikeway facilities. In general, Class I bike paths are designated in parks, along Old Auburn Road, across Interstate 80, Mesa Verde High School, and along the Priority 1 Trail Segments identified in the Creek Corridor Trail Project Feasibility Report (Arcade Creek from Sylvan Library to Tempo Park and the SMUD corridor from Tempo Park to Wachtel Way). Class II bike lanes were designated on major arterials and Class III bike routes were recommended on local connecting streets. The main difference in the Class II and Class III designations stems from the higher speeds and traffic volumes on arterials and the physical and cost constraints of providing Class II bike lanes on local residential streets. The proposed system contains a number of on-street bikeways that provide for local and regional bicycle travel.

REGIONAL AND MULTI-MODEL BIKEWAY CONNECTIONS

Regional connections include those bikeway facilities that connect the City of Citrus Heights with urban areas and activity centers in surrounding counties. Multi-modal connections allow bicyclists and pedestrians to transfer to other modes such as buses. Including these components in the discussion about the proposed system is important for the development of a bikeway system that provides a high degree of both accessibility and mobility.



Notes:
1. The City of Citrus Heights makes no claims as to the safety of any proposed bike facility shown on this map. The purpose of this map is to identify potential bikeways for funding and implemenation. For more information please contact the City of Citrus Heights General Services Department at 916-727-4770.

2. The final designation of bikeways on this map may change when detailed technical analysis is developed for individual projects as they advance to implementation.

3. Opportunities to install Class I bike trails adjacent to creeks will be studied on a case-by-case basis. Development near and adjacent to creeks will require dedication of a pedestrian/bikeway easement.

4. For Creek and SMUD Corridor Segments refer to the Creek Corridor Trail Project Feasibility Report for more information.

NORTH 0 0.25 0.5 1 MILES

Proposed Bikeway System
Figure 4

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REGIONAL CONNECTIONS

In the development of the proposed bikeway routes, an effort was made to assess the potential connectivity of Citrus Heights bikeways with existing or planned bikeways in surrounding counties. The City of Citrus Heights is bordered by the City of Roseville (Placer County) to the north, Fair Oaks and Carmichael to the south (Sacramento County), Orangevale to the east (Sacramento County). Interstate 80 and Greenback Lane, Madison Avenue, Sunrise Boulevard, San Juan Avenue, and Auburn Boulevard all provide regional roadway connections to these adjacent areas. Sunrise Boulevard has the potential of providing a direct connection to the American River Parkway that parallels U.S. Highway 50 and the American River. The American River Parkway provides a seamless Class I bike path from Folsom Lake to downtown Sacramento. As discussed in the existing conditions section above, no existing bikeways fully connect Citrus Heights to these surrounding areas. The proposed system would provide Class II bike lanes on the major routes connecting to these areas, in addition to major Class I facilities along Arcade Creek and the SMUD corridor.

Multi-modal Connections

The proposed bikeway system includes routes that overlap with existing Sacramento RT transit routes and stations. To facilitate us of these routes by bicyclists, all transit buses and major transit stations should be equipped with bike racks.

SUPPORT FACILITIES AND PROGRAMS

Support facilities and education programs are an important part of the proposed bikeway system. Existing support facilities such as bicycle parking and showers are very limited in the City. However, the Citrus Heights Police Department, San Juan School District, and the Sunrise Parks and Recreation District are actively involved in bicycle education programs. Specific recommendations on how to improve the bicycle support facilities and programs are discussed below.

Bicycle Parking, Shower, and Locker Facilities

Support facilities such as bicycle parking, shower and locker facilities can encourage bicycling by reducing the threat of theft and making riding more convenient.
Properly designed bike racks should be available at major bicycle destinations in the city. For the most part, these facilities should be required for new developments that are likely to experience a demand for bicycle parking such as commercial areas, parks, libraries, schools, and major employees. Existing activity centers should be encouraged to add bicycle-parking facilities. The type of parking facility (bike rack or bicycle locker) should be selected based on (a) cost, (b) ease of use, and (c) ability to prevent theft. Secure and convenient bike parking is critical in the effort to

encourage bicycling. All bike parking needs to be installed with consideration of protection from weather, theft and vandalism protection, gear storage, and, where appropriate, 24-hour access. Bike parking typically comes in two basic forms:

- Bike Racks for Short Term Bicycle Parking

  Short term bike parking is typically provided via bike racks and is usually used when cyclists are parking their bicycles for a couple of hours or less. An example is a trip to the library or store. Bike racks should be placed in close proximity to the bicyclists' destination in a highly visible location that is illuminated. Bike racks should be installed with minimum clearances from walls, landscaping and driveways per manufacturer's specifications. Quality bike racks provide at least two points of contact with the bicycle and allow both frame and wheels to be locked. For special events, short term bicycle parking may be provided by valet bicycle parking.

- Long Term Bicycle Parking

  Long term is typically provided at major employment sites, schools and transportation terminals in the form of bike lockers, bike cages or bike rooms. These facilities provide a higher level of security so bicyclists feel comfortable leaving their bicycle for long periods of time. Long-term parking should be fully protected from the weather. Bike lockers may be placed outdoors and some may be stacked to save space. Bike cages are fully enclosed and roofed areas with bicycle racks inside the enclosure with secure (limited) access, and are commonly located in parking garages or in outdoor areas. Bike rooms are secure, limited access rooms within a building dedicated for bicycle parking.

Access to shower and locker facilities may help encourage people to commute by bicycle, particularly in the summer months. Many jobs require employees to wear specific uniforms or formal attire such as suits and ties. By having shower and locker facilities employees have the option to shower and dress at work. This is an important consideration for bicycle commuters since they cannot control their travel environment and are much more dependent on support facilities located at the workplace.

The following actions are recommended for increasing the number of locations with bicycle parking, shower, and locker facilities:

- Encourage the installation of bicycle parking, shower, and locker facilities as conditions of approval for major new developments.

- Actively pursue state and federal funding to install bicycle parking, shower, and locker facilities at existing activity and employment centers.

Crossing Protection

Crossing protection improvements should be targeted for major intersections on the proposed bikeway networks, and at locations where school children cross a busy street to gain access to their school. State law has mandated bicycle detection at signals. However, Caltrans has not developed the plans and specifications to implement this new law. The following steps are recommended to build upon this effort.

- Use signing, striping, crossing guards, flashing beacons, and pedestrian actuated signals at street crossings with high levels of pedestrian and bicycle demand when warranted by engineering standards.

- Install bicycle detectors at signalized intersections along the bikeway system as intersections are upgraded. Detectors should be located within the striped bike lane either along the curb or between the right-turn lane and through lane.

- Change signal timing in coordination with installation of bicycle detectors and bicyclist actuated signals.

Educational Programs

Programs to teach existing and potential bicyclists about the fundamentals of bicycle riding are important in establishing good riding habits. Currently, the City of Citrus Heights Police Department conducts bicycle riding and safety education programs for elementary age school children. In addition, future safety and education programs are planned for implementation such as bicycle rodeos and helmet safety programs. The following additional steps are recommended to build upon this effort.

Continue and expand the current bicycle education program to reach all school children in the City. This should include private schools as well.

Establish an adult bicycle education program through the parks and recreation departments or other local agency departments that teaches adults how to ride defensively and encourages people to ride to work. This program may include the use of volunteers and possibly sponsorship of bicycle tours and races.

The League of American Bicyclists offers an instructor certification program. Becoming a League Cycling Instructor (LCI) certified to teach BikeEd is a great way to help cyclists in your community. Certified instructors can teach BikeEd classes to children as well as adults. The City may be sending staff and officers to this certification program.

VI. COST AND FUNDING ANALYSIS

Implementation of the proposed system will require funding from local, state, and federal sources and coordination with other agencies. To facilitate funding efforts, this section presents conceptual construction cost estimates for the proposed system along with a brief description of past expenditures for bikeway and pedestrian facilities.

COST ESTIMATES

Table 6 contains a unit cost summary for bikeway facilities in Citrus Heights. These cost estimates are based on costs experienced in various other California communities. However, these cost estimates should be used only to develop generalized construction cost estimates. More detailed estimate shall be developed after preliminary engineering.

Table 6 Generalized Cost Estimates

Generalized Unit Cost Estimates for Bikeway Construction Facility Type	Estimated Cost Per Mile	 Kilometer
Class III Bike Route		
• Signing only	$2,000	$1,200
• Signing plus minor road improvement	$80,000	$50,000
• Signing plus moderate roadway improvement	$300,000	$186,000
• Signing plus major roadway improvement	$600,000	$376,000
Class II Bike Lane [1]		
• Signing and striping only	$10,000	$6,000
• Signing and striping plus minor roadway improvement	$100,000 $600.0000	$62,000 $376,000
• Signing and striping plus moderate roadway improvement	$1,000,000	$625,000
• Signing and striping plus major roadway improvement		
Class I Bike Path		
• Construct asphalt path on graded right of way with drainage and new sub-base	$1,000,000	$625,000
• Construct asphalt path on un-graded right of way with drainage and new sub-base	$2,000,000	$1,300,000

Notes: [1] Minor, moderate, and major designations correspond to the designations used to classify roadways in the existing facilities inventory.

For the purposes of this plan, the use of specific unit costs depended on information from the existing conditions inventory. The inventory classified existing roadways according to the relative level of improvement (ie, cost) to add four-foot shoulders to the existing roadways. The three class types included minor, moderate, and major, which correspond to the cost designations in Table 6. This approach results in unit costs for Class III bike routes that include some roadway widening. Although Class III bike routes only require signing, many of the roadways designated for these routes should be widened to provide a minimum shoulder width of four to five feet as previously discussed.

Using the cost information in Table 6, and costs for trails identified in the Creek Corridor Trail Project, conceptual construction costs were developed of the proposed system. A summary of these costs is presented in Table 7 by type of facility. Conceptual construction cost estimates for individual routes and segments are contained in Appendix B.

Table 7 Conceptual Cost Estimate

Conceptual Construction Cost Estimate Summary	
Bikeway Classification	Cost
Class I Bike Path	$25,394,000
Class II Bike Lane	$26,781,813
Class III Bike Route	$26,943
Total	$52,202,756
Source: See cost estimates in Appendix C	

Table 7shows a total cost for constructing the proposed system of approximately $52-million. This total includes approximately $25- million in new Class I facilities and $26- million in Class II facilities.

Many funding opportunities exist at the federal, state, and local levels for constructing bikeway facilities. A general description of these sources is provided below.

POTENTIAL FUNDING SOURCES

In some cases, portions of the proposed system will be completed as part of future development and road widening and construction projects. For those portions that will rely on other funding mechanisms, the following discussion provides descriptions of the more effective potential funding sources.

Federal Sources

Federal funding through TEA-21 (Transportation Equity Act for the 21st Century) program could provide the bulk of non-local funding. TEA-21 consists of three major programs:

- Surface Transportation Program (STP);
- National Highway System (NHS); and
- Congestion Mitigation/Air Quality Program (CMAQ).

Other related federal programs include the following:

- Transportation Enhancement Activities (TEA);
- Hazard Elimination;
- Bridge Repair and Replacement;
- National Recreation Trail;
- Bicycle Transportation and Pedestrian Walkways;
- Transit Enhancement Activity;
- Scenic Byways; and
- Section 402 (Safety).

TEA-21 funding is administered through the state and regional governments. The City of Citrus Heights is located in the jurisdiction of the Sacramento Area Council of Governments (SACOG) agency. TEA-21 funding would be administered through SACOG. Most of the funding programs are transportation versus recreation oriented, with an emphasis on (a) reducing auto trips and (b) providing an intermodal connection. Funding criteria includes completion and adoption of a bikeway master plan, quantification of the costs and benefits of the system, proof of public involvement and support, environmental compliance, and commitment of local resources. In most cases, TEA-21 provides matching grant of 80 to 90 percent. Other federal funding sources include the Land and Water Conservation Fund Program and the Recreation and Public Purposes Act (Bureau of Land Management).

State Sources

The following state of California sources provide funding that could be applicable for the City of Citrus Heights.

Active Transportation Program (ATP)

The ATP consolidates existing federal and state transportation programs, including the Transportation Alternatives Program (TAP), Bicycle Transportation Account (BTA), and State Safe Routes to School (SR2S), into a single program with a focus to make California a national leader in active transportation. The ATP administered

by the Division of Local Assistance, Office of Active Transportation and Special Programs.

Environmental Enhancement and Mitigation Program (EEM)

Bicycle projects can qualify for EEM funds if they meet the program's requirements. Any non-profit organization can sponsor projects, which are submitted to the State Resources Agency for evaluation in June/July of each year.

Regional Improvement Program (RIP)

This is a funding category within the State Transportation Improvement Program (STIP) that can be used for a variety of projects, including transit stations, road rehabilitation, and road improvements such as bike lanes.

Regional Sources

The Sacramento Area Council of Governments (SACOG) provides regional funding in several categories that include active transportation. Programs include Bike/Ped Funding, ATP Regional Funding, Community Design, and Regional/Local Funding. SACOG issues a call for projects bi-annually.

Local Sources

A variety of local sources may be available for funding bikeway and pedestrian improvements; however, their use if often dependent on political support.

Local Transportation Fund

Established by the California legislature under the State Transportation Development Act of 1972, local transportation fund (LTF) revenues are derived from a one-quarter cent of the State's current 7.25% sales tax collected statewide. These funds are used for transit, special transit for disabled persons, and bicycle and pedestrian purposes. They are collected by the State Board of Equalization but are administered locally through SACOG.

New Construction

Future road widening and construction projects are on means of providing on-street bikeways and sidewalks. To ensure that roadway construction projects provide these facilities where needed, roadway design standards need to include adequate minimum cross-sections. Further, the review process for new development should include input pertaining to consistency with the proposed system and the goals and policies included in the General Plan.

Measure A

Measure A authorizes the imposition of a ½-cent sales tax in Sacramento County through 2009 to help find transportation projects and programs to promote alternative modes, improve air quality and make streets and highways safer and more efficient. The City of Citrus Heights receives approximately $3.6 million dollars per year through this process. The fund is split at $1.6 million in maintenance funds and $2 million in capital funds for the current budget year. The Measure A ordinance requires routine accommodation of bicycles and pedestrians in all transportation projects.

Assessment Districts

Different types of assessment districts can be used to fund the construction and maintenance of bikeway and pedestrian facilities. Examples include Mello-Roos Community Facility Districts, Infrastructure Financing Districts (SB 308), Open Space Districts, or Lighting and Landscape Districts. These types of districts have specific requirements relating to their establishment and use of funds.

Other Sources

Local sales taxes, developer or public agency land dedications, private donations, and fundraising events are other local options to generate funding for bikeway and pedestrian projects. Creation of these potential sources usually requires substantial local support.

COST AND FUNDING SUMMARY

Since the City's incorporation in January 1997, dedicated funds for bikeway facilities have been very limited. Recently, the City completed bicycle and pedestrian infrastructure along Auburn Boulevard between Sylvan Corners and Rusch Park and is currently designing pedestrian/bike facilities along Auburn Boulevard from Rusch Park to the north city limits line. The City is also conducting a feasibility study of a bicycle and pedestrian overcrossing over Interstate 80.

Future funding from the State and Federal government is difficult to predict due to the ever changing fiscal climate and the number of variables involved in securing funding. It is instructive to consider the total annual amount required to implement the proposed system over a 30year time frame. Dividing the approximately $52 million total cost equally over 30 years equates to about $1.7 million per year in constant 2015 dollars. To better prepare for future funding and grants, the following actions are recommended to complete:

- Prepare joint applications wherever possible, with other local and regional agencies for competitive funding programs at the state and federal levels;

- Actively pursue funding from the BTA and Safe Schools Program to complete priority portions of the proposed system;

- Use existing funding sources as matching funds for state and federal funding; and

- Include proposed bikeways wherever possible as part of roadway projects involving widening overlays, or other improvements.

VII. IMPLEMENTATION

This section addresses the construction phasing issues related to implementation of the proposed system. It includes guidelines for establishing priorities for implementing specific routes and also provides typical design standards for each bikeway classification.

BIKEWAY SYSTEM PHASING

The specific implementation of any given route, with all other things considered equal, should be based on the following criteria:

- Where an opportunity, such as a road widening or re-paving, makes implementation favorable;

- Where an eminent loss of an opportunity or land development, , makes implementation necessary;

- Where resolution of a major obstacle, such as access to flood channel right-of-way, makes implementation necessary; and

- Where the segment is not disconnected or otherwise poorly accessible from the rest of the system.

In many situations, the most needed bikeway improvement may not be implemented first. In these cases, external factors such as new road construction create opportunities to provide new bikeway facilities without consideration for need. Therefore, the proposed system does not include a ranking of specific routes, but does include the following list of high priority routes.

BIKEWAY DESIGN STANDARDS

The Caltrans Highway Design Manual gives extensive detail on the design for bikeways. The Caltrans standards provide a good framework for future implementation, but may not always be feasible due to topographic constraints. Bikeway design and planning standards are continually changing and expanding.

For example, there is pressure from the bicycling public to allow bike lanes that are narrower than Caltrans Standards to be installed on existing streets. However, local jurisdictions must be protected from liability so most agencies adopt the Caltrans guidelines a minimum standard. Examples of typical standard design treatments for Class I, Class II, and Class III bikeways are provided in Figures 5 through 6. This information is provided to assist local agency staff in the design and construction of future bikeway facilities. With these standards and other information contained in this update of the Citrus Heights Bicycle Master Plan, the City is positioned to take the next step in advancing bikeway projects from the planning stage to the design and construction phase.

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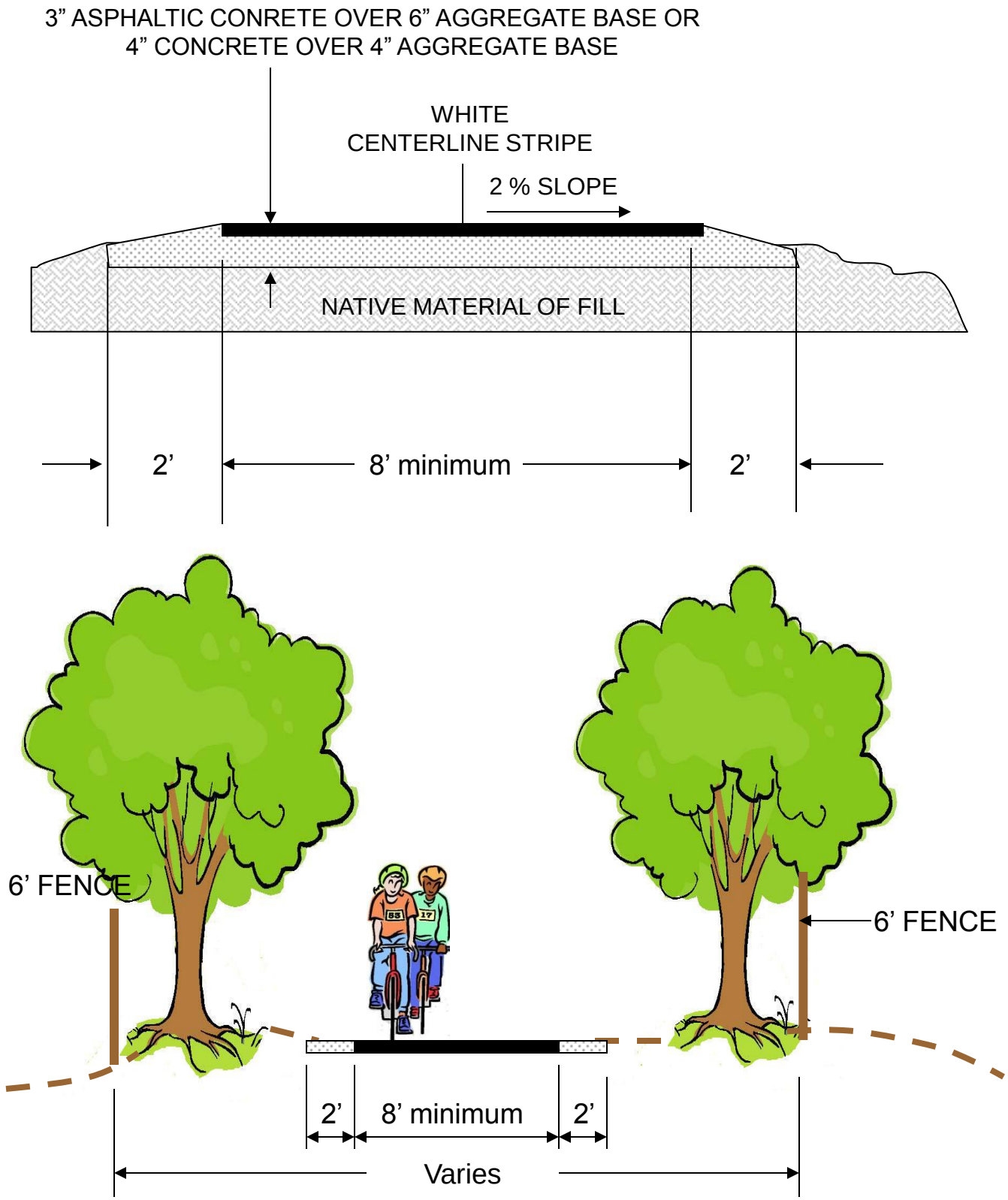
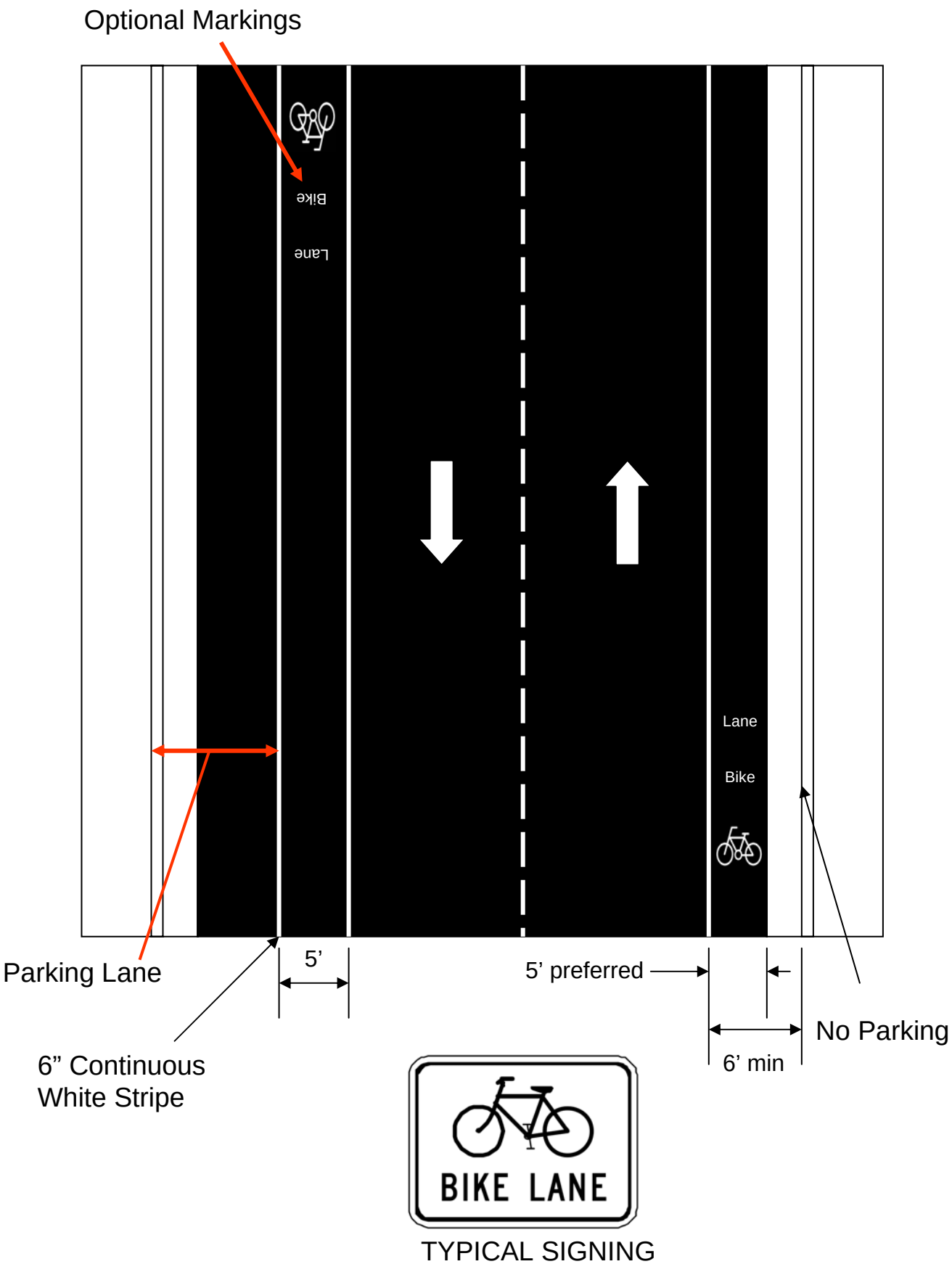


TYPICAL CLASS I BIKE PATH

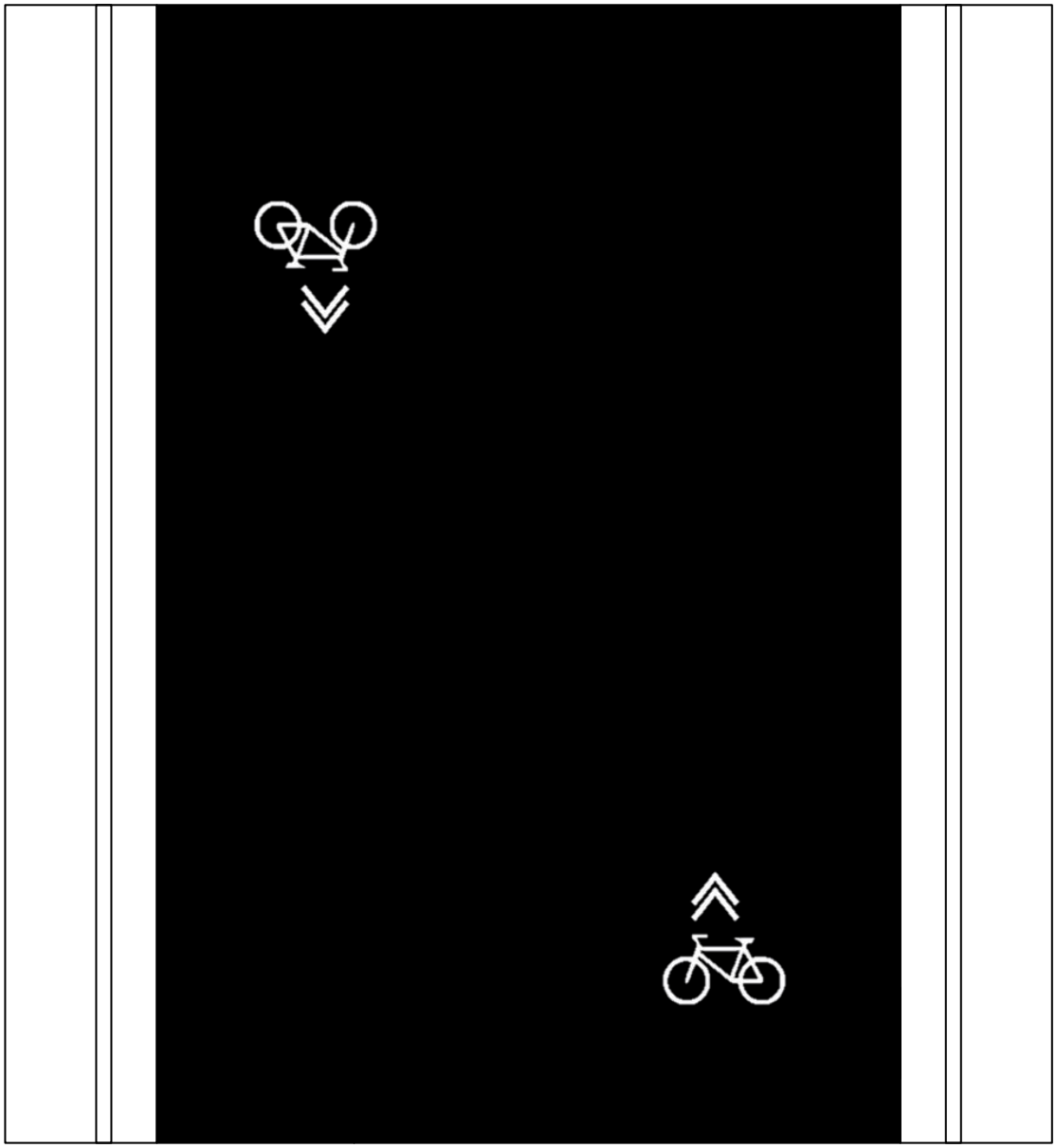
FIGURE 5



TYPICAL SIGNING

TYPICAL CLASS II BIKE LANES

FIGURE 6



TYPICAL SIGNING

TYPICAL CLASS III BIKE ROUTE

FIGURE 7

Appendix A - Conceptual Cost Estimates for Individual Routes

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ID	STREET/ Trail	Limits (South/East)	Limits (North/West)	Length (LF)	Cost
Existing					
Class I (Existing)					
	Rusch Park			5,340	Existing
	Stock Ranch			5,092	Existing
	San Juan Park			1,115	Existing
A04	Arcade Creek Park Preserve			2,300	Existing
	Tempo Park			5,656	Existing
	Old Auburn Trail	Robert Creek Court	Gary Oak Drive	4,261	Existing
			SUBTOTAL	23,764	
			Miles	4.50	
CLASS II (Existing)					
1	Antelope Road	Lichen Drive	West City Limits	2,777	Existing
2	Antelope Road	Lauppe Ln	Gardengate Drive	3,260	Existing
3	Antelope Road	Auburn Boulevard	Lauppe Lane	1,184	Existing
4	Antelope Road	Old Auburn Road	Auburn Boulevard	7,102	Existing
8	Auburn Boulevard	Sylvan Road	Rusch Park	5,286	Existing
9	Auburn Boulevard	Greenback Lane	Arcade Creek	2,703	Existing
10	Auburn Boulevard	Sylvan Road	Van Maren Lane	5,995	Existing
13	Birdcage Street	Kingswood Drive	Greenback Lane	3,396	Existing
15	Birdcage Street	Uplands Drive	Kingswood Drive	1,096	Existing
16	Brooktree Drive	Dunmore Avenue	Greenback Lane	2,144	Existing
17	Butternut Drive	Antelope Road	West City Limits	7,345	Existing
18	Calvin Drive	Van Maren Lane	Carriage Drive	4,421	Existing
20	Carriage Drive	Auburn Boulevard	Pratt Avenue	3,679	Existing
21	Celine Drive	Treecrest Avenue	Kingswood Drive	651	Existing
23	Chesline Drive	San Juan Avenue	West City Limits	1,979	Existing
25	Crux Drive	Woodmore Oaks Drive	Sungarden Drive	1,331	Existing
26	Dewey Drive	South City Limits	Greenback Lane	2,744	Existing
27	Dunmore Avenue	Dewey Drive	Brooktree Drive	1,678	Existing
28	Fair Oaks Boulevard	Oak Avenue	Old Auburn Road	2,711	Existing
29	Fair Oaks Boulevard	Woodmore Oaks Drive	Oak Avenue	3,053	Existing
30	Fair Oaks Boulevard	Greenback Lane	Woodmore Oaks Drive	4,922	Existing
31	Fair Oaks Boulevard	South City Limits	Greenback Lane	4,392	Existing
32	Farmgate Way	Birdcage Street	Primrose Drive	971	Existing
34	Fleetwood Drive	Madison Avenue	Chesline Drive	1,316	Existing

ID	STREET/ Trail	Limits (South/East)	Limits (North/West)	Length (LF)	Cost
35	Fountain Square Drive	Greenback Lane	Stock Ranch Road	2,389	Existing
38	Greenback Lane	Van Maren Lane	Auburn Boulevard	3,073	Existing
39	Greenback Lane	Mariposa Avenue	Van Maren Lane	7,324	Existing
40	Greenback Lane	Birdcage Street	Mariposa Avenue	2,494	Existing
41	Greenback Lane	Auburn Boulevard	West City Limits	1,493	Existing
47	Indian River Drive	Greenback Lane	Flaming Arrow Drive	3,116	Existing
48	Kingswood Drive	Celine Drive	Sunrise Boulevard	2,133	Existing
49	Kingswood Drive	Sunrise Boulevard	Birdcage Street	559	Existing
50	Larwin Drive	Sunrise Boulevard	Woodmore Oaks Drive	3,280	Existing
53	Macy Plaza Drive	Sunrise Boulevard	Birdcage Street	1,003	Existing
60	Mariposa Avenue	Greenback Lane	Highland Drive	9,222	Existing
63	Misty Creek Drive	Van Maren Lane	Navion Drive	2,304	Existing
66	Oak Avenue	East City Limits	Sunrise Boulevard	7,887	Existing
67	Old Auburn Road	Sunrise Boulevard	Auburn Boulevard	6,224	Existing
68	Old Auburn Road	Gary Oak Drive	Sunrise Boulevard	3,308	Existing
69	Old Auburn Road	Cripple Creek	Gary Oak Drive	4,261	Existing
70	Old Auburn Road	East City Limits	Cripple Creek	2,308	Existing
74	Parkoaks Drive	South City Limits	Greenback Lane	2,094	Existing
77	Rollingwood Boulevard	Auburn Boulevard	Antelope Road	5,548	Existing
78	Roseville Road	Butternut Drive	Northern City Limits	2,151	Existing
80	San Juan Avenue	Madison Avenue	Greenback Lane	5,338	Existing
82	Sperry Drive	Spicer Drive	San Juan Avenue	2,128	Existing
84	Stock Ranch Road	Sylvan Road	Fountain Square Drive	2,220	Existing
85	Stock Ranch Road	Fountain Square Drive	Aspen Gardens Way	788	Existing
90	Sunrise Boulevard	Oak Avenue	Antelope Road	3,070	Existing
94	Sylvan Road	Greenback Lane	Auburn Boulevard	6,187	Existing
96	Treecrest Avenue	Fair Oaks Boulevard	Celine Drive	612	Existing
97	Tupelo Drive	Saybrook Drive	Antelope Road	3,086	Existing
98	Twin Oaks Avenue	Old Auburn Road	Crestmont Drive	3,472	Existing
101	Twin Oaks Avenue	Sunrise Boulevard	Auburn Boulevard	5,343	Existing
104	Van Maren Lane	Auburn Boulevard	Campfire Way	1,887	Existing
105	Van Maren Lane	Greenback Lane	Auburn Boulevard	3,293	Existing
106	Van Maren Lane	Misty Creek Drive	Antelope Road	954	Existing
107	Van Maren Lane	Campfire Way	Misty Creek Drive	5,304	Existing
108	Villa Oak Drive	Olivine Drive	Fair Oaks Boulevard	3,315	Existing

ID	STREET/ Trail	Limits (South/East)	Limits (North/West)	Length (LF)	Cost
109	Wachtel Way	South City Limits	Old Auburn Road	8,562	Existing
113	Wintergreen Drive	Villa Oak Drive	Old Auburn Road	2,165	Existing
114	Woodmore Oaks Drive	Fair Oaks Boulevard	Sunrise Boulevard	2,665	Existing
115	Woodmore Oaks Drive	Highwood Way	SMUD Corridor	644	Existing
116	Zenith Drive	Antelope Road	Butternut Drive	4,398	Existing
120	Tupelo Drive	Saybrook Drive	West City Limits	2,250	Existing
			SUBTOTAL	215,988	
			Miles	40.91	
Class III (Existing)					
45	Highland Avenue	Sunrise Boulevard	Mariposa Avenue	3,339	Existing
71	Olivine Avenue	Oak Avenue	Villa Oak Way	1,617	Existing
65	NorthLea Way	Westgate Drive	San Juan Avenue	1,287	Existing
111	Westgate Drive	Farmgate Way	Northlea Way	250	Existing
33	Farmgate Way	Primrose Drive	Westgate Drive	2,702	Existing
76	Primrose Drive	Madison Avenue	Farmgate Way	3,444	Existing
52	Lichen Drive	Butternut Drive	Lichen Drive	1,906	Existing
112	Whyte Avenue	North City Limits	Lichen Drive	1,640	Existing
72	Olivine Avenue	Feldspar Court	Villa Oak Way	1,206	Existing
73	Olivine Avenue	Wachtel Way	Feldspar Court	1,069	Existing
			Subtotal	18,460	
			Miles	3.50	

ID	STREET/ Trail	Limits (South/East)	Limits (North/West)	Length (LF)	Cost
Proposed					
	Class I (Proposed)				
117	I80 Overcrossing	Navion Drive	Saybrook Drive	898	$ 9,000,000.00
118	Mesa Verde	Lauppe Ln	Zeeland Dr	2,229	$ 2,500,000.00
119	Twin Oaks Avenue	Twin Oaks Ave (West Terminus)	Twin Oaks Avenue (East Terminus)	667	$ 1,500,000.00
A10	A10	Crosswoods Circle (West)	Sylvan Library	760	$ 376,000.00
A09	A09	Crosswoods Circle (East)	Crosswoods Circle (West)	1,895	$ 1,596,000.00
A08	A08	Stock Ranch Bridge	Crosswoods Circle (East)	1,618	$ 686,000.00
A07	A07	Sylvan Road	Stock Ranch Trail (Existing)	1,615	$ 959,000.00
A06	A06	Mariposa Avenue	Sylvan Road	2,434	$ 2,203,000.00
A05	A05	Sayonara Drive	Mariposa Avenue	2,450	$ 2,989,000.00
A03	A03	Tempo Park	Sunrise Boulevard	1,532	$ 1,165,000.00
A01	A01	Highwood Way	Fair Oaks Boulevard	1,476	$ 710,000.00
S05	S05	S04	Woodmore Oaks Drive	905	$ 242,000.00
S04	S04	S05	Streng Avenue	1,400	$ 212,000.00
S03	S03	Streng Avenue	Oak Avenue	1,391	$ 275,000.00
S02	S02	Oak Avenue	S01	3,250	$ 617,000.00
S01	S01	S02	Wachtel Way	1,254	$ 364,000.00
			SUBTOTAL	25,774	$ 25,394,000.00
			Miles	4.88	

ID	STREET/ Trail	Limits (South/East)	Limits (North/West)	Length (LF)	Cost
Class II (Proposed)					
5	Antelope Road	Lichen Drive	Gardengate Drive	2,751	$ 17,881.50
6	Arcadia Drive	Greenback Lane	Sunrise Boulevard	1,848	$ 12,012.00
7	Auburn Boulevard	City Limits	Greenback Lane	2,957	$ 19,220.50
11	Auburn Boulevard	Rusch Park	City Limits	4,515	$ 12,500,000.00
12	Auburn Boulevard	Donegal Drive	Van Maren Lane	1,788	$ 11,622.00
14	Birdcage Street	Greenback Lane	Sunhill Drive	1,056	$ 6,864.00
19	Canelo Hills	Crux Drive	Oak Avenue	1,676	$ 10,894.00
37	Grand Oaks Boulevard	Auburn Boulevard	Rosswood Drive	2,763	$ 17,959.50
42	Greenback Lane	Auburn Boulevard	Matheny Way	522	$ 227,070.00
43	Greenback Lane	Fair Oaks Boulevard	Sunrise Boulevard	2,663	$ 1,158,405.00
44	Greenback Lane	Sunrise Boulevard	Birdcage Street	1,277	$ 555,495.00
51	Lauppe Lane	Pratt Avenue	Antelope Road	1,904	$ 12,376.00
54	Madison Avenue	Mariposa Avenue	West City Limits	3,755	$ 1,633,425.00
55	Madison Avenue	East City Limits	Sunrise Boulevard	2,517	$ 1,094,895.00
56	Madison Avenue	Sunrise Boulevard	Mariposa Avenue	3,541	$ 1,540,335.00
57	Mariposa Avenue	Antelope Road	Twin Oaks Avenue	4,699	$ 117,475.00
59	Mariposa Avenue	Madison Avenue	San Juan Park	472	$ 11,800.00
61	Mariposa Avenue	Highland Drive	Old Auburn Road	4,236	$ 105,900.00
62	Mariposa Avenue	Old Auburn Road	Antelope Road	2,360	$ 59,000.00
75	Pebble Beach Drive	Sunrise Boulevard	Kingswood Drive	1,239	$ 8,053.50
81	Saybrook Drive	Tupelo Drive	Antelope Road	2,851	$ 18,531.50
87	Sungarden Drive	Canelo Hills Drive	Sunrise Boulevard	567	$ 3,685.50
88	Sunrise Boulevard	South City Limits	Sayonara Drive	7,790	$ 3,388,650.00
89	Sunrise Boulevard	Antelope Road	North City Limits	4,185	$ 1,820,475.00
91	Sunrise Boulevard	Sayonara Drive	Oak Avenue	5,479	$ 2,383,365.00
92	Sunrise East Way	Fair Oaks Boulevard	Sunrise Vista Drive	524	$ 3,406.00
93	Sunrise Vista Drive	Sunrise East Way	Greenback Lane	2,322	$ 15,093.00
99	Twin Oaks Avenue	Gary Oak Drive	Cripple Creek	218	$ 1,417.00
102	Uplands Drive	Sunrise Boulevard	Birdcage Street	445	$ 2,892.50
121	Cobalt Way	Auburn Boulevard	Calvin Drive	3,633	$ 23,614.50
			SUBTOTAL	76,553	$ 26,781,813.00
			Miles	14.50	

ID	STREET/ Trail	Limits (South/East)	Limits (North/West)	Length (LF)	Cost
Class III (Proposed)					
22	Cessna Drive	Calvin Drive	Lost Creek Court	1,494	$ 1,494.00
24	Crestmont Avenue	Twin Oaks Avenue	Northern City Limits	956	$ 956.00
36	Gary Oak Drive	Old Auburn Road	Twin Oaks Avenue	3,750	$ 3,750.00
46	Highwood Way	Woodmore Oaks Drive	A01	925	$ 925.00
58	Mariposa Avenue	Twin Oaks Avenue	North City Limits	878	$ 878.00
64	Navion Drive	Van Maren Lane	Misty CreekDrive	3,274	$ 3,274.00
79	Rosswood Drive	Grand Oaks Boulevard	Rollingwood Boulevard	1,459	$ 1,459.00
86	Sun Hill Drive	Sunrise Boulevard	Birdcage Street	1,224	$ 1,224.00
95	Sylvan Valley Way	Mariposa Avenue	Sylvan Road	1,956	$ 1,956.00
100	Twin Oaks Avenue	Eastern Terminus of Twin Oaks Avenue	Sunrise Boulevard	1,951	$ 1,951.00
103	Uplands Drive	Birdcage Street	Primrose Drive	645	$ 645.00
110	Watson Way	Antelope Road	Auburn Boulevard	4,892	$ 4,892.00
83	Spicer Drive	San Juan Avenue	West City Limits	2,037	$ 2,037.00
122	Sperry Drive	Chesline Drive	Spicer Drive	1,502	$ 1,502.00
			SUBTOTAL	23,404	$ 26,943.00
			Miles	4.43	
			GRAND TOTAL	383,943	$ 52,202,756.00

1) 2008 Bicycle Master Plan, City of Roseville, CA., Public Works – Alternative Transportation

2) 2010 Sacramento City/County Bikeway Master Plan Vol 1 of 2; adopted by Sacramento County on Nov 23, 1993

3) California Dept of Transportation Highway Design Manual, Sixth Edition, 7/1/2015

4) California Manual on Uniform Traffic Control Devices for Streets and Highways (FHWA's MUTCD 2009 Edition, as amended for use in California), PART 9 Traffic Control for Bicycle Facilities

5) Caltrans Project Development Procedures Manual; CHAPTER 31 – Non-motorized Transportation Facilities, 7/9/2015

6) Guide for the Development of Bicycle Facilities, American Association of State Highway and Transportation Officials, Fourth Edition, 2012

7) Highway and Facility Design: Scenic Byways, Transportation Research Record 1363, Transportation Research Board, Washington, D.C., 1992.

8) Pedestrian and Bicycle Facilities in California: A Technical Reference and Technology Transfer Synthesis to Caltrans Planners and Engineers, July , 2005

9) Wilkinson, W.C., and Moran, C.G., Selecting and Designating Bicycle Routes, Bicycle Federation of American, Washington, D.C., April, 1986

10) Flink, C.A., Lagerwey, P., Balmori, D., and Searns, R.M., Trails for the Twenty-First Century: Planning, Design, and Management Manual for Multi-Use Trails, Washington, D.C., Covelo, CA 1993.

11) Selecting Roadway Design Treatments to Accommodate Bicycles, Publication No. FHWA-RD-92-073, U.S. Department of Transportation, Federal Highway Administration, January 1994.

12) Rack Em Up, Bicycle Improvement Program, Seattle Engineering Department, July, 1993.

13) Williams, L.A., Pedestrian Safety, Special Report, Technology Transfer Program, Institute of Transportation Studies, University of California, April 1994.

14) The National Bicycling and Walking Study: Transportation Choices for a Changing America, Publication No. FHWA-PD-94-023, U.S. Department of Transportation, Federal Highway Administration. 1994.

15) Chapter 1000: Bikeway Planning and Design, Highway Design Manual, Fifth Edition, California Department of Transportation, September 1, 2006.

16) 1990 Census Transportation Planning Package, Bureau of Transportation Statistics, U.S. Department of Transportation.

17) The Sacramento County City/County Bikeway Master Plan, Volume 2, August 1991

18) City of Citrus Heights General Plan, 2011

19) City of Citrus Heights Creek Corridor Trail Project Feasibility Report, March 27, 2014

Appendix C - Web Site Resources

California State DOT bike web site resources > http://www.dot.ca.gov/hq/tpp/offices/bike/index.html

League of American Bicyclists > http://www.bikeleague.org/

Sacramento Area Bicycle Advocates (SABA) > http://www.sacbike.org/

Sacramento Bicycle Kitchen > http://sacbikekitchen.org/

Sacramento County Bicycle Master Plan - Links Page > http://saccountybikeplan.webexone.com/default.asp?link=