CITY OF Rancho Cordova

Incorporated July 1, 2003

BICYCLE MASTER PLAN

MARCH 2011

The City would like to thank ***Dave Cassel****, who submitted the photograph used on the cover of the Bicycle Master Plan.*

BICYCLE MASTER PLAN

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MARCH 2011

Executive Summary

The City of Rancho Cordova Bicycle Master Plan carries forward cycling policies and goals that were initiated in the City's General Plan. The Bike Plan is closely tied to the Transit Master Plan and Pedestrian Master Plan, and continues to shape the City's goal of providing safe and attractive alternative modes for travel.

The Bicycle Master Plan envisions a system of bike paths and bike lanes that encourage both commuting and recreational activities. The plan focuses on expanding the bicycle network in our existing community by providing good access to activity centers, light rail and the American River Parkway. The plan also resolves access issues crossing Highway 50, improves connections between local neighborhoods and helps to provide a level of comfort to riders through way-finding signs and maps, by building bike parking racks and by providing rest areas.

The newly developing areas of the City create a bold vision for trails and bike lanes that will connect all of or our neighborhoods to the future Upper Laguna Creek Trail System, ultimately providing connections to other communities in the region. Barriers to travel will be eliminated so that all types of cyclists will ride to parks, schools, shopping and restaurants, and so that residents find it easy to access work opportunities, religious institutions and other social activity centers.

The four E's, Education, Encouragement, Enforcement and Engineering are supported through programs such as Student Bicycle Safety courses lead by the 50 Corridor Transportation Management Association, the Folsom Bicycle Safety Corridor Program initiated by the California Highway Patrol and the Rancho Cordova Police Department, and the Sacramento Air Quality Management District's Bicycle Parking Program. The City will continue to develop programs through the Bicycle Advisory Committee and through the citizen organized Bicycling Advocates for Rancho Cordova or BARC.

The Bike Plan creates a path for implementation through private investment, state and federal grant actions and citizen led initiatives. Implementation priorities are identified and will be balanced with fiscal, environmental and institutional challenges. Bicycle Friendly Community status will also be attained through the League of American Bicyclists providing recognition that will ensure the future vision for cycling in Rancho Cordova.

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CHAPTER 1

Introduction

Bicycling is becoming an increasingly significant mode of transportation as communities across the globe seek to clean their air and develop healthy living habits. A comprehensive and safe bicycle network can encourage people to get on a bike and ride to work, to school, to run errands, to get in shape, or just for the fun of it. Ample opportunities for bicycling, for recreation and transportation, are representative of a high standard of living and a community that cares about the environment and the health of its citizenry.

PURPOSE OF THE PLAN

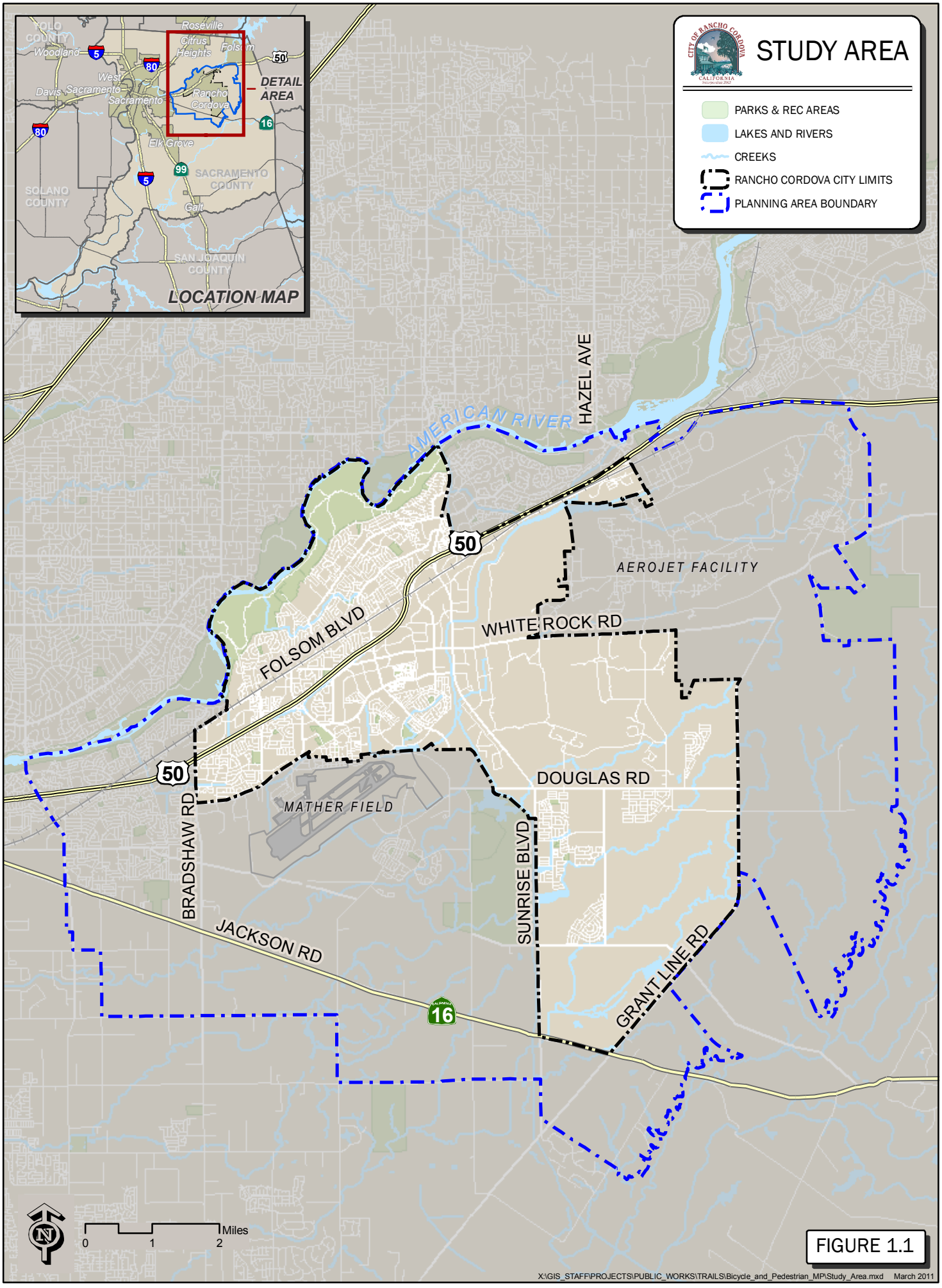
A bicycle master plan provides strategic direction for the development of a comprehensive bicycle transportation network. This Plan is Rancho Cordova's first dedicated Bicycle Master Plan, although the City's General Plan provided a sound policy framework for bicycle facility development beginning in 2006.

This Plan provides information about the current state of bicycle transportation in Rancho Cordova and provides additional policy direction for the City. The Plan also indicates the level of financial effort and community collaboration necessary to achieve the desired network.

SETTING

PLANNING AREA

The City of Rancho Cordova is located within the Highway 50 corridor to the east of the City of Sacramento and west of the City of Folsom. Mather Field Air Base is located along the southwest boundary of the City, and the Aerojet Rocket Testing Facility is located to the east. The northern boundary of Rancho Cordova is defined by the American River. At approximately 23 square miles within its borders, the City of Rancho Cordova is the third largest incorporated municipality in Sacramento County and is the second largest employment center in the Sacramento region. Rancho Cordova was incorporated in 2003. See Figure 1.1 for Study Area Map.


STUDY AREA
PARKS & REC AREAS
LAKES AND RIVERS
CREEKS
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LOCATION MAP
DETAIL AREA
Roseville
Citrus Heights
Folsom
Woodland
West Sacramento
Davis
Sacramento
Rancho Cordova
Elk Grove
Galt
YOLO COUNTY
SOLANO COUNTY
SACRAMENTO COUNTY
SAN JOAQUIN COUNTY
AMERICAN RIVER
HAZEL AVE
FOLSOM BLVD
WHITE ROCK RD
AEROJET FACILITY
DOUGLAS RD
MATHER FIELD
BRADSHAW RD
SUNRISE BLVD
JACKSON RD
GRANT LINE RD
50
16
Miles
0
1
2
FIGURE 1.1
X:\GIS_STAFF\PROJECTS\PUBLIC_WORKS\TRAILS\Bicycle_and_Pedestrian_MP\Study_Area.mxd March 2011

Rancho Cordova was largely settled during and after the Second World War, when it was home to a thriving military base and a hub for the emerging aerospace industry. The original development pattern focused on vehicle transportation, resulting in limited opportunities for bicycle travel. The military base is no longer active. The site is now used for both private air service and goods movement aviation.

Due to its proximity to the state capital and its accessibility by multiple transportation modes, Rancho Cordova has emerged as an important employment center within the greater Sacramento metropolitan region and the state.

PLANNING PROCESS AND PUBLIC INVOLVEMENT

The Bicycle Master Plan was developed in close collaboration with the Bicycle and Pedestrian Technical Advisory Committee (TAC), composed of interested residents and cycling advocates. This committee met throughout the planning process to identify issues and needs, review projects, discuss future network development, prioritize projects, and review the draft document. Upon completion of the Master Plan process, the Advisory Committee is expected to continue work on plan implementation.

Early in the planning process, the City co-hosted a bicycle and pedestrian planning open house with Bicycle Advocates Rancho Cordova (BARC) to gather information about ridership trends, issues, and needs. This workshop-style meeting was widely advertised and drew community members from throughout Rancho Cordova, in addition to interested residents of the neighboring communities of Folsom and Gold River, as well as representatives from Caltrans, the Sacramento Area Bicycle Advocates (SABA), and WalkSacramento. A second community workshop was held during the final months of the planning process to gather community feedback on the draft Bicycle Master Plan document and proposed bicycle network and project list.

In addition to TAC meetings and community workshops, City staff met repeatedly with neighborhood associations to gather input on the Plan. Comments were also welcomed via email and telephone throughout the planning process.

THE LANGUAGE OF THIS PLAN

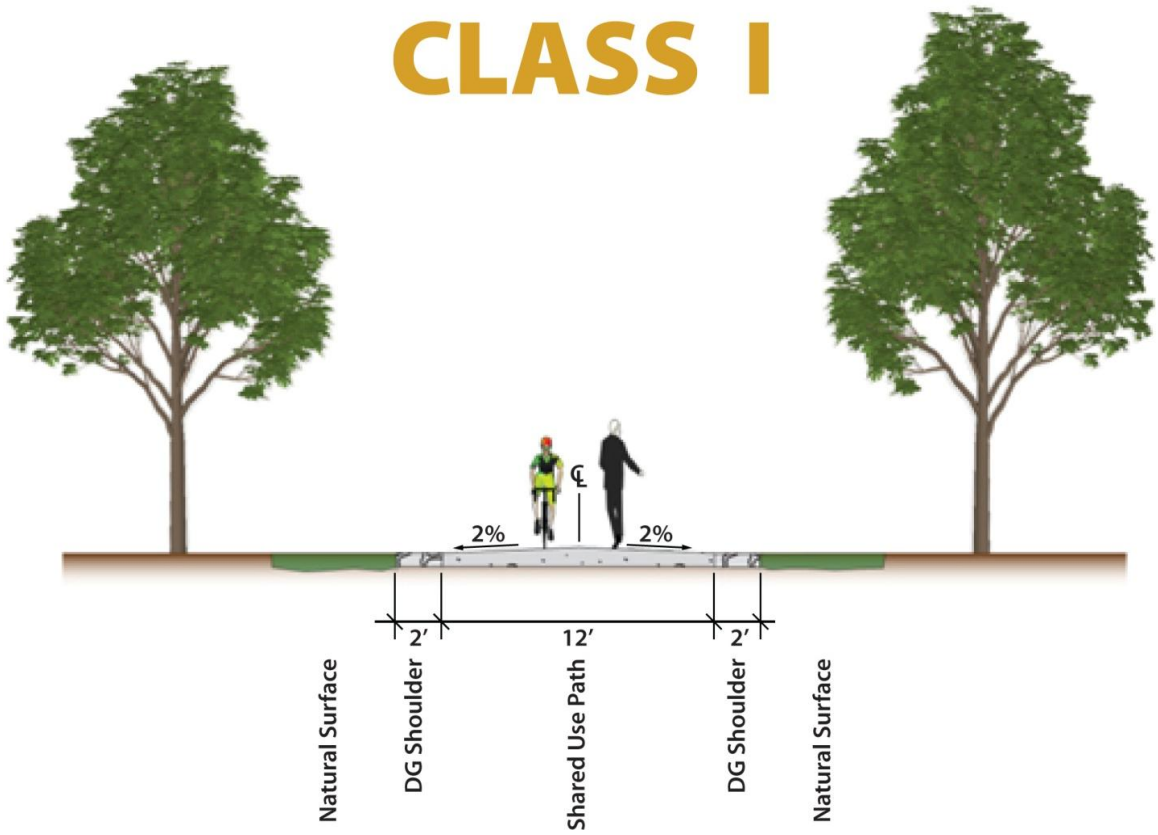
A bicycle master plan is intended to be a user-friendly document that provides strategic direction for staff while also capturing and accurately reflecting a community's vision for their bicycle transportation network. To ensure better understanding of the more technical aspects of this Plan, the concepts of bicycle facility types and cyclist types are introduced below.

BICYCLE FACILITY TYPES

The Caltrans Highway Design Manual, Chapter 1000, designates three discrete types of bikeways: Class I Bike Paths, Class II Bike Lanes, and Class III Bike Routes.

Class I

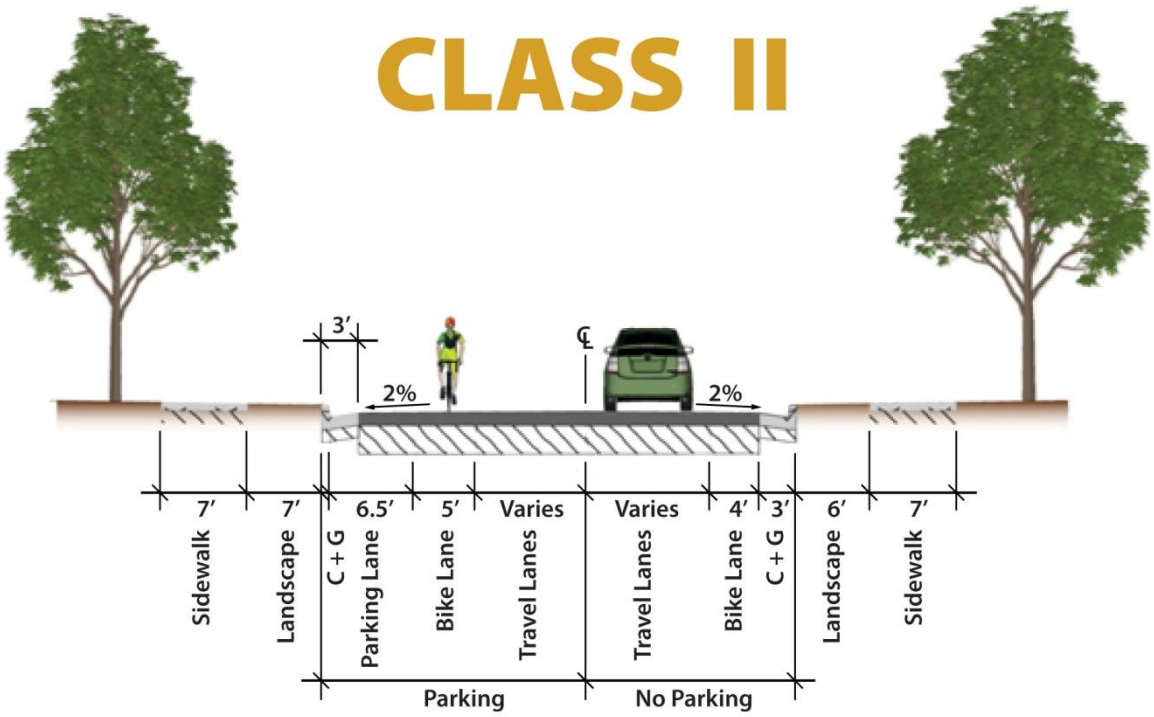
Class I pathways are off-street facilities, dedicated exclusively to use by bicyclists, pedestrians, and in some cases, equestrians and for other non-motorized travel such as roller skating, skateboarding, and so forth. Class I pathways are sometimes called multi-use pathways or multi-use trails because of the diversity of uses they can accommodate. Class I facilities are an important recreational amenity and are often located adjacent to parks, open space, rivers, streams, and canals. In cases where Class I facilities provide direct connections between major destinations, they can become popular commute routes.



** The standard trail width is 10 feet. A 12-foot trail width is desirable for major corridors or busy multi-use paths.*

Class II

Class II bike lanes are established in the public right-of-way and delineate a portion of the street for bicyclists, providing greater predictability in their movement relative to motor vehicle traffic. Class II lanes must be located on roadways with adequate width to accommodate the delineation of a bike lane. Once established, bike lanes must be signed and require adequate maintenance to keep them free of debris and other barriers to safe cycling.



Class III

On Class III bike routes, bicyclists have been directed to use a particular roadway in conjunction with motor vehicle traffic. Class III routes are generally designated on roadways with low levels of motor vehicle traffic where bicyclists may share the travel lane. Class III facilities are often used as an alternative route through a high-demand corridor. Class III facilities must be signed and may be demarcated with a "sharrow" stencil indicating to motorists that they are sharing the road with cyclists. In some cases, sharrows may be appropriate on streets that are not designated on the Class III system.

A "sharrow" alerts motorists that they are sharing a lane or roadway with cyclists.

CYCLIST TYPES

Cyclists use the bicycle transportation network in different ways, depending on their purpose for riding and their level of experience and comfort on the road. Cyclist types are identified solely for the purpose of planning to meet the needs of all types of cyclists with a diverse network of facilities, from meandering Class I pathways to Class II on-street lanes. Designers are challenged to provide attractive riding opportunities for all cyclists, both on streets and on bike paths.

Youth or Recreational

- Prefers slower speeds
- Often rides together as a family
- Rides on local streets and trails

Commuter and Utilitarian

- Rides primarily for transportation
- Comfortable using Class I trails and Class II bike lanes
- Comfortable at a range of speeds

Avid and Experienced

- Prefers faster speeds
- Comfortable on all road ways and trails, including riding in the travel lane
- Comfortable sharing the roadway with vehicular traffic

Of those Rancho Cordova cyclists queried, the majority identify themselves as "commuter or utilitarian" cyclists, followed closely by "avid and experienced."

SUPPORT FACILITY TYPES

Bicycle support facilities refer to the many small items of bicycle-related infrastructure that "support" a bicycle transportation network. Support facilities most commonly refer to parking: bicycle racks, lockers, and other storage facilities. However, support facilities can also include bicycle repair shops, drinking fountains and rest areas alongside a trail, directional signage and maps throughout the City, or lighting at an underpass. Bicycle support facilities are a key component of a successful network; if there is nowhere to park a bicycle at a destination, a person will be less likely to ride there.

GRADE-SEPARATED CROSSINGS

A grade-separated crossing is any crossing of a roadway, waterway, rail line, utility corridor, or other major barrier that is at a different grade than the street level. Grade-separated crossings may be overpasses or

underpasses, depending on the constraints of the site. Existing grade-separated crossings in Rancho Cordova provide dedicated bicycle and pedestrian crossings across Highway 50. In contrast, an at-grade crossing is a crossing as the same grade (at street level) as the rest of the facility.

PLAN ORGANIZATION

HOW TO USE THIS PLAN

This plan comprises six chapters, ranging from an explanation of existing conditions for cycling in Rancho Cordova to detailed cost estimates for proposed bicycle improvement projects. Different readers may focus on different components of the Plan.

If you are a resident, you may want to focus on the proposed network described in Chapter 5: Recommended Bicycle Network, which conveys the long-term vision for bicycle transportation in Rancho Cordova. You may also be very interested in the project implementation phasing, outlined in Chapter 6.

The proposed bicycle network is described in Chapter 5.

If you are a City staff member, you may want to read and understand the entire document, and you'll want to focus on the policy framework for bicycle facilities and programs, outlined in Chapter 4: Recommended Policies, Programs, and Standards.

If you are a member of the development community, you may be particularly interested in the policy direction provided by Chapter 4: Recommended Policies, Programs, and Standards, as well as the implementation information contained in Chapter 6.

CALIFORNIA STREETS AND HIGHWAYS CODE COMPLIANCE

This Plan complies with California Streets and Highways Code Section 891.2, items A–K, regarding bicycle transportation plans. Compliance with this code section will help to ensure that the City of Rancho Cordova may become eligible to receive Caltrans Bicycle Transportation Account funding upon approval of this Plan by the regional transportation planning agency, Sacramento Area Council of Governments (SACOG), and Caltrans.

The manner in which this Plan complies with Section 891.2 is outlined in Table 1.1 below.

Table 1.1: California Streets and Highways Code Section 891.2 Compliance

Requirement	Description	Location of Applicable Information in this Plan
A	The estimated number of existing bicycle commuters in the plan area and the estimated increase in the number of bicycle commuters resulting from implementation of the plan.	Chapter 3, Page 3-7
B	A map and description of existing and proposed land use and settlement patterns which shall include, but not be limited to, locations of residential neighborhoods, schools, shopping centers, public buildings, and major employment centers.	Chapter 2, Page 2-18
C	A map and description of existing and proposed bikeways.	Chapter 2, Pages 2-5 through 2-9 —and — Chapter 5
D	A map and description of existing and proposed end-of-trip bicycle parking facilities. These shall include, but not be limited to, parking at schools, shopping centers, public buildings, and major employment centers.	Chapter 2, Pages 2-9 through 2-13
E	A map and description of existing and proposed bicycle transport and parking facilities for connections with and use of other transportation modes. These shall include, but not be limited to, parking facilities as transit stops, rail and transit terminals, ferry docks and landings, park and ride lots, and provisions for transporting bicyclists and bicycles on transit or rail vehicles or ferry vessels.	Chapter 2, Pages 2-9 through 2-13
F	A map and description of existing and proposed facilities for changing and storing clothes and equipment. These shall include, but not be limited to, locker, restroom, and shower facilities near bicycle parking facilities.	Chapter 2, Pages 2-9 through 2-13
G	A description of bicycle safety and education programs conducted in the area included within the plan, efforts by the law enforcement agency having primary traffic law enforcement responsibility in the area to enforce provisions of the Vehicle Code pertaining to bicycle operation, and the resulting effect on accidents involving bicyclists.	Chapter 2, Pages 2-14 —and— Chapter 3, Pages 3-3 through 3-6
H	A description of the extent of citizen and community involvement in development of the plan, including, but not limited to, letters of support.	Chapter 3, Pages 3-1 through 3-3 —and— Appendix B

Requirement	Description	Location of Applicable Information in this Plan
I	A description of how the bicycle transportation plan has been coordinated and is consistent with other local or regional transportation, air quality, or energy conservation plans, including, but not limited to, programs that provide incentives for bicycle commuting.	Chapter 2, Pages 2-15 through 2-19
J	A description of the projects proposed in the plan and a listing of their priorities for implementation.	Chapter 5 —and— Chapter 6, Pages 6-4 through 6-5
K	A description of past expenditures for bicycle facilities and future financial needs for projects that improve safety and convenience for bicycle commuters in the plan area.	Chapter 2, Page 2-4 —and— Chapter 6

Chapter 2:
EXISTING CONDITIONS

2

CHAPTER 2

Existing Conditions

Rancho Cordova's existing network of bicycle trails, lanes, and routes provides opportunities for cyclists to commute, ride for recreation, and make utilitarian trips. Many residents enjoy their after-work and weekend excursions along the Folsom South Canal and American River Parkway bike trail. Yet significant improvements to the network of bicycle facilities remain to be completed.

This chapter describes the existing condition of Rancho Cordova's bicycle network and identifies existing demographic trends, planning context, and policy framework relevant to the future development of bicycle infrastructure.

PLANNING CONTEXT

DEMOGRAPHIC PROFILE

Rancho Cordova grew from 57,799 residents in 2007 to over 62,000 residents in 2009.[1] The City has experienced significant growth in the recent past and anticipates continued growth into the future. The population is estimated to grow to 105,000 residents by 2020. The median income for Rancho Cordova households is $46,529.[2] The City has a diverse population as shown in Table 2.1 on the following page.

[1] American Community Survey 2007

2 American Community Survey 2007

Table 2.1: Population Diversity

Area	White	Hispanic or Latino	Black or African American	Asian	Two or More Races	Other
Rancho Cordova	53.6%	16.7%	11.8%	10.2%	6.3%	1.5%
California	59.8%	35.9%	6.2%	12.3%	3.3%	18.4%
Sacramento County	60.8%	19.3%	10.1%	13.7%	4.2%	11.1%

Source: U.S. Census Bureau

Rancho Cordova is one of the Sacramento region's most concentrated employment centers. It is home to many residents who are working age (over 16), as depicted in Table 2.2 below.

Table 2.2: Number of Residents and Workers in Rancho Cordova and Nearby Communities

City	Total Population	Total Number of Workers Over the Age of 16*	Total Number of Workers as Percentage of Total Population
Rancho Cordova	59,666	26,787	45%
Folsom	71,836	32,020	45%
Arden-Arcade	90,973	41,828	46%
Roseville	115,452	57,243	50%
Sacramento	446,530	197,856	44%

Source: American Community Survey 2007
**Refers to workers living in each area.*

EXISTING TRANSPORTATION MODE SHARE

Analysis of transportation mode share has focused primarily on the work trip. As work-related travel is discussed below, it should be noted that work trips constitute 20 percent of trips that are made by City residents.

Rancho Cordova residents use a variety of transportation modes to travel to and from work. The majority of residents drive alone to work, with a significant number using public transportation and carpooling. Nearly one in one hundred working residents report riding a bicycle to work. This figure is greater than the bicycle-to-work mode share for Roseville and Folsom, but less than that of the City of Sacramento or Arden-Arcade (see Table 2.3 below).

Nearly one in one hundred working Rancho Cordova residents report riding a bicycle to work.

Table 2.3: Mode of Transportation to Work for Residents of Rancho Cordova and Nearby Communities

Mode of Transportation	Rancho Cordova		Folsom		Arden-Arcade		Roseville		Sacramento	
	Percentage	No. of Workers	Percentage	No. of Workers	Percentage	No. of Workers	Percentage	No. of Workers	Percentage	No. of Workers
Drove Alone	71.6%	19,886	78.6%	22,370	76.2%	32,758	80.1%	42,203	72.5%	147,356
Car-pooled	15.3%	4,249	8.2%	2,334	11.2%	4,814	9.8%	5,163	14.1%	28,658
Transit	5.5%	1,528	2.2%	626	3.2%	1,376	1.6%	843	3.6%	7,317
Walked	1.5%	417	1.2%	342	2.7%	1,161	1.5%	790	3.3%	6,707
Bicycled	0.9%	250	0.6%	171	1.5%	645	0.4%	211	2.2%	4,471
Other	5.2%	1,444	9.3%	2,647	5.2%	2,235	6.7%	3,530	4.4%	8,943

Source: 2007–09 American Community Survey 3-Yr. Estimates, Table S0801

Detailed information on work-trip travel times for City residents provides insight on how many citizens could use their bicycles for commute purposes. The 3 percent of residents who have a commute time of 5 minutes or less should be able to switch to a pedestrian or bicycle mode, assuming a safe route and reasonable weather conditions. The same might also be true for potential bicycle commuting trips for the 13 percent of the population that have a commute time of under 10 minutes. Thirty (30) percent of Rancho Cordova working residents spend less than 15 minutes traveling to work, as shown in Table 2.4 below.

30 percent of Rancho Cordova working residents spend less than 15 minutes traveling to work.

Table 2.4: Travel Time to Work for Rancho Cordova Workers

Travel Time (in minutes)	Percentage of Workers
Less than 5	3%
5 to 9	10%
10 to 14	17%
15 to 19	13%
20 to 24	14%
25 to 29	8%
30 to 59	27%
60 to 89	3%
90 or more	1%

Source: American Community Survey 2007

ROLE OF THE CITY IN PROVIDING BICYCLE TRANSPORTATION FACILITIES

The City of Rancho Cordova constructs and maintains transportation facilities within the publicly owned right-of-way in Rancho Cordova. Development and maintenance of transportation facilities is overseen by the Department of Public Works. In newly developing areas, builders design trail facilities and the City conditions additional improvements that ensure the trails are integrated into an overall citywide transportation concept. The following table of past bicycle expenditures is intended to represent the City-constructed elements of the existing trail and route system. A significant investment is also provided by the development community that generally relates to open space areas and parks. Several miles of trails and other amenities have recently been built in the Stone Creek and Anatolia developments.

PAST EXPENDITURES ON BICYCLE FACILITIES

Several rehabilitation and enhancement projects were constructed in Rancho Cordova over the last three years. Each of these projects has elements that build the bicycle system, adding Class II bike lanes and improving traffic signal infrastructure, pavement detection, and push buttons. Approximately $287,000 was invested in the City's bicycle system through these projects.

- 2008 Traffic Calming Project – La Loma, West La Loma, Georgetown – CP08-2064
- 2007 Pavement Rehabilitation Project – Coloma Rd. Phase 1 – CP07-2040
- 2006 Pavement Rehabilitation Project – Explorer, Vanguard, Ambassador, Rod Beaudry, and Trinity Dr. – Contract #85-2006 CP06-2014
- International Dr. & Data Dr. Traffic Signal and Striping Improvements – CP07-2030

- Traffic Signal and Pavement Overlay Improvement Projects – Contract #52-2006 CP05-2006 & CP05-2007 – Kilgore Rd. @ Trade Center Dr. and Coloma Rd. @ Cordova Lane
- Folsom Blvd. and Mather Field Rd. Enhancements Phase 1 Project – CP05-2011
- White Rock Pedestrian and Safety Improvement Project – CP09-2075

EXISTING BICYCLE NETWORK

Rancho Cordova's existing bicycle network comprises primarily Class II facilities with key Class I pathways located in new development areas and along the Folsom South Canal. Class II facilities provide transportation corridors throughout the City, with connections to the American River Parkway bike trail in the north, which serves as a regional connection into the cities of Sacramento and Folsom. The existing bicycle transportation network is shown in Figure 2.1.

EXISTING BICYCLE SUPPORT FACILITIES

Facilities at important destinations are critical to promoting bicycle activity.

Rancho Cordova's bicycle transportation network is supported by a network of bicycle parking facilities, showers and changing rooms, bicycle retailers, transit stations, and park and ride locations. These support facilities provide places to store bicycles, prepare for the workday, and make connections to other modes of transportation for travel to destinations outside of the City. Figures 2.2 and 2.3 show the location of bicycle support facilities within Rancho Cordova. A summary of existing bicycle parking and shower and changing facilities is listed in Table 2.5.

Facilities at important destinations to bicyclists are critical to promoting bicycle activity. For example, facilities at places of employment promote bicycle commuting. Facilities at retail centers and public offices allow bicyclists to perform errands. Facilities at parks and along trails promote recreational bike riding. In order to increase bicycle activity, the City evaluated a broad range of destinations for cyclists.

Anatolia Bike Trail – The Anatolia Bike Trail is a Class I bike trail in the new Anatolia development near Sunrise Boulevard and Douglas Road. It offers about a mile of recreational bicycle activity, which will eventually be connected to the larger Class I system. Five Class III bike racks have been installed along the trail. As is typical of most bicycle trails, changing or shower facilities and long-term storage along the trail are not provided. The City will continue to work with the Cordova Recreation and Park District for other needs such as improved access to restrooms.

Employment Centers – These are destinations where people go to inquire about employment opportunities. Three of the employment agencies that were surveyed provide changing rooms, storage, showers, and restrooms. Access to most of these facilities is limited to clients of the agencies.

Fitness Centers – Local gyms and sports complexes are designed for recreational activity and offer amenities to accommodate users. All of these centers offer showers, changing rooms, lockers, and restrooms. They are very accessible and encouraging to bicyclists. However, depending on the location, many centers only offer these amenities to members and are not available to the general public. Class III bike racks are available to everyone at each location.

Public Library – The Rancho Cordova Library on Folsom Boulevard offers bike racks for bicyclists and restrooms that are available to the general public.

Medical Centers – Kaiser Permanente and the VA Hospital offer multiple amenities to their employees commuting to work by bicycle. They provide bike racks, showers, changing areas, and restrooms to their employees but not to the general public.

Major Employers – The City selected a group of eight major employers in Rancho Cordova based on number of employees and surveyed the facilities they offer to their employees. Many employers observe a direct correlation between employee health and performance. They encourage commuters to bike to work whenever possible and accommodate those who choose to do so. Nearly all of the major employers surveyed offer all possible amenities to employees.

Park and Ride Locations – Park and ride lots are provided at two light rail stations within the City and at the Sunrise Boulevard/Jackson Highway intersection. These locations are intended as transition points rather than as places a person would stay for an extended period of time. Thus, at the light rail stations, the amenities are geared toward multiple forms of bicycle parking in the form of racks as well as lockers to store a bicycle for a couple of hours or for an entire day. There are no bicycle amenities at the Sunrise Boulevard/ Jackson Highway intersection.

City Hall offers bicycle parking, showers, changing areas and storage.

Public Buildings – Rancho Cordova City Hall and the Neighborhood Services Center are destinations for City residents. Whether people wish to attend a council meeting, find information about their community, or apply for a permit, they go to one of the City's public buildings. City Hall has bike racks in front as well as enclosed racks in the back. City Hall also offers restrooms, showers, changing areas, and storage. The Neighborhood Services Center offers both a bike rack and a restroom.

Police and Fire Stations – These public information buildings and centers of public safety provide facilities for employees only. However, there is often not a lot of pedestrian and bicycle activity, because it is often difficult for employees to walk or ride their bike to work with equipment transport requirements.

Post Office – The local post office currently does not host any bicycle facilities.

EXISTING BICYCLE NETWORK

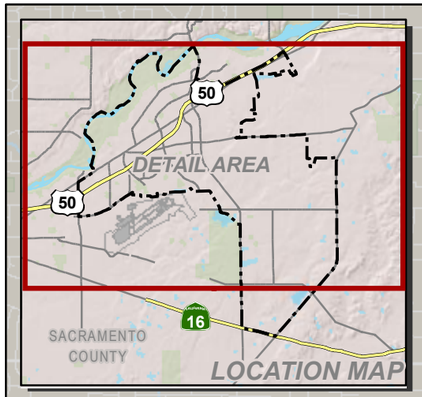
CITY OF RANCHO CORDOVA CALIFORNIA

BIKEWAYS

- EXISTING CLASS I BIKE PATH
- EXISTING CLASS II BIKE LANE
- EXISTING CLASS III BIKE ROUTE

OTHER FEATURES

- PARKS & REC AREAS



AMERICAN RIVER

FOLSOM BLVD

COLOMA RD

VEHICLE DR

CITRUS RD

50

POINT EAST DR

FOLSOM SOUTH CANAL

BENITA DR

AMBASSADOOR DR

GEORGETOWN DR

MCGREGOR DR

QUEENWOOD DR

CORDOVA LN

CORDOVA LN

ARAMON DR

CHASE DR

TRADE CENTER DR

SUNRISE BLVD

KILGORE RD

OLSON DR

ZINFANDEL DR

GOLD CENTER DR

WHITE ROCK RD

GRANT LINE RD

AMERICAN RIVER BIKE TRL

AMERICAN RIVER BIKE TRAIL

ROD BEAUDRY DR

W LA LOMA DR

LA LOMA DR

CROYDON WAY

MILLS STATION RD

DISK DR

DATA DR

PROSPECT PARK DR

LAURELHURST DR

S WHITE ROCK RD

INTERNATIONAL DR

BEAR HOLLOW DR

BAROQUE DR

FITZGERALD RD

LUYUNG DR

RECYCLE RD

SUNRISE BLVD

SECURITY PARK DR

ROUTIER RD

WHITEHEAD ST

EXPLORER DR

SYSTEMS PK WY

LINCOLN VILLAGE DR

50

OLD PLACERVILLE RD

MATHER FIELD

DOUGLAS RD

MATHER LAKE

CHRYSANTHY BLVD

N KIEFER BLVD

KIEFER BLVD

KIEFER BLVD

BRADSHAW RD

JACKSON RD

RANCHO CORDOVA PKWY

BLODGETT RESERVOIR

N

0 0.5 1 Miles

FIGURE 2.1

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BICYCLE PARKING & SUPPORT FACILITIES

MAP A

DESTINATIONS

- PARK
- RETAIL SHOPPING CENTER (SURVEYED)
- SCHOOL
- PARK AND RIDE
- EMPLOYMENT CENTER (SURVEYED)*
- FITNESS CENTER
- MAJOR EMPLOYER (SURVEYED)**
- MEDICAL CENTER
- PUBLIC BUILDING
- PUBLIC LIBRARY
- PUBLIC SWIMMING POOL
- TRANSIT STATION
- RANCHO CORDOVA PD
- FIRE STATION
- POST OFFICE

OTHER FEATURES

- EXISTING CLASS I BIKE PATH
- EXISTING CLASS II BIKE LANE
- EXISTING CLASS III BIKE ROUTE
- LIGHT RAIL LINE

* Also includes staffing (temp) agencies.
** Based upon number of people employed by a Rancho Cordova business as of April 2009. Data Source: Sacramento Business Journal.

LOCATION MAP
MAP A DETAIL AREA
SEE MAP B
SACRAMENTO COUNTY

AMERICAN RIVER
AMERICAN RIVER PARKWAY
AMERICAN RIVER BIKE TRAIL
SUN RIVER PARK
ROSSMOOR DR
LARCHMONT ROSSMOOR PARK
BENITA DR
COLOMA RD
AMBASSADOR DR
DAVE ROBERTS COMMUNITY PARK
MC GREGOR DR
CORDOVA LN
HAGAN COMMUNITY PARK
AHLSTROM PARK
FEDERSPIEL PARK
ZINFANDEL DR
CHASE DR
RIVER BEND PARK
FOLSOM BLVD
50
FOLSOM SOUTH CANAL
MERCANTILE DR
CIT RUS RD
SUNCO DR
SUNRISE GOLD CIR
SUN CENTER DR
OLSON DR
KILGORE RD
PROSPECT PARK DR
SUNRISE PARK DR
AEROJET FACILITY
WHITE ROCK RD
SANDERS DR
FITZGERALD RD
LUYUNG DR
MONIER CIR
GOLD DREDGE WAY
TAYLOR PARK
ROD BEAUDRY DR
ROUTIER RD
CROWN DON WAY
WHITE ROCK COMMUNITY PARK
VILLAGE GREEN PARK
RENESSAINCE PARK
DATA DR
TUSCANY PARK
SONOMA PARK
WATERBROOK PARK
STONE CREEK PARK
RECYCLE RD
SUNRISE BLVD
OMEC CIR
ELKS CIR
SECURITY PARK DR
GRANT LINE RD
HORN RD
COUNTRYSIDE PARK
MATHER SPORTS COMPLEX
BUSINESS PARK DR
EXPLORER DR
VANGUARD DR
LINCOLN VILLAGE COMMUNITY PARK
VIKING DR
LINCOLN VILLAGE DR
ASTRAL DR
OLD PLACERVILLE RD
BRADSHAW RD
MATHER FIELD
DOUGLAS RD
ARGONAUT PARK
MATHER LAKE
MATCHLINE FOR MAP B
0 0.5 1 Miles

FIGURE 2.2

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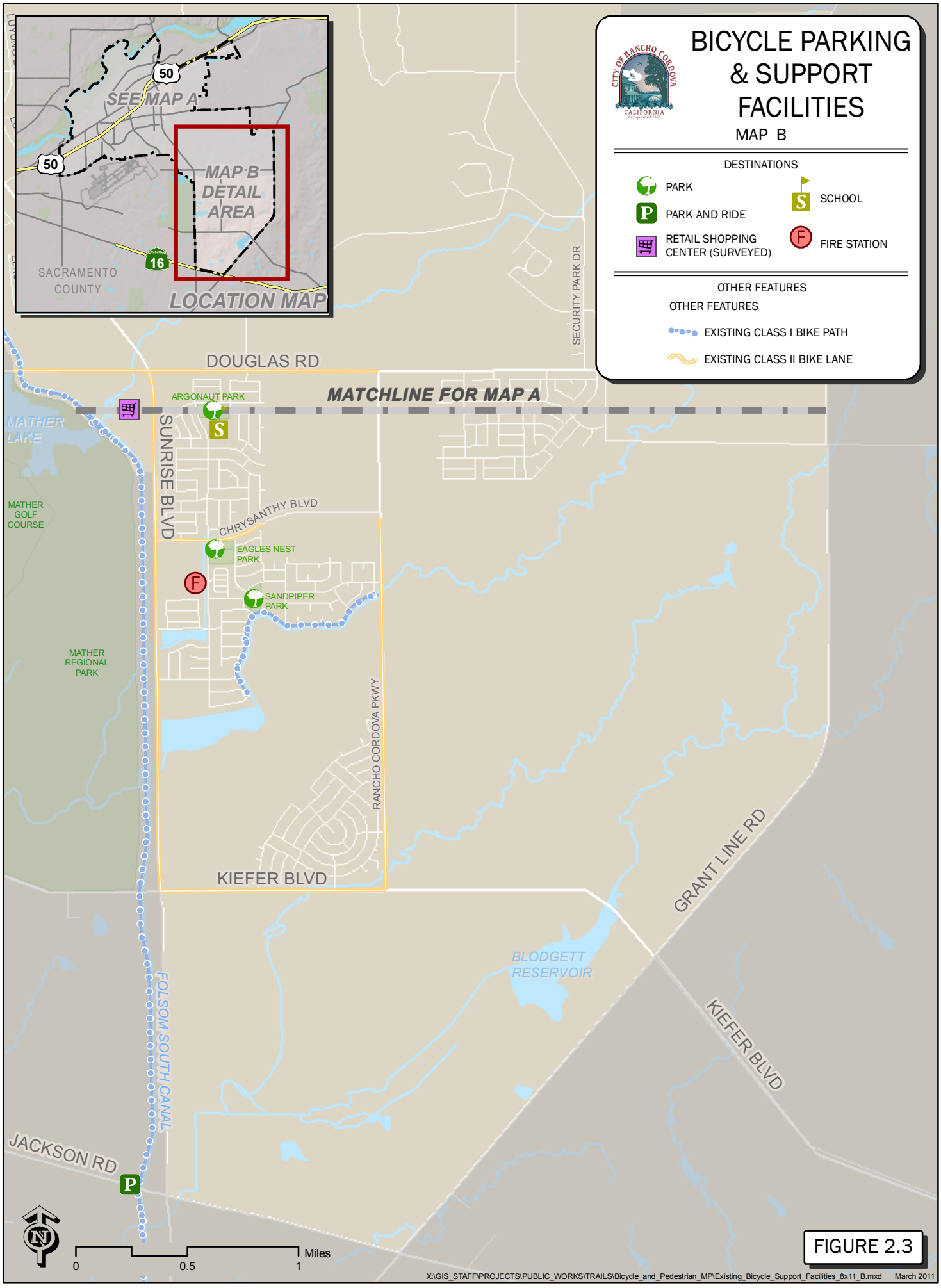

BICYCLE PARKING & SUPPORT FACILITIES
MAP B
DESTINATIONS
PARK
SCHOOL
PARK AND RIDE
RETAIL SHOPPING CENTER (SURVEYED)
FIRE STATION
OTHER FEATURES
OTHER FEATURES
EXISTING CLASS I BIKE PATH
EXISTING CLASS II BIKE LANE
SEE MAP A
MAP B DETAIL AREA
SACRAMENTO COUNTY
LOCATION MAP
50
16
DOUGLAS RD
MATCHLINE FOR MAP A
ARGONAUT PARK
MATHER LAKE
SUNRISE BLVD
SECURITY PARK DR
MATHER GOLF COURSE
CHRYSANTHY BLVD
EAGLES NEST PARK
SANDPIPER PARK
MATHER REGIONAL PARK
RANCHO CORDOVA PKWY
KIEFER BLVD
GRANT LINE RD
BLODGETT RESERVOIR
FOLSOM SOUTH CANAL
JACKSON RD
0
0.5
1
Miles
FIGURE 2.3
X:\GIS_STAFF\PROJECTS\PUBLIC_WORKS\TRAILS\Bicycle_and_Pedestrian_MP\Existing_Bicycle_Support_Facilities_8x11_B.mxd March 2011

Bicycling to schools reduces road congestion and improves student health.

Parks – Parks are an obvious destination for recreational bicyclists. The area north of Highway 50 is an established neighborhood developed when Mather Air Force Base was thriving. Many of the parks in this area were developed without bicycle facilities. Hagan Park and the American River Parkway are exceptions to this rule, as they provide restrooms, water fountains, and bicycle parking. Newer parks south of Highway 50 have bicycle parking available, most offer restrooms, and some offer changing areas and showers. The parks that offer the changing areas and showers are the parks that either have a pool now or did at some point.

Retail Shopping Centers – Bicyclists appreciate opportunities to complete their errands on their bicycles. The City surveyed seven commercial locations, and although almost none of the local shopping centers in the City offer public restrooms, showers, or storage, most offer bicycle racks for parking. One resident expressed the appreciation of a bicycle rack at a local coffee house, as that is where their bicycle group meets before taking off on group rides.

Schools – Bicycling to schools reduces road congestion, improves the student's health while promoting good habits, and increases the student's performance in school. All schools have bicycle racks and restrooms for students. Generally, only high schools offer any kind of shower or changing facilities. The high schools commonly only offer this service during the students' gym period at school. Many higher education schools offer shower and changing facilities for their students.

CLASSIFICATION OF BICYCLE PARKING FACILITIES

Long-Term Parking (Class I) – Bicycle parking facility intended for long-term parking and protected against theft of the entire bicycle and its components and accessories. Three common ways of providing Class I bicycle parking are:

1. Fully enclosed lockers accessible only by the user;
2. A continuously monitored facility that provides at least Class II bicycle parking facilities;
3. A restricted access facilities in which Class II racks are provided and access is restricted only to the owners of the bicycles stored therein.

Medium-Term Parking (Class II) – Bicycle parking facility intended for medium- or short-term parking and consisting of a stationary object to which the user can lock the frame and both wheels with a user-provided lock. The facility should be designed to protect the lock from physical assault.

Short-Term Parking (Class III) – Bicycle parking facility intended for short-term parking, consisting of a stationary object to which the user can lock the frame and both wheels with a user-provided 6-foot cable (or chain) and lock.

Table 2.5 is intended to provide a snapshot of facilities provided to cyclists in the City.

Table 2.5: Summary of Existing Bicycle Support Facilities

Facility Type	Bicycle Parking				Changing	Storage	Showers	Restroom
	Class I	Class II	Class III	Multiple				
Anatolia Bike Trail	0	0	5	0	0	0	0	0
Employment Center/Staffing Agency (4)*	0	3	0	1	3	3	3	4
Exercise Facility	0	1	4	0	5	5	5	5
Library	0	0	1	0	0	0	0	0
Medical Facility	0	0	1	1	2	0	2	2
Major Employer (8)*	3	1	2	2	8	8	8	8
Park-and-Ride Location	0	0	0	2	0	0	0	0
Public Building	0	0	1	1	1	1	1	2
Park	0	0	8	0	4	1	3	6
Public Swimming Pool	0	0	2	0	0	0	0	2
Retail Shopping Center (7)*	0	1	5	1	0	0	0	0
School	4	2	22	1	6	4	5	28
Transit Station	0	0	2	2	0	0	0	0
American River Parkway Parking	0	0	1	0	0	0	0	1

**Surveyed locations only (see map)*

EXISTING BICYCLE ENCOURAGEMENT AND EDUCATION PROGRAMS

The City of Rancho Cordova continues to assess bicycle conditions within the City. The City supports the growing interest in bicycle riding and acknowledges the positive effects it can have on the community.

This Bicycle Master Plan addresses infrastructure development that is intended to provide an engineering foundation for a bicycle system. Ongoing work with the Bicycling Advocates for Rancho Cordova, Rancho

Cordova Police Department, and the Bicycle and Pedestrian Technical Advisory Committee will expand other programming efforts that focus on encouragement, education, and enforcement.

Currently, Rancho Cordova is home to a number of bicycle encouragement and education programs, ranging from elementary bicycle safety education to commuter encouragement programs. The existing programs are summarized below.

Elementary School Programs – Annually, the 50 Corridor Transportation Management Association (TMA) holds a bicycle safety day at Sunrise Elementary School and Navigator Elementary School. Important topics such as safety, maintenance, and rules of the road are discussed at these events. Students are asked to sign a contract to abide by the rules if they are going to ride their bikes. Emphasis is especially given concerning wearing helmets, after observing many students were riding to school without one. A slow-motion race is one of the most exciting parts of the day for most of the students.

Commuter Program – This is an exciting addition to the programs offered in Rancho Cordova. Bicycle commuters are able to register for the TMA Bicycle Commuter Program, which offers many amenities to bicycle commuters. This program offers taxicab fares or a car rental in case a commuter needs to get home in case of an emergency. As an added incentive, drawings and prizes are offered to those who are registered.

Rancho Cordova Police Department (RCPD) Program – The RCPD program provides a safety course, presentation on bicycle laws, informational flyers, and free helmets. This program was initiated by Larry Canfield of the Rancho Cordova Police Department. Since his passing, the Rancho Cordova Police Department has championed this program and is working to ensure success. RCPD first operated the program in 2010, and they held their first bike rodeo at White Rock Elementary School. This rodeo included a safety course, informational flyers, and free helmets donated by Mercy Hospital.

May Is Bike Month – May Is Bike Month is a Sacramento regional campaign that challenges people to choose bicycling for all types of trips. City staff encourages participation through the efforts of the Bicycling Advocates for Rancho Cordova and through its membership in the 50 Corridor TMA. City staff participates and provides support to events such as the Mayor's Ride and the Bikefest at the State Capitol building.

Rancho Cordova Pedestrian and Bicyclist Safety Corridor – The California Highway Patrol (CHP) has initiated a safety education and enforcement program on the Folsom Boulevard corridor that will improve conditions for cyclists and pedestrians and reduce incidents and fatalities. The program includes marketing efforts that will raise the profile of cyclists and pedestrians on the corridor and includes a Folsom Boulevard Saturation effort by CHP and RCPD that will make direct contact with residents providing warnings and encouraging smart travel habits.

Sacramento Metropolitan Air Quality Management District (SMAQMD), Bicycle Parking Program – SMAQMD has obtained a Sacramento Area Council of Governments grant that will build bicycle parking equipment in public rights-of-way and on private business properties throughout the region. Rancho Cordova and the Bicycle Advocates for Rancho Cordova will work with SMAQMD and the Sacramento Area Bicycle Advocates to identify good locations within the City to add bike parking equipment.

EXISTING POLICY FRAMEWORK

PLAN REVIEW AND SUMMARY

City of Rancho Cordova General Plan, June 2006

Transportation choices that encourage walking, cycling, and transit uses are supported in both the Land Use and Circulation elements of the General Plan. See Figure 2.4 showing land uses in the Planning Area. Non-auto access to schools, parks, jobs, and shopping areas will be achieved through integrated and connected open space corridors along with the mitigation of barriers to non-auto travel such as state highways, canals, and busy arterials. A focus on smart land use design that is pedestrian supportive and transit friendly will greatly improve connectivity and encourage cycling.

> *"The City's vision is to become a bicycle-friendly community, where cycling is a viable mode of transportation. To achieve this goal, the City will provide a safe and convenient network of bike paths and lanes that connect residential, commercial, transit, and recreational destinations.*
>
> *"The City's trail network will also link to existing and planned regional trail systems. Grade-separated crossings, such as bridges or undercrossings, will be provided where necessary to provide a safe, seamless bike network. Regional trails will link the City to facilities such as Lake Natoma and Laguna Creek."*

The 2006 Rancho Cordova General Plan identifies existing land uses generally west of Sunrise Boulevard and focuses a land plan that is under development east of Sunrise Boulevard. Large wetland preserves are planned in the east area along with an integrated Class I trail system that follows open space corridors and provides access to a variety of land uses.

City of Rancho Cordova Transit Master Plan, September 2006

Pedestrian connectivity integrates into the goals of the Transit Master Plan, providing connections for cyclists utilizing vehicle cycling racks and cycling support elements at transit destinations. The transit Signature Route, a future streetcar technology, and the Neighborhood Shuttle System will encourage use by cyclists and pedestrians. Neighborhood village centers will take advantage of transit to promote pedestrian activity and civic pride.

Rancho Cordova Municipal Code, Title 23 – Zoning Code

The new Zoning Code solidifies the need for bicycle-friendly facilities that are of great interest to many successful local businesses. Zoning Code Title 23 outlines the requirements for the number of bicycle parking spaces per facility as well as the specifications for the spaces themselves.

The number of bicycle parking spaces is based on such factors as the size of residential units serviced, number of classrooms, or square footage of the building. The specifications include requirements for lighting, location, and space provided. Also, 50 percent of all visitor bicycle parking is to be sheltered to protect it from precipitation. These standards ensure that bicycle parking is visible from the buildings served, is convenient to cyclists, and provides sufficient security from theft and damage.

Valuable benefits related to secure bicycle parking include provisions that developments that provide additional bicycle parking facilities over and above the minimum requirement may reduce their parking requirement by one vehicle space for every two additional bicycle spaces provided.

Shower and locker facilities are to be provided by development projects above the minimum development size threshold as specified in Table 4.7-1 of the Zoning Code. Developments with 100 or more employees may reduce their parking requirements by providing shower and clothing locker facilities for bicycle-commuting employees with a maximum reduction of up to 5 percent.

Although these standards do not apply to existing developments within the City, any new developments, or modifications to existing developments, must abide by these standards. Thus, Zoning Code Title 23 ensures that sufficient facilities are available to encourage bicycle riding and reduce automotive commuting.

Rancho Cordova Open Space Plan

The City's Open Space Plan is currently under development and is intended to further establish policy direction that will create a safe, attractive, functional, and interconnected open space system. Policy direction includes the provision of access to the open space system within 0.2 to 0.4 miles of homes, facilitating 5-minute walks for toddlers, the elderly, and the disabled, limiting block lengths to less than 600 feet, and providing street furniture, lighting, and other elements that will provide attractive opportunities for pedestrian activities.

The plan will focus on natural areas and mitigation lands that are set aside for preservation for wildlife and associated habitat, parks and recreation serving localized community needs, and community open space that augments traditional parks and is generally accessible to the public.

Various Specific Plans

Several specific plans are under development for the area bounded by Sunrise Boulevard, Highway 50, Grant Line Road, and Jackson Highway. These plans address park and recreational needs, open space areas, natural preservation areas, and other public sites such as schools. Specific plan development is guided by the General Plan and other completed or ongoing planning efforts. The Bicycle Master Plan will provide an opportunity to enhance these specific plans through common policies and through the interconnection of trail infrastructure at plan boundaries.

Upper Laguna Creek Coalition

The Laguna Creek Parkway is a system of waterways that extends from the Sacramento River to the headwaters of Laguna Creek in the southern portion of the City of Rancho Cordova. The upper watershed will be developed in the near future. Local government agencies are recognizing the need to try new planning and design approaches that will integrate riparian and wetland habitats with flood control, water quality treatment, and passive recreation.

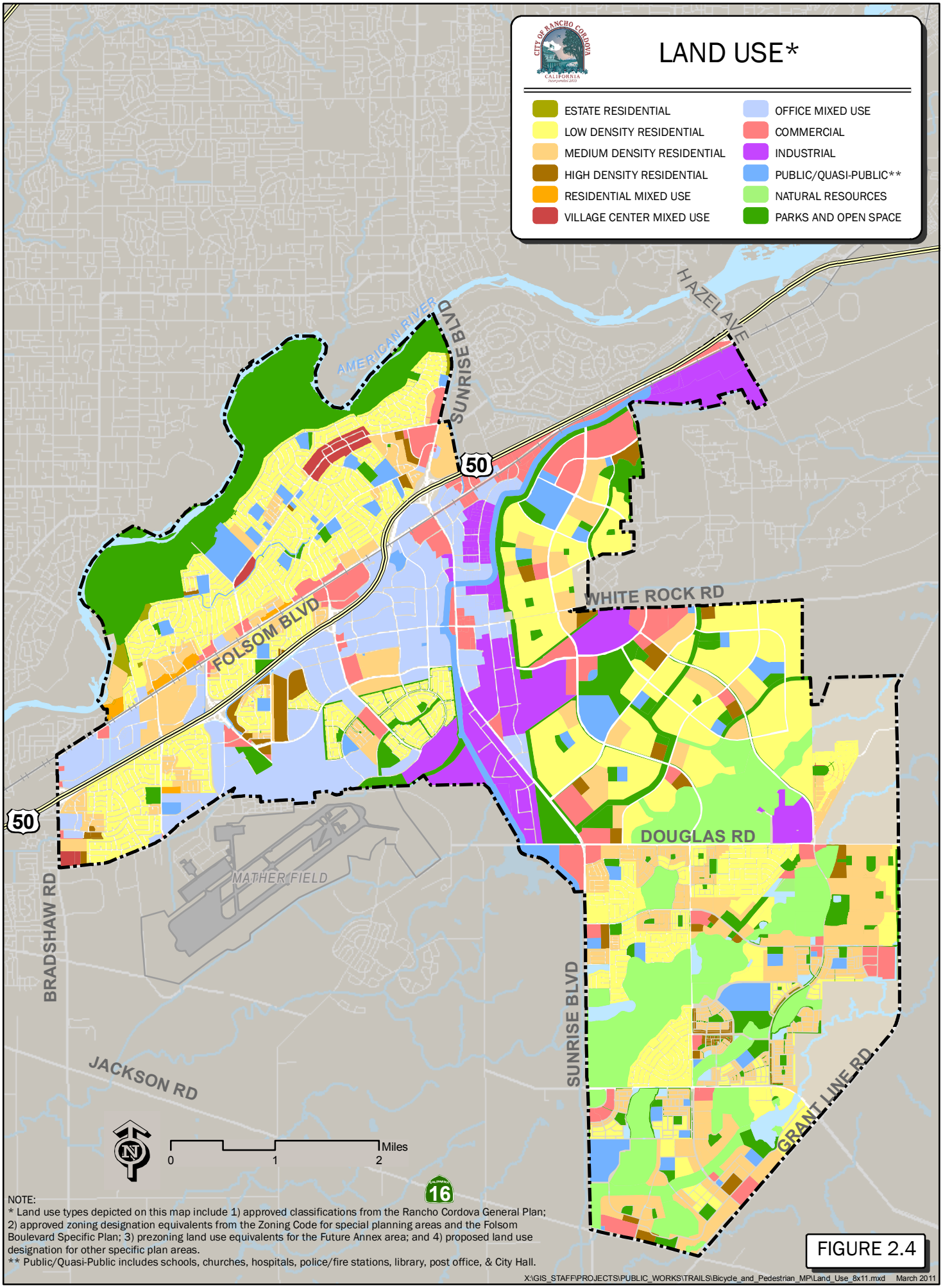
As part of a multifunctional corridor, the Upper Laguna Creek Coalition (ULCC) Trails and Parks Workgroup is developing a concept for a future regional bicycle system. The trail system would connect to the Sacramento River system and to the future Deer Creek Trail system east of Rancho Cordova. Within the City of Rancho Cordova, the ULCC trail system is being planned as a high-amenity regional bicycle facility that will be similar to the American River Parkway.

American River Parkway Plan

The American River Parkway is an open space greenbelt that extends approximately 29 miles from Folsom Dam in the northeast to the American River's confluence with the Sacramento River in the southwest. The American River Parkway is a unique regional facility that preserves natural open space and protects environmental quality within the urban environment. It also provides unique recreational opportunities throughout the Sacramento area.

Preservation activities for the American River Parkway are documented as early as 1915 and culminated in the adoption of the first Parkway Plan by Sacramento County in 1962. The adoption of the 1962 Parkway Plan helped to preserve open space as expanding development encroached on the American River watercourse. The 2008 American River Parkway Plan update documents guidelines for the preservation, use, development, and administration of the parkway and results in a strong guiding document for important land use decisions affecting the parkway.

The American River Parkway multi-use recreational trail is seen as a primary attraction for residents of Rancho Cordova both for recreational cycling and for non-motorized commuter travel.



NOTE:
* Land use types depicted on this map include 1) approved classifications from the Rancho Cordova General Plan; 2) approved zoning designation equivalents from the Zoning Code for special planning areas and the Folsom Boulevard Specific Plan; 3) prezoning land use equivalents for the Future Annex area; and 4) proposed land use designation for other specific plan areas.
** Public/Quasi-Public includes schools, churches, hospitals, police/fire stations, library, post office, & City Hall.

FIGURE 2.4

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SACOG Regional Bicycle, Pedestrian, and Trails Master Plan

The Regional Bicycle, Pedestrian, and Trials Plan, adopted by the Sacramento Area Council of Governments (SACOG) Board in September of 2003, is intended to capitalize on local assets within the six-county SACOG region and to provide non-motorized travel connections between communities and to other areas outside the region. The plan establishes a prioritized project list that will help guide funding for regional bicycle and pedestrian efforts.

In 2007, the plan was amended to include an updated 20-year view of anticipated projects. The project list is currently in an update cycle, and the City of Rancho Cordova has submitted several projects that have received high and moderate priority for regional funding. The following Rancho Cordova projects are included in the SACOG plan:

- Bicycle Signal Detection for Traffic Signals – Provide bicycle detection loops and push buttons at approximately 20 signalized intersections in the City of Rancho Cordova.
- Completion of the Class II Bicycle Trail System – Provide striping and signage along Class II corridors throughout Rancho Cordova.
- Douglas Road Bike Trail Connection to Folsom South Canal – Provide a Class I connection from the Folsom South Canal Bicycle Trail to Douglas Road. This project will provide a connection between the new and planned residential areas east of the Folsom South Canal with the business and commercial centers west of the canal.
- Mather Railroad Spur, Rails to Trails Project – Provide a Class I connection from Folsom Boulevard to the Mather Airport.

Sacramento County Bicycle Master Plan

Sacramento County is in the process of finalizing a comprehensive Bicycle Master Plan that shares many common goals and outcomes with the Rancho Cordova Bicycle Master Plan. Both plans strive to achieve increased ridership, improved regional connections, and new facilities. The American River Parkway bike trail and the Folsom South Canal Trail are identified as part of the regional backbone system. Both plans identify advantages of the Regional Transit light rail/bus system serving longer-distance trips in connection with shorter bike trips. Healthy travel choices and environmental stewardship are also cited.

The Rancho Cordova Bicycle Master Plan mapping process reviewed all existing and proposed bikeways within and adjacent to the City, taking advantage of a cooperative GIS data-sharing agreement. This facilitated information exchange ensures the seamless continued development of regional trails so that system users are served regardless of jurisdictional boundary. Additionally, future planned bikeways in the undeveloped eastern county help the City of Rancho Cordova prioritize future connections across Grant Line Road.

Chapter 3:
NEEDS ASSESSMENT

3

CHAPTER 3

Needs Assessment

How many miles of trail will Rancho Cordova need to meet the demands of the additional population? How should the City respond to shifting transportation trends that are getting more people out of cars and onto their bikes?

This chapter provides an assessment of community needs versus existing conditions and projected future demands. This assessment forms the basis for the recommendations that follow in Chapters 4 and 5.

SUMMARY OF COMMUNITY-IDENTIFIED NEEDS

PUBLIC PARTICIPATION PROGRAM RESULTS

A community workshop to discuss existing conditions and opportunities to improve the bicycle and pedestrian transportation network was held on June 2, 2009, at Rancho Cordova City Hall. Residents of Rancho Cordova and other meeting participants shared a number of concerns regarding the current conditions of bicycle facilities within the City. One major concern that is seen throughout the City is the need for additional bicycle detection at intersections. Crossing the many major corridors of Rancho Cordova can be very challenging without a designated phase allowing bicyclists and pedestrians to cross the road. Meeting participants expressed interest in adding more bicycle detection at the most challenging intersections in the City. Participants particularly expressed concern about the intersections of Zinfandel Drive and White Rock Road, Prospect Park Drive and White Rock Road, and Coloma Road and Bridlewood Drive.

Workshop participants stressed the need for connections to the Folsom South Canal.

Another major concern is interchange accessibility over Highway 50. Many feel it is a challenge to cross the busy on- and offramp access points to Highway 50. The crossings of greatest concern are Zinfandel Drive, Mather Boulevard, Bradshaw Road., and Sunrise Boulevard.

Attendees also requested additional connections to the Folsom South Canal. A Class I trail system runs along the canal throughout the City, and there are no access points between White Rock Road and Jackson Highway; a length of over 6 miles. A new access at Douglas Road should be a high priority.

Meeting participants also expressed concern that bicycle facilities were not always clear of debris and needed better signage. Additionally, participants noted the lack of bike lockers and the need to increase the number of amenities along our Class I trails.

A complete record of meeting results is included as Appendix A to this Bicycle Master Plan.

RIDERSHIP TRENDS

Currently, detailed ridership information for the City of Rancho Cordova does not exist. During the first public workshop, attendees were queried informally regarding their cycling habits. The results in Table 3.1 below show that the majority of meeting participants, who consider themselves commuter/utilitarian cyclists or avid/experienced cyclists, are riding daily.

Table 3.1: Cycling Frequency for Public Workshop Participants

How often do you ride?	Number of Responses
Daily	**16**
Two times per week	**7**
One time per week	**2**
One time per month	**2**
One time every 6 months	**0**
One time per year	**0**
Never	**1**

Source: Public Workshop, Rancho Cordova City Hall, June 2, 2009

Most workshop participants ride their bike daily.

The primary barrier to cycling in Rancho Cordova, as conveyed by meeting participants, is the lack of safe bicycle routes, as shown in Table 3.2.

Table 3.2: Barriers to Cycling in Rancho Cordova for Workshop Participants

What prevents you from riding more often?	Number of Responses
Not enough safe routes	15
Not enough time	9
Can't get to my destination on a bicycle	5
Too much traffic	4
Lack of bike rack and lockers	4
Other	4
Lack of signage	3
Lack of showers and lockers at my destination	2

Source: Public Workshop, Rancho Cordova City Hall, June 2, 2009

Rancho Cordova cyclists are motivated to ride by a variety of reasons. Meeting participants primarily enjoyed riding for fitness and conditioning and recreation. A significant number of meeting participants were bicycle commuters, riding to work as well as for errands. Additional detail is shown in Table 3.3 below.

Table 3.3: Purpose of Cycling in Rancho Cordova for Workshop Participants

Why do you ride a bike?	Number of Responses
Fitness and conditioning	18
Recreation with family and friends	15
Transportation to work	15
Recreation alone	11
Transportation to errands/shopping	10
Other transportation	7
Transportation to school	1
Competitive cycling	1

Source: Public Workshop, Rancho Cordova City Hall, June 2, 2009

COLLISION HISTORY AND ANALYSIS

The Bicycle Master Plan reviews the existing conditions of the bicycle network as well as identifies any safety concerns. The City records collision data on an ongoing basis. A three-year collision summary is shown below (see Table 3.4). The data shows bicycle collisions occurring within the City of Rancho Cordova between January 2006 and December 2008. Although none of the accidents involved a fatality, 64 of the 78 total accidents did involve some form of injury.

Table 3.4: Three-Year Bicycle Collision Summary

Time Period	Total Number of Collisions	Injuries	Fatalities
January 2006—December 2006	22	17	0
January 2007—December 2007	26	21	0
January 2008—December 2008	30	26	0
Total	78	64	0

Source: City of Rancho Cordova, data from January 2006 through December 2008

Table 3.5 summarizes the data by type of collision. There were 2,662 collisions reported from January 2006 through December 2008, and 78 of these involved bicycles. By far, the most common type of collision was a broadside. In this type of collision, the auto and bicyclist are often traveling at 90-degree angles to each other. This type of collision typically occurs at intersections, driveways, or within parking lots and often occurs when bicyclists are riding against the normal flow of traffic. Rear-end accidents generally are caused by excessive speed and/or lack of awareness of vehicles or bicycles slowing or stopping. Sideswipes generally occur when a car or bicycle fails to yield while changing lanes.

Table 3.5: Collisions in Rancho Cordova Between 2006 and 2008, by Type

Type of Collision	Number of Collisions	Percentage of Total
Broadside	**35**	**44.9%**
Not stated	**21**	**26.9%**
Sideswipe	**9**	**11.5%**
Head on	**7**	**9.0%**
Other	**2**	**2.6%**
Rear end	**2**	**2.6%**
Vehicle-pedestrian	**2**	**2.6%**
Total	**78**	**100.0%**

Source: City of Rancho Cordova 2009

Approximately one-third of the collisions were caused by the bicyclist riding on the wrong side of the road.. The next most common cause was auto right-of-way violation, which caused 12 of 78 collisions. The bicyclist was found to be at fault on 53 occasions, or 68 percent of the time.

Broadside collisions are the most common type of collision involving bicycles in Rancho Cordova.

In order to provide useful context for these statistics, this Plan evaluates collision data from nearby cities. The City of Folsom shares a similar geography and demographic composition with Rancho Cordova. However, the City of Rancho Cordova had a much greater number of collisions as well as injuries in 2005 and 2006 compared to Folsom. The City of Roseville has about 50 percent more accidents on average. While the population of Roseville is higher, Roseville's bicycle trip making is about a third of Rancho Cordova's ridership. Statistical comparisons with the City of Davis and Sacramento would require a comparison to bicycle trip making. Both of these communities have significantly greater bicycle trip making. Even though the per person statistics indicate higher accident rates, it is likely that the accident rate per bicycle mile traveled is much lower than in Rancho Cordova.

Table 3.6: Collision History, by City

City	Population	2005 Fatal	2005 Injury	2006 Fatal	2006 Injury	2007 Fatal	2007 Injury	Average Collisions per Year for 3-Year Period	Collisions Per 1,000 Persons
Rancho Cordova	59,666	0	33	0	20	0	17	23.3	0.38
Roseville	109,154	0	38	0	32	0	35	35.0	0.32
Davis	66,310	0	50	0	48	0	18	38.7	0.58
Fairfield	107,421	0	37	0	26	0	30	31.0	0.29
Folsom	69,445	0	4	0	6	0	20	10.0	0.14
Lincoln	38,350	0	6	0	3	1	5	5.0	0.13
Rocklin	53,843	0	6	0	10	0	6	7.3	0.14
Sacramento	453,781	4	183	2	225	1	280	231.7	0.51
Elk Grove	139,452	1	32	1	32	0	21	29.0	0.21
Santa Rosa	154,241	1	55	1	60	1	59	59.0	0.38
West Sacramento	48,410	0	12	0	5	0	18	11.7	0.24
Citrus Heights	87,017	1	28	1	24	0	29	27.7	0.32
State of California	37,288,000	132	10,428	155	10,352	125	10,521	10,571	0.28

Source: California Highway Patrol Statewide Integrated Traffic Records System (SWITRS)

ESTIMATED BICYCLE TRANSPORTATION DEMAND

Without accurate ridership data, it is difficult for the City of Rancho Cordova to quantify existing bicycle transportation demand. However, given the U.S. Census 2007 American Community Survey data, it is known that 399 Rancho Cordova residents commute via bicycle. This number is equal to 2 percent of the transportation mode share. It is likely that the overall bicycle mode share is greater than 2 percent, given that ridership trends from the June 2 public workshop show that Rancho Cordova cyclists ride frequently for recreation and fitness, purposes which are not captured by transportation-to-work data in the American Community Survey.

Relative to surrounding communities, Rancho Cordova's existing bicycle mode share has room to increase. Both the City of Sacramento and Arden-Arcade had a bicycle-to-work mode share of 3 percent in 2007. It is reasonable to assume that Rancho Cordova can achieve a 3 percent bicycle-to-work mode share by 2020. See Table 3.7 for current and projected bicycle commuter mode share. With the implementation of this Bicycle Master Plan, Rancho Cordova will remedy some of the primary barriers to cycling identified by public meeting participants, such as the lack of safe routes. Implementation of additional encouragement programs, as described in Chapter 4: Recommended Policies, Programs, and Standards, will also help to increase bicycle ridership in Rancho Cordova.

Table 3.7: Current and Projected Bicycle Commuter Mode Share

Current Commuting Statistics (2007)	Total
Population (2007)	59,666
Number of Commuters	27,774
Number of Bicycle to Work Commuters	250
Bicycle to Work Mode Share	0.9%
Projected Commuting Statistics (2020)	**Total**
Projected Population in 2020	105,000
Estimated Number of Commuters in 2020	47,868
Estimated Number of Bicycle to Work Commuters in 2020	1,436
Estimated Bicycle Mode Share in 2020	3%

AIR QUALITY BENEFITS

The projected increase in bicycle-to-work mode share will help Rancho Cordova to maintain its air quality by reducing the number of vehicle miles traveled and, in turn, reducing vehicle emissions. Vehicle exhaust is currently the primary source of air pollution in the Sacramento region.[1] Air quality benefits expand to include reductions in greenhouse gases and reduction in congestion, and they include cost savings both to jurisdictional entities and to individual citizens.

OTHER QUALITY-OF-LIFE BENEFITS

Both physical and emotional health can be greatly improved through biking. Our nation's increasing obesity and epilepsy epidemics will require a multidisciplinary approach that will likely include regular physical activity. It is well known that the best way to guarantee regular physical activity is to incorporate that activity into a daily routine.

BICYCLE NETWORK NEEDS AND OPPORTUNITIES

Many residents would like to see additional bicycle parking at key stores and restaurants.

Key bicycle transportation network needs and opportunities are summarized below.

Stripe Additional Lanes. Many roadways that provide important east-west and north-south connections through the City lack Class II bike lanes along their entire length. Opportunities exist to fill gaps in the existing Class II network and to expand the network onto residential roadways that provide connections to neighborhood destinations such as schools and parks. Opportunities are particularly acute in locations where adequate public right-of-way exists.

Additional Bike Parking. Many residents would like to see additional bicycle parking within the City at major key stores and restaurants. Some locations in particular are Costco, Home Depot, and Starbucks. Also, additional parking at light rail stations with bike lockers is desired by community members. Community members have asked for inverted U bike racks to be installed in the public right-of-way.

Use of Existing Utility Right-of-Way. One opportunity in the City is the use of a retired Union Pacific Railroad track right-of-way to make a Class I north-south bike connection. This option is an opportunity to make a connection with the least amount of negotiation for right-of-way.

[1] Sacramento Air Quality Management District. Land Use and Transportation. http://www.airquality.org/lutran/index.shtml, accessed on September 9, 2009.

Bridge Crossings Along Highway 50. Currently, seven bridges and two undercrossings along the highway provide opportunities for bicycle crossings:

- Bradshaw Road interchange
- Routier Road bridge (no ramp access to Highway 50)
- Mather Field Road interchange
- White Rock Park pedestrian bridge
- Zinfandel Road interchange
- Folsom Boulevard undercrossing
- Sunrise Boulevard interchange
- Citrus Road undercrossing
- Hazel Avenue interchange

Another crossing is planned just east of the Zinfandel Road interchange that is intended to be a city landmark. This bridge will be called The Promenade. The White Rock Park pedestrian bridge is being reconstructed and will be greatly enhanced to attract bicycle and pedestrian use. The Citrus Road undercrossing will also be a key future route that will provide American River Parkway access for residents in the newly developing areas of the Rancho Cordova.

Connections to Existing Class I Bike Trails. Residents identified the need for additional connections along the Folsom South Canal, which provides a well-used Class I bike trial that runs north-south throughout the City. This trail could be better utilized if it had more connections throughout the trail. Plans have already been made to connect the trail at Douglas Road and International Drive. Long-term connections are planned as development continues in the Anatolia area of the City.

Bike Trail Signage. Additional signage is needed throughout the City, designating dedicated bike routes and providing direction to common destinations such as schools, parks, transit stations, and commercial centers.

Additional Amenities. Additional amenities along Class I trails are needed, particularly along the Folsom South Canal. Currently, the canal trail lacks most amenities. Shade, benches, restrooms, and drinking fountains would greatly improve conditions for trail users. Enhanced lighting would also improve the conditions of trails with underpasses and tunnels.

Education and Enforcement Programs. With bicyclists found to be at fault 68 percent of the time in recent collisions, it is apparent that education and enforcement programs would be valuable resources in preventing bicycle accidents.

Trail Maintenance. Although all major arterials within the City are swept twice per month, debris can build up, particularly in more rural areas. The roads of particular concern to community members are Sunrise and Folsom boulevards. Since there are many open lots adjacent to portions of these roads, brush and debris can migrate into the roadway and gather in the shoulder and along the gutter, creating hazards for cyclists.

MAINTENANCE AND OPERATIONS NEEDS

Street Sweeping

- Mather Field Road between Data Drive and Highway 50
- Sunrise Boulevard from White Rock Road to Douglas Road
- Zinfandel Drive from Folsom Boulevard to White Rock Road
- Folsom Boulevard from Sunrise Boulevard to Hazel Avenue

Add Trail Amenities

- Shade
- Safety
- Benches
- Maintenance

Improve Bike Signal Detection

- Various locations

Enforcement of City Code

- Placement of garbage cans

Resurface and Stripe

- Rossmoor Road
- Bridlewood Drive

Chapter 4:
RECOMMENDED POLICIES, PROGRAMS, AND STANDARDS

4

CHAPTER 4

Recommended Policies, Programs, and Standards

Rancho Cordova's existing planning documents provide a strong foundation for the development of a bicycle network and support facilities. The 2006 General Plan set the precedent for bicycle policy, with goals, policies, and actions outlining the City's dedication to the creation of an extensive trail network and well-maintained facilities.

As an implementing mechanism of the General Plan, this Bicycle Master Plan enhances the existing policy framework, working hand in hand with the existing policies in the General Plan. The new goals, policies, and actions set forth in this chapter help to complete the existing policy framework by providing more detailed direction with regard to implementation, funding, partnerships, mode share targets, and Rancho Cordova's role as a regional cycling destination.

EXISTING GENERAL PLAN GOALS

The 2006 General Plan contains numerous goals, policies, and actions with bearing on the City's bicycle facilities. Some of the relevant goals from the Circulation Element and the Open Space and Trails Element are repeated below.

FROM THE CIRCULATION ELEMENT

Goal C.2 Establish an extensive, complete, smooth, interconnected, and continuous pedestrian and bicycle network that is a safe and attractive option for local or regional trips or recreation and that connects to the City's neighborhoods, parks and schools, employment areas, and retail centers.

Goal C.6 Provide a circulation system that is properly maintained and maximizes safety for all users.

FROM THE OPEN SPACE AND TRAILS ELEMENT

Goal OSPT.3 Create a system of pedestrian and bicycle trails that maximize usage while providing places for walking and bicycling without conflicts with motor vehicles.

Goal OSPT.4 Encourage public use of all trails and open space and promote public input in creating and maintaining these resources.

BICYCLE MASTER PLAN GOALS, POLICIES, AND ACTIONS

With a sound policy framework provided by the General Plan, the policy direction set forth in this Bicycle Master Plan intends to fill existing gaps in Rancho Cordova's policy language. In some instances, policies contained in this Plan supersede General Plan policies that have become outdated as the City has successfully implemented facilities and programs.

Goal 1 Develop a comprehensive bicycle transportation network as described in this Bicycle Master Plan.

1.1 Ensure all bicycle facilities, including grade-separated crossings, meet the City of Rancho Cordova's design and construction standards.

Goal 2 Increase the percentage of all trips made by bicyclists in Rancho Cordova by 40 percent by 2020.

Goal 2: Increase the percentage of all trips made by bicyclists in Rancho Cordova by 40 percent by 2020.

2.1 Develop a program of regular data collection to track bicycle ridership within Rancho Cordova to monitor progress toward the goal of increased ridership.

2.2 Encourage development projects that make bicycling a convenient and desirable form of transportation by providing a mix of land uses in close proximity to one another, as well as safe bicycle network connections and support facilities.

Goal 3 Ensure the implementation of the bicycle transportation network keeps pace with new development.

3.1 The Public Works and Planning departments shall work collaboratively to provide continuity in the design and implementation of bicycle facilities and support facilities.

3.2 All development projects shall be reviewed by City staff for consistency with the goals, policies, and actions of the Bicycle Master Plan.

3.3 Where construction is adjacent to Class II or Class III bikeways, require the developer or contractor to maintain a clear and clean travelway for cyclists.

3.4 Ensure bicycle trail projects minimize environmental impacts, to the extent feasible.

Goal 4 Ensure adequate support facilities throughout Rancho Cordova's bicycle network.

Goal 4: Ensure adequate support facilities throughout Rancho Cordova's bicycle network.

4.1 Ensure all signalized intersections located along bicycle network routes feature bicycle signal detectors. For Class III routes, alternative signal detection may be considered, such as bicycle push button.

4.2 All development projects shall include bicycle support facilities, to the extent feasible.

4.3 Bicycle parking shall be provided at all major employment and retail sites.

4.4 Encourage all employers to offer showers and changing facilities.

4.4.1 Work with public and private facilities to develop shower and changing room sharing arrangements or partnerships to better serve bicycle commuters.

4.4.2 Develop and adopt guidelines for the inclusion of showers and changing facilities at major employment sites.

4.5 Provide wayfinding signage, maps, mileage markets, water fountains, shade structures, and other amenities as appropriate and feasible along primary bicycle routes.

Goal 5 Increase awareness of cyclist safety and responsibility through education and enforcement.

5.1 Work with the Rancho Cordova Police Department to enforce safe cycling laws to prevent vehicle versus bicycle collisions and other cycling accidents.

5.2 Work with local bicycle advocacy groups, the Folsom Cordova and Elk Grove school districts, the Cordova Recreation and Park District, the Sacramento County Health

Department, the Sacramento Metropolitan Air Quality Control District, and the Rancho Cordova Police Department to expand existing bicycle education and encouragement programs.

5.3 Develop a wayfinding and destination signage program to identify directions to and distances between key destinations and attractions within Rancho Cordova.

5.4 Support the Rancho Cordova Police Department's helmet promotion program.

5.5 Regularly update the City of Rancho Cordova's Bicycle Network User Map to ensure that cyclists and other trail users have accurate information for trip planning.

Goal 6 Pursue innovative funding sources and partnership opportunities to enhance bicycle facilities, and provide education and encouragement opportunities.

6.1 Pursue a diverse array of funding sources for bicycle projects, including federal, state, and local sources, development agreements, and private funding.

6.2 Coordinate with community members and local and regional bicycle advocacy groups to increase stewardship of bicycle facilities in terms of regular maintenance.

6.2.1 In coordination with local bicycle advocacy groups, neighborhood associations, and the Chamber of Commerce, develop an adopt-a-bikeway program that addresses cleaning and basic maintenance of bikeways and multi-use pathways.

6.3 Pursue nontraditional funding sources for bicycle infrastructure projects, such as climate change, air quality, and other emerging sources.

6.4 Coordinate the installation and maintenance of bicycle facilities with other major roadway improvement projects.

6.5 When feasible, coordinate bicycle infrastructure projects with other open space and conservation projects, such as streambank restoration, native habitat restoration, utility improvements, and flood control projects.

6.6 Where the bicycle network intersects jurisdictional boundaries, partner with neighboring jurisdictions to share the financial obligation of bicycle infrastructure projects.

Goal 7 **Establish Rancho Cordova as a destination for recreational cycling through creation of a signature trail network and encouragement of cycling and cycling events.**

7.1 Encourage the development of a comprehensive bicycle network and bicycle support facilities as part of the City's economic development strategy.

7.2 The Public Works Department should work collaboratively with the Redevelopment Agency and local businesses, schools, and advocacy groups to attract and host cycling events such as bicycle rodeos, bicycle races, and trail days.

7.3 Continue to support regional bicycle encouragement efforts such as SACOG's Bike to Work Day and Bike Month.

BICYCLE MASTER PLAN STANDARDS

The City is improving existing standards to promote bicycle and pedestrian safety.

The City of Rancho Cordova has an interest in ensuring that its goals, policies, and values are incorporated into all new development. This is very important, as the City has room to grow and is steadily improving existing development. The City sets improvement standards to ensure that the goals are met.

In general, the City of Rancho Cordova relies on Sacramento County standards for most new construction. Other sources such as the California Manual of Uniform Traffic Control devices are also consulted for guidance in system development.

It is anticipated that new technologies such as video detection and cool pavements will be considered in the future along with other infrastructure such as "cycle tracks" that provide physically separated on-street bike lanes. Operational considerations ,such as extended green phases at traffic signals to provide appropriate cyclist clearance and "green wave" traffic signal programming to improve signal timing for cyclists, should also be considered.

As needs arise, the City also develops updated standards that incorporate the values of promoting bicycle and pedestrian safety. The following City-initiated standard drawings are provided in Appendix B. In addition, the City's Pedestrian Master Plan provides information and drawings on other new standards such as the City's Complete Streets.

Some of the recent standards under development that will improve bicycle access include:

Pedestrian Refuge. The purpose of this standard is to help pedestrians cross wide multilane roadways by allowing a safe place to stand in the median of the roadway. The intimidation of getting across eight to ten lanes of car traffic can be reduced if the pedestrian can focus on one direction of traffic at a time and cross half as many lanes.

Class I Bike Trail. While bike trail standards have been prepared by Caltrans and the County, the City feels that a minimum 10-foot-wide path with 2-foot-wide shoulders should be required. In addition, busy trails or multi-use trails should be 12 feet wide with shoulders.

Trail Under Bridge. One of the City's policies is to provide undercrossings at roadways that are major barriers to bicycle travel. A standard has been developed that provides a safe, open, and well-lit facility that is highly desirable for bicycle and pedestrian use.

Pork Chop Island. The concept of this standard is similar to the pedestrian refuge. It reduces crossing distance at major roadway intersection. The pork chop island is a place of refuge that is located between the right-turning traffic lanes and the through lanes.

Pedestrian Plaza. The pedestrian plaza expands space for pedestrians waiting at intersection crosswalk lights adjacent to busy intersections. It allows waiting pedestrians to stand a few feet away from the automobile traffic that is traversing the intersection.

Flush Bollards. Often a trail entrance points include bollards or poles that block the trail entrance to motor vehicles. These bollards are generally removable for maintenance vehicles or other uses, leaving a short mounting bracket in the middle of the trail. These mounting brackets are a known hazard for bicyclists, and the new flush mount standard will eliminate this trail incongruity.

Bike Detection at Signalized Intersections. The City's standard provides a bicycle loop detector in the Class II bike lane that actuates the traffic signal in the same way that cars trigger traffic light changes. Recently, Caltrans has adopted new standards that will expand bicycle detection coverage at intersections. The City is in the process of pursuing an expanded standard that will provide detection for bicycles in left turn pockets and other lanes.

Chapter 5:
RECOMMENDED BICYCLE NETWORK

5

CHAPTER 5

Recommended Bicycle Network

The recommended bicycle network outlined in this chapter builds on the foundation of existing facilities in Rancho Cordova, while looking to maximize the City's opportunities to develop trails, increase Class II connectivity, and provide safe access to the places people live, work, and play via bicycle.

This chapter defines the ultimate City bicycle network and identifies capital improvements needed to realize the community's vision for bicycle transportation in Rancho Cordova.

CONNECTING TO THE REGIONAL TRAIL SYSTEM – A LONG-RANGE VISION FOR BICYCLE NETWORK DEVELOPMENT

Primary bicycle corridors within the City will need to connect to the regional trail system. The Folsom South Canal trail connects to the American River Parkway trail in the vicinity of the Nimbus Dam and will ultimately connect to the Upper Laguna Creek trail system near Jackson Highway. These existing Class I trails provide an initial backbone for the City system and will be the focus of enhanced access for a City bike route system.

Primary bike routes within existing neighborhoods will connect to destinations on both sides of Highway 50, providing safe access to shopping and work sites and connecting to Regional Transit's Gold Line light rail system. Four connections to the American River parkway will be prioritized.

- Rod Beaudry/River Bend Park
- Coloma Road/Chase Drive/Hagan Park
- McGreggor Drive/Rossmoor Drive
- Sunrise Boulevard East/Citrus Road

A fifth access to the American River Parkway is provided by the Folsom South Canal trail near the Nimbus Fish Hatchery, with several other localized accesses along neighborhood streets.

New neighborhoods will focus on a system of Class I trails providing a network of bike routes. These routes will connect to the Folsom South Canal and the Upper Laguna Creek trail system and will anticipate future connections outside the City westward along Chrysanthy Boulevard and Kiefer Boulevard, and eastward toward the Grant Line/White Rock Road area and through Cordova Hills to the future Alder Creek Trail south of Highway 50 (see Figure 5.1).

A proposed backbone route will be built in the Sunrise East area that will connect the Upper Laguna Creek trail near Blodgett Reservoir to the American River Parkway just east of Sunrise Boulevard. This central route will follow Americanos Boulevard into Rio del Oro, connecting westward to the Rio del Oro West Trail and north through the Westborough development to the Citrus Road bike trail. This route is important for safe and unobstructed mobility.

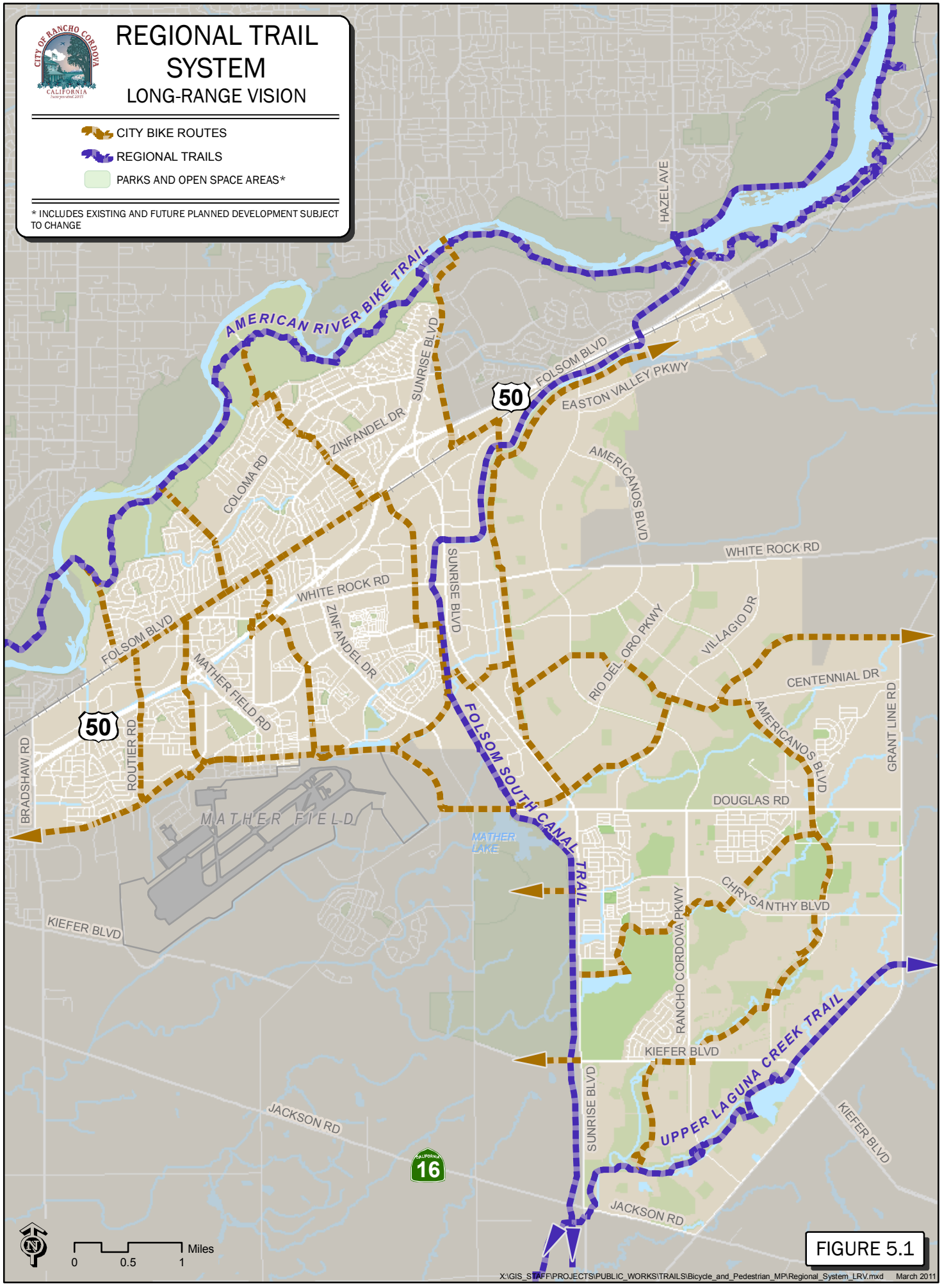
BUILDING THE CITY BIKE ROUTE SYSTEM

The City bike system will pursue opportunities to provide better connectivity in existing neighborhoods and will ensure that a safe, reliable system is constructed in new areas. The Bicycle Master Plan will provide traffic control systems, signage, and pavement striping on city streets and will build trails through open space corridors with trailside amenities that will enhance system desirability. City residents will be provided with good opportunities to use bicycles for a variety of trip purposes.

Fiscal support for the system will be provided by the City's Capital Improvement Program (CIP), private development investments, and through the City's pursuit of regional, state, and federal grants. Generally speaking, the City will provide system enhancements and new connections throughout the existing system by obtaining grants to fund the CIP. Private development will build trails and Class II lanes in new communities, and the City will back some new trail infrastructure through grants and programs. Cost details are provided in Chapter 6 of this Bicycle Master Plan.

AREAS WEST OF SUNRISE BOULEVARD

The on-street bicycle route system will be completed within existing neighborhoods by expanding the Class II and Class III routes. This network of street routes will connect schools, parks, transit facilities, and other commercial and recreational opportunities. A Class I route will be pursued along the Union Pacific rail spur that connects to Mather Airport. Additional trail connections will be created on the perimeter of the Stone Creek neighborhood, and new pedestrian crosswalk connections will be provided along the north trail in Stone Creek.


REGIONAL TRAIL SYSTEM
LONG-RANGE VISION
CITY BIKE ROUTES
REGIONAL TRAILS
PARKS AND OPEN SPACE AREAS*
* INCLUDES EXISTING AND FUTURE PLANNED DEVELOPMENT SUBJECT TO CHANGE
AMERICAN RIVER BIKE TRAIL
HAZEL AVE
SUNRISE BLVD
FOLSOM BLVD
50
EASTON VALLEY PKWY
ZINFANDEL DR
COLOMA RD
AMERICANOS BLVD
WHITE ROCK RD
RIO DEL ORO PKWY
VILLAGIO DR
CENTENNIAL DR
GRANT LINE RD
FOLSOM SOUTH CANAL TRAIL
MATHER FIELD RD
BRADSHAW RD
ROUTIER RD
MATHER FIELD
MATHER LAKE
DOUGLAS RD
CHRYSANTHY BLVD
RANCHO CORDOVA PKWY
KIEFER BLVD
UPPER LAGUNA CREEK TRAIL
JACKSON RD
16
Miles
0
0.5
1
FIGURE 5.1
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As part of an effort to "bridge" the barrier that is created by Highway 50, a new crossing will be built at White Rock Park that will replace the existing pedestrian overcrossing. The new crossing will be Americans with Disabilities Act (ADA) accessible and will have enhancements to make it more attractive for use by residents. A pedestrian/bike bridge concept called The Promenade has been initiated in the downtown district between Olson Drive and Prospect Park Drive. This crossing will be greatly enhanced to attract use and will be further enhanced to function as a landmark or gateway for the City. And lastly, as interchanges are updated along Highway 50, the City will pursue opportunities to provide more efficient Class II bike lane crossings of the highway.

As part of a vision for the future, seven bridges or undercrossings (grade separations) will be considered along the Union Pacific rail spur, Zinfandel Drive, and the Folsom South Canal. These locations are not included in current programming documents and will be evaluated for feasibility at a future stage of project development (see Figure 5.2).

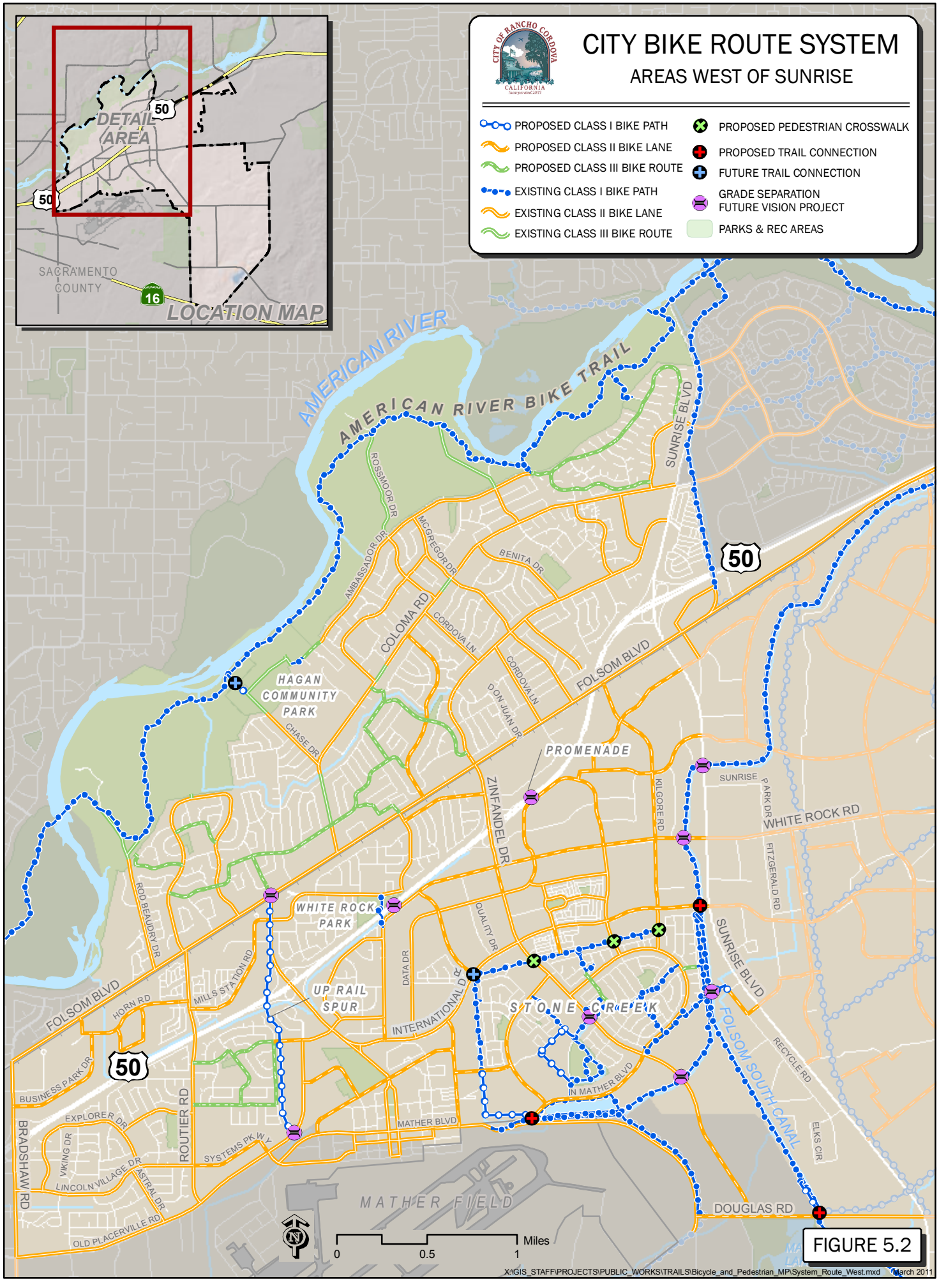
DAWES BIKEWAY FEASIBILITY ANALYSIS

In 2005, the City prepared a feasibility evaluation for the construction of a bikeway along the Dawes drainage canal between Coloma Road and the Jedediah Smith Recreational Trail. The effort would have been constructed as part of a canal rehabilitation project, but was determined to be infeasible. The project faced funding challenges and some engineering constraints, but ultimately was rejected by adjacent landowners due to concern for safety and vandalism. At some point in the future, if safety issues can be addressed, the engineering and demand feasibility analysis could be reinitiated.

AREAS EAST OF SUNRISE BOULEVARD

A Class I trail system will be the centerpiece of the bike trail system in the newly developing areas. Priority access to existing areas of the City will be provided through better connections across the Folsom South Canal and Sunrise Boulevard. The Class I system in the new area will follow stream corridors and open space corridors, providing high quality aesthetics while minimizing trail interruptions. The Class I system is designed to terminate at major destinations or points along the Class II system (see Figure 5.3).

Bridges and undercrossings will be constructed in order to provide safe access across major barriers to pedestrian travel. These barriers include the Folsom South Canal and multilane arterial roadways with heavy traffic. Additional bridges and undercrossings will be considered for feasibility in later stages of development where smaller roads interrupt the trail system, which is expected to be heavily used. There are also a few bridges and undercrossings that should be considered in the future. These locations are described as future vision projects.


CITY BIKE ROUTE SYSTEM
AREAS WEST OF SUNRISE
CITY OF RANCHO CORDOVA
CALIFORNIA
PROPOSED CLASS I BIKE PATH
PROPOSED CLASS II BIKE LANE
PROPOSED CLASS III BIKE ROUTE
EXISTING CLASS I BIKE PATH
EXISTING CLASS II BIKE LANE
EXISTING CLASS III BIKE ROUTE
PROPOSED PEDESTRIAN CROSSWALK
PROPOSED TRAIL CONNECTION
FUTURE TRAIL CONNECTION
GRADE SEPARATION FUTURE VISION PROJECT
PARKS & REC AREAS
DETAIL AREA
50
SACRAMENTO COUNTY
16
LOCATION MAP
AMERICAN RIVER
AMERICAN RIVER BIKE TRAIL
ROSSMOOR DR
MCGREGOR DR
AMBASSADOR DR
BENITA DR
SUNRISE BLVD
COLOMA RD
CORDOVA LN
CORDOVA LN
CORDOVA LN
FOLSOM BLVD
HAGAN COMMUNITY PARK
CHASE DR
DON JUAN DR
PROMENADE
ZINFANDEL DR
KILGORE RD
SUNRISE PARK DR
WHITE ROCK RD
FITZGERALD RD
WHITE ROCK PARK
ROD BEAUDRY DR
QUALITY DR
DATA DR
SUNRISE BLVD
FOLSOM BLVD
HORN RD
MILLS STATION RD
UP RAIL SPUR
INTERNATIONAL DR
STONE CREEK
BUSINESS PARK DR
EXPLORER DR
ROUTIER RD
IN MATHER BLVD
RECYCLE RD
FOLSOM SOUTH CANAL
ELKS CIR
BRADSHAW RD
VIKING DR
LINCOLN VILLAGE DR
ASTRAL DR
SYSTEMS PK WY
MATHER BLVD
MATHER FIELD
DOUGLAS RD
OLD PLACERVILLE RD
0
0.5
1
Miles
FIGURE 5.2
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March 2011

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CITY BIKE ROUTE SYSTEM

AREAS EAST OF SUNRISE

CITY OF RANCHO CORDOVA CALIFORNIA

GRADE SEPARATIONS
- EXISTING
- PROPOSED
- FUTURE VISION PROJECT
- FEASIBILITY TO BE EVALUATED

PROPOSED CLASS I BIKE PATH
- STANDARD
- MAJOR
- EXISTING CLASS I BIKE PATH
- PARKS AND OPEN SPACE AREAS*

* INCLUDES EXISTING AND FUTURE PLANNED DEVELOPMENT SUBJECT TO CHANGE

LOCATION MAP

DETAIL AREA

SACRAMENTO COUNTY

AMERICAN RIVER
HAZEL AVE
FOLSOM BLVD
COLOMA RD
BENITA DR
VEHICLE DR
ZINFANDEL DR
EASTON VALLEY PKWY
MCGREGOR DR
CORDOVA LN
TRADE CENTER DR
SUNCOR
MERCANTILE DR
WESTBOROUGH
AMERICANOS BLVD
OLSON DR
SUN CENTER DR
PROSPECT PARK DR
GOLD CENTER DR
KILGORE RD
SUNRISE PARK DR
WHITE ROCK RD
FITZGERALD RD
SANDERS DR
INTERNATIONAL DR
SUNRISE BLVD
RIO DEL ORO PKWY
VILLAGIO DR
CENTENNIAL DR
RIO DEL ORO
RANCHO CORDOVA PKWY
SPOTO DR
RECYCLE RD
N MATHER BLVD
OMEC CIR
ELKS CIR
FOLSOM SOUTH CANAL
SECURITY PARK DR
DOUGLAS RD
MATHER LAKE
MATHER BLVD
SUNRIDGE
CHRYSANTHY BLVD
SUNCREEK
GRANT LINE RD
KIEFER BLVD
BLODGETT RESERVOIR
ARBORETUM
JACKSON RD

Miles
0 0.5 1

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FIGURE 5.3

A system of Class II (on-street) bike lanes will be provided throughout the east area. With the exception of some residential streets, roadways will be built with bike lanes, route markers, and traffic signal detection devices for bikes. As the Class II system is realized in the east area, priority routes will be identified and will be modeled on the concept of a "bicycle boulevard." A bicycle boulevard is anticipated between Sunrise Boulevard and Rancho Cordova Parkway in the Rio del Oro development. Ultimately, a network of bicycle boulevards will be contemplated.

> *Bicycle boulevards take the shared roadway bike facility to a new level, creating an attractive, convenient, and comfortable cycling environment that is welcoming to cyclists of all ages and skill levels. In essence, bicycle boulevards are low-volume and low-speed streets that have been optimized for bicycle travel through treatments such as traffic calming and traffic reduction, signage and pavement markings, and intersection crossing treatments. These treatments allow through movements for cyclists while discouraging similar through trips by nonlocal motorized traffic. Motor vehicle access to properties along the route is maintained.*
>
> – Portland State University, Initiative for Bicycle and Pedestrian Innovation

Chapter 6:
IMPLEMENTATION

6

CHAPTER 6

Implementation

Implementation of the bicycle network outlined in Chapter 5 of this document will require a significant commitment from residents, advocacy groups, community builders, and City government. A number of projects recommended by this Bicycle Master Plan will be swift and inexpensive to implement. However, many more projects will require the collaborative work of private, not-for-profit, and government groups. This investment in Rancho Cordova's bicycle transportation network will return a high quality of life and a legacy of healthy transportation and recreation options for residents and visitors.

This chapter outlines implementation priorities and provides planning-level cost estimates for projects that will build the system. Funding opportunities are also outlined.

The capital cost to complete the City bicycle transportation system is about $98 million. The most expensive elements of the system build Class I trails east of Sunrise Boulevard and construct bridges and undercrossings that will help users overcome major barriers to travel. See Table 6.1 below for a summary of the BMP cost.

Table 6.1: Bicycle Master Plan Cost Summary

Master Plan Cost Categories	Cost (2009 Dollars)
Class I Routes and Connections West of Sunrise Boulevard	$11,200,000
Class II and Class III System Improvements	$12,000,000
Class I Routes in Areas East of Sunrise Boulevard	$45,000,000
Grade Separations for Class I Routes (bridges and undercrossings)	$29,700,000
Total Estimate	$97,900,000

ULTIMATE SYSTEM MAINTENANCE COSTS

System maintenance for the fully built-out bicycle system would be approximately $429,000 annually. These maintenance costs include sweeping, restriping, and litter removal along the Class I system, periodic restriping of the Class II system, and occasional sign replacement on the Class III system. The maintenance estimate does not include maintaining the Class II system in the new area. More detail on maintenance cost is provided in Appendix C.

CLASS I ROUTES AND CONNECTIONS WEST OF SUNRISE BOULEVARD

The following 12 projects listed in Table 6.2 provide new Class I connections and improve at-grade trail/street crossings on the perimeter of the Stone Creek neighborhood. These projects also build a new "gateway landmark" crossing of Highway 50, a new connection to the Folsom South Canal at Douglas Road, and a new connection to the American River Parkway trail on the west side of Hagan Park. A Class I trail is also being considered along the Union Pacific Railroad spur that would connect the Mather Field Light Rail Station to the Rockingham neighborhood and the Mather Campus area, terminating near Mather Field Airport. Approximately 2 miles of new Class I trails will be added to the existing 16.3 miles of Class I trails west of Sunrise Boulevard, including about 7 miles of Folsom South Canal trail within the city limits.

Table 6.2: New Class I Routes and Connections (West of Sunrise Boulevard)

Description	Cost (2009 Dollars)
1. Douglas Road Connection to Folsom South Canal	$275,000
2. Kiefer Blvd. Connection to Folsom South Canal	$230,000
3. Hagan Park Bike Path Trail Connection to American River Parkway	$165,000
4. Stone Creek Trail NE Connection to Folsom South Canal	$30,000
5. Stone Creek Trail SE Connection to Folsom South Canal	$35,000
6. Stone Creek Trail SW Connection to Mather Blvd Existing Trail	$16,000
7. Stone Creek Trail NW Connection to International Drive	$18,000
8. Pedestrian Signal for Stone Creek Trail N Connection at Zinfandel Dr.	$200,000
9. Ramp & Crosswalk for Stone Creek Trail N Connection at Prospect Park Dr.	$14,000
10. Ramp & Crosswalk for Stone Creek Trail N Connection at Kilgore Rd.	$14,000
11. Pedestrian, ADA, and Safety Improvements, Mather Field Rd. (UP Rail Spur)	$1,655,000
12. Promenade at Highway 50 (east of Zinfandel Interchange)	$8,500,000
Total Estimate	$11,152,000

The Bicycle Master Plan also contemplates a long-range vision for bicycle bridges or undercrossings (grade separations) at seven locations west of Sunrise Boulevard. Three locations are in the vicinity of the Folsom South Canal, two in the Stone Creek neighborhood, and the last two along the proposed Union Pacific Railroad spur. These locations are in the distant future beyond the current General Plan horizon and have not been included in the Master Plan cost summary provided above.

CLASS II STRIPING ON EXISTING STREETS AND CLASS II LANES ON STREETS THAT REQUIRE WIDENING

Class II bicycle lanes will be added to approximately 13.2 centerline miles of streets in existing neighborhoods at a cost of about $810,000. The total mileage of Class II bike lanes on existing streets would increase from 54.1 to 67.3.

Other existing streets are not wide enough to add Class II lanes through a pavement striping project. These roads would require reconstruction of curbside roadway elements and minor widening of roadways. Cost for these improvements is anticipated to be $11,160,000, which considers only the pavement widening, additional right-of-way, and other striping and signal improvement costs. The Plan recognizes that the addition of bike lanes on these roadways is not likely to occur until a frontage rehabilitation project is initiated. These projects would add approximately 6 centerline miles of Class II routes on existing streets.

CLASS III SIGNING ON EXISTING STREETS

Class III routes are identified by bike lane route signs and a "sharrow" pavement legend painted on the roadway at strategic locations. The Plan anticipates Class III routes along approximately 8.6 centerline miles of local streets at a cost of $18,000.

The Class II and III system west of Sunrise Boulevard is identified on Exhibit 5.2, and cost details are provided in Appendix C.

CLASS I ROUTES IN AREAS EAST OF SUNRISE BOULEVARD

Approximately 47 miles of Class I trails are anticipated in the new development area. The unit cost for these trails is assumed at $175 per lineal foot for standard trails and $190 per lineal foot for major trails. Approximately one-quarter of the new system will provide major trails. The anticipated cost of the Class I trails is $45 million.

Grade separations include bridges over roads and waterways, and undercrossings at roads that are considered barriers to bicycle travel. An undercrossing is generally preferred at major road crossings as it would result in better access for riders and would have a more subtle visual effect on the landscape.

The trail system in the newly developing areas of the City will build 20 undercrossings and 7 bridges at a cost of $27.9 million. Approximately one-third of this cost is covered by the City's Capital Improvement Program. In addition, the Plan identifies 10 sites where a bridge or undercrossing should be considered for feasibility in the future as development is occurring and 3 locations that would be considered in the distant future beyond the current General Plan horizon.

The Class I system is identified on Exhibit 5.3, and cost details are provided in Appendix C.

CLASS II ROUTES IN AREAS EAST OF SUNRISE BOULEVARD

Future costs associated with the Class II system in the newly developing areas are not included in the Plan estimates, as the improvements will be implemented as part of roadway projects in new development areas. It is anticipated that at least a couple hundred miles of new Class II bike lanes will be necessary in the next few decades. These lanes cost approximately $1.5 million per centerline mile considering pavement and right-of-way costs.

Because of the preliminary status of new development plans, it is not practical to estimate how many roads with Class II bike lanes will be built in the area east of Sunrise Boulevard.

IMPLEMENTATION PRIORITIES

The City of Rancho Cordova is working to complete the bicycle transportation network in a timely manner. Project implementation is dependent on funding and project feasibility. The City has prioritized three projects for short-term completion, as shown in Table 6.3 below.

Table 6.3: Projects for Short-Term Implementation

Class	Project Location	Estimated Cost (2009 Dollars)
I	**Douglas Rd. Connection to the Folsom South Canal**	**$240,000**
I	**Feasibility Study of Pedestrian, ADA, and Safety Improvements, Mather Field Road (UP Rail Spur)**	**$150,000***
II	**Class II Striping (Citywide)**	**$91,720**

** Cost for Feasibility Study. Actual project cost estimated at over $1 million.*

COMMUNITY PRIORITIES

In addition to the short-term list of projects for implementation, community members identified their top priority projects as part of this planning process. The City will continue to work with community members to implement these projects, and as project feasibility and funding availability are clarified, City staff and the

community will have the opportunity to update these priorities. See Table 6.4 for the Top 10 Community-Supported Trail Projects and Table 6.5 for the Top 10 Community-Supported On-Street Bicycle Projects.

Table 6.4: Top 10 Community-Supported Trail Projects

Class	Project Location	Estimated Cost (2009 Dollars)	Level of Community Support
I	Citrus Road Trail at Folsom Boulevard	$2,000,000	5
I	N Mather Blvd. Connection to Mather Blvd.	$250,000	5
I	Connection to International Dr. @ Capital Center Dr.	$200,000	4
I	Douglas Rd. Connection to the Folsom South Canal	$240,000	4
I	Hagan Park Bike Path Trail Connection	$200,000	4
I	Promenade at Highway 50 (East of Zinfandel Drive)	$15,000,000	4
I	Rio del Oro Trail at Sunrise Boulevard	$2,000,000	4
I	Stone Creek Class I Trail Connection to the Folsom South Canal – SE	$200,000	4
I	Anatolia Bike Trail at Rancho Cordova Parkway	$2,500,000	3
I	Primary Route Trail Signage on Existing Routes	$9,000	3

Table 6.5: Top 10 Community-Supported On-Street Bicycle Projects

Class	Project Location	From	To	Level of Community Support
II	Kilgore Rd.	International Dr.	Folsom Blvd.	7
II	International Dr.	Prospect Park Dr.	Sunrise Blvd.	4
I	UP Rail Spur	Old Placerville Rd.	Folsom Blvd.	3
II	Douglas Rd.	Rancho Cordova Parkway	Borderlands Dr.	3
II	Douglas Rd.	Sunrise Blvd.	Mather Rd.	3
II	White Rock Rd.	Capital Center Dr.	Kilgore Rd.	3
II	Zinfandel Dr.	North Mather Dr.	Douglas Rd.	3
III	Ambassador Dr.	Trails Ct.	River Trails Cir.	3
II	Chardonnay Dr.	Coloma Rd.	Dolcetto Dr.	2
II	Chassella Way	Dolcetto Dr.	Barbera Way	2

FUNDING OPPORTUNITIES

Funding opportunities include the following sources: state bond funds, hazard mitigation funds, Transportation Development Act/SAFETEA funds, congestion management and air quality funds, Community Development Block Grants, and the use of developer fee credits. A brief description of each proposed source appears below.

FEDERAL AND STATE FUNDING SOURCES

Transportation Development Act/SAFETEA-LU

The Transportation Development Act (TDA) is administered by Caltrans and provides funding for transportation through regional transportation planning agencies. Pedestrian and bicycle facility improvements may be eligible for TDA funding. A one-quarter-cent sales tax collected by the state and redistributed to each city generates TDA funds. The great majority of the funds go to transit operations. However, if transit needs are met in a given fiscal year, surplus funds may be available for other transportation-related uses. A funding source with similar characteristics is the Safe, Accountable, Flexible and Efficient Transportation Equity Act: Legacy for Users (SAFETEA-LU Act), which is the major federal source of transportation grant funding.

American Reinvestment and Recovery Act Funds

The American Reinvestment and Recovery Act (ARRA) provides a diverse range of grants and other funding programs for local governments, including $77 million in Transportation Enhancements (TE) funds for California. In accordance with state legislation to implement the recovery act, ABX3 20, bicycle and pedestrian projects are the second priority for TE-funding projects. The majority of TE funds will be programmed by metropolitan planning organizations and regional transportation planning. With cooperation from the Sacramento Area Council of Governments (SACOG), the City of Rancho Cordova's bicycle projects may be eligible for this funding source. In addition, federal energy conservation grant programs may fund bicycle-related projects.

Congestion Management and Air Quality

Similar to TDA/SAFETEA, congestion management and air quality funding focuses on mobility projects with the potential to reduce vehicle trips and emissions.

Land and Water Conservation Fund

Last year this National Park Service program, administered at the state level by the Department of Parks and Recreation, had $1.3 million available statewide for acquisition or development of land and facilities that provide or support public outdoor recreation.

Recreational Trails Program

The Recreational Trails Program is a SAFETEA-LU program administered by the Federal Highway Administration. Nationally, $80 and $85 million was authorized for 2008 and 2009, respectively, to develop and maintain trails and trail-related facilities.

Community Development Block Grants

The U.S. Department of Housing and Urban Development provides funds for community-based projects. Neighborhood-based bicycle facilities that improve local transportation options or help to revitalize neighborhoods may be eligible.

California Department of Transportation Bicycle Transportation Account

The State's Bicycle Transportation Account (BTA) funds bicycle projects for commuting purposes. A Bicycle Transportation Plan is required for eligibility.

Safe Routes to School Funding (State Program)

The State of California funds $20 million annually in traffic calming and non-motorized transportation improvements near schools. The City of Rancho Cordova has recently implemented safe routes to school projects after successful bids for funding.

Safe Routes to School Funding (Federal Program)

In August 2005, the United States Congress established the national Safe Routes to School program in Section 1404 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU). This landmark legislation designated $612 million in federal transportation funds for Safe Routes to School programs nationwide.

Federal Tiger I & II Program

In 2010, the U.S. Department of Transportation gave out a total of $2.1 billion for innovative transportation projects that address economic, environmental, and travel issues at once. The TIGER program, as it's known (Transportation Investments Generating Economic Recovery), is a competitive and merit-based process to pick projects and should be a model for next transportation authorization.

Sacramento Area Council of Governments, Bike and Pedestrian Program

In 2002, SACOG approved program that provides $350 million of funding for bicycle and pedestrian projects through 2025. The program is supported by federal means, and projects are selected biannually through a competitive application process.

LOCAL FUNDING AND FINANCING SOURCES

Developer Impact Fees and Fee Credits

In some instances, it may be mutually beneficial for the City and a particular private developer to agree on a combination of development impact fees, fee credits, land dedication, and/or capital improvements in order

to most effectively move a project forward. Allowing fee credits in lieu of fees will be at the discretion of the City. Traffic generation impact fees are typically tied to trip generation rates and traffic impacts from proposed development and may be used to install Class II facilities.

Private Grant Funding

There are thousands of private foundations with grant programs providing park and recreation funding. The National Recreation and Park Association (www.nrpa.org) and the Foundation Center (www.foundationcenter.org) maintain websites with information on grant opportunities.

PARTNERSHIP OPPORTUNITIES

As public funding nonessential programs and services becomes increasingly scarce, jurisdictions nationwide find themselves leveraging their resources in increasingly creative ways. One of the best ways for municipal governments to leverage existing resources is by partnering with organizations that share common goals, such as promoting bicycling, improving public health, promoting sports, and conserving natural resources. Partnerships can provide donations of land, materials, money, or volunteer time.

The City of Rancho Cordova currently partners local and regional organizations, such as the County of Sacramento, Cordova Recreation and Parks District, the American River Parkway Foundation, and with the U.S. Department of the Interior, Bureau of Reclamation to provide bicycle-oriented recreational opportunities. With the significant cost to implement the bicycle transportation network and related programs, the City will need to maintain these partnerships as well as identify others.

It is recommended that the City begin to formalize the most successful of its existing partnerships through the adoption of Memorandums of Understanding (MOU). Adoption of an MOU helps to memorialize the informal partnership agreement and clearly delineate responsibility for maintenance and operations of shared facilities.

The City should also continue to support community advocacy and stewardship groups who are working to increase ridership and enhance cycling in Rancho Cordova. Jurisdictions throughout California and the nation have long benefited from partnerships with private, nonprofit organizations that are motivated to assist with maintenance, renovations, and new improvements in their communities. Partnerships with nonprofit organizations should be formalized with an MOU, even if no funds are changing hands. Formalizing the partnership though a written agreement helps to manage expectations and ensure accountability for both parties.

Current partnering efforts are described below.

BICYCLING ADVOCATES FOR RANCHO CORDOVA

Bicycling Advocates for Rancho Cordova (BARC) provided a key role in the development of the Bicycle Master Plan and is providing continuing guidance for project implementation within the City. As participants

in the Rio del Oro Tier I entitlement process, BARC lobbied for better connections between the Rio del Oro and Anatolia communities and better integration within the Rio del Oro site.

The use of "side paths" is a continuing discussion with BARC and the greater cycling community. A side path is a physically separated bike lane that is adjacent to a roadway and is sometimes referred to as a Class I-a trail. These trails look like Class I facilities but are not independent of roadway alignments, as the definition for Class I states. While these bikeways can provide an incentive for use by all types of riders, there are some concerns about how they interface with driveways and cross streets. The side path discussion is an example of technical capacity building that is anticipated between the City and its advocacy partners.

CORDOVA RECREATION AND PARK DISTRICT

Cordova Recreation and Park District (CRPD) has described the Master Plan's bicycle system as a "backbone for recreation." A park system that is interconnected with trails both serves to encourage cycling and pedestrian activity, and provides good access to recreational destinations. The City and CRPD are contemplating a coordinated program of design standards and wayfinding signage. While standards will be individually respected by the City and CRPD, they will be shaped to provide seamless facilities for users.

BUREAU OF RECLAMATION

Authorized in 1965, the Auburn-Folsom South Unit originally consisted of the Auburn Dam, Reservoir, and Power Plant, County Line Dam and Reservoir, Sugar Pine Dam and Reservoir, and Folsom South Canal. The Folsom South Canal was planned to be constructed in five reaches for a total length of 68.8 miles. Only the first two reaches have been built, a total length of 26.7 miles, and there are no current plans to construct the remaining three reaches. As part of the recreational opportunities offered by all units of the Bureau's American River Division, the Folsom South Canal Recreation Trail provides a trail for horseback riding, bicycling, and hiking.[1]

As urban development expands in the vicinity of the Folsom South Canal, there is increased pressure to improve access to the recreational trail for local residents. As such, maintenance services and other support programs and facilities need to be expanded. The Bureau of Reclamation has requested that the City enter into an agreement that will add the City of Rancho Cordova as a responsible partner for maintenance, safety, and liability. This management agreement will help to support increased use of the trail and to encourage improvements in access and amenities along the trail.

[1] U.S. Department of the Interior, Bureau of Reclamation. Auburn-Folsom South Unit Project. http://www.usbr.gov/projects/Project.jsp?proj_Name=Auburn-Folsom+South+Unit+Project (accessed February 24, 2011).

OTHER PARTNERING OPPORTUNITIES

- Local schools – Folsom Cordova Unified School District, Elk Grove Unified School District, and local private schools
- Rancho Cordova Police Department
- Caltrans Local Assistance
- 50 Corridor TMA
- Walk Sacramento
- Rancho Cordova Strong Neighborhoods
- Sacramento Area Council of Governments (SACOG)
- Sacramento County Regional Parks

Appendix A:
PUBLIC OUTREACH RESULTS

A

APPENDIX A

Public Outreach Results

SUMMARY OF PUBLIC OUTREACH

The bicycle and pedestrian master planning process provided ongoing opportunities for input through regular Technical Advisory Committee stakeholder meetings, community workshops, and access to staff to provide comments. A summary of each outreach opportunity and results follows.

TECHNICAL ADVISORY COMMITTEE (TAC)

The advisory committee to this process comprised local cyclists and cycling advocates, with occasional attendance from concerned agency stakeholders. The TAC met once at the beginning of the process to discuss key opportunities and constraints with staff, to review past efforts, and to convey their desired outcomes from the planning process. For their second meeting, the TAC members worked collaboratively with Bicycle Advocates for Rancho Cordova (BARC) and the City of Rancho Cordova to host a community workshop (results are outlined below). At the TAC's third meeting, committee members were invited to review the proposed network and learn about the estimated cost to complete the network, as well as to provide feedback on the prioritization of projects. The results of this prioritization exercise showed significant support for the completion of Rancho Cordova's Class I off-street network. The final TAC meeting will provide the committee with an opportunity to review the final draft of each plan, including final cost and prioritization details.

COMMUNITY OPEN HOUSE: JUNE 2, 2009

A community open house was held in June of 2009 to provide community members with the opportunity to learn about the planning process and to provide feedback on walking and bicycling in Rancho Cordova. The meeting began with an opportunity for participants to review educational presentation boards and socialize with other community members. Participants were then briefed on the project's purpose and schedule and were provided an overview of past progress in developing bicycle and pedestrian facilities in Rancho Cordova. City staff then presented an overview of the plans and explained the purpose of the evening's

meeting: to provide information related to key trends, challenges, and opportunities for cycling and walking in Rancho Cordova, as well as to gather input on these issues from the community.

Following the presentations, participants were broken into small groups and visited a variety of small group "education stations" where staff was able to share information and gather feedback on trends, opportunities, and challenges. The results from each education station are outlined below. Following the small group station activities, participants were seated at small group tables and worked with a facilitator to examine a map of the existing bicycle and pedestrian network and to provide input on issue and opportunity areas and other items of interest and concern.

Following the small group work, a large group discussion on potential partners and program opportunities was convened. The results of this discussion follow the station results below.

STATION 1 – BICYCLE FACILITIES

- Bike lanes adjacent to parallel parking are hazardous to "dooring" accidents – prefer bikes adjacent to travel lane – no parking
- Vertical curbs preferred to rolled curb for pedestrian safety
- Q: Could pedestrians be separate from bikes on American River Parkway Trail?
  - County owned, may not be likely due to environmental impact
- Driveway aprons should be flush to bike lanes; even small "lip" presents hazard
- Tumbleweed cleanup needed – esp. South Sunrise
- Take advantage of natural drainage/open space to align new trails
- Use of "Class III" trails is common current condition
- Connect established communities with new developments – E<->W and N<->S
- Folsom South Canal does not "feel like" a "Class I" trail
  - Debris maintenance needed
  - Not lit – not safe for night
- Gutter/trail – too dangerous, unreliable
  - Never less than 4 feet wide for "Class II" bike lane
- Zinfandel overcrossing is too dangerous for pedestrians/bikes

- Construction sandbags = hazard
  - Solution: reflective tape on bags

STATION 2 – WHERE DO YOU LIVE, WORK, AND PLAY?

- N/S & E/W access through existing neighborhoods
- Bike lanes on Kilgore, canal access @ Douglas
- Connect Douglas Rd. to Zinfandel
- Connect Douglas Rd. to Folsom South Canal
- Change speed limit on Douglas Rd. to 45 mph
- Improve Douglas Rd. bike lane with signs
- Class III?
- Connectivity
- Dashed merge lanes

STATION 3 – WALKING AND CYCLING TRENDS IN RANCHO CORDOVA

- % kids biking to school
- Rancho Cordova resident and Rancho Cordova employees? (Census Info)
- Which employers are bicycle friendly?
- Residential bike parking
- Feeling unsafe crossing over Hwy 50
- Bikes locked safely not stolen when commuting, shopping errands
- Easy to find good, safe, bike parking around town!
- Bike lockers $5/mo; rent from RT
- Parents are driving kids to school; this makes a lot of traffic in the morning
- 1,000's would use the light rail if they had a safe bike trail: Citrus Road Bike Trail

WHY NOT?

- Weather
- Dark at night
- Traffic too heavy and too fast!
- Preparation: shower, clothes, lockers
- Bike security
- Time!

STATION 4 – PEDESTRIAN INFRASTRUCTURE

- We need walking paths in our community parks
- Put in class I paths first and build community around paths
- Resolution in doc. regarding pedestrians on pavement
- Multicultural signage or universal

STATION 5 – BICYCLE SUPPORT FACILITIES

- Bike trail along Folsom Blvd. from Sunrise to Hazel is full of debris (glass, rocks, etc.). Also there are telephone poles in the bike trails.
- The bike lockers at Home Depot are locked because they were being used by homeless people and are now not accessible to bicyclists. Find some way to make lockers accessible.
- Would like bike lockers at Sunrise and Hazel light rail stations
- Better lighting at tunnel going under freeway as well as at Citrus Rd.
- The Folsom South Canal needs more facilities
- Starbucks in Gold River doesn't have a bike rack and they have a group of bicyclists that meet there to go on rides
- Bel Air also does not have bike racks
- On-demand bike lockers at light rail stations instead of annual reservations
- Higher capacity for bikes on buses and light rail

- Green lights to cross along Data are too short
- Costco doesn't have bike racks
- Kaiser doesn't have bicycle parking
- Residential area along Data does not provide safe bicycle storage
- City of Sacramento has been installing many inverted "U's" in public right-of-way
- People are parking on the street in the business parks rather than in the parking lots
- Make sandbags more visible to bicyclists. Use a fluorescent or reflective bag.
- More frequent sweeping in the City
- More reflectors along bike trails
- Improved performance and quantity of bicycle sensors at intersections
- No button to cross Coloma when traveling NB on Bridlewood
- Want a connection at South Canal and Mather
- Would like a drinking fountain at Folsom South Canal and Mather
- More signage indicating where facilities are located
- Existing facilities map on our website
- Mills Center Area needs more bike facilities
- Village Green – the showers are not usable to bicyclists
- Folsom South Canal – more benches, shade, fountains
- Would like buttons along Folsom Blvd. to be adjacent to the bike trails
- Show facilities outside of the City as well

OTHER GENERAL COMMENTS

- Bike racks for bicycles with trailers for kids and/or shopping

POTENTIAL PARTNERS

- BARC
- Schools
- Police Department
- Caltrans Local Assistance
- 50 Corridor TMA
- Walk Sacramento
- Rancho Alliance of Neighborhoods
- Cordova Recreation and Parks District
- SACOG
- Sac County Regional Parks

PROGRAM OPPORTUNITIES

- Police Department
  - Helmets
  - Bike rodeo
  - Safety and law education
- Walk Audits
  - Identify concerns/problems
- Eyes on the Street Program
- Customized transit marketing
- Safe Routes to School
- SR2 Transit
- Smart Cycling
- Bike Month

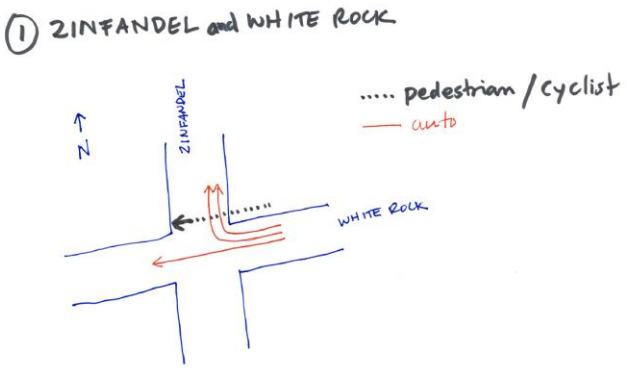
- Bike rack giveaways – like Sacramento
- Reach out to transit users – station announcements, also get bike and pedestrian feedback there
- Incentives for kids to ride to school –
  - Contests
  - Build generation of riders
  - Folsom – Cordova?
- Walking School Bus
- Enforce rules on parkway
  - Pavement vs. Shoulder
  - Speeding

Note: Tabular results of station activities are also summarized in Chapter 3, Needs Assessment.

DIRECT COMMUNICATION WITH STAFF

The following comments were provided to staff via e-mail, following the June 2009 workshop:

Intersection 1: Zinfandel and White Rock



Cyclists and pedestrians traveling west on White Rock trying to cross Zinfandel are going to have trouble.

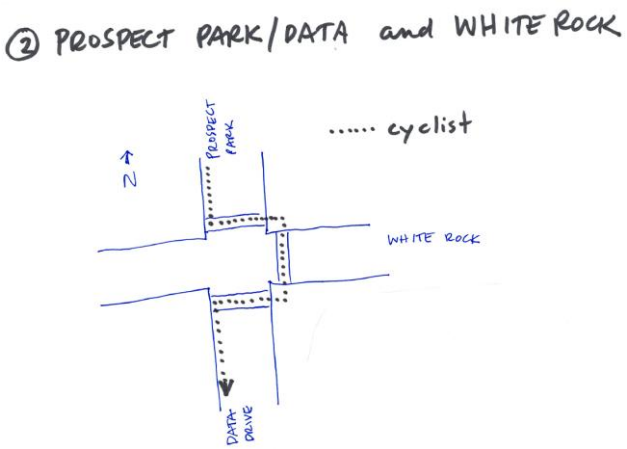
The pedestrian *walk* button gives a green walk signal to the crosswalk at the same time as the green right-turn arrow for traffic.

Drivers in the center-most left turn lane cannot see that a pedestrian or a cyclist has entered the crosswalk.

Extra danger is that drivers are already thinking on-ramp speed because most are heading for the Highway 50 on-ramps.

Needed: A green light for pedestrians/cyclists that is separate from the green turn arrow for drivers.

Intersection 2: Prospect Park/Data Drive and White Rock



This is a "3-legged" intersection which poses problems for cyclists that are traveling south on Prospect Park and crossing over White Rock.

As the cyclist approaches the intersection, there is no way that he can cause a green light enabling him to ride across on the correct side of the road.

So the cyclist has three choices here, all inconvenient, and some dangerous:

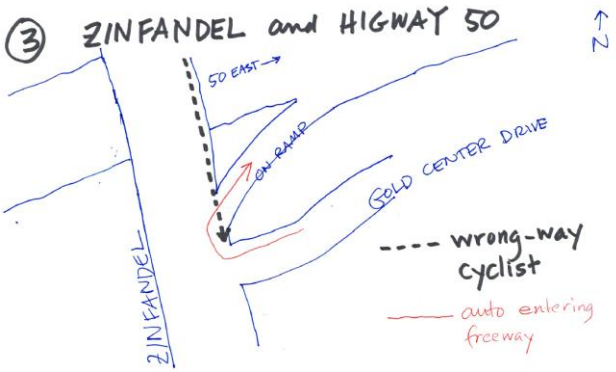
1 – (See drawing) Hit the *walk* button to cross Prospect Park as a pedestrian, again hit the *walk* button to cross White Rock as a pedestrian, and thirdly hit the *walk* button to cross Data Drive as a pedestrian. Only then get back on the bike to continue riding. Or ride through the intersections, which I think is illegal.

2 – Wait and wait for a car to come and trip the light so that he can ride across. The green light in that instance is very short; only a racing cyclist can make it across before it turns red.

3 – On the approach to the intersection, cross in order to ride on the wrong side of the road. Stop and hit the *walk* button to get a green light across White Rock. Once the light is green, ride through the intersection on a diagonal (if traffic permits), both crossing White Rock and regaining the correct side of the road to go south on Data Drive.

Needed: A way for a cyclist to get a green light in order to correctly cross White Rock on the bike.

Intersection 3: Zinfandel and Highway 50



At the community night, I know many people pointed out the dangers of this intersection. Here is one more way in which it's dangerous.

I was driving home at 6 pm, heading toward the freeway entrance to get on Highway 50 traveling east. I traveled west on Gold Center Drive and stopped at the red light. Sitting at the red light, I carefully checked for traffic across from me (off-ramp from 50 East) and to my left (cars traveling north on Zinfandel). There were no cars so I edged out to make a right turn on red, into the on-ramp.

Good thing I hadn't punched the accelerator, because as I turned my head to look at my direction of travel right before the on-ramp, there was a **CYCLIST** crossing the on-ramp right in front of me. He was riding south on Zinfandel **ON THE WRONG SIDE OF THE STREET WHERE I DID NOT EXPECT HIM TO BE.** I narrowly missed him, but there would have been nothing I could do to avoid a collision, given the timing.

I made a mistake in not looking better. He made a stupid mistake in breaking the law riding on the wrong side and in foolishly assuming that I would see him.

Needed: I'm not sure. Is there a way to better protect this intersection?

COMMUNITY WORKSHOP: JULY 2010

Workshop Summary and Key Results

The purpose of this workshop was to gather input from the Council and members of the public to establish a clear vision for the Rancho Cordova Bicycle and Pedestrian Master Plans. Three Council members were in attendance, in addition to numerous members of the public and other key stakeholders from local agencies, advocacy organizations and the development community.

The workshop began with a Staff introduction to the project and an overview of the meeting's purpose. Guest speakers from SABA (Owen Howlett), WalkSacramento (Eric Fredericks) and Design Sacramento 4 Health (Dr. Charlene Hauser) were invited to present their vision for walking and bicycling in Rancho Cordova. Following the speakers' presentation, Staff provided a more detailed look at the contents of the Plans, including the key recommendations.

Following the Staff presentation, an open discussion among Council members and workshop attendees was moderated by the Mayor. The primary themes that emerged from the discussion are identified below.

Funding

- Grant opportunities
- Explore funding measures other cities have used
- SACOG for "complete streets" funding
- Safe Routes to School

The issue of funding was addressed as a priority for many of the meeting participants. In order to draft a realistic plan, different funding options like grant opportunities and other creative funding sources must be considered. Some participants also suggested exploring funding options that other cities in the area have used

to implement similar plans. Additional funding sources to consider included SACOG for "complete streets" funding as well as Safe Routes to School.

Education

- Focus on public health issues
- Quality of life
- Work towards "bicycle friendly" designation from the League of American Cyclists
- Participation in Safe Routes to School

Participants also expressed interest in public education. One suggestion included focusing education on public health issues, turning Rancho Cordova into a community focused on fitness. City designations like becoming a "bicycle friendly" community by the League of American Cyclists emerged as an important consideration as well as participation in the Safe Routes to School program. Council members and some participants felt this sort of designation and focus on quality of life issues could be an effective economic development tool for the City.

Bicycle & Pedestrian Master Plan Goals

- Safety
- Connectivity issues
- "Complete streets" approach
- Land use, density and services
- Use of good signage and sharrows
- River and trail access

Bicycle and pedestrian safety was discussed as an explicit goal of the plan with many suggestions for accomplishing safety goals. Looking at the existing connectivity issues within the city and perhaps using the "complete streets" model to address connectivity was one approach to be considered. Also, current land use, density and location of services need to be evaluated for bicycle and pedestrian access.

Some safety issues can be addressed using good signage and sharrows. There was also some discussion about providing access to the river and connecting existing parks throughout Rancho Cordova.

Photo Contest

The workshop concluded with a Master Plan cover photograph selection contest. Dave Cassel's winning photograph "Biker on the Sunrise Foot Bridge at Sunset" will be placed on the Cover of the Bicycle Plan. The city would also like to thank the following for their photo submittals.

James Begg – Franklin Templeton Bicycle Commuters

JoAnna Bueno Williams and Ryan Lundquist – Project 680 Bike Ride

Jeff Beiswenger – Bridge Bike Rack

Travis Evans – American River Parkway

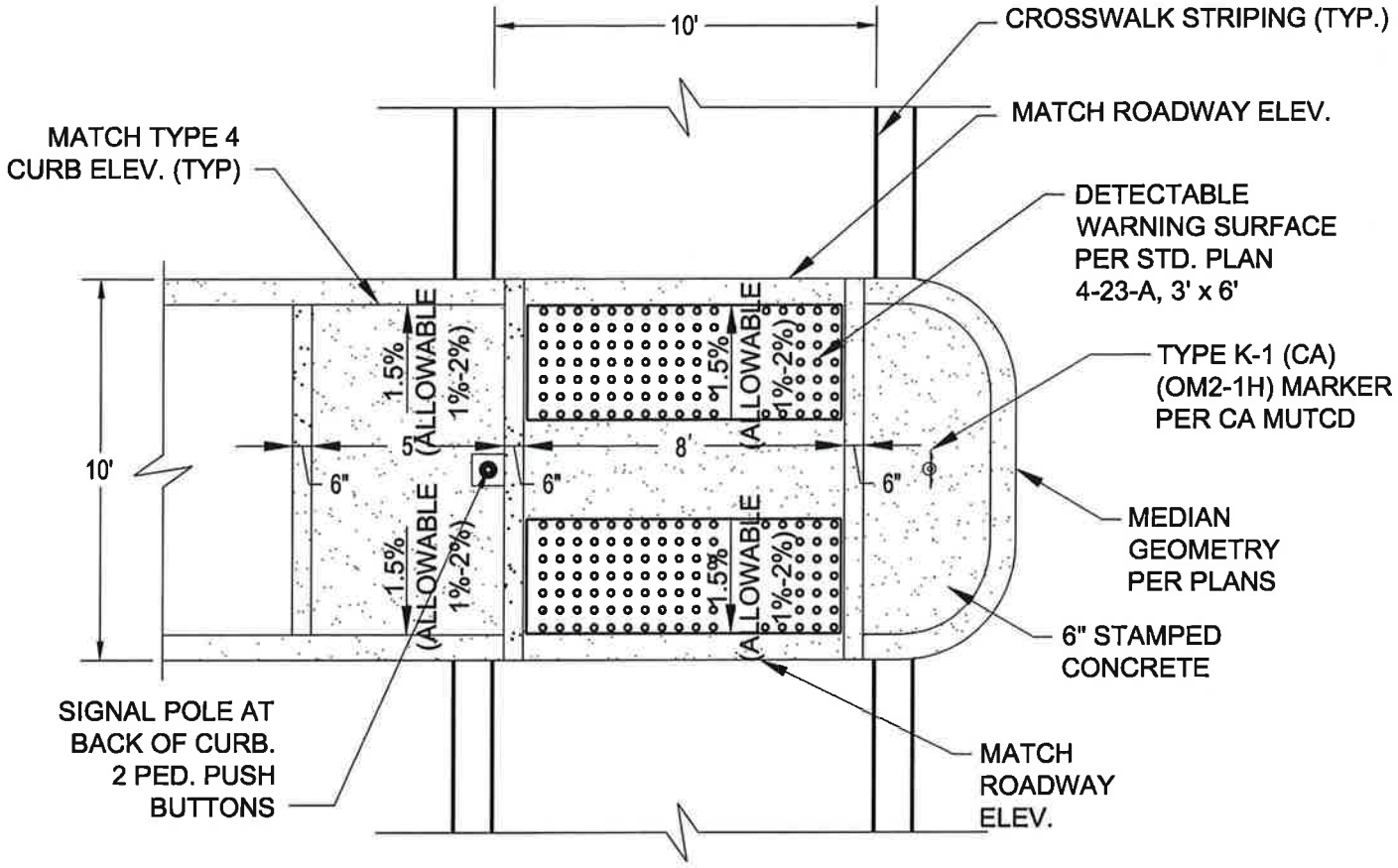
Mark Thomas – American River Parkway

Appendix B:
STANDARD DRAWINGS

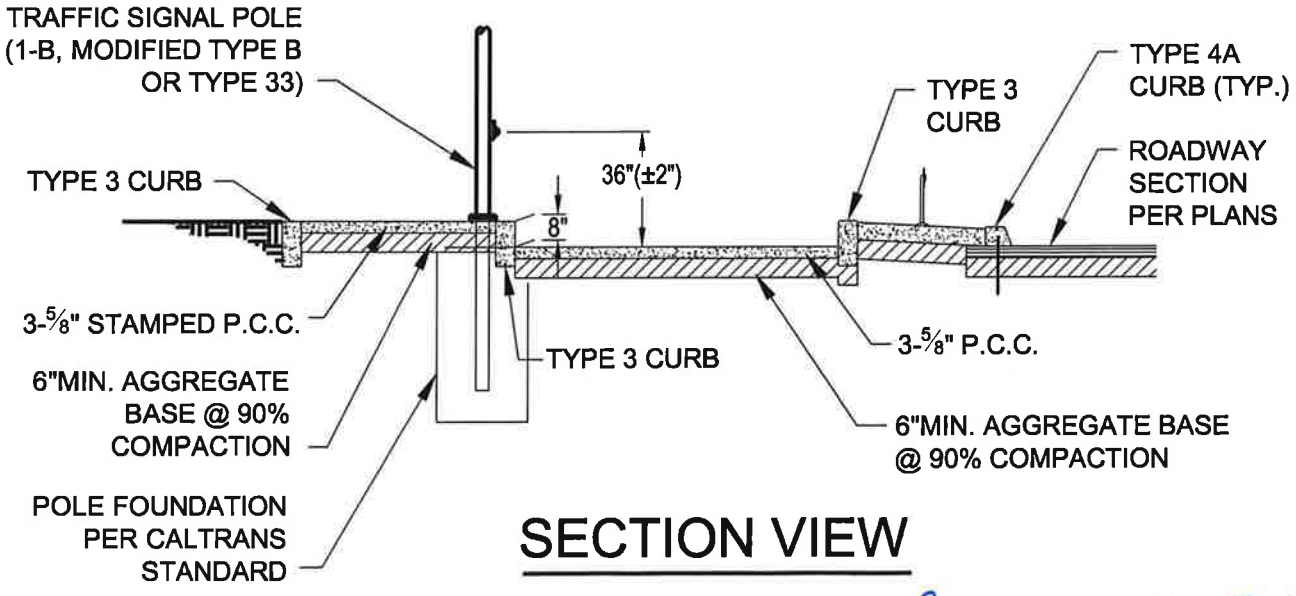
B

APPENDIX B:

Standard Drawings



PLAN VIEW



SECTION VIEW

NOTES:

1. FOR SIGNAGE CLEARANCES SEE MUTCD FIGURE 9B-1

Cyrus Abhar

DIRECTOR OF PUBLIC WORKS

CITY OF RANCHO CORDOVA PUBLIC WORKS		MEDIAN PEDESTRIAN REFUGE
	SCALE: 1" = 5" DATE: JUNE 2009 DRAWN BY: TE	BP - 03

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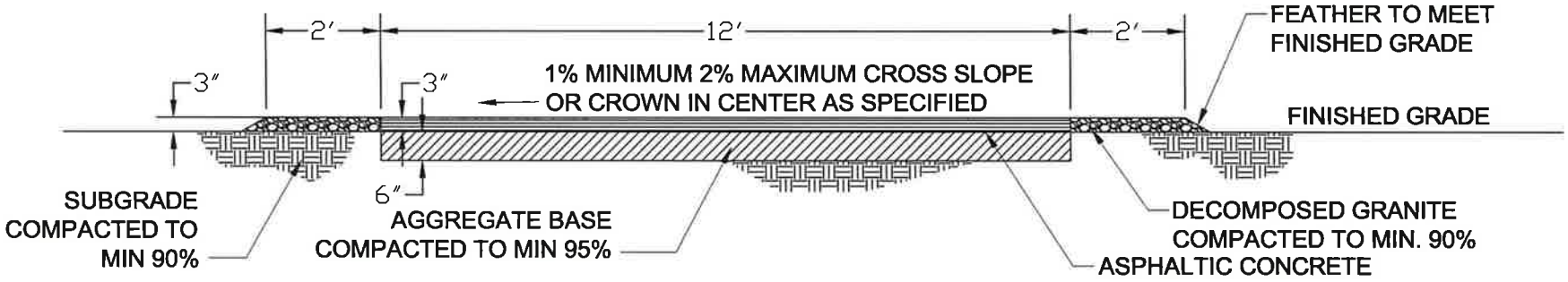


NOTES:

1. 10' ALLOWABLE TRAIL WIDTH FOR MINOR CLASS I TRAIL
2. APPLY PRE-EMERGENT HERBICIDE UNDER DECOMPOSED GRANITE PRIOR TO INSTALLING IT.
3. APPLY PRE-EMERGENT HERBICIDE TO AGGREGATE BASE PRIOR TO PAVING ASPHALT
4. APPLY A 4" WIDE SOLID YELLOW CENTERLINE STRIPE CONTINUOUSLY DOWN THE CENTER OF THE BIKETRAIL
5. IF POSSIBLE USE FOR UTILITY ACCESS THEN USE 3" OF ASPHALTIC CONCRETE AND 10" OF AGGREGATE BASE

DIRECTOR OF PUBLIC WORKS

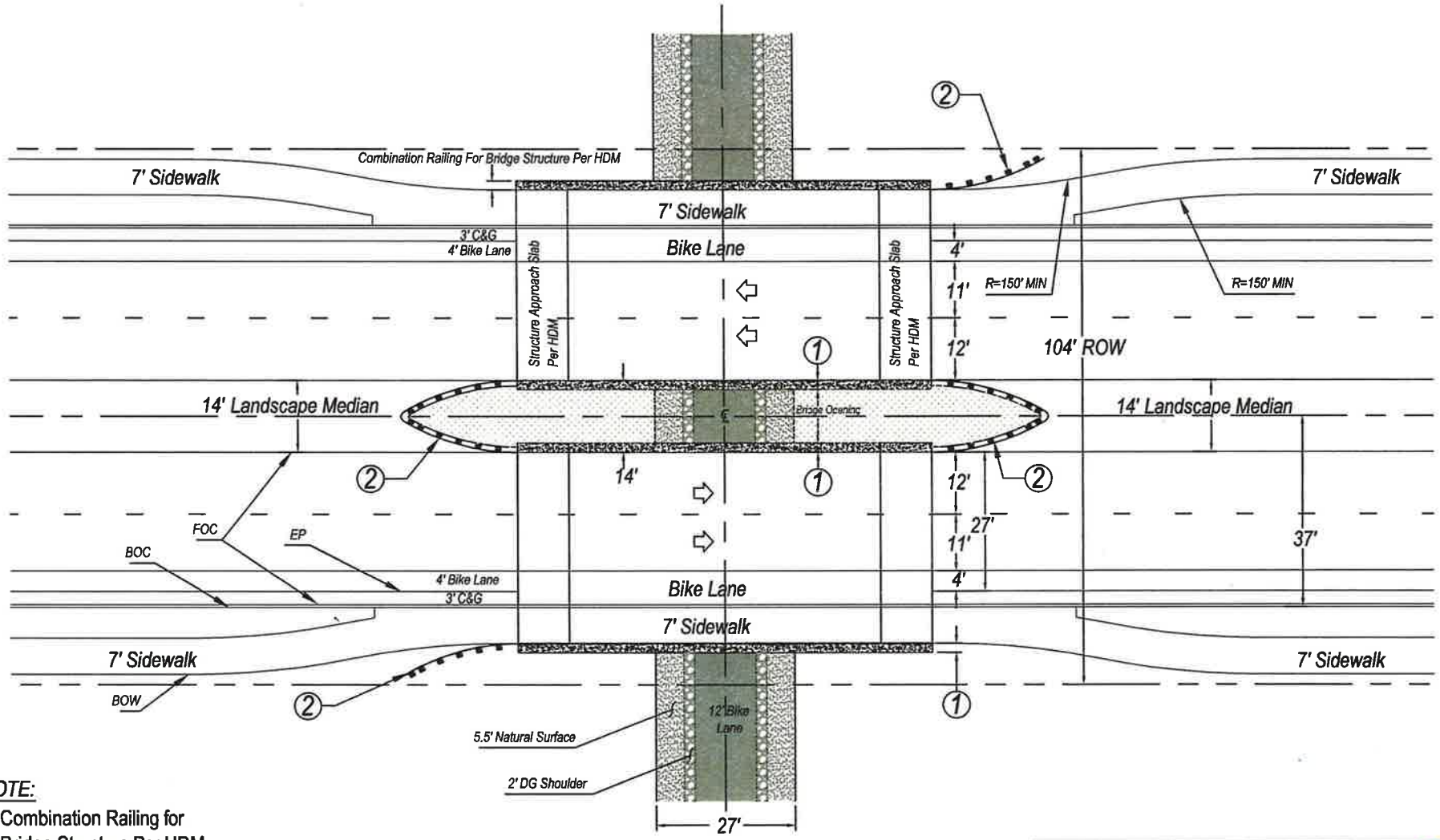
CITY OF RANCHO CORDOVA PUBLIC WORKS

MAJOR BIKE TRAIL CLASS I

SCALE: NTS
DATE: FEBRUARY 2008
DRAWN BY: TE

BP - 02

P:\Public Works\Transportation Planning\AutoCAD Files\City Std Spec\Bike Trail\Class I Bike Trail.dwg 11/02/09 11:11am tevans



NOTE:

1. Combination Railing for Bridge Structure Per HDM
2. Metal Beam Guard Railing

PLAN VIEW

PUBLIC WORKS DIRECTOR

CITY OF RANCHO CORDOVA
PUBLIC WORKS

4 LANE BRIDGE OVER BIKE TRAIL

SCALE: NTS
DATE: 11/2008
DRAWN BY: BC

BP - 01a

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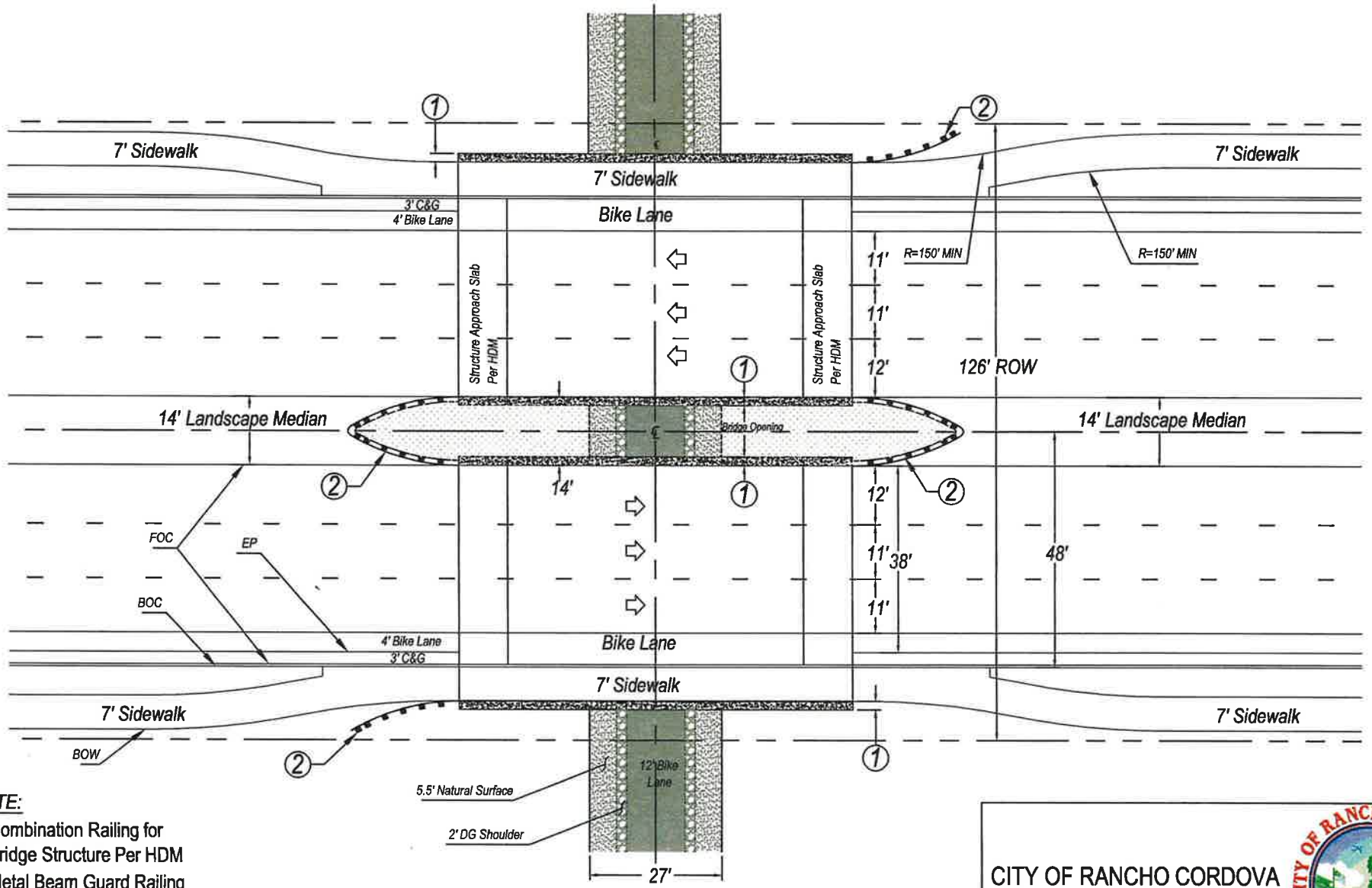


PLAN VIEW

NOTE:

1. Combination Railing for Bridge Structure Per HDM
2. Metal Beam Guard Railing

PUBLIC WORKS DIRECTOR

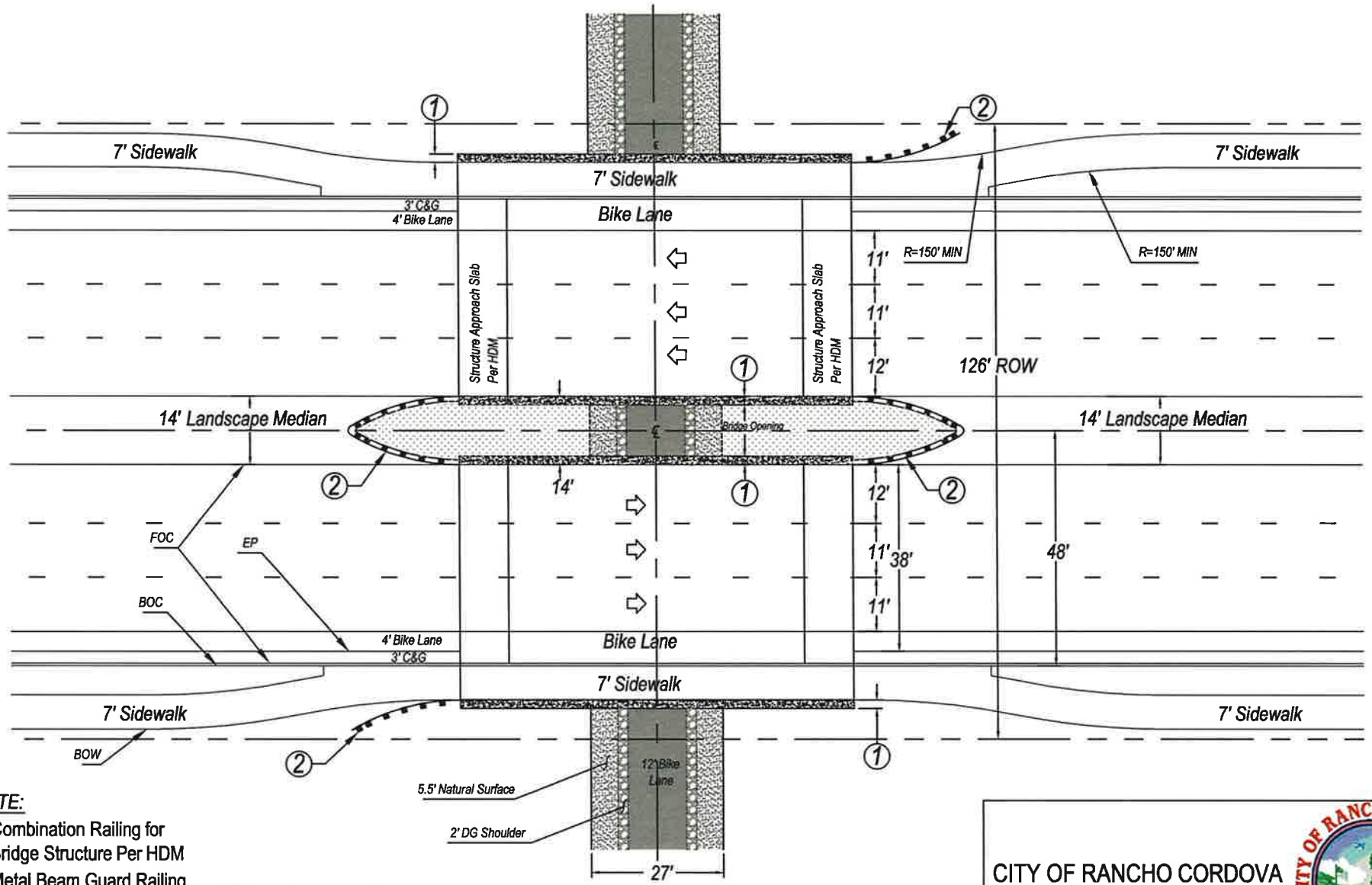
CITY OF RANCHO CORDOVA
PUBLIC WORKS

6 LANE BRIDGE OVER BIKE TRAIL

SCALE: NTS
DATE: 11/2008
DRAWN BY: BC

BP - 01b

P:\Public Works\Transportation Planning\AutoCAD Files\City Std Spec\Bridge over Trail\Trail Undercross.dwg 11/02/09 8:21am tevans



NOTE:

1. Combination Railing for Bridge Structure Per HDM
2. Metal Beam Guard Railing

PLAN VIEW

PUBLIC WORKS DIRECTOR

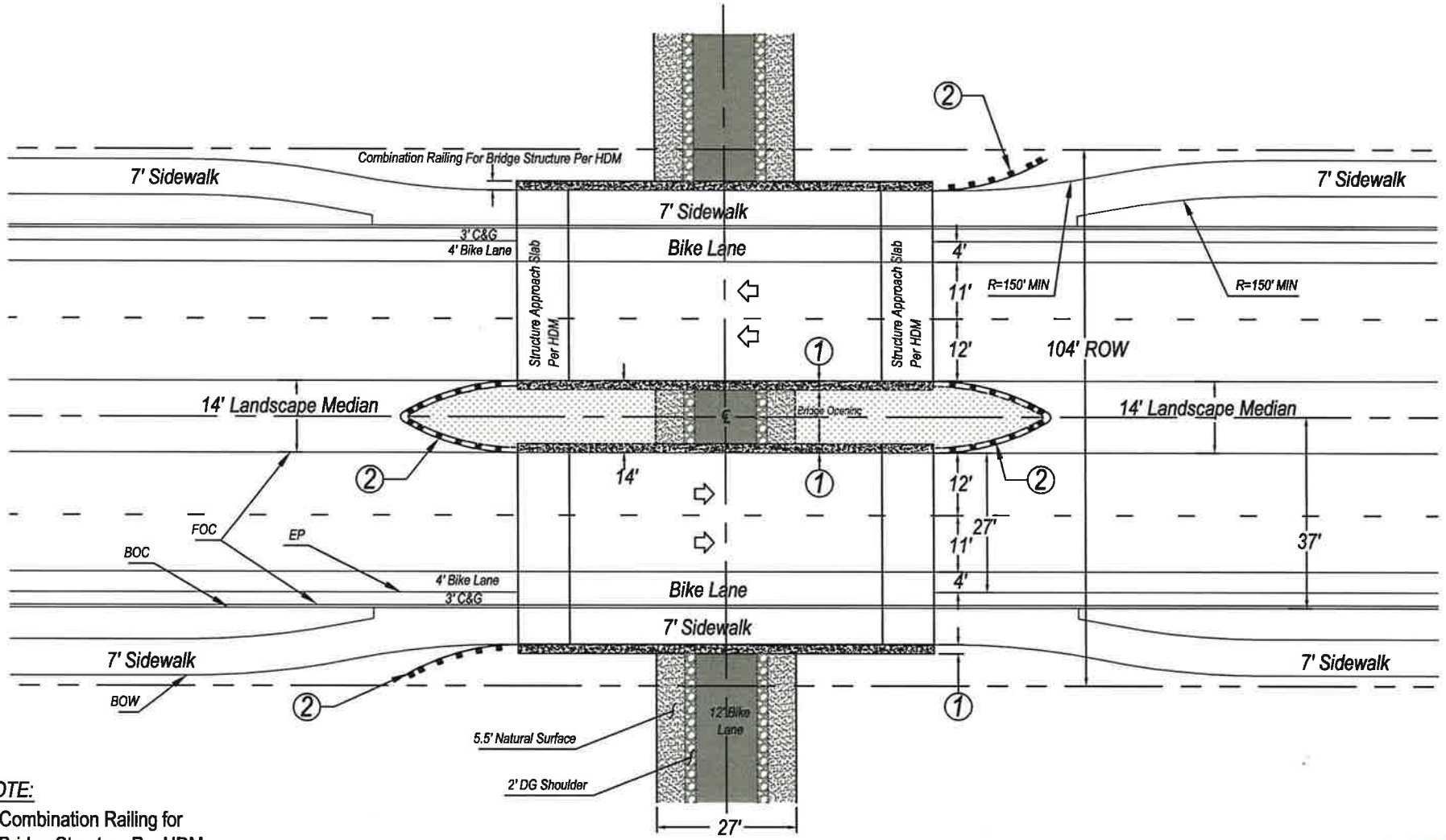
CITY OF RANCHO CORDOVA
PUBLIC WORKS

6 LANE BRIDGE OVER BIKE TRAIL

SCALE: NTS
DATE: 11/2008
DRAWN BY: BC

BP - 01b

P:\Public Works\Transportation Planning\AutoCAD Files\City Std Spec\Bridge over Trail\Trail Undercross.dwg 11/02/09 8:21am tevans



NOTE:

1. Combination Railing for Bridge Structure Per HDM
2. Metal Beam Guard Railing

PLAN VIEW

PUBLIC WORKS DIRECTOR

CITY OF RANCHO CORDOVA
PUBLIC WORKS

4 LANE BRIDGE OVER BIKE TRAIL

SCALE: NTS
DATE: 11/2008
DRAWN BY: BC

BP - 01a

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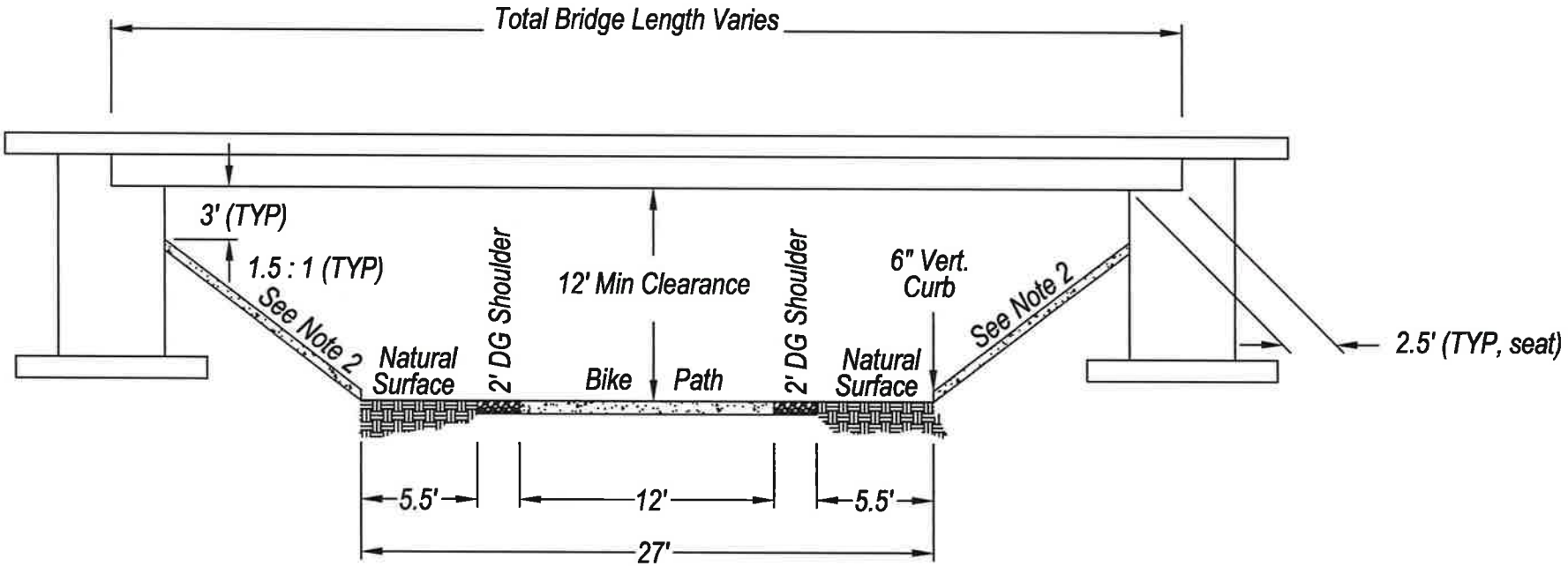

ELEVATION

PUBLIC WORKS DIRECTOR

NOTES:

1. SEE BICYCLE IMPLEMENTATION POLICIES FOR LOCATION AND ADJACENT LAND USE REQUIREMENTS.
2. ARCHITECTURAL FINISHES SHOULD DISCOURAGE SKATEBOARDING

CITY OF RANCHO CORDOVA
PUBLIC WORKS

BIKE TRAIL SECTION UNDER ARTERIAL BRIDGE

SCALE: NTS
DATE: 11/2008
DRAWN BY: BC

BP - 01

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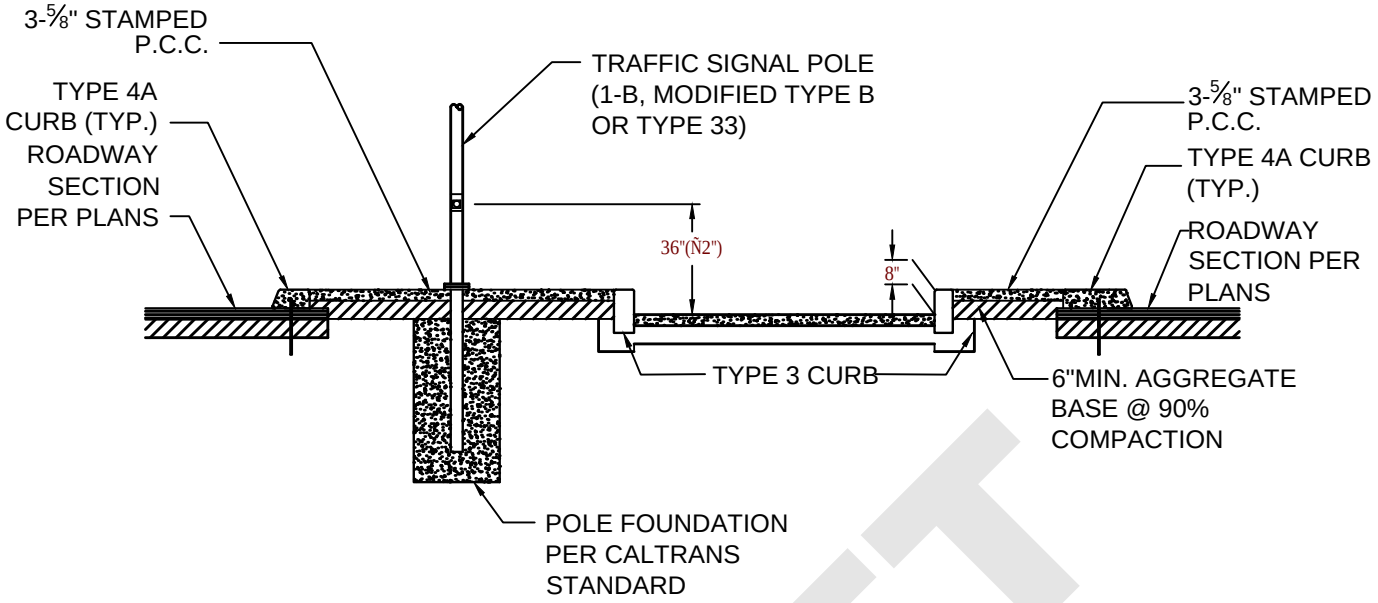
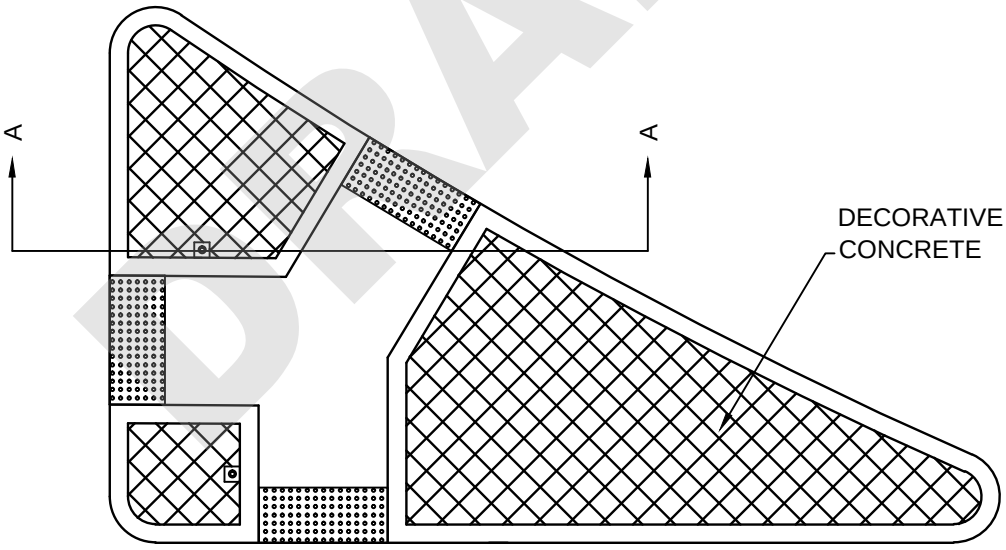


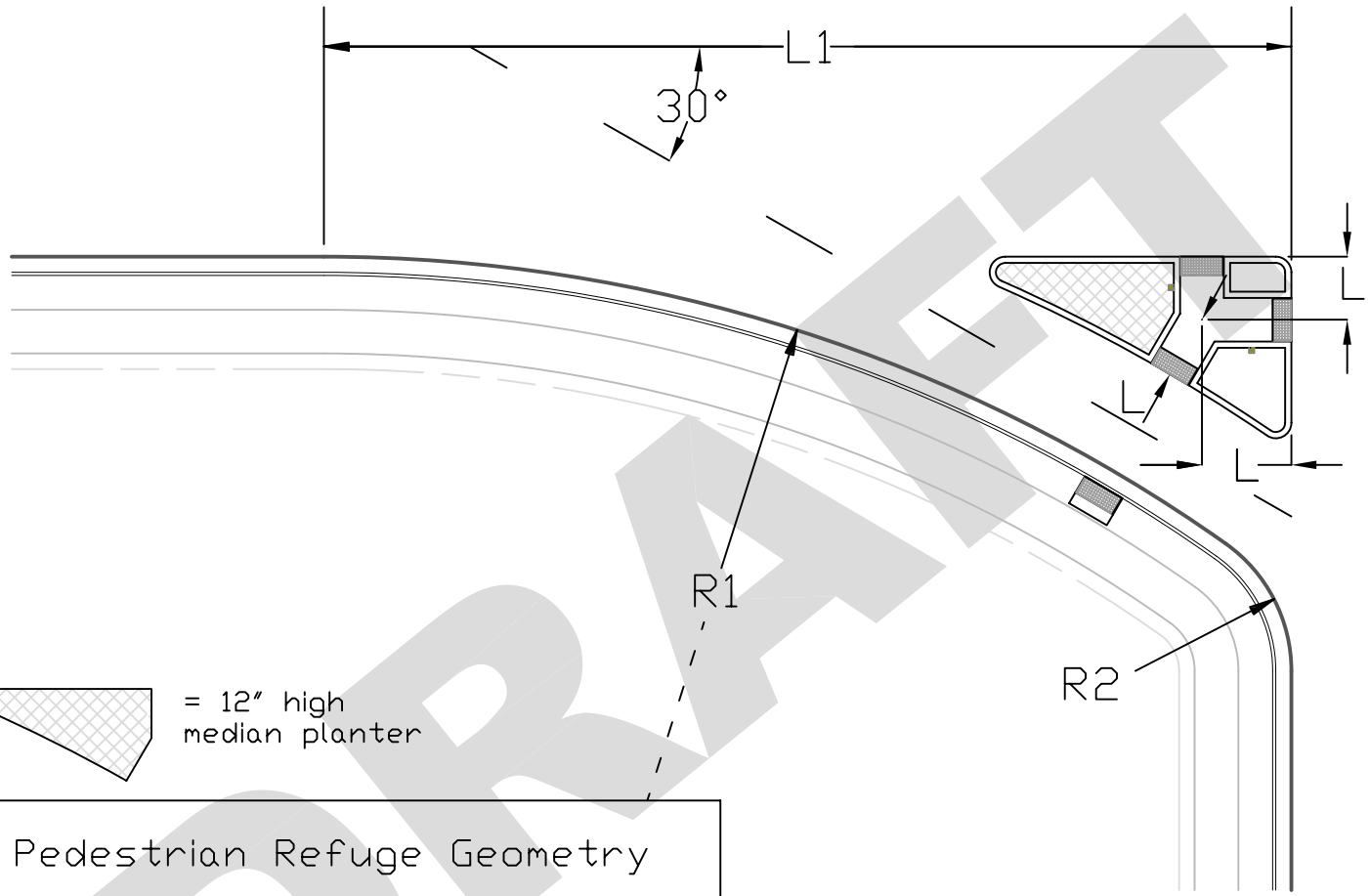
PORKCHOP - SECTION A



PORKCHOP - PLAN VIEW

DIRECTOR OF PUBLIC WORKS

CITY OF RANCHO CORDOVA PUBLIC WORKS	RAISED ISLAND PEDESTRIAN REFUGE	
	SCALE: NTS DATE: FEBRUARY 2010 DRAWN BY: TE	XX - XX



= 12" high median planter

Pedestrian Refuge Geometry				
	R1	R2	R1 Point of Curveture Offset (L1)	L
No RT Turn Pocket	250	25	155	10 ft
Single RT Turn Pocket	200	25	125	10 ft
Dual RT Turn Pocket	250	25	150	12 ft

Notes - R1 Point of curverature offset should be adjusted for intersection approaches that are screwed of on horixontal curvrature. L value should be maintained and an approximatly 30 degree angle for right turn traffic should be achieved.

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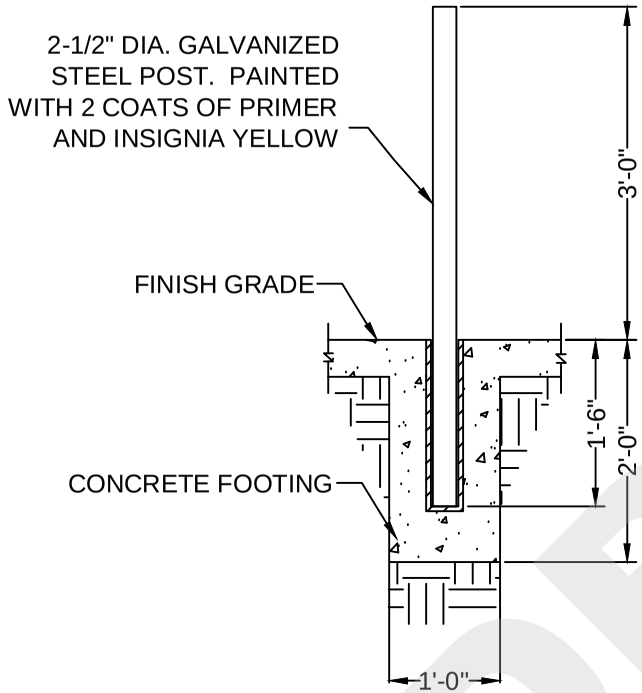
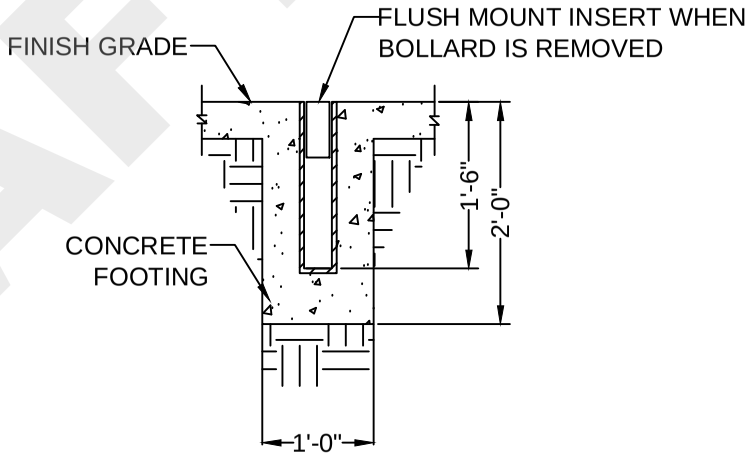
CITY OF RANCHO CORDOVA
PUBLIC WORKS

Raised Island
Pedestrian Refuge Geometry

SCALE: 1" = XX'
DATE: JULY 2006
DRAWN BY: MATTHEW RUBLE

MIS - 03





NOTE:
MUST BE LOCKING

DIRECTOR OF PUBLIC WORKS

CITY OF RANCHO CORDOVA PUBLIC WORKS	REMOVABLE FLUSH MOUNT BOLLARD	
	SCALE: 1" = 20' DATE: FEBRUARY 2010 DRAWN BY: TE	BP - XX

Appendix C:
COST ESTIMATES

C

APPENDIX C

Cost Estimates

APPENDIX C-1, CLASS II – CITY ADD BIKE LANE

ENGINEER'S ESTIMATE OF CONSTRUCTION COSTS
RANCHO CORDOVA PROPOSED CLASS II BIKE LANE PROJECTS

Cost Estimates of Proposed City Projects that add Class II Lanes to Existing Roadways.

ITEM NO.	DESCRIPTION	ESTIMATED TOTAL QUANTITY	UNIT	AVERAGE UNIT COST	GRAND ITEM TOTAL
1	Traffic Control	26	EA	$ 840.00	$ 21,840
2	Type 27B Thermoplastic Striping *	27,760	LF	$ 0.45	$ 12,492
3	Type 39 Thermoplastic Striping	208,200	LF	$ 0.70	$ 145,740
4	Type 39A Thermoplastic Striping (Skip Dash)	13,880	LF	$ 0.60	$ 8,328
5	Pavement Markings Legends	3,330	SF	$ 3.00	$ 9,990
6	Signal Modifications (Detection & Push Buttons)	20	EA	$ 15,000.00	$ 300,000
7	Sign Project	1	LS	$ 150,000.00	$ 150,000
				SUB-TOTAL	**$ 648,390**
				5% Misc Repair	$ 32,420
				20% Engineering	$ 129,678
				TOTAL ESTIMATE	**$ 810,488**

Length of proposed City's projects on existing streets is : **69,400 LF** = 13.2 miles of roadways

* Approximately 20% of bike lane requires an edge striping

APPENDIX C-2, CLASS II RIGHT-OF-WAY WIDENING ESTIMATES

ENGINEER'S ESTIMATE OF CONSTRUCTION COSTS
RANCHO CORDOVA PROPOSED CLASS II BIKE LANE PROJECTS

Cost Estimates of Proposed City Projects that require frontage widening in order to provide space for Class II Lanes.

ITEM NO.	DESCRIPTION	ESTIMATED TOTAL QUANTITY	UNIT	AVERAGE UNIT COST	GRAND ITEM TOTAL
1	Roadway Widening **	31,780	LF	$ 160.00	$ 5,084,800
2	Additional ROW ***	240,080	SF	$ 12.00	$ 2,880,960
3	Temporary Construction Easement	480,160	SF	$ 1.50	$ 720,240
4	Traffic Control	13	LS	$ 840.00	$ 10,920
5	Type 27B Thermoplastic Striping *	12,712	LF	$ 0.45	$ 5,720
6	Type 39 Thermoplastic Striping	95,340	LF	$ 0.70	$ 66,738
7	Type 39A Thermoplastic Striping (Skip Dash)	6,356	LF	$ 0.60	$ 3,814
8	Pavement Markings Legends	1,525	SF	$ 3.00	$ 4,576
9	Signal Modifications (Detection & Push Buttons)	10	EA	$ 15,000.00	$ 150,000
				SUB-TOTAL	**$ 8,927,768**
				5% Misc Repair	$ 446,388
				20% Engineering	$ 1,785,554
				TOTAL ESTIMATE	**$ 11,159,710**

Length of proposed City's projects on existing streets is : **31,780 LF** = 6.0 miles of roadways

* Approximately 20% of bike lane requires an edge striping
** Centerline Measurement (widening on both sides)
*** $784k / Acre (narrow takes)

APPENDIX C-3, CLASS III – SIGN PROJECTS

ENGINEER'S ESTIMATE OF CONSTRUCTION COSTS
RANCHO CORDOVA PROPOSED CLASS III BIKE ROUTE PROJECTS

Cost Estimates of Proposed Class III Sign Installation Projects by City.

ITEM NO.	DESCRIPTION	ESTIMATED TOTAL QUANTITY	UNIT	AVERAGE UNIT COST *	GRAND ITEM TOTAL
1	Ambassador Dr	3	EA	$ 200	$ 600
2	Azienda Dr	2	EA	$ 200	$ 400
3	Capitales Dr	4	EA	$ 200	$ 800
4	Chardonay Dr	2	EA	$ 200	$ 400
5	Chassella Way	2	EA	$ 200	$ 400
6	Corvina Dr	2	EA	$ 200	$ 400
7	Croetto Way	2	EA	$ 200	$ 400
8	Dolecetto Dr	2	EA	$ 200	$ 400
9	El Cejo Cir	2	EA	$ 200	$ 400
10	El Chorlito Dr	4	EA	$ 200	$ 800
11	Ellenwood Ave	6	EA	$ 200	$ 1,200
12	Glenmoor Dr	2	EA	$ 200	$ 400
13	Klamath River Dr	8	EA	$ 200	$ 1,600
14	La Placita Dr	4	EA	$ 200	$ 800
15	Levee Rd	2	EA	$ 200	$ 400
16	Malaga Way	6	EA	$ 200	$ 1,200
17	Mills Park Dr	2	EA	$ 200	$ 400
18	Nut Plains Dr	5	EA	$ 200	$ 1,000
19	Paseo Dr	2	EA	$ 200	$ 400
20	Ribier Way	2	EA	$ 200	$ 400
21	Rockingham Dr	6	EA	$ 200	$ 1,200
22	Smithlee Dr	2	EA	$ 200	$ 400
23	Woodberry Way	3	EA	$ 200	$ 600
24	Yukon River Way	1	EA	$ 200	$ 200
	TOTAL =	**76**	EA	**SUB-TOTAL**	**$ 15,200**
				20% Contingency	$ 3,040
				TOTAL ESTIMATE	**$ 18,240**

* **Average Unit Cost includes:**

- Material & Labor	$	146
- Administrative Costs	$	24
- Construction Management	$	30
Total =	**$**	**200** /Each Sign installed

45,651 LF = 8.6 miles of roadways

APPENDIX C-4, CLASS I – PRIVATE DEVELOPER

ENGINEER'S ESTIMATE OF CONSTRUCTION COSTS
RANCHO CORDOVA PROPOSED CLASS I BIKE TRAIL BY PRIVATE DEVELOPMENT

Cost Estimates of Proposed Class I Bike Trail Projects by Private Development.

ITEM NO.	DESCRIPTION	ESTIMATED TOTAL QUANTITY	UNIT	AVERAGE UNIT COST*	GRAND ITEM TOTAL
1	Aerojet Spur Trail (12')	480	LF	$ 190	$ 91,200
2	Americanos Trail (12')	17,630	LF	$ 190	$ 3,349,700
3	Anatolia Bike Trail	3,060	LF	$ 175	$ 535,500
4	Anatolia Preserve Trail	2,140	LF	$ 175	$ 374,500
5	Bardolino Trail	430	LF	$ 175	$ 75,250
6	Blodgett Reservoir South Trail	4,660	LF	$ 175	$ 815,500
7	Centennial Dr Connector	1,360	LF	$ 190	$ 258,400
8	Crystal Cove Trail	5,720	LF	$ 175	$ 1,001,000
9	Grant Line 208 Trail	410	LF	$ 175	$ 71,750
10	Jaeger Ranch Trail (12')	9,520	LF	$ 190	$ 1,808,800
11	Kiefer Blvd Trail	5,530	LF	$ 175	$ 967,750
12	Montelena Preserve Trail	5,870	LF	$ 175	$ 1,027,250
13	Morrison Creek Trail	22,890	LF	$ 175	$ 4,005,750
14	North Trail	5,080	LF	$ 175	$ 889,000
15	Park Loop Trail	17,800	LF	$ 175	$ 3,115,000
16	The Preserve Trail	20,530	LF	$ 175	$ 3,592,750
17	Queen Arbor Dr Trail	2,200	LF	$ 175	$ 385,000
18	RC Parkway Connector Trail	860	LF	$ 175	$ 150,500
19	RDO Park Loop Connector	640	LF	$ 175	$ 112,000
20	Rio Del Oro Trail (12')	31,560	LF	$ 175	$ 5,523,000
21	Stone Creek / RDO Recycle Rd Trail	630	LF	$ 175	$ 110,250
22	Stone Creek Trail W	2,740	LF	$ 175	$ 479,500
23	The Arboretum Trail (12')	6,360	LF	$ 190	$ 1,208,400
24	The Arboretum West Trail	5,540	LF	$ 175	$ 969,500
25	Upper Laguna Creek Jackson Hwy Connector (12')	230	LF	$ 190	$ 43,700
26	ULCC Kiefer Blvd Connector Trail	11,400	LF	$ 175	$ 1,995,000
27	Upper Laguna Creek Trail (12')	24,450	LF	$ 190	$ 4,645,500
28	West Trail	12,390	LF	$ 175	$ 2,168,250
29	Westborough East Trail	9,100	LF	$ 175	$ 1,592,500
30	Westborough FSC East Trail	19,320	LF	$ 175	$ 3,381,000
	TOTAL =	**250,530**	LF	**TOTAL**	**$ 44,743,200**
		47	miles		

*** Average Unit Cost includes:**

- Environmental work	$	20
- Design	$	20
- Administrative Costs	$	20
- Construction Management	$	15
- Construction **	$	100
Total =	**$**	**175 / LF**

** Construction for 12' trails is $115.00 / LF

APPENDIX C-5, GRADE SEPARATION PROJECT LIST

GRADE SEPARATION INVENTORY AND ENGINEER'S ESTIMATE OF CONSTRUCTION COSTS
RANCHO CORDOVA PROPOSED GRADE SEPARATIONS FOR BIKE PEDESTRIAN TRAILS

GIS LABEL	Grade Separation Name	Type of Crossing	Notes	Cost (millions)	Funding Source			
1	ULCC Trail at Jackson Highway	Undercrossing	Partial Span 38.5x102 (6 lane)	$1.00	Proposed		Structure Cost: $250 per sq. ft.	
2	ULCC Trail at Sunrise Boulevard	Undercrossing	In County	$0	County			
3a	ULCC Trail at Arboretum Parkway	Undercrossing	Special 2 lane, 61x74, without parking lane	$1.13	Proposed			
3b	ULCC Trail at Waegell Parkway	Undercrossing	Feasibility to be determined, 61x68 (2 lane special without parking)	$1.04	Feasibility		Standard 6 and 4 lane has	
3c	ULCC Trail at Crossign Road	Undercrossing	Feasibility to be determined, 61x68 (2 lane special without parking)	$1.04	Feasibility		attached walks and an open	
3	ULCC Trail at Rancho Cordova Parkway	Undercrossing	Partial Span 38.5x102 (6 lane)	$1.00	Proposed		median	
5	ULCC Trail at Kiefer Boulevard	Undercrossing	Partial Span 38.5x80 (4 lane)	$0.77	Proposed		2 lane is based on Resiential	
6	ULCC Trail at Grant Line Road	Undercrossing	Partial Span 38.5x102 (6 lane)	$1.00	Proposed		Collector with no parking and	
10	CL I TRAIL @ CHRYSANTHY BLVD	Undercrossing	Standard 4 Lane - 61x80	$1.22	Proposed		All bridge parapets assumed to be	
13	Anatolia Bike Trail at Rancho Cordova Parkway	Overcrossing	526x12 (200' of each ramp on structure)	$1.58	Proposed		1.5 ft wide	
14	Folsom South Canal Trail at Sunrise Boulevard	Undercrossing	Future Vision Project, build with FSC Bridge replacement, Partial Span 38.5x102 (6 lane)	$1.00	City Vision		If there is a median, it is open as a	
21	Folsom South Canal Trail at International Drive	Undercrossing	Part of Current Project effort	$0.80	Funded		skylight	
22	Westborough FSC East Trail at Sunrise Gold Circle	Undercrossing	Partial Span 38.5x51 (2 lane)	$0.49	Proposed			
27	Class I Trail at Easton Valley Parkway	Undercrossing	Standard 6 lane - 61x102	$1.56	Proposed			
28	Jaeger Ranch Trail at Rancho Cordova Parkway	Undercrossing	Standard 6 lane - 61x102	$1.56	Proposed			
29	Jaeger Ranch Trail at Kiefer Boulevard	Undercrossing	Standard 4 Lane - 61x80	$1.22	Proposed			
30	Jaeger Ranch Trail at Central Park Drive	Undercrossing	Feasibility to be determined, 61x51 (2 lane)	$0.78	Feasibility			
30a	Jager Ranch Trail at Crossing Road	Undercrossing	Feasibility to be determined, 61x51 (2 lane)	$0.78	Feasibility			
31	Jaeger Ranch Trail at Americanos Boulevard	Undercrossing	Standard 4 Lane - 61x80	$1.22	Proposed			
32	Americanos Trail at Americanos (near North Campus Drive)	Undercrossing	Standard 4 Lane - 61x80	$1.22	Proposed			
33	Americanos Trail at Chrysanthy Boulevard	Overcrossing	526x12 (200' of each ramp on structure)	$1.58	Proposed			
35	Americanos Trail at Douglas Road	Undercrossing	Standard 6 lane - 61x102	$1.56	Proposed			
36	Folsom South Canal Trail at Jackson Highway	Undercrossing	In County	$0	County			
38	Grant Line 208 Trail at Americanos Boulevard	Undercrossing	Standard 4 Lane - 61x80	$1.22	Proposed			
40	Rio del Oro Trail at East Residential Road	Undercrossing	Feasibility to be determined, 61x51 (2 lane)	$0.78	Feasibility			
42	Rio del Oro Trail at Rancho Cordova Parkway	Undercrossing	Road Bridge over Stream, width of path 21.5x102 (6 lane)	$0.55	Proposed			
43	Rio del Oro Trail at Villagio Drive	Undercrossing	Feasibility to be determined, 61x63 (speical 2 lane)	$0.96	Feasibility			
44	Rio del Oro Trail at Centennial Drive	Undercrossing	Feasibility to be determined, Standard 4 Lane - 61x80	$1.22	Feasibility			
45	Rio del Oro Trail at Americanos Drive	Undercrossing	Feasibility to be determined, Standard 4 Lane - 61x80	$1.22	Feasibility			
49	Mather UP Spur Trail at Old Placerville Road	Undercrossing	Standard 6 lane - 61x102	$1.56	City Vision			
50	White Rock Park Trail at Highway 50	Overcrossing	Part of Current Project effort	$3.96	Funded			
55	RDO West Trail at White Rock Road	Undercrossing	Standard 6 lane - 61x102	$1.56	Proposed			
59	Rio del Oro Trail at Sunrise Boulevard	Overcrossing	526x12 (200' of each ramp on structure, over 6 lane)	$1.58	Proposed			
60	Westborough FSC East Trail at Americanos Blvd./Merchantile I	Undercrossing	Partial Span 38.5x51 (2 lane)	$0.49	Proposed			
61	Rio del Oro Trail at Rio del Oro Parkway	Undercrossing	Feasibility to be determined, Standard 4 Lane - 61x80	$1.22	Feasibility			
62	Westborough High School at Rancho Cordova Parkway	Overcrossing	526x12 (200' of each ramp on structure, over 6 lane)	$1.58	Proposed			
63	Aerojet Spur @ Folsom South Canal	Overcrossing	Trail on existing bridge (rails to trails)	$0	Proposed			
65	Citrus Road Trail at Folsom Boulevard	Overcrossing	504x12 (200' of each ramp on structure, over 4 lane)	$1.51	Proposed			
68	RDO West Trail at International Drive	Undercrossing	Standard 6 lane - 61x102	$1.56	Proposed			
70	Rio del Oro Trail at Grant Line Road	Undercrossing	Standard 6 lane - 61x102	$1.56	City Vision			
72	Westborough FSC East Trail at Rancho Cordova Parkway	Undercrossing	Road Bridge over FSC, incidental cost addition to Structure	$0	Proposed			
77	Stonecreek SE Trail at Zinfandel Drive	Undercrossing	Standard 6 lane - 61x102	$1.56	City Vision			
78	Stonecreek Spoto Drive Trial at Zinfandel Drive	Undercrossing	6 lane skew - 61x170	$2.60	City Vision			
90	Rio del Oro Community Park Trail at Internationa Drive	Overcrossing	To be considered if Sports/Water Park is approved by City, 526x12	$1.58	Feasibility			
93	Rio del Oro Trail at Rancho Cordova Parkway/Community Park	Overcrossing	526x12 (200' of each ramp on structure, over 6 lane)	$1.58	Proposed			
98	Folsom South Canal Trail at Chrysanthy Boulevard	Undercrossing	Road Bridge over FSC, incidental cost addition to Structure	$0	Proposed		**Total Feasibility:**	**$10.6**
99	Folsom South Canal Trail at White Rock Road	Undercrossing	Future Vision Project, build with FSC Bridge replacement, Partial Span 38.5x102 (6 lane)	$1.00	City Vision		**Total Funded:**	**$4.8**
121	Stonecreek/Rio Recycle Road Connector at FSC	Overcrossing	Bridge over canal, 300x12	$0.90	City Vision		**Total Proposed:**	**$29.7**
122	Mather UP Spur Trail at Folsom Boulevard	Overcrossing	504x12 (200' of each ramp on structure, over 4 lane)	$1.51	City Vision		**Total Cost in Vision:**	**$14.8**
124	RDO Park Loop Trail at White Rock Road	Overcrossing	Standard 6 lane - 61x102	$1.56	City Vision			
125	Morrison Creek Trail @ Dougals Road	Overcrossing	526x12 (200' of each ramp on structure, over 6 lane)	$1.58	City Vision			
				$59.95				**$59.95**
							Master Plan Cost Total:	**$29.7**

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APPENDIX C-6, MAINTENANCE COST ESTIMATES

ENGINEER'S ESTIMATE OF SYSTEM WIDE MAINTENANCE COSTS FOR BICYCLE SYSTEM

Estimated Annual Maintenance Costs for All Class II Bike Lane and Class I Trails.

ITEM NO.	DESCRIPTION	ESTIMATED TOTAL QUANTITY	UNIT	ANNUAL UNIT COST	GRAND ITEM TOTAL
1	Striping Class II Trails - paint - Maintained every 2 years	193,500	LF	$ 0.10	$ 19,350
2	Striping Class II Trails - Thermoplastic - Maintained every 7 years	580,500	LF	$ 0.13 *	$ 75,465
3	Class I Trails	59	Miles	$ 5,000.00	$ 295,000
4	Bike Route Signage (60$ per sign every 10 years)	37	EA	$ 6.00	$ 222
				SUB-TOTAL	**$ 390,037**
				10% Misc Repair	$ 39,004
				TOTAL ESTIMATE	**$ 429,041**

Total length of all City's Class II Centerline mileage is : **387,000 LF** = 73.3 miles of roadways

1&2 approx. 25% of total City street would be repainted with paint every 2 years - minor streets
approx. 75% of total City street would be repainted with Thermoplastic every 7 years - thoroughfare, arterials, major collectors
* annual unit cost includes type 39, 39A, 27B, and legends
Quantity is 2 x (% x Total Length)
type 39 is 4 inch Bike Lane striping
type 39A is 4 inch dash Bike Lane striping
type 27B is edge stripe

3 Vegetation control
Sweeping
Litter removal
Restriping

NOTE: Cost for maintenance of Class II System is not included.


E HASSADOR DR