

CITY OF DAVIS

BICYCLE ACTION PLAN



BEYOND PLATINUM



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Preface

What is the Beyond Platinum Bicycle Action Plan?

This bicycle action plan is designed to provide a detailed road map for implementing bike programs that will help Davis achieve its long-term emissions reductions and mode share goals. By implementing these strategies, the City will dramatically increase the safety and ease of use of active transportation options throughout Davis. The Beyond Platinum Bicycle Action Plan is an active transportation plan that focuses on bicycling as the primary mode, and also integrates walking and transit. The combination of the three modes creates the perfect trifecta to achieve a sustainable transportation system.

A Call to Action

Davis faces a changing landscape. The city is required to meet strict emissions reduction targets while simultaneously accommodating a growing population of students and residents. Our current transportation infrastructure is reaching the end of its life cycle and is in urgent need of repair. Most importantly, more people are choosing to switch to bicycling for both utilitarian and recreational purposes. It is time for Davis to develop simple and specific ways to make bicycling a safe and attractive option for all residents.

At the state level, California has set climate adaptation goals outlined by Senate Bill 375 and Assembly Bill 32. To help municipalities adapt their transportation systems to meet these goals, the state's newly revised Active Transportation Program was increased by 35% this year. The funds made available through this legislation provide a timely opportunity for cities like Davis to invest in sustainable transportation policies and infrastructure. As an international leader in promoting bicycle friendly infrastructure and community, Davis has the opportunity to spearhead and develop the solutions needed for meeting these objectives.



Bicycle advocates, Leo Rainer and Steve Tracy working with City staff to identify connectivity issues in Davis



Residents and community leaders discuss bicycle improvements at the Davis Bike Collective

Public Input Process

Over the past eighteen months, staff has garnered valuable input from many individuals, organizations, commissions, and stakeholders. The development of this plan has been an iterative process as the ideas, strategies, and overall content are custom made for Davis. The Bicycle Advisory Commission played a vital role in the development process acting as a sounding board for staff and has vetted and provided guidance on the strategies to accomplish the plan's goals. The Davis Bicycles! organization was also instrumental in shaping the plan by providing critical, constructive criticism to safely and effectively increase bicycling in Davis. This plan was developed from many ideas and concerns that originated from Davis residents. Just the same, it calls the community to action to participate in the plan's numerous programs and projects.

Main Strategies to Increase Bicycling in Davis

Davis is renowned as one of the top bicycling cities in the country. Bike trips account for roughly 20-25% of all trips in Davis¹, but this figure needs to grow for Davis to become a world-class bicycling city and to strive toward the city's climate action goals. To achieve its objective for a 30% bicycle mode share by 2020, Davis must set equally ambitious goals to demonstrate that bicycling is a viable means of transportation.

To this end, this plan assembles four main goals that dovetail with the goals and objectives outlined in the Davis General Plan and the Transportation Element:

- 1) *Davis will develop and maintain a community of safe, confident, and comfortable cyclists.*
- 2) *Davis will offer a complete, seamless, and integrated bikeway network on and off street that is accessible to and comfortable for people of all ages and abilities.*
- 3) *Davis will integrate cycling with transit options both locally and regionally.*
- 4) *Davis will obtain Diamond Level Bicycle Friendly Community designation from the League of American Bicyclists.*

Throughout this plan, each program focuses on one or more of the “5 E’s” outlined by the League of American Bicyclists to increase bicycling: engineering, education, encouragement, enforcement, and evaluation and planning. In addition to these well-known strategies, the Davis Transportation Element includes an additional “E”, equity, when considering transportation improvements. The “5 E’s” must be viewed as a holistic, integrated, and comprehensive approach to advance bicycling in Davis. This plan also emphasizes the importance of embracing and leveraging the joy of biking as a tool to attract new riders and foster a deeper sense of place for Davis residents.



Left: Two-way protected bike lanes
Below: Dual buffered bike lane



Engineering

Smart engineering is crucial to creating a safe and complete bikeway network for Davis. This plan utilizes established best practices in complete streets design to develop plans for infrastructure improvements that will make Davis bicyclists of all ages and abilities feel safe and confident getting anywhere they need to travel. In addition to standard infrastructure improvements, the City will install wayfinding signage and markings throughout the city to guide bicyclists through preferred corridors and to key destinations.

¹ Estimate based on the compilation of ACS 3-year commute to work estimates, UC Davis Campus Travel Survey, and Davis school bike rack counts

Education

Educating residents about the benefits of active transportation is one of the most important strategies to increase biking. The City will use a variety of venues to conduct trainings, certification courses, and safety campaigns to highlight the health and environmental benefits of bicycling. These educational campaigns include programs such as after-school trainings, field trips, LCI courses, web-based videos, and a streamlined website with access to important cycling resources.



Encouragement

The Ride Walk Davis program develops a series of programs that help engage community members through fun activities that encourage bicycling as a safe and satisfying activity. Each program discussed in this plan is designed to encourage everyone from young children to senior citizens, from advocacy groups to local businesses, to choose biking as their means of transportation. These outreach efforts include programs such as: the Bicycle Ambassador Program, the Bicycle Friendly Business Program, Senior Travel Training, and guided bike tours.

Enforcement

Traffic laws must be adequately enforced in order to make sure cyclists and motorists alike are respecting the rules of the road and contributing to a safe environment for all road users. Enforcement should go hand in hand with education, encouragement, and engineering efforts.

Evaluation and Planning

Collecting data is an integral part of prioritizing projects and evaluating our progress toward increasing the bicycle mode share. The City will improve the bike data collection process by installing temporary and permanent bike counters, administering public satisfaction surveys, conducting mode share intercept surveys, and routinely analyzing reported bike crashes and thefts. The City will increase collaboration with UC Davis and utilize cutting edge transportation research the university is producing to ensure that evidence-based strategies are prioritized when deciding between program and infrastructure alternatives. This symbiosis between the University and the City of Davis offers an exciting opportunity for Davis to serve as an exemplary model to other cities when considering how to adapt their transportation policies to meet similar goals.

Equity

This plan aims to increase bicycling among groups with historically low ridership, such as women, seniors, and low-income residents. The City can eliminate some of the barriers to ridership for these groups by distributing free or low-cost bikes to families in need and teaching adult bicycle education classes. This plan also underscores the importance of selecting infrastructure improvements that reallocate road space in an equitable way that ensures the safety and comfort of all road users.



Enjoyment

The primary goal of this plan is to increase bike trips made for transportation purposes; however, the joy of bicycling is a powerful tool for motivating people to embrace bicycling as a lifelong activity. By sponsoring community bike rides, encouraging bicycle tourism, installing an off-road bike park, and hosting a Bicycle World's Fair, Davis will have a unique opportunity to reveal the healthy lifestyle, inviting culture, and downright fun that bicycles have to offer!



Four Davis cyclists take a break after a brisk recreation ride to Winters.

Left: Mont Hubbard, President of Davis Bicycles! providing outreach at one of many community events.

Community Engagement and Partnership

In order to achieve the bold objectives set out in this plan, the City of Davis will rely on expert input from and collaboration with many different organizations in the community. Each program and initiative described in this plan will be a joint effort between the City and designated community partners. These partnerships will provide venues for outreach to all different neighborhoods, help city staff acquire expert input on specific projects, ensure transparency in policy decisions, and encourage residents and visitors alike to voice their opinions and concerns. The City has already established collaborative efforts with the following organizations and will cultivate additional partnerships as individual programs are developed.

Advocacy and Engagement

- Davis Joint Unified School District
- Davis Bicycles!
- Davis Bike Collective
- Davis Schools Committee
- Senior Citizens of Davis
- Cool Davis
- Davis Bike Club

Transportation Planning

- Yolo Transportation Management Association
- Sacramento Area Council of Governments
- UC Davis Institute of Transportation Studies

Economic Development and Tourism

- Davis Downtown
- Local businesses
- Chamber of Commerce
- Yolo County Visitors Bureau
- U.S. Bicycling Hall of Fame

TIMELINE:

Unlike the General Plan and the Transportation Element, this plan is meant for immediate implementation, as funding becomes available. Many of the projects detailed in this plan have been initiated through the strategic action development process and the majority of projects and programs will be initiated in the next two fiscal years. While the primary goal is to increase the bicycle mode share to 30% by 2020, this plan provides a framework for continuing to encourage bicycling far beyond the immediate future. The Action Implementation Table (Appendix A), illustrates the complete breakdown of project elements, deliverables, timeframe, and evaluation methods.

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Photo by Ansel Adams, courtesy of UC Davis University Library Special Collections

PART 1 All the Right Reasons

1.1 Introduction

The Beyond Platinum plan is designed to employ new and best practices to continue to advance bicycle programs, policies, and infrastructure and to springboard the future of cycling in Davis through 2020.

This Beyond Platinum plan is informed by:

1. The Transportation Element of the Davis General Plan
2. Davis Climate Action and Adaptation Plan
3. Projects identified in the Davis Transportation Plan
4. The Davis Bicycle Advisory Commission 2013 Work Plan
5. Projects identified and prioritized by Davis Bicycles!
6. The League of American Bicyclists’ Bicycle Friendly Community program — Diamond level performance metrics

The Beyond Platinum plan is a direct product of the updated Transportation Element of the Davis General Plan. Both plans aim to develop the General Plan’s vision, goals, and objectives by leveraging the relationships between transportation and quality of life, urban form, the economy, and public health. As automobile usage continues its downward trend more residents, students, and visitors rely on bicycling as their primary mode of transportation. The Beyond Platinum plan is designed to provide a safe transition for an ever expanding and changing population of new bicycle riders in Davis.

The ultimate purpose of the plan is to create a clear road map to improve bicycling conditions and programs in order to achieve a 30% overall bicycle mode share by 2020. The overall mode share will be determined by

aggregating three major types of transportation trips in Davis: school, work, and errands (shopping and dining). An increase in bicycling will greatly contribute to Davis’ overarching goals of reducing its carbon footprint and to improve the health of its residents and economy.

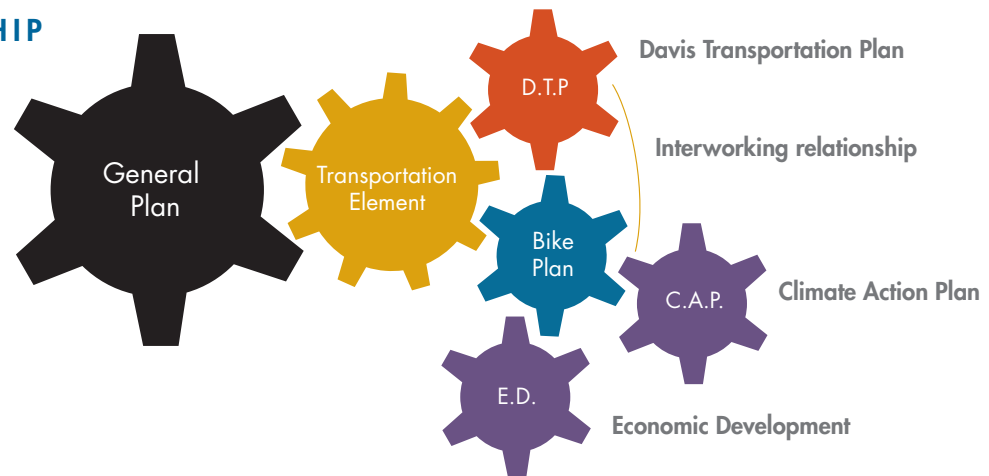


Early protected bike lanes in Davis—Courtesy of Yolo County Archives, Larkey Collection

1.2 Brief History of Cycling in Davis

Davis has historically embraced bicycle transportation and has repeatedly demonstrated its commitment to bicycling over the years. One of the most important people who propelled Davis toward its bicycle friendly atmosphere was UC Davis’ enthusiastic Chancellor, Emil Mrak in the early 1960s. Mrak, an avid cyclist, instructed university architects to plan for a bicycle friendly, tree-lined campus with ample bicycle parking at each of the campus’ buildings. Mrak’s early vision for a bicycle friendly campus set the stage for the City of Davis to pursue similar goals.

PLAN RELATIONSHIP





Historic bicycling photos in Davis, courtesy of the Hattie Weber Museum



In 1964, Frank Child, a UCD Economist, returned from a sabbatical year living in the Netherlands and presented a petition to the Davis City Council requesting bicycle lanes on all arterial streets and bicycle parking at all shopping centers. City Council rejected the proposal in favor of pursuing a policy of building downtown parking lots to bring in more automobile traffic.

Between 1964 and 1965, Frank and his wife, Eve, formed the Citizen's Bicycle Safety Group. They circulated a series of petitions proposing bike lanes, which drew increasing public support and newspaper coverage. By 1966 the bike lane proposal had become a major city issue. In the 1966 City Council election, two pro-bike lane candidates, Norm Woodward and Maynard Skinner, won by landslides. The new pro-bike City Council immediately voted to begin building a citywide network of bike lanes along arterial streets.

Following the development of the nation's first bike lane in 1967, Davis was on its way to building out its network of bicycle paths, a concept brought forth in 1986 by landscape architecture professor Mark Francis. The City adopted Francis' proposed changes to the General Plan and subdivision code to require new developments to include greenways or greenbelts. The greenways would serve as linear urban parks linking Davis neighborhoods to open spaces and recreation areas. Once embedded in the subdivision code, two-thirds of the planned greenways were built by 2007. They continue to provide an incredible amenity to residents at a relatively low cost to the City.

In the mid-1990s, Davis was the first U.S. city to install bicycle signal heads, which currently operate at eight signalized intersections throughout the city. Both the early development of the bike lane and the bicycle signal

photo by Macey Galloway



heads prompted the California Department of Transportation to first develop and later amend Chapter 1000 of the California Highway Design Manual, a chapter devoted entirely to bicycle transportation. By 1992, Davis had unofficially branded itself as the “Bicycle Capital of the U.S.” and incorporated

the silhouette of a 19th century Penny Farthing high wheel bicycle into its logo.

In 2005, the City of Davis created its first Bicycle Advisory Commission to take an active role in bicycle planning and project review. That same year, the League of American Bicyclists designated Davis as the first city to receive their platinum level bicycle friendly community award. Two years later, Ted Buehler, then a master’s student at the UC Davis Institute of Transportation Studies, published his thesis: *Fifty Years of Bicycle Policy in Davis, CA*. This event prompted the formation of Davis Bicycles!, a local group that renewed bicycle advocacy efforts by encouraging residents to continue cycling and lobbying community leaders to continue improving cycling infrastructure. These events triggered a new era of cycling advocacy in Davis. In many ways, Davis has returned to its bicycle advocacy roots from the late 1960s.



In 2009, the U.S. Bicycling Hall of Fame conducted a nationwide search to find a new host city best suited to support the culture of competitive cycling. With the help of UC Davis, City staff and bicycle advocates encouraged the U.S. Bicycling Hall of Fame board of

directors to relocate the Hall to Davis where it could be partnered with the California Bicycle Museum, an effort in the making since UC Davis had purchased an extensive collection of vintage bicycles ten years earlier.

In 2012, the City of Davis and UC Davis recognized the need to collaborate with other platinum level bicycle friendly communities and the League of American Bicyclists to design a new, advanced bicycle friendly community designation that would encourage U.S. cities to aspire to the same bicycling mode share levels and low crash rates as international bicycle communities like Amsterdam, Copenhagen, Houten, Freiberg, or Vancouver. The new designation, aptly coined “Diamond,” now presents Davis with a well-defined set of challenges and opportunities to turn Davis into a truly world-class bicycle friendly community.

1.3 Climate Change Adaptation

Transportation is known to substantially contribute to the accumulation of greenhouse gas (GHG) emissions. Investing in bicycling as a means of sustainable transportation helps to reduce carbon emissions, especially when combined with other active transportation modes. In addition to the state level GHG emissions reductions targets outlined by SB 375 and AB 32, the 2010 Davis Climate Action and Adaptation Plan specifies short and long term carbon reduction goals, including becoming carbon neutral by 2050. Investing in bicycling as a means of sustainable transportation is critical to achieving these ambitious goals.

In Davis, the transportation sector is responsible for 57% of the city’s total GHG emissions with personal vehicles accounting for over 75% of all transportation emissions, or 43% of total emissions.² Increasing the bicycle mode share is an incredible opportunity for Davis to significantly reduce its emissions without expensive investments in infrastructure overhauls, alternative fuel sources, or carbon offsets.

1.4 An Equitable Transportation Choice

Bicycling increases individual access and mobility without compromising important community values like clean air and safe streets. Bicycles provide an affordable means of transportation to low-income residents and help seniors maintain a sense of independence when they are no longer able to drive. By improving the bicycle network throughout the city, biking will become a viable transportation option for households of all ages, abilities, and income levels.

1.5 For Life: Health and Wellness

Bicycling improves health and wellness – mentally and physically – at both the personal and societal level. Measures that decrease concerns and increase safety – real or perceived – result in more residents who feel comfortable

² Davis Climate Action and Adaptation Plan, 2010

riding bicycles. Cycling to school has been an integral part of successful strategies to decrease childhood obesity. An early understanding of safe and comfortable neighborhood bicycling and walking routes benefits child development, health, and overall well-being.

1.6 Safety in Numbers

As bicycling increases in Davis, the presence of bicycles on the roads will alert other road users to be aware of bicyclists and the bicycle crash rate will begin to decrease.³ Individuals who start biking – even if only occasionally – will gain firsthand experience that will inform and improve their driving behavior, resulting in safer streets for everyone. As more drivers transition to cycling, there will be fewer cars on the roads and therefore fewer potential conflicts between different road users.

1.7 Vibrant and Livable Neighborhoods

Bicycling connects people. The social element of bicycling benefits relationships among neighbors by bringing residents beyond their doorsteps and onto the city's largest shared public space: the street. Daily interactions among cyclists and other road users can also be inspiring. A simple gesture, such as a wave, smile, or friendly ring of a bike bell, can promote a positive “pay it forward” effect. Fun events like the annual Davis Loopalooza bicycle ride strengthen the fabric of the Davis community and help to close the gap between neighborhoods, businesses, schools, parks, and downtown.



The Bicycle Advisory Commission meeting takes to the streets of Davis



Many downtown Davis destinations like the movie theaters, can be comfortably reached by bicycle

1.8 Good Business Likes Bicycles

Nationally, research has shown that while motorists spend more money per shopping trip, cyclists make more trips and spend more money in the long run.⁴ In Davis' downtown core, cyclists spend even more than motorists on a per-month basis.⁵

Bicycle-related destination tourism to Davis has the potential to be leveraged as an economic development tool. Special events and tourism incentives bring visitors to Davis to experience our small town way of life and the bucolic nature of our agricultural surroundings, both of which are prime for recreational cycling enjoyment. Increasing bicycle tourism means more jobs for residents and additional tax revenue for our city.

1.9 Smart Public Investment

The City can make cycling a more attractive transportation option by investing in cycling infrastructure that reduce road maintenance costs. Bicycling infrastructure and facilities are more cost-effective than auto-oriented facilities and also generate more jobs per mile of infrastructure installed.⁶ Furthermore, research has shown that property values and business revenues increase after installing bike infrastructure – encouraging local economic development while producing additional tax revenue.⁷

³ Pucher and Buehler, 2012

⁴ Transportation Alternatives, 2012; Clifton et al., 2012

⁵ Popovich and Handy, 2014

⁶ Garrett-Peltier, 2011

⁷ McCormick, 2012; Stantec Consulting Ltd, 2011

Focused on Performance

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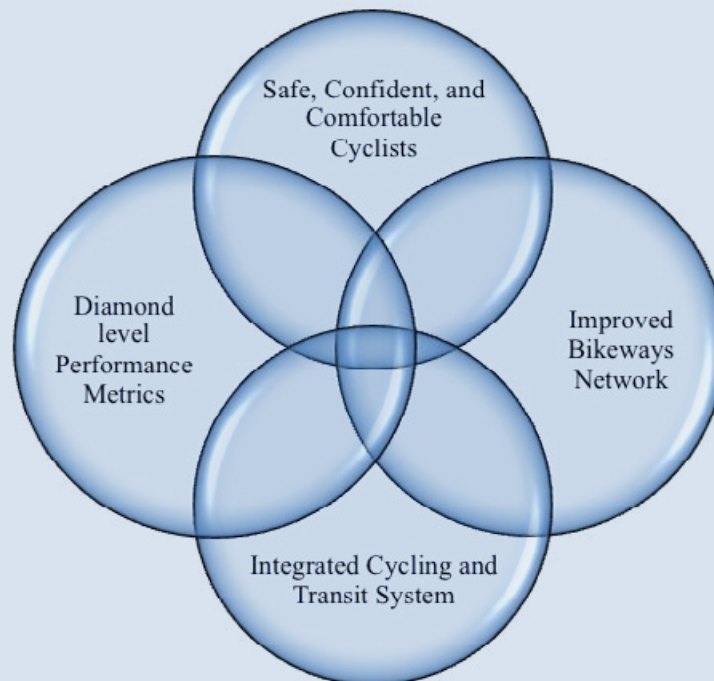
PART 2 Focused on Performance Plan Vision, Goals and Objectives

The Beyond Platinum plan establishes goals, objectives, and means of verification to monitor the progress of plan implementation progress. This plan presents a framework to advance cycling through 2020.

VISION

Davis will become a world-class bicycling city where a majority of people of all ages and abilities choose bicycling as their primary mode of transportation for everyday trips.

To help make this vision a reality, the Beyond Platinum plan develops the framework to achieve a 30% bicycle mode share of all trips taken by 2020.



The four goals represent a comprehensive approach to advance cycling in Davis. The center of the diagram represents a livable, healthy, and sustainable community.

GOAL 1: Davis will develop and maintain a community of safe, confident, and comfortable cyclists.

Through training, marketing, and organizational strategies, the City will provide bicycle safety education outreach to the following groups: K-12 students, college students, families, and senior citizens.

PERFORMANCE OBJECTIVE 1:

- Decrease the number of reported bicycle crashes by 30% by 2017 and 50% by 2020

Evaluation Method:

- Biannual bicycle crash analysis reports to determine progress in decreasing annual crashes

PERFORMANCE OBJECTIVE 2:

- Increase expressed riding comfort, confidence and improved appropriate cycling behavior by 25% by 2017 and 40% by 2020

Evaluation Method:

- Population-based survey and sentinel site observation of behavior

GOAL 2: Davis will offer a complete, seamless, and integrated bikeway network on and off street that is accessible to and comfortable for people of all ages and abilities.

This goal consists of improvements to the bikeway network utilizing contemporary street design techniques to improve comfort levels for cyclists while reducing potential conflicts between cyclists, motorists and pedestrians by: buffering bike lanes on busy streets, installing bicycle path and citywide wayfinding signage, maintaining existing bike paths in good repair, and improving safety where bicycle paths intersect with streets without traffic control devices.

PERFORMANCE OBJECTIVE 1:

- Implement 80% of identified improvements as noted in Part 4: Designing Bikeways for All Ages and Abilities by 2020

Evaluation Method:

- Biannual progress reports to the Bicycle Advisory Commission and City Council highlighting progress on infrastructure improvements

PERFORMANCE OBJECTIVE 2:

- Apply best practices in complete streets design techniques to equitably allocate road space to all users
- Integrate innovative designs into the City's ongoing street pavement maintenance program⁸

Evaluation Method:

- Biannual progress reports to the Bicycle Advisory Commission and City Council highlighting progress on infrastructure improvements

⁸ Refer to Complete Streets section of the Transportation Element, pp. 47

GOAL 3: Davis will integrate cycling with transit options both locally and regionally.

The first and last mile of a trip characterizes the black hole of bicycle commuting: the first and final legs of a journey that discourage people from using public transit. This goal includes installing bicycle facilities at transit stations, such as secure bicycle storage, bike share, bike rentals, and bike commute incentives.

PERFORMANCE OBJECTIVE:

- Increase the number of regional commuters utilizing a combination of bicycling and transit options by 30% by 2020

Evaluation Methods:

- Commuter surveys asking about multi-modal trips
- Facility usage rates and transit sales records
- Bicycle counts at train station

GOAL 4: Davis will obtain Diamond Level Bicycle Friendly Community designation from the League of American Bicyclists.

The League of American Bicyclists' new diamond level designation establishes a set of objectives to which platinum level cities can aspire. Their objectives outline minimum requirements in terms of rates of bicycle trips to work and school, overall bicycle safety, percentage of cyclists who feel safe riding in the community, and quality of the bicycling network, programs, and policies.

PERFORMANCE OBJECTIVE 1:

- Increase bicycle trips to school, work, and for errands to 30% of all trips taken by 2020

Evaluation Methods:

- American Community Survey Transportation to Work mode share
- Monthly bike rack counts at all public schools
- Intercept surveys at shopping, dining, and other locations

PERFORMANCE OBJECTIVE 2:

- Attain a 50% public satisfaction rate by 2017 and an 80% public satisfaction rate by 2020 with respect to bicycle safety, facilities, parking, and community leadership

Evaluation Method:

- In conjunction with the League of American Bicyclists and UC Davis, administration of a statistically valid public satisfaction survey to the Davis community

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PART 3 Instilling a Culture of Safety: Education and Encouragement Programs

Goal 1: Davis will develop and maintain a community of safe, confident, and comfortable cyclists.

Introduction

Preventive measures that decrease risk and increase safety—real or perceived—result in more residents who feel comfortable using active modes of transportation, which directly relates to healthier lifestyles both mentally and physically.

The Beyond Platinum plan proposes a multipronged approach to increase public perception that bicycling is a safe and healthy activity, while also working toward decreasing the annual number of actual bicycle and pedestrian crashes. This combined approach includes conducting consistent bicycle safety education and encouragement outreach while making improvements to bicycle infrastructure. This chapter focuses on bicycle safety education outreach techniques and programs and the resulting prospective health benefits. Improvements to bicycle infrastructure will be discussed in the following chapter.

The increased use of active transportation creates an overall healthier environment by reducing traffic congestion, travel stress, noise, and greenhouse gas emissions,⁹ ultimately leading to cleaner air and improved quality of life. Investments in active transportation have also been shown to have positive economic impacts through decreased healthcare costs.¹⁰

One of the foremost obstacles to increased bicycle use is the concern about sharing streets with vehicle traffic. Everyone, regardless of age, or ability, experiences safety concerns. However, levels of comfort and confidence vary greatly from person to person. Davis can greatly increase the number of residents using active transportation modes by increasing the skills, knowledge, and levels of confidence of “would-be” transportation cyclists and fostering an overall atmosphere of safety and awareness.

Bicycle safety education entails teaching people of all ages and abilities safe riding practices in order to reduce the perceived and real risks associated with cycling. Bicycle safety education teaches and promotes road and path safety among all types of users including pedestrians, motorists, and skateboarders.

Teaching the fundamentals of safe cycling is not limited to classroom instruction. Successful cycling courses also take into account the role of experiential learning opportunities, marketing techniques, peer influence, positive social interactions, enforcement measures, and learned behavior. These elements are essential to building a culture of bicycle safety.

The League of American Bicyclists (LAB) Smart Cycling program provides an excellent foundation from which to teach bicycle safety. This curriculum ensures consistency throughout all education outreach techniques. The basis of the curriculum includes teaching cyclists about the elements of a bicycle, proper maintenance techniques, clothing and equipment, helmet safety, handling skills, crash avoidance, proper etiquette, and how to share the road with motorists.

The LAB’s bicycle safety education curriculum relies on the same general principles for people of all ages and abilities, though several subtle nuances exist between age groups and types of cyclists. Senior citizens have needs that differ from school children, as do commuters and recreational cyclists. The best educational approaches take into account these needs that vary from one type of cyclist to another.

⁹ Pucher and Buehler, 2012

¹⁰ Gotschi, 2011

3.1 Ride Walk Davis: Active Transportation Program



BACKGROUND

The City of Davis does not currently have an informational resource for residents, students, and visitors interested in active transportation options, such as bicycling, walking and public transit. General information regarding bicycling is provided, but nothing that connects walking and transit options. The City's bike program originally hailed under the generic name of "bike program" and offered no brand identity to residents that would connect bicycle-related events, programs or projects.

ACTION STRATEGY

The City will provide a one-stop shop for bicycling, walking, and transit information for residents, visitors, students of all ages, and local and regional commuters. Ride Walk Davis will be the primary program for City-led programmatic initiatives and projects dedicated to improving active transportation and recreation in Davis.



Comprehensive Website

The Ride Walk Davis website will serve as the hub of all active transportation information and will provide the following:

- Educational video access
- Links to transit schedules
- Bicycle/pedestrian general safety information, classes and events
- Laws pertaining to biking and walking



- Walking and biking tours
- Citizen reporting: close calls and crashes
- Citizen reporting: bicycle/pedestrian concerns
- Road and path closure and detour information
- Bike Maps and Plans (electronic and interactive)
- Tourism information
- Other transportation related links
- Electronic newsletter and social media integration

Newly Designed Bicycle Map and Mobile Application

The current version of the Davis Bicycle Map is from 2007. Historically, the map has been co-produced by UC Davis. This partnership is mutually beneficial and maximizes the cost effectiveness of production. The map should be produced with the consent and feedback of local stakeholders, including Davis Bicycles!, the Davis Bike Club, the Bicycle Advisory Commission, the UC Davis student body, and other organizations to ensure community inclusiveness and accuracy. The new bike map should be produced in concert with the bikeways and wayfinding efforts in order to emphasize primary and low-stress neighborhood bikeways. This map should also offer an interactive mobile application for users.

Perhaps most importantly, the new bike map should highlight one of our greatest pieces of bicycling infrastructure: the Davis Bike Loop. Each year, hundreds of residents and visitors gather to celebrate biking at Loopalooza – an annual, family-friendly 12-mile bike ride that follows the Davis Bike Loop. The bike loop should be given greater emphasis in the new map and certain optional extensions should be added that would lead cyclists through the agricultural belts and lakes in North Davis.

In order to support bike-oriented tourism, a much simpler version of the bike map should also be produced. A low-cost visitor “tear off” style map will provide basic user information while highlighting bicycle safety resources, as well as low-stress bike routes to major tourist destinations, such as the Davis Bike Loop route, U.S. Bicycling Hall of Fame, UC Davis Arboretum and Mondavi Center, Veterans Memorial Center, and agricultural buffers. These maps would be available at typical visitor outlets, such as the Davis train station, Chamber of Commerce, Yolo County Visitor’s Bureau, and U.S. Bicycling Hall of Fame.

Inter-City Sustainable Transportation Options

Davis has a long-standing national reputation as a bicycle friendly community. As more and more cities seek to improve quality of life through increasing bicycling and walking, Davis is often looked to as a prime example. Davis should actively share best practices with communities close to home and far away to encourage healthy and sustainable travel choices. Several communities in Yolo County, particularly Woodland, Winters, West Sacramento, and Dixon, can and do benefit from Davis’ best practices. Nonetheless, the City of Davis should continue to coordinate with those communities to develop regional cycling corridors and to proliferate bicycle safety education opportunities. Coordination with cities along the Capital Corridor, including Sacramento and Berkeley, is critical as residents, students, and visitors work, attend school, and live throughout Northern California. Ride Walk Davis should plan and promote inter-city sustainable transportation options.

Best Practices Educational Seminar

The UC Davis Institute of Transportation Studies, National Center for Sustainable Transportation, and the Community and Regional Development program are

tremendous local assets. Leading researchers in the fields of active transportation and behavioral change are consistently churning out valuable studies related to trends in sustainable transportation use. The Ride Walk Davis program and UC Davis should investigate the opportunity to co-design a one-week educational program that provides outside community leaders, planners, engineers, students, and advocates an opportunity to visit Davis and to learn about best practices in transportation and land use planning, design, and research. The City of Davis and the UC Davis campus are quintessential living laboratories for those interested in furthering their interests or careers in the sustainable transportation industry.



Cargo bikes, like this Bakfiets in Amsterdam, are becoming more popular in Davis

Lessons from Europe

European cities, particularly in the Netherlands, experience exceptionally high numbers of people bicycling for utilitarian purposes. By gaining a better understanding of European transportation planning techniques and integration of land use, Davis can learn and transcend best practices concerning facility design, data collection, and policies.

Establishing an informal relationship with one or more European cities will provide a valuable opportunity for the Davis community to witness firsthand the Dutch way of life. By integrating cycling into other areas of community interests, such as agricultural research, renewable energies, and land use planning, the City of Davis and its partners, such as UC Davis, can combine resources to create an overseas, educational tour for community members to explore the diverse aspects of regional sustainability.

Mainstream Education Marketing Approach

In addition to providing educational outreach, Davis must develop a mainstream marketing approach to reach the general population. The City can publicly reinforce its commitment to improving active transportation options through consistent coordination with local, regional, and national media outlets on active transportation events and projects.

The City should coordinate with the Davis Police Department and UC Davis to create a themed poster series that utilizes bold imagery to demonstrate principles of bicycle, motorist, and pedestrian safety. Potential poster topics will include:

- Broadside crashes at bike path/driveway intersections
- Right hooks
- Door zones
- Distracted driving
- Riding bicycles at night with lights
- Stop sign compliance

Posters will be distributed to high schools, UC Davis residence halls, local and regional employers, transit centers, and local businesses. All printed posters will also be disseminated electronically through the City of Davis and partner websites.

In addition to the education poster series, the Ride Walk Davis program and partnering organizations should also support efforts to improve the rate of bicyclists riding at night with bike lights. The development of the “Be Seen” bike light safety education campaign will provide strategic measures to address this need. This campaign will include an evaluation component to demonstrate compliance.

Bicycle Based Tourism

The City should coordinate with the Chamber of Commerce, the U.S. Bicycling Hall of Fame, the Mountain Bike Hall of Fame,¹¹ the Capitol Corridor, and the Yolo County Visitors Bureau to plan, support, and promote bicycle-related programs, events, projects, and tourism opportunities that contribute to the cultural vitality and economic health of the community. Coordination among



U.S. Bicycling Hall of Fame

community partners is paramount. For example, Davis Bicycles! has led a number of educational bike tours for conferences and groups. The City should continue to support and expound upon these local efforts.

Bike Theft Reduction

Bike theft in Davis is a serious issue that affects residents, students, and visitors. Coordination with city, county and state enforcement agencies regarding bicycling is critical and should include campaigns and programs to increase safety at strategic locations. A full analysis of bike thefts between 2009 and 2012 is in Appendix F. Potential action steps to reduce bike theft through outreach and awareness include:

- Conduct a bait bike program (on campus and in the city)
- Provide education for cyclists regarding bicycle security, Craigslist data mining, and retrieval in the event of a stolen bicycle
- Provide link on the Ride Walk Davis website to register bikes at bikeindex.org
- Use social media sites to post stolen bike reports and alerts
- Remove abandoned bikes at apartment complexes



Only a rim remains from a bike stolen at the Davis train station

¹¹ The Mountain Bike Hall of Fame will be relocating to Marin County and will be a key partner in publicizing bicycling events, drawing additional bicycle tourism to California, and providing guidance for specific projects outlined in this plan

Web-Based Videos

Ride Walk Davis and the City's community partners should work together to develop 1-3 minute web-based traffic safety videos for all road users on an ongoing basis. Safety education videos will provide humor, enthusiasm, and rich images to enhance the educational content. Video topics may include the following safety issues:

- Avoiding common types of crashes
- Understanding new bicycle and pedestrian facilities
- Traffic controls: what they mean and why they are important to obey
- Shared-use path etiquette:
 - Bicyclists yielding to pedestrians
 - Using an audible signal when passing
 - Keeping right except to pass
 - Creating "Bicycle Slow Zones" on sections of paths with high pedestrian volumes
- Integrating cycling into your transit trip
- Effects of driving speeds
- Walking and bicycling tours
- Proper helmet use
- Safe Routes to School

OBJECTIVES:

- Increase awareness, usability, and access to active transportation options both locally and regionally
- Streamline access to Davis bicycling information
- Reduce occurrences of bike theft
- Raise community awareness about best practices in bike-oriented planning and design

DELIVERABLES:

- Comprehensive website
- New bike map, print and electronic versions
- Foster relationships with select European cities
- Educational seminar on best practices in bicycle oriented street design
- Bike theft reduction programs
- Thematic poster series on bike, pedestrian, and motorist safety
- Program marketing and educational materials
 - "Be Seen" bike light safety program in conjunction with UC Davis and the Davis Police Department
- Web-based videos

EVALUATION METHOD:

- Biannual progress reports to the Bicycle Advisory Commission and City Council highlighting progress and status of programmatic endeavors

FUNDING:

- Ride Walk Davis Program Implementation Funding
- Supplemental grants

3.2 Davis Bicycle Ambassador



BACKGROUND

It is going to take the proverbial village to disseminate bicycle safety information to the majority of Davis residents and ever-changing student population. Building a cadre of trained volunteers through the development of a Bicycle Ambassador Program is an avenue to reach hundreds, if not thousands, of cyclists. The Bicycle Ambassador Program is a tiered, train-the-trainers program that offers four levels of ambassador opportunities. These include: hosting neighborhood “open garage” events, teaching League of American Bicyclists’ “Smart Cycling” classes, assisting with school bicycle rodeos, and providing everyday assistance to bicyclists regarding proper riding etiquette and safety information. A branded Bicycle Ambassador Program will empower, train, and coordinate the efforts of existing and future community volunteers. Through this program, the public perception of cyclists riding respectfully throughout Davis will improve.

ACTION STRATEGY

Until February 2013, the Davis community had only a handful of active League Cycling Instructors—volunteers who have undergone extensive bicycle safety training through the League of American Bicyclists’ (LAB) Smart Cycling program. League Cycling Instructors (LCIs) are licensed to properly instruct the fundamentals of bicycle safety to people of all ages and abilities by teaching a curriculum based upon the principles of vehicular cycling, also known as “riding in traffic.”

The Davis community is now home to nine LCIs, thanks in part to collaboration efforts with the Sacramento Area Council of Governments (SACOG), which provided financial assistance to four local volunteers to receive the three-day training. A solid base of LCIs in the community will increase the frequency of bicycle safety education classes in the community and the availability of instructors for other education projects.

Becoming an LCI involves a considerable time commitment. Approximately 30 hours of training are required to obtain a teaching license through the LAB. Once certified, there are several beneficial back-end resources provided by the LAB, including liability coverage for training events and an array of teaching materials.

The Bicycle Ambassador Program will also offer opportunities to volunteers who cannot devote the time it takes to be trained as an LCI. The following bicycle ambassador framework allows volunteers to choose an ambassador level that works best for their specific needs and availability.



Davis Bicycles! volunteer, Emily Tracy, gives out bike lights and collects bicycle safety pledge signatures

Ambassador I – Ride Leader and Neighborhood Garage Host:

Davis is internationally renowned for its bicycle reputation. Several times a year, community planners, advocates, and students visit and tour Davis to study its facilities and bicycle-friendly way of life. A Ride Leader/ Garage Host facilitates these tours. The Ride Leader also educates cyclists regarding proper etiquette and behavior on an informal, daily basis. They may choose to host “open garages” for neighbors that need light mechanical assistance or information and advice regarding safe bicycling. Required Ambassador I training: One-hour basic Bicycle Ambassador Safety class.

Ambassador II – Presenter:

A Presenter is responsible for scheduling and facilitating 1-2 hour bicycle safety presentations for employees of local and regional businesses, school classes, service groups, and other community organizations. Required Ambassador II training: Three-hour Fundamentals of Safe Cycling class.

Ambassador III – Trainer:

A Trainer is responsible for conducting school bicycle safety rodeos and community bicycle safety classes for seniors and college students. A Trainer focuses on in-class instruction and some experiential instruction, such as parking lot drills in a closed system. Required Ambassador III Training: Eight-hour Traffic Skills 101 class and/or four-hour Youth Cycling 123 class.

Ambassador IV – League Cycling Instructor (LCI):

LCIs are League of American Bicyclists' certified trainers, and they teach it all. The primary role of an LCI is to conduct trainings for new Ambassadors, including Traffic Skills 101 and Youth Cycling 123 classes. Required Ambassador IV Training: Eight-hour Traffic Skills 101 class (prerequisite) and 21-hour League Cycling Instructor class.

Through its Transportation Demand Management (TDM) program, SACOG is fostering the development of a robust regional bicycle education platform and is willing to assist Davis with critical financial backing to increase bicycle safety education opportunities for volunteers and residents.

Class and event coordination through the City of Davis' Community Services-Recreation Program provides volunteers, City staff, and residents a central location for class listings and registration services.

The Davis Bicycle Ambassador Program will serve as the clearinghouse to provide ambassadors for all bicycle safety outreach programs, including:

- Safe Routes to School program
- High school outreach programs and events
- UC Davis safety education events
- Women on Bikes events
- Senior Travel Training program

OBJECTIVES:

- Create a cadre of bicycle savvy educators in Davis to proliferate citywide bicycle safety

DELIVERABLES:

- Conduct 15 bicycle safety and encouragement presentations annually to local businesses, service groups, and the general public
- Conduct at least four bicycle safety classes each year
- Provide additional trained volunteers for existing and future bicycle related events and programs
- Host and provide instructors for LCI training courses

EVALUATION METHODS:

- Attendance and participation rates in Bicycle Ambassador Program
- Biannual progress reports to the Bicycle Advisory Commission and City Council highlighting progress and status of Bicycle Ambassador Program

FUNDING:

- Ride Walk Davis Program Implementation Funding



Bicycle skills class

3.3 Introducing Safe Routes to School



BACKGROUND

Learning to ride a bicycle is one of the most exciting events in a child’s life and it is perhaps equally exciting for the parent who teaches their child to ride. Children experience newfound levels of independence as their ability to explore on a bicycle increases with age. Learning how to ride a bicycle is a true measure of a child’s cognitive and physical development.¹²

A child’s bicycle riding experiences greatly depend upon his or her family’s attitude and perception of cycling. A child’s ability to bike to school depends on several variables, including family work schedules, extra-curricular activities, weather, route distance, economic status, and the actual or perceived safety of the possible routes to schools. Research shows that social factors and the physical environment are the most important determinants of choosing to bike or not.¹³ In Davis, parents who ride bicycles are more likely to bike with their children to school and allow their children to bike on their own.¹⁴

Research has shown that bicycling and walking to school improves a child’s performance in school¹⁵ and children

who get to know their neighborhood by bicycling and walking have a better understanding of their environment and sense of direction compared to traveling by car.¹⁶ Cycling to school has also been an integral component of successful strategies to decrease childhood obesity.¹⁷ For these reasons and many more, becoming familiar with safe and comfortable neighborhood bicycling and walking routes early is beneficial to a child’s development, health, and overall well-being.

In Davis, bicycling and walking to school rates are high compared to other U.S. cities. The bike mode shares for Davis elementary schools in Figure 1 are based on the average of a series of bike rack counts conducted between December 2012 and October 2013 in addition to a classroom survey conducted in October 2013. Figure 2 shows the same information collected at the junior high schools. The overall bike mode share is about 27% at elementary schools and 44% at junior high schools. The Holmes results are particularly striking with almost 60% of students bicycling to school.

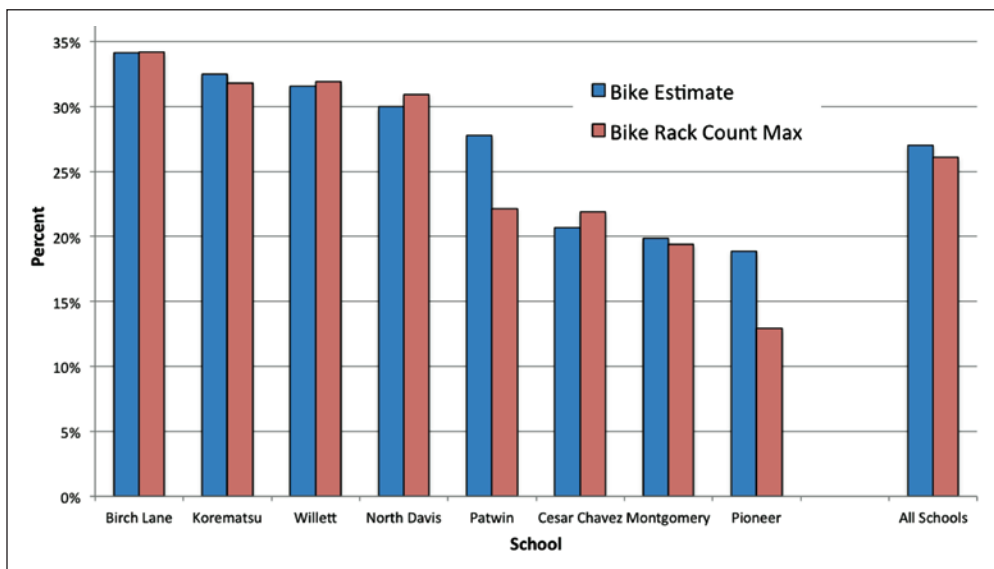


Figure 1
Comparing Estimates of Percent of Students Bicycling from Classroom Tallies with Bike Rack Counts by Elementary School

Classroom tallies conducted 10/1/2013, bike rack counts done on various dates (maximum provided from rack counts)

¹² Pucher and Buehler, 2012
¹³ Hume et al., 2009
¹⁴ Driller and Handy, 2012

¹⁵ Danish Science Communication, 2012
¹⁶ Appleyard, 2005
¹⁷ Pucher and Buehler, 2012

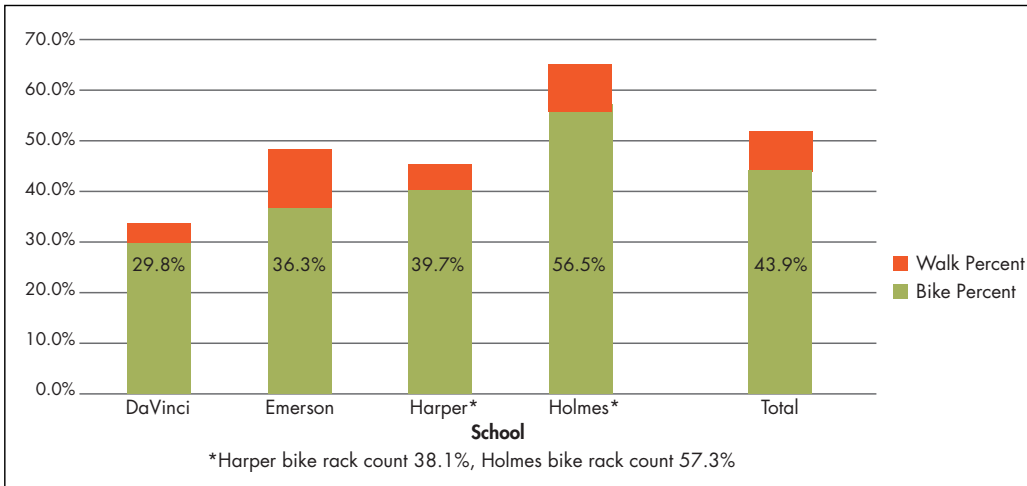


Figure 2
Percent of Junior High School Students Bicycling and Walking to School

Based on classroom tallies conducted on 10/1/2013

However, compared to European cities Davis bicycling rates are on the low end of the scale, which means there is still plenty of room for improvement. Much can be done in the way of education and encouragement programs to increase the number of children bicycling to school. Engineering towards this end will be discussed in the following chapter.



Street Smarts and Safe Routes to School

The City’s Street Smarts program launched in 2007 with the help of local and federal funds and community support. The Street Smarts program is a traffic safety educational campaign that provides information on suggested bicycling, walking, and driving routes to residents through a variety of public outreach and education programs. It also produces and disseminates materials addressing issues such as distracted driving, proper helmet use, and traffic compliance.

The Street Smarts program engages K-6th graders to develop multimodal safety education materials through school poster competitions. The artwork generated through this inclusive, creative process is used to produce outdoor banners, advertisements at bus stops, and a variety of other educational media posted throughout Davis.

Although the relationship between the Street Smarts program and the future Safe Routes to School program would be complementary, the Safe Routes to

School program would: 1) provide child and family education and training, and 2) serve as the conduit for prioritizing and applying for future infrastructure grant projects that support bicycling and walking.

Regional and National Coordination of Safe Routes to School Program

Regionally, SACOG is a strategic funding partner in developing a Davis Safe Routes to School program. In 2013, SACOG adopted a policy that demonstrates its commitment to encouraging active transportation for all residents in the Sacramento region.¹⁸ Their Bicycle and Pedestrian Funding Program policy is in response to a Transportation Control Measure (TCM). This TCM was designed to enhance SACOG’s role in supporting the efforts of its member agencies to implement Safe Routes to School programs and projects in their jurisdictions.

SACOG adopted a Safe Routes to Schools policy to promote the practice of safe bicycling and walking to and from schools in order to reduce traffic congestion, improve air quality, and enhance neighborhood safety. Their strategies include:

- Sharing information with policymakers, partners, stakeholders, schools, and the public about the importance of safe routes to school through SACOG’s Complete Streets Resource Toolkit and by hosting workshops and webinars
- Maintaining regional safe routes to school-related data (e.g. state and federally funded Safe Routes projects, project proximity to K-8 schools, safety, bike lane, census data)
- Encouraging bicycle and pedestrian infrastructure improvements in and around school attendance boundaries through SACOG’s Regional Funding Programs

¹⁸ http://www.sacog.org/regionalfunding/fundingprograms_bikeped-overview.cfm



Positive creative safety messaging at Emerson Junior High School

- Facilitating development of broad-based partnerships by serving as a forum for community partners, schools, and stakeholders
- Providing technical assistance on program and infrastructure planning along with grant review and letters of support

There are a number of potential funding sources for Safe Routes to School. Under the federal and state funding programs, cities and counties are eligible applicants for infrastructure projects. The passage of the Safe Routes to School bill (AB 1475) in 1999, established a “one third” distribution formula that allocates federal safety funds in equal amounts to state highways, local roads, and the development of Safe Routes to School programs.

ACTION STRATEGY

Starting a Safe Routes to School program in Davis is an opportunity to make walking and bicycling to school safer for and more accessible to children while increasing the number of children who choose to walk and bicycle on a regular basis. Developing a collaborative program with the Davis Joint Unified School District (DJUSD) and other community partners, such as Davis Bicycles!, would ensure a robust program consisting of ongoing, consistent bicycle safety education, training, bike maintenance clinics, and improvements to the transportation infrastructure. A Safe Routes to School program can enhance children’s health and well-being, ease traffic congestion near schools, build community, and improve air quality and overall quality of life. These efforts will help establish Davis as a leader and national model for Safe Routes to School.

Robust Safe Routes to School Program

In 2011, the Street Smarts Program was awarded a Safe Routes to School grant, with the objective of providing detailed walk and bike audits for each elementary and junior high school in Davis. See Appendix O for the complete report on the results of these audits. The program aims to:

“Support healthy children and families and promote a thriving environment by providing the necessary tools and infrastructure to support everyday active forms of transportation.”

To this end, the school audit process included the following:

- Community forums to engage residents and community stakeholders
- A community-generated, detailed bicycling and walking audit of each school
- Redesign of suggested bicycling and walking route maps for each of the eleven participating DJUSD elementary and junior high schools
- Strategic coordination with other city and community initiatives
- Final grant-ready report to include:
 - Infrastructure project priority list and potential funding sources
 - Programmatic recommendations for encouraging walking and biking to school

The audit process and report will be concluded by spring 2014 and will play a major role in creating a roadmap to develop the necessary infrastructure for a comprehensive Safe Routes to School program in Davis. With input from community stakeholders, the Community Services Department will pilot a youth bicycle program beginning in 2014. This program will include an after-school component and a summer camp that focuses on bicycle safety, minor bike maintenance, and the fun and responsibility of independent exploration. Local LCIs and city staff will provide support and training for volunteers and camp counselors through the proposed Bicycle Ambassador program.

Program partners will need to discuss how to staff the Safe Routes to School program. Providing a Safe Routes to School Coordinator is crucial to the success of a Safe Routes to School program. It is hopeful that future local and grant-funded opportunities will assist with program staff support.



Paul DelBene and his family enjoy year-round cycling for all occasions

A formalized Safe Routes to School partnership with DJUSD to co-develop and adopt a sequential in-school curriculum based on the California Common Core Standards for grades K-8 addressing bicycle training, safety education, and related topics within a range of academic disciplines is just one of many strategies to develop a world class Safe Routes to School program in Davis. The City will also work with local bicycle groups to lead guided bike tours for students and their families when they change schools. These tours will lead families from the elementary school to the new middle school and show students and parents the safest routes to get from their neighborhoods to the new school site.

The SRTS program should work with the U.S. Bicycling Hall of Fame to develop a program in which the hall hosts a series of grade-level field trips that are adopted as part of the DJUSD school curriculum. These field trips would focus on the role of the bicycle in local and regional history and economy, the mechanics and physics of the bike, and the relevancy to our community today. SRTS should also develop a program to collect and distribute used youth and adult bikes and provide a great model for smart resource management and reuse. This type of exchange is already happening very informally, but it could be better orchestrated. Used bikes would be collected through an annual or semi-annual bike drive.

OBJECTIVES:

- Increase number of children walking and bicycling to school
- Reduce annual crashes involving school-age children

DELIVERABLES:

- Foundational development of robust Safe Routes to School Program
- Guided bike tours for students and their families when transitioning to new schools
- Formal program through the local Child Development Corporation (CDC) that provides comprehensive after-school bike training
- Replacement of current bike parking at schools with contemporary bike racks
- Development of a U.S. Bicycling Hall of Fame field trip program
- Ongoing, inter-school competitions promoting higher levels of ridership among elementary and middle school aged children
- Feasibility analysis of constructing a traffic skills playground by developing an outdoor location (like a skate park) designed for formalized bicycle safety training
- Annual Electric Bike Parade that promotes biking and safe after-dark travel, in which families adorn their bikes with lights and reflectors and gather to ride together in the evening
- Program to collect and distribute used youth and adult bikes

EVALUATION METHODS:

- Biannual progress reports to the Bicycle Advisory Commission and City Council highlighting progress and status of Safe Routes to School program
- Annual bicycle crash data analysis
- Monthly bike rack counts

FUNDING:

- State of California – Active Transportation Program Safe Routes to School funding
- Ride Walk Davis Implementation Funding

3.4 Reaching High School Students



BACKGROUND

Bicyclists hitting their teenage years experience an increase in independence, which means they are cycling longer distances and exploring new places. But with greater independence comes greater responsibility to ride safely. A great lesson for the teenage cyclist is to learn to treat his or her newfound responsibility and freedom as a privilege.



Davis Senior High School bike parking

Three different bike rack counts between December 2012 and October 2013 at Davis High School found an average of 325 bikes, which amounts to a 19.4% bike mode share. This figure is high for California high schools, but in a city as small as Davis, many more students could be biking to school.

One of the greatest challenges to encouraging high school students to continue cycling through their high school years is addressing the perceived freedom, independence, and privilege of driving cars. Today, teenagers and young adults are more aware than ever of the high financial and environmental costs of driving. Although some young people are waiting longer to drive, most teenagers will get their driver's license before finishing high school.¹⁹ When they do, it is important they do not forget what it's like to be a cyclist or let the newfound freedom of driving get in the way of common sense. To avoid injury or worse, it is vital that teenagers act safely and share the road, whether driving or bicycling.

¹⁹ Bicyclinginfo.org

ACTION STRATEGY

Teenage bicycle education involves more than safety. Focusing solely on the potential dangers of unsafe cycling may even discourage teenagers from cycling. The most effective strategies for promoting teenage bicycling include highlighting the benefits through sports, fun, exercise, adventure, independence, and healthy transportation. Inserting the fundamentals of safe bicycling along the way ensures they are learning the most important thing about cycling.

Teenagers are likely to be tempted not to wear helmets, or choose not to ride because they are required to wear a helmet. Fortunately, the look and feel of contemporary urban bicycle helmets has evolved. Today, even inexpensive helmets look more appealing while still providing protection. It is important to remind teenagers that a good-fitting helmet greatly reduces the degree of injury and risk of fatality. Teaching teenage cyclists the importance of riding with lights, front and rear, at night will also increase their safety.



Bicycle Encouragement and Safety Outreach Events at High Schools

Fundamentals of bicycle safety can be incorporated into fun, interactive events at the high school campuses (DHS, Da Vinci, and King). The school district and partners should encourage the formation of high school bike clubs to take on this responsibility or coordinate with college-age students looking for volunteer experience. Offering Do-it-Yourself (DIY) bicycle maintenance

clinics at the high schools would provide a venue for students to learn and practice basic bike mechanics. It may be possible for a bicycle course to dovetail with an existing automotive repair program at DHS. The existing May is Bike Month program should be leveraged to its full potential as an opportunity to kick start year-round bicycling.

Junior High/High School Mentorship Program

School leaders should open the dialogue for a potential mentorship program between the high schools and junior high schools. The schools should encourage experienced high school students to teach junior high school students the basics of bicycling as well as the responsibility of the increased freedom of cycling.



High School Cycling League

The NorCal High School Cycling League was organized in

2001 to provide competitive mountain biking programs for high school students and it is currently undergoing expansion to recruit more riders and to establish teams in areas where none exist. Mountain biking is beneficial from a bicycle-safety perspective because it teaches valuable bicycle handling skills, which can then be transferred to urban settings. It would be worthwhile, then, to conduct outreach through Davis' high schools to find interested students. Although Davis does not currently offer any mountain biking options, there are several recreational areas in the region.

Junior Cycling Program with the Davis Bike Club

The DBC Race Team Juniors Program is a development program, funded by the Davis Bike Club and its sponsors. Their mission is threefold: to give aspiring junior cyclists access to racing at both the local and national level, to develop an active, lifelong healthy lifestyle in their athletes, and to create well-rounded community minded individuals.

OBJECTIVES:

- Increase number of high school students riding bicycles to school
- Decrease number of high school students involved in bicycle crashes
- Increase safety measures like proper use of helmets and bike lights

DELIVERABLES:

- Bicycle Encouragement and Safety Outreach Events at High Schools
- Junior High/High School Mentorship Program
- Partnership with High School Cycling League
- Junior Cycling Program with the Davis Bike Club

EVALUATION METHODS:

- Biannual progress reports to the Bicycle Advisory Commission and City Council highlighting progress and status of efforts in high schools
- Monthly bike rack counts at high schools
- Annual analysis of bicycle crashes

FUNDING:

- Ride Walk Davis Program Implementation Funding

3.5 Coordination with UC Davis Bicycle Program



BACKGROUND

The University of California at Davis attracts over 8,000 new students each year from all corners of the world. Fortunately, a majority of these students choose cycling for everyday purposes as opposed to driving. The nature of UC Davis' virtually car free campus makes cycling and walking the obvious choice for students.

UC Davis has experienced a steady increase in bicyclists over the last five years, and with that increase comes the challenge of educating students to safely bike both on campus and throughout the city. Between 2001 and 2006, reported bike crashes fluctuated between 20 and 35 crashes per year. In 2007, campus reported bicycle related crashes started an upward trend, peaking at 55 crashes in 2008. Since then, reported bike crashes are on a downward trend.²⁰



UC Davis experiences upward of 20,000 daily bicyclists on campus. Photo courtesy of UC Davis

Diversification Program

In October 2011, UC Davis initiated the Bicycle Education and Enforcement Program (BEEP), a collaborative diversion program between the University Police and Transportation and Parking Services. BEEP allows campus police officers to offer bicyclists a lower cost option when cited for a bicycle traffic or equipment violation. In lieu of a \$220 fine, violators are given the option to take an online bike traffic school course for a \$70 fee. The online school option not only saves the bicycle law violator

money, it also provides basic bicycle safety information that he or she would not otherwise have received by just paying the fine. The BEEP program has resulted in many more citations being issued by campus police officers who were formerly reluctant to give students \$220 bicycle traffic tickets. Since the launch of BEEP, over 1,100 people have taken the online school course (465 due to a ticket, and 645 for educational purposes).

Bicycling at Night with Lights Program (Be Seen)

In the fall of 2012, campus officials bought 1,700 LED bike headlights. Since then, the University Police have been giving away free lights. Davis Police officers stop cyclists who are riding at night without a light and give them a free light in lieu of a citation. UC Davis has joined forces with the City's Ride Walk Davis program and Davis Bicycles! – each of which purchased an additional 1,000 lights – to distribute lights in the community. In the fall of 2013 Davis Bicycles! bought 1,000 tail lights to distribute. The bike light giveaway program will be at least an annual occurrence and a continual part of the Beyond Platinum plan.

Bike Safety Talks and Tours

The UC Davis Bicycle Coordinator is invited to give bike safety talks at each of the three main student-housing areas during the Fall Welcome Week each year. Bicycle tours of the campus are also led for new graduate students each September at the request of the Graduate Student Association. The UC Davis Bicycle program also hosts a booth at the International Students and Scholars orientation event in September.

Student Orientation

Formally known as "Summer Advising", over 90% of incoming students participate in this three-day, two-night orientation program before classes begin each September. University Police meet with participants to provide them with safety and security information, including basic information about bicycle safety. Additionally, UC Davis distributes fliers and brochures about bike safety and security to visiting students and parents.

²⁰ UC Davis Transportation and Parking Services

ACTION STRATEGY

UC Davis is on the right track for improving pedestrian and cyclist safety on campus. UC Davis is proposing additional outreach efforts, several of which dovetail with the Ride Walk Davis program. The City of Davis will coordinate with and support UC Davis' educational efforts in order to create a seamless transition between the campus and city limits, so that students who attend UC Davis not only enjoy an incredible academic experience, but also enjoy a safe walking and bicycling experience.

The following programs will be coordinated in concert with UC Davis' goals. They will be initiated and led by UC Davis staff and may include assistance from city staff.

Traffic Skills 101 and LCI Seminars

UC Davis and community partners will increase the frequency of the League of American Bicyclists' Traffic Skills 101 classes for students. Shortening the course from eight hours to three or four hours will greatly increase the interest and availability of students.

Additional Bike Tours in Fall and Spring Quarters

Bike tours will include bike safety, bike security, access points, and laws pertaining to cyclists. City staff will work with UCD officials and local bicycle groups to advertise campus bicycle tours to students more effectively.

Bicycle Ambassador Program Participation

Trained UC Davis students would become Bicycle Ambassadors and will demonstrate model behavior and offer bike advice, or help with way finding and minor mechanical issues

Monthly Bike Safety Stations

Provide monthly or other regularly scheduled tabling at one or more campus locations. Student staff, the bike coordinator, and/or bike ambassadors will perform bike safety checks, provide safety materials, register bicycles, and answer questions about commuting and cycling in general.

Bicycle Safety Road Shows

Campus and city staff will organize and schedule short bicycle safety clinics for residence halls, campus departments or other campus organizations. Clinics will review bike safety tips, campus and city routes, and demonstrate effective bike locking practices.



David Takemoto-Weerts, UC Davis Bicycle Coordinator, speaks to a group conducting a bike tour of campus.

Student Orientation Bicycle Safety Information

It has been particularly challenging finding a time during student orientation to effectively teach incoming students about bicycle safety as the orientation schedule is packed. The Bike Program will continue to work to integrate bicycle safety clinics into the busy schedule as well as identify alternative strategies to reach students during this timeframe. City staff and UCD officials will explore feasibility of requiring all incoming students to view the new Transportation and Parking Services (TAPS) BEEP Bicycle Safety Video. Coordination with the registrar's office will be necessary to implement this item.

OBJECTIVES:

- Increase cycling among faculty, staff, and students
- Decrease college student bicycle crashes
- Increase safe driving behavior for students that drive

DELIVERABLES:

- Traffic Skills 101 and LCI Seminars
- Additional Bike Tours in Fall and Spring Quarters
- Bicycle safety information packets and mandatory viewing of new BEEP Bicycle Safety Video for incoming students at orientation
- Explore academic opportunities for students to collaborate with the City on community projects, e.g. data collection
- Monthly bike safety stations
- Bicycle Safety Road Shows

EVALUATION METHODS:

- Annual analysis of bicycle related crashes on UC Davis campus and within Davis
- Bike mode share of faculty, staff, and students through annual Campus Travel Survey

FUNDING:

- UC Davis Transportation and Parking Services
- Ride Walk Davis Program Implementation Funding

3.6 Gender Equity in Bicycling: Women on Bikes



BACKGROUND

A bicycle friendly community is defined by the diversity and number of people who use bicycling as a means of transportation on an everyday basis. Achieving gender equity among bicyclists represents a valuable opportunity to increase total ridership. Currently, the majority of bicyclists tend to be young to middle-aged men, especially in locations with lower bicycling rates.²¹ Figure 3 summarizes the commute to work bicycle mode share estimates by gender for the past six years.

Although the overall bike mode share is increasing in Davis, the percent of women biking to work has actually dropped since last year. Because the ACS data only estimate trips made to work, the bike mode share for all trips is unclear. Gender equity among transportation trips made by bicycle is a key indicator of a bicycle friendly community. The aim of this education and encouragement program is to address the specific issues that have historically been barriers to bike riding for women.

Safety Concerns

Safety is an important concern for many when deciding whether or not to ride a bike. Studies have shown that women feel a higher level of concern for the perceived risks of riding a bicycle²² and prefer separated bike paths and quiet streets to bike lanes next to motor vehicle traffic. Women also report low levels of confidence with their bicycling skills, which may lead to less riding. However, confidence can be improved with education and practice, so the safety concern is paramount in encouraging female ridership.

In most families, it is an adult woman that decides how the children will get to school. Our programs and facility designs need to help these important decision makers feel comfortable with the system we provide for their children. Where appropriate, separated bike paths should be considered as the increased perceived safety and comfort of these bike paths has been shown to increase the number of women cycling.²³

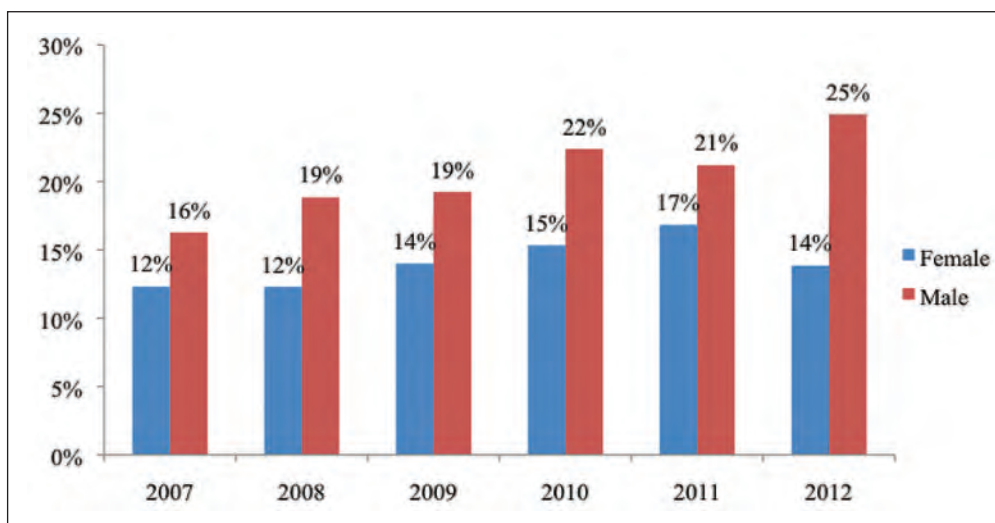


Figure 3
Bike Commute Mode
Share by Gender in
Davis, CA

Source: ACS 3-year estimates,
table B08006, 2007, 2008,
2009, 2010, 2011, 2012

²¹ Garrard et al., 2012

²² Emond et al., 2009

²³ Monsere et al., 2012



East Davis group preparing to ride downtown for the evening

Responsibilities and Types of Trips

Even though household dynamics today are more gender-balanced than in the past, in households where both men and women work outside the home, women still carry a larger share of the household responsibilities.²⁴ This added responsibility is reflected in more complex travel patterns and time constraints.²⁵ In turn, this complexity is reflected in a variety of attitudes and behaviors. For example, many women report incorporating errand trips into their commute to work, making it difficult to separate commute from non-commute trips.²⁶

Women also transport children much more frequently than men, making bicycling a complicated family project with specific safety and convenience requirements. The proliferation of bicycle amenities, such as baskets, rear seats, and trailers can lower some of these barriers to bicycling, but the problem is not easily overcome.

Attitudes toward Bicycling

Women report a variety of attitudes that discourage them from cycling — from hairstyle impairment to social norms to inadequate showering facilities at the end of their ride. Encouraging more women to bike requires embracing a culture that promotes the image of female bicyclists of all ages, abilities, and styles as the norm for everyday activities, including commuting to work.

ACTION STRATEGY

In conjunction with the programs throughout the Beyond Platinum plan, the City of Davis will make every effort to ensure that all media and promotional materials are gender-balanced in their messages and imagery. Ride Walk Davis should work with the following community partners to achieve gender equity in biking:

- Women’s advocacy groups
- Bicycling advocates and community members
- Davis Bicycles!
- Davis Bike Club
- Davis Bike Collective
- U.S. Bicycling Hall of Fame
- UC Davis

OBJECTIVES:

- Achieve gender equity among cyclists in Davis

DELIVERABLES:

- Targeted promotion of Traffic Skills 101 and LCI Seminars to women
- Balance of male and female Bike Ambassadors
- Engage girls in schools through outreach and education programs that promote bicycling to all activities
- Public events on women in cycling and historical presentations by female cycling authors
- Coordination with bicycling organizations to set up female cycling groups for commuting and recreation
- Informational posters that include more women in commuting and utilitarian situations
- Balanced gender representation in all social networking outlets: Ride Walk Davis website, Facebook, Twitter, LinkedIn
- Emphasis on infrastructure improvements that decrease perceived safety risks, such as off-street separated bike facilities, protected bike facilities, safe bike-friendly intersections, and bikeways on quiet streets/ bike boulevards

EVALUATION METHOD:

- Transportation surveys that include bike mode share and socio-demographic information: American Community Survey, Public Satisfaction Surveys, UC Davis Campus Travel Survey

FUNDING:

- Ride Walk Davis Program Implementation Funding

²⁴ Bureau of Labor Statistics, 2008

²⁵ Sarmiento, 2000

²⁶ Szczaepanski, 2013

3.7 Senior Travel Training



BACKGROUND

The aging population experiences a multitude of challenges related to mobility. Getting around on one's own becomes more difficult with age and adverse physical and mental health effects arise as a result of physical immobility. Staying active means staying healthy. Active transportation and recreational opportunities through walking, bicycling, and public transit provide excellent ways of maintaining an active lifestyle. Some folks just need a little coaching to help them get back on the go.

Davis's climate, medical access, and small town feel make it a great place to retire. Almost 10% of the city's population is over 65 years old, and many are living far beyond the age when it is safe to drive. By improving

active transportation connectivity throughout the city, seniors will be able to maintain their independence and mobility.

In August 2009, a travel training effort was initiated in Davis, but was soon discontinued due to insufficient funding. In 2012, the Senior Citizens Commission, city staff, and local transportation service providers, including Davis Community Transit, Unitrans and Yolobus, recognized the need to reinstate an ongoing travel training program for seniors and those with disabilities or other mobility challenges. To address this need, they created a Senior Travel Training Committee to develop and carry out an effective program strategy.



Photos courtesy of the Davis Enterprise. Photographer, Wayne Tilcock

ACTION STRATEGY

The Senior Travel Training Committee developed a program to fill this gap in the transportation system with a mission to improve transportation access and quality of life for seniors and residents with physical limitations. The primary goals of the program are: to increase understanding and usage of local transportation options, to help older residents increase their confidence and independence in using different transportation options, and to provide an opportunity to create new social connections.

The first phase of the program consists of two travel training events per year, one in the spring and one in the fall. These events feature both indoor training sessions and field excursions that teach or remind seniors and physically-limited residents about the basics of riding a bus, using para-transit services, or riding a bicycle. This instruction is supplemented by monthly travel training field excursions that reinforce the travel training event curriculum and provide opportunities for residents to try out these services on their own.

OBJECTIVES:

- Increase senior residents' understanding, confidence, and usage of active transportation modes
- Provide opportunity for social connections

DELIVERABLES:

- Biannual Senior Travel Training Events
- Periodic travel excursions for seniors

EVALUATION METHODS:

- Baseline travel training event survey measuring total number of trips, mode share by trip type, access to activities, and life satisfaction/social indicators
- 6 month travel training survey measuring changes in the indicators of baseline survey

FUNDING:

- Ride Walk Davis Program Implementation Funding
- Supplemental grants



Photo courtesy of the Davis Enterprise. Photographer, Wayne Tilcock

3.8 Enforcement and Education: A Mutual Relationship



BACKGROUND

Like most U.S. cities, Davis is still in its infancy with respect to bicyclists regularly obeying the rules of the road. To effectively change behavior, education and enforcement must go hand in hand. Enforcement reinforces education and education brings context and understanding of proper behavior and “know how” to enforcement measures.

In 2013, City Council adopted a resolution allowing the Davis Police Department to reduce the fine schedule for cycling related traffic offenses. The fines cover most of the city’s bicycling offenses, including the three most common infractions: stop sign violations, right-of-way violations, and bicycling at night without a light. The City of Davis has had the ability to adopt a local bike fine schedule since 1993, when an amendment was made to the California Vehicle Code (section 42001(d)). At the time of the amendment, the City wanted to challenge the conventional wisdom that higher fines are the more appropriate way to encourage compliance with laws. Ironically, even though this amendment was originally sponsored by the City of Davis, City Council did not pass a resolution to authorize reduced fines until 20 years later in 2013.

A New Compliance Strategy

The rationale for lowering the fine was spurred by the fact that many police officers were hesitant to issue citations for bicycle violations fearing a significant level of animosity from the public, who perceived the \$202 fines as excessive. The Davis Police Department believes that the adoption of lower fines will actually increase enforcement and bicycle safety. The current fine schedule is as follows:

Infractions subject to the fine schedule shall include any violation of the Vehicle Code and Davis Municipal Code subject to punishment under Vehicle Code section 42001 committed by a bicyclist. A person convicted of an

infraction subject to this Resolution shall be punished as follows:

- By a fine not exceeding fifty dollars (\$50).
- For a second infraction occurring within one year of a prior infraction that resulted in a conviction, a fine not exceeding one hundred dollars (\$100).
- For a third or subsequent infraction occurring within one year of two or more prior infractions that resulted in convictions, a fine not exceeding two hundred fifty dollars (\$250).

ACTION STRATEGY

Although the lower fine schedule is lauded by community leaders and bicycle advocates, it is missing an educational component. To make this enforcement strategy as effective as possible, it is critical that we utilize the new fine schedule as an opportunity to teach bicyclists about the increased responsibility that results from having the same rights as motorists. To this end, a diversion program is needed that maintains the integrity of a lower fine schedule but also includes an educational component that requires either viewing a bicycle safety video or participating in a bike safety class.

Unfortunately, the City of Davis’ hands are tied, as the California Vehicle Code prohibits enforcement agencies from administering diversion programs for traffic offenses. Conversely, UC Davis is able to administer a diversion program because the university is not interpreted as a “local authority” and thus may carry out a diversion program as previously discussed.²⁷

Section CVC 42005.3, states:

Operative January 1, 1993, no local authority may allow a person who is alleged to have committed a traffic offense in violation of this code or an ordinance or resolution adopted under this code, to participate in a driver awareness or education

²⁷ CVC 285. “Local authority” refers to the legislative body in every county or municipality having authority to adopt local police regulations

program or in any other diversion program as an alternative to the procedure required to be followed under this code for alleged violations of this code. This section does not apply to diversion programs for minors who commit infractions not involving a motor vehicle for which no fee is charged.

Further,

(d) Notwithstanding any other provision of law, a local public entity that employs peace officers, as designated under Chapter 4.5 (commencing with Section 830) of Title 3 of Part 2 of the Penal Code, the California State University, and the University of California may, by ordinance or resolution, establish a schedule of fines applicable to infractions committed by bicyclists within its jurisdiction. A fine, including all penalty assessments and court costs, established pursuant to this subdivision shall not exceed the maximum fine, including penalty assessment and court costs, otherwise authorized by this code for that violation. If a bicycle fine schedule is adopted, it shall be used by the courts having jurisdiction over the area within which the ordinance or resolution is applicable instead of the fines, including penalty assessments and court costs, otherwise applicable under this code.

If the City of Davis is intent on adding an educational component through the administration of a diversion program, then laws must be changed. The City should partner with UC Davis and other municipalities to work with legislators to draft an amendment to the California Vehicle Code that would allow diversion programs for cycling infractions in California. For an analysis of bike citations issued in Davis between 2009 and 2012, see Appendix G.

OBJECTIVES:

- Add an educational component to enforcement measures by instituting a diversion program in Davis
- Reduce number of bike traffic violations over time

DELIVERABLES:

- Collaboration with city departments and other stakeholders to conduct a feasibility analysis on the possibility of creating a diversion program in Davis
- Proposed amendment to the California Vehicle Code (contingent on legislative cooperation)
- Ongoing dialogue with the Davis Police Department to identify and prioritize enforcement measures pertaining to common types of bicycle infractions, including bicycling at night without bike lights

EVALUATION METHODS:

- Number of repeat offenders of bicycle traffic laws
- Bicycle crash data

FUNDING:

- Ride Walk Davis Program Implementation Funding

3.9 Embracing the E-Bike



BACKGROUND

In some parts of the world, electric bicycles (e-bikes) represent a significant share of daily travel, though they are still rare in the U.S. The functional characteristics of e-bikes, particularly their greater speed and acceleration compared to conventional bicycles, enable more people to bicycle and more trips to be made by bicycle.²⁸ E-bikes are faster and require less physical exertion than conventional bikes, and they are cheaper and provide greater mobility than cars. The small size and maneuverability of e-bikes and their potential substitutability for cars makes them an important part of the discussion around sustainable transportation.

Recent research with e-bike users in the Davis area found that – among the sample of individuals who purchased an e-bike – there was an overall decrease in driving, with some users getting rid of their car altogether.²⁹ E-bikes enable individuals who have begun to experience knee and back pain on conventional bikes to continue receiving the physical and environment benefits of bike commuting. E-bikes are particularly helpful in alleviating the pain and effort required to start from a dead stop and in allowing these riders to carry more of their belongings.

Despite these enormous benefits, there are some major obstacles to greater adoption of e-bikes. E-bike users cited a number of negative aspects including: safety and security concerns, unwieldiness, range anxiety, and several misperceptions on the part of non-e-bike users that could inhibit their adoption. Furthermore, current regulations governing the use of electric bikes are ambiguous at best because they are classified sometimes as a motor vehicle and sometimes as a bicycle.

Current Regulations in California

- E-bike users are required to wear a bicycle helmet, not motorcycle helmet
- Federal legislation governs the maximum power for an e-bike at 750 watts or one horsepower – which is powerful enough to propel riders at speeds much faster than the 15 mph speed limits for bike paths

- E-bikes are prohibited from Class I bike paths, which is particularly important in Davis with its extensive greenbelt system

ACTION STRATEGY

The importance of experiencing e-bikes firsthand should not be underestimated in efforts to encourage e-bike adoption – most e-bike users purchase their e-bikes at the urging of a trusted friend or family member. To this end, the City should encourage and host educational programs and outreach campaigns targeted toward groups for whom e-bikes could be especially beneficial – particularly people with physical limitations. The goal of these programs is to raise awareness about the potential of e-bikes as a mode of transportation and to overcome any existing misperceptions as well as basic lack of knowledge of e-bikes. Incentive programs might be created to encourage the purchase of e-bikes or conversion kits for conventional bicycles, modeled after programs designed to encourage investments in energy conservation. Lastly, appropriate regulation of e-bikes as vehicles must be addressed, though it remains a challenging issue in California and worldwide.

OBJECTIVES:

- Increase e-bike use as a means of regional transportation for commuters and recreational and utilitarian use for the aging population of Davis

DELIVERABLES:

- Change regulations to permit e-bikes on Class I bike paths with strict speed limits, either permanently or via a temporary pilot program to observe potential safety concerns

EVALUATION METHODS:

- Include electric bikes as a distinct travel mode in surveys
- Track trends in e-bike use through use of travel surveys
- Sales data from local stores that carry e-bikes
- Observations and manual bike counts

FUNDING:

- Ride Walk Davis Program Implementation Funding

²⁸ Popovich et al., 2013

²⁹ *ibid*

3.10 Bicycle Friendly Businesses



BACKGROUND

Despite Davis' designation as a platinum level Bicycle Friendly Community, the only certified Bicycle Friendly Businesses (BFB) are UC Davis and the City of Davis. There are currently no certified BFBs in the private sector. Davis' 37-block downtown core alone is home to over 700 businesses and many more employees, each of whom makes at least two commute trips per day. This immense amount of motor vehicles in such a small area leads to traffic congestion, unnecessary emissions, and unsafe conditions for pedestrians and cyclists. The availability of free parking means that many employees have no incentive to choose active modes of transportation to commute to work. To reduce congestion and improve customer service, it would be wise for local businesses to encourage their employees to choose active transportation modes and to leave available parking spaces for their customers.

Davis has many commuters from Roseville, Woodland, Sacramento, Vacaville, Fairfield, and even the Bay Area, who are not able to travel the entire distance by bike. The BFB program will coordinate with Capital Corridor to encourage employees with long commutes to choose active transportation options by utilizing a combination of biking, walking, and riding the train or bus. Furthermore, encouraging residents that live or work in Davis to choose active modes will free up limited parking space for drivers without alternative commute options.

ACTION STRATEGY

Bicycle Friendly Business Program

In December 2013, the City of Davis was awarded funds from SACOG for the foundational development and promotion of a Bicycle Friendly Businesses (BFB) program that is in concert with similar programs administered by the League of American Bicyclists (LAB) and SACOG. City staff will provide an advisory role to encourage and assist local businesses in submitting BFB applications to SACOG and the LAB. The primary goal of this program is to reduce employee vehicle-miles traveled (VMT)

while garnering regional and national recognition for participating businesses that demonstrate a strong commitment to fostering a bicycle friendly workplace.

Staff from the Ride Walk Davis program will develop and disseminate BFB marketing materials, conduct workplace transportation audits, provide recommendations for improvements, prepare press releases, conduct safety trainings and special events, and produce progress and evaluation reports. See Appendix P for the full text of the BFB program plan.

The BFB program will be integrated into SACOG's May is Bike Month activities by encouraging participating businesses to take part in sponsoring and staffing energizer stations on Bike to Work Day. In addition, Davis will collaborate with SACOG's Shop Dine Bike program in May to encourage regional collaboration during May is Bike Month. The City will develop a monthly Bike to Work Day sub-program with the help of local businesses to encourage year-round bicycling.

In addition to bicycling, other active transportation commute options and incentives will be integrated into the program, such as incentives to utilize a combination of transit and bicycling. This component of the program will emphasize regional, sustainable transportation options.

Bicycle Friendly Business Districts

In contrast to the Bicycle Friendly Business Program — which focuses on employee commute behavior — Bicycle Friendly Business Districts (BFBD) provide improvements to the physical environment that accommodate patrons on bicycles. Research shows that infrastructure that accommodates bike shoppers not only increases the number of cyclists who frequent the shopping center, but is also correlated with higher amounts of spending per capita than in shopping centers without bike infrastructure.³⁰

³⁰ O'Connor, 2011

Some Californian cities, such as Long Beach, San Diego, Los Angeles, and Sacramento, have demonstrated how publicity and minor infrastructure changes can create a shopping experience that not only welcomes cyclists, but also makes it more convenient for patrons to bike than to drive to their shopping destinations. Davis's relatively uniform land use patterns means that small shopping districts are evenly distributed throughout the city, making BFBDs a natural fit. The City will coordinate with the Davis Downtown Business Association (DBA) to develop strategies to attract shoppers on bikes. The City will also initiate a BFBD program for those shopping centers located outside of the central downtown core. Each shopping district in Davis will be encouraged to engage in friendly competition by offering bike friendly incentives to their patrons. For each BFBD, the City will:

- Produce a bike map and destination guide
- Include details about the BFBD on the city website
- Connect business districts to local bike shops for events and promotions
- Provide infrastructure recommendations such as bike racks and corrals, bike lanes and signage

OBJECTIVES:

- Reduce employee and patron vehicle-miles-travelled (VMT)

DELIVERABLES:

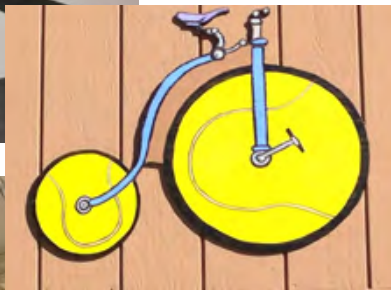
- BFB/BFBD marketing materials
- Quick guide to traffic laws for bicyclists and drivers
- Workplace audits and business recommendations
- Safety education and commute presentations
- 50 designated Bicycle Friendly Businesses by 2016
- 4 designated Bicycle Friendly Business Districts by 2016
- Online, searchable map of Davis BFBs and BFBDs

EVALUATION METHODS:

- Employer bike rack installations
- Commuter mode share surveys
- Bike rack utilization rates

FUNDING:

- Ride Walk Davis Program Implementation Funding
- SACOG Tier II Transportation Demand Management Funding



The bicycle is a common theme for many area businesses



Designing Bikeways for All Ages and Abilities

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PART
4



PART 4 Designing Bikeways for All Ages and Abilities

Goal 2: Davis will offer a complete, seamless, and integrated bikeway network on and off street that is accessible to and comfortable for people of all ages and abilities.

Introduction

Bicyclists do not come in one shape or size. They range in age and ability, from children to seniors, from new bicyclists tending to separated paths to vehicular bicyclists zipping through the streets, and everything in between. The City's main objective is to design a complete network of bicycle facilities that is comfortable, safe, and easily navigable for bicyclists of all ages and abilities. There are many design advances available today that accommodate the needs of all types of bicyclists without compromising the safety and comfort of other roadway users.



Our infrastructure must accommodate the spectrum of riders that travel the bikeways of Davis



Historically, street design techniques have prioritized moving motor vehicles instead of moving people, which has resulted in an unbalanced allocation of our street space. Streets should be designed to move people using a variety of modes, including bicycling, walking, and transit use. Available street space and right-of-way should be allocated equitably and appropriately.

In an effort to update street design criteria to most effectively reduce GHG emissions, California passed SB 743 in September 2013. This new bill removes the level of service (LOS) metric from the evaluation criteria for certain transportation projects that fall under the scope of CEQA. This important change means that many projects will be evaluated on their effectiveness in encouraging active transportation modes and reducing vehicle-miles-traveled rather than improving traffic speeds. For a summary of all bicycle-related legislation enacted in 2013, see Appendix R.

The Transportation Element of the General Plan identifies several critical policies that are specifically applicable to improving bicycle infrastructure. The Beyond Platinum plan works from the policies set in the Complete Streets and Bicycling and Walking sections of the Transportation Element to create the action items in this section of plan.

In Davis, there are many opportunities to create roadways that embody the elements of complete streets. Roadways are generally wide enough to adequately accommodate roadway users of all types and to allow greater separation between motor vehicles and bicycles.

To this end, the majority of proposed bikeway infrastructure improvements consist of restriping to increase separation between motor vehicles and bicycles. Currently, the City of Davis is considering moving forward with a large investment in road rehabilitation and pavement resurfacing. This is a timely opportunity to restripe roadways and implement or upgrade bicycle facilities. In addition to coordinating with the road rehabilitation and pavement maintenance program, various funding sources should be secured to fund key bicycle infrastructure improvements that address current obstacles for bicyclists and improve connectivity throughout the city.



Human powered transportation doesn't always take the shape of the traditional bicycle

Four and five year olds line up for the children's bike race at the annual Fourth of July Downtown Criterium Race, hosted by the Davis Bike Club



Infrastructure projects should be implemented in a way that enhances and supports the educational outreach programs outlined above. Bike facilities should be designed so that people of all ages and abilities feel safe and comfortable bicycling to all the places they need to go. Special consideration should be given to lane width and pavement quality so that people riding tricycles, recumbent bikes, and electrically assisted bikes can all use the paths safely and comfortably. In order to enable bicycling to key destinations like parks, schools, and shopping districts, it is absolutely necessary to consider the origins of these bike trips and ensure network connectivity. Taking into account the crucial network links when selecting bike projects will ensure connectivity between distinct neighborhoods, downtown, and the UC Davis campus, and provide cycling facilities to people in all neighborhoods.

4.1 Best Practices in Contemporary Street Design



BACKGROUND

Bicyclists should have a wide variety of comfortable and safe bicycle facilities to choose from to get from one destination to another. Although Davis boasts over 50 miles of off-street shared use paths, connections between streets and the paths are sometimes disjointed, leaving gaps in the bikeway network. Reducing the level of stress for cyclists by eliminating gaps in the bikeway network has been shown to increase the number of cyclists in certain communities.³¹ Bicyclists who use collector and arterial streets as transportation corridors sometimes encounter uncomfortable conditions, typically at intersections.

ACTION STRATEGY

To reduce the stress associated with cycling, contemporary bicycle facility options that stretch beyond the bike lane must be considered and employed when feasible. The National Association of City Transportation Officials' (NACTO) *Urban Bikeway Design Guide* and *Urban Street Design Guide* offer a unique approach unmatched by conventional design guidelines. In the *Urban Bikeway Design Guide* and *Urban Street Design Guide*, NACTO has codified a vision for city streets as attractive public spaces, foundations for thriving local economies, and safe channels for transit riders, bicyclists, pedestrians, and motorists. The City of Davis is currently referencing and should formally endorse the *Urban Bikeway Design Guide* and *Urban Street Design Guide*.

Importantly, it is feasible to utilize the *Urban Bikeway Design Guide* and *Urban Street Design Guide* while still meeting many of the standards of the California Manual on Uniform Traffic Control Devices (CA MUTCD) and the California Highway Design Manual (CHDM). When experimenting with facilities outside of the CA MUTCD, the City of Davis should apply for a "Request to Experiment" with the California Bicycle Advisory Committee (CBAC), the California Traffic Control Devices Committee (CTCDC), and the Federal Highway Administration (FHWA). Davis has a prior history of successfully experimenting with new bicycle facilities, such as the first bike lane in 1967 and the first bicycle signal head in 1992.

The experimentation process allows Davis to track and monitor facilities new to California under the auspices of the CTCDC and FHWA while sharing the results of the experiment with a broader audience. The experimentation process can provide cities protection through design immunity and may ultimately lead to updates in the CA MUTCD, the federal MUTCD, and potentially, the CHDM. The *Urban Bikeway Design Guide* and the *Urban Street Design Guide* act as catalysts for making these best practices in street design techniques standards in the industry.

City staff should continue to work at the state level with municipal agencies and statewide advocacy organizations to encourage swift adoption and/or endorsement of innovative street design guidelines. This process will help establish industry standards to assist practitioners with consistent and safe application of these guidelines. The California Bicycle Advisory Committee is the proper venue to move this action forward.

Policy TRANS 2.2 of the Transportation Element is consistent with the bicycle facilities found in the *Urban Street Design Guide*:
 "Implement state-of-the-art street design solutions to improve bicycle/pedestrian access, comfort, and safety."

This plan identifies specific infrastructure projects designed to enhance existing bicycle facilities while installing new projects as well. A complete map of existing bicycle facilities is in Appendix B. The following are examples of the types of recommended infrastructure projects:

Corridor Enhancements

- Bike lanes – along corridors without any marked bicycle facility
- Double stripe existing bike lanes – define boundary between bike lane and parked cars / waste and recycling bins

³¹ Lusk et al., 2011

- Buffered bike lanes – add marked separation between motor vehicle lane and bike lane
- Dual buffered bike lanes – in addition to separation between motor vehicle lane and bike lane, additional marked separation between bike lane and door zone of parked cars
- Protected bike lanes (cycle tracks) – one-way or two-way buffered bike lane with additional stationary barriers for protection
- Shared lane markings – “sharrows” markings that designate a travel lane where bikes may use full lane in a shared environment with motor vehicles
- Bicycle Wayfinding – directional signing and marking for cyclists that guide cyclists to primary destinations, such as schools, parks, shopping centers, and downtown

Intersection Enhancements

- Bike Box
- Bike Lane Conflict Markings (Green)
- Bike Intersection Crossing Markings
- Two Stage Turn Queue Boxes
- Bike/Pedestrian Crossings
- Traffic Calming
- Intersection Redesign

See the Bicycle Facilities Tool Kit on pages 49-54 for more detailed explanations and photo examples of corridor enhancements.

Vulnerable User Clause

The Transportation Element also sets a critical, hallmark policy that is directly applicable to the safety of bicyclists and pedestrians – the vulnerable user clause. This policy ensures that road space is allocated in such a way that supports and protects users of active transportation modes.

Policy TRANS 2.1 - Provide Complete Streets to meet the needs of drivers, public transportation vehicles and riders, bicyclists, and pedestrians of all ages and abilities in all transportation planning, programming, design, construction, reconstruction, retrofit, operations, and maintenance activities and products. The City shall view all transportation improvements as opportunities to improve safety, access, and mobility for all travelers in Davis, and recognizes bicycle, pedestrian, fixed-route transit, and demand-response para transit modes as integral elements of the transportation system along with motor vehicles.

Standards

e. Where limited street space exists, priority should be given to non-motorized modes to protect the safety and comfort of these more vulnerable users. Deviations from street widths to favor motor vehicles should be location-specific and result from either constrained right-of-way and/or safety considerations

Policy TRANS 2.5 also supports the build out of the bicycle infrastructure system and aims to, “Create a network of street and bicycle facilities that provides for multiple routes between various origins and destinations.”

Actions A-C under Policy **TRANS 2.5** are consistent with the action items identified in this section of the Beyond Platinum plan:

a. Develop a network of bicycle boulevards (enhanced bikeway) on relatively low-volume and low-speed “shared” streets that are attractive, convenient, comfortable, and welcoming to cyclists of all ages and skill levels. Facility improvements on such bicycle boulevards may include but are not limited to traffic calming, diversion or discouragement of non-local vehicle traffic, signage, pavement markings, and intersection crossing improvements. An example of a potential bicycle boulevard is the east-west route connecting Loyola Drive, Drexel Drive, Fourteenth Street, and Villanova Drive.

b. Develop a network of secondary bicycle connectors (neighborhood bikeways) through low-speed neighborhood streets. Such routes could include signage, striping, and traffic calming measures as necessary.

c. Provide convenient bike, pedestrian and public transportation access through areas where cars are or may be prohibited, where applicable.

The Transportation Element goals outlined above can be carried out through targeted infrastructure improvements as identified in the Beyond Platinum plan or integrated into the City’s ongoing pavement maintenance program.

Table 1. Geometric Cross Section Guidelines (Transportation Element)

Item	Typical Width	Street Classification
Moving	Arterials: Lane 12', may be reduced to 11' to accommodate up to 7' each for parking and for a bike lane.	
Moving Lane	11'	Collector with bike lanes
Two-Way Left-Turn Lane	10'	Minor Arterials
Parking	7'	All Streets
Center Median	14'	Major Arterials and some Minor Arterials
Bike Lane	7'	Arterial and Collectors (add 1 foot next to curb lane). Negotiable with application of buffered bike lane
Bike Path	10'	Arterial and Collector
Curb Lane	Add 2' to minimum lane width ("shy distance")	

DELIVERABLES:

- Official City endorsement of NACTO’s Urban Bikeway Design Guide and Urban Street Design Guide
- Utilization of best practices in street design for all projects
- Complete inventory of priority destinations and bicycle network links
- Implementation of intersection and corridor enhancements that improve the bicycle network (refer to intersection and corridor exhibit in Appendix C)
- Coordination with the City’s Pavement Maintenance program to implement new bicycle facilities in conjunction with roadway resurfacing projects

EVALUATION METHODS:

- Overall bicycle mode share evaluation
- Annual bicycle crash data analysis
- Biannual reports to BAC and City Council on progress of infrastructure improvements

FUNDING:

- City of Davis Pavement Maintenance Funding
- SACOG Funding Cycle
- Ride Walk Davis Program Implementation Funding

OBJECTIVES:

- Improve the comfort and safety along bikeways in Davis
- Increase number of cyclists from groups with historically low ridership (women, young children, seniors, individuals with physical limitations)
- Implement 80% of identified intersection and corridor enhancements by 2020

Bicycle Facilities Tool Kit

BIKE LANES



Davis, CA

Bike lanes are lanes on roadway designated for bicyclists. Bike lanes visually alert motorists of their right and presence to the street. Bike lanes follow the same direction as motor vehicles, positioned between motor vehicle travel lanes and the curb or parking lane. Bicyclists can travel at their own pace without interference from motor vehicle traffic. The separation between bicyclists and motor vehicles also increases bicyclists' level of comfort. Bike lanes are typically used on streets with moderate to high motor vehicle traffic and when there is an allowable width to the roadway. An outer solid white line is used to separate the motor vehicle travel lane and the bike lane. In addition, an inner solid white line separates a parking lane from the bike lane, further designating the area for bicyclists and not for cars or other objects.

BUFFERED BIKE LANES



Davis, CA

Buffered bike lanes are conventional bike lanes with a buffer space between the motor vehicle travel lane and the bike lane. Buffered bike lanes provide greater separation between bicyclists and motor vehicles. This further increases bicyclists' level of comfort and perception of safety; thereby appealing to more bicycle users. Buffered bike lanes are typically used on roads with high motor vehicle travel speeds, high motor vehicle traffic volume, extra lanes, and/or extra width. Two solid white lines are used to separate the motor vehicle travel lane and the bike lane. Buffer areas may also be used to separate the bike lane and the door zone of parked cars. Larger buffer widths require the buffer area to be marked with cross hatching or chevrons.

PROTECTED BIKE LANES/CYCLE TRACKS



Davis, CA

Protected bike lanes, or cycle tracks, are similar to conventional bike lanes but with physical barriers between bicyclists and motor vehicles. Cycle tracks can be one-way, allowing bicyclist movement in one direction on one side of the road, or two-way, allowing for bicyclist movement in both directions on one side of the road. Types of physical protection include a parking lane, raised curb, bollards, planters, and signs. The physical separation further increases bicyclists' level of comfort and perception of safety; thereby appealing to even more bicycle users. Protected bike lanes also prevent motor vehicles from parking in the bikeway. Protected bike lanes are typically used on streets with parking lanes, high vehicle travel speeds, high vehicle traffic volume, high parking turnover, and/or high bicycle volumes. Maintenance and street sweeping of protected bike lanes should be completed regularly to ensure the bikeway is smooth and free of debris.

Bicycle Facilities Tool Kit

SHARED LANE MARKINGS



Davis, CA

Shared lane markings, or sharrows, are pavement markings that indicate to drivers and bicyclists of a shared lane environment. Motorists should expect bicyclists along these corridors and provide enough space for them to ride safely. Shared lane markings also encourage proper bicyclist positioning on a street with marking placement outside of the door zone of parked cars. Typical uses for shared lane markings include streets that are not wide enough to fit bike lanes, streets with low speed differentials between bicyclists and motorists, and streets with angled parking. Other uses include bridging gaps within a bike network and providing wayfinding and directional guidance.

SHARED-USE PATHS



Davis, CA

Shared-use paths are off-street facilities for bicyclists, pedestrians and any other non-motorized users. The complete separation from motor vehicles often provides a high level of comfort and perception of safety; thereby appealing to a range of bicycle users. Centerline pavement markings should be used to clearly separate people moving in opposing directions, notably in high conflict areas, junctions, or sharp turns. Wayfinding signage can be included to help direct bicyclists and pedestrians through the pathway network. Etiquette signage can be included to help educate bicyclists and pedestrians on the proper way to share the path.

COLORED PAVEMENT TREATMENT



Portland, OR. Will Vanlue; Flickr CCL.
<http://www.flickr.com/photos/wv/7688990368/sizes/l/>

Colored pavement treatment is used to clearly identify a bicycle facility. Colored bike facilities increase the visibility of bike lanes, bike boxes, shared lane markings, and bike crossings to motorists. This treatment identifies and encourages bicyclists' right and presence in bicycle designated areas while distinguishing from areas for motor vehicles. Colored bike facilities are typically used in areas where vehicles frequently infringe into bicycle designated areas. Treatment can be applied along corridors for the length of a bike lane or in short segments within conflict zones. A consistent green color should be used for all colored bike facilities. Colored pavement treatment options include paint, DLP, thermoplastic, and colored asphalt, and vary in terms of durability and cost.

Bicycle Facilities Tool Kit

BIKE BOXES



Bike boxes are designated areas for bicyclists in front of a motor vehicle travel lane at a signalized intersection. Bike boxes extend outward to the left of a bike lane, providing an opportunity for bicyclists to group together, get ahead of queuing motor vehicle traffic, and clear an intersection quickly after a red light. This allows for increased visibility of bicyclists to drivers, as well as prevention of bicycle conflicts with right turning vehicles. Bike boxes are typically used at intersections with a high volume of bicycles and/or a high number of bicyclists traveling straight while motorists are turning right. The designated area is often applied with color treatment for greater visibility and identified with signage and markings to specify the location of where motor vehicles are to stop.

Portland, OR. Cheryl & Rich, Flickr CCL.
<http://www.flickr.com/photos/cherylandrich/2609888772>

BIKE LANE CONFLICT MARKINGS



Bike lane conflict markings utilize colored treatment of a bike lane in an area that vehicles have to pass through. These markings highlight the conflict zone in order to increase the awareness for bicyclists.

Portland, OR. Diane Yee; Flickr CCL.
<http://www.flickr.com/photos/dianneyee/10300440975/>

BIKE INTERSECTION CROSSING MARKINGS



Davis, CA

Bicycle intersection crossing markings show the intended direction of bicyclists passing through an intersection. They help to properly guide bicyclists from one bicycle facility to another, as well as indicate to motor vehicle drivers of the presence of bicyclists. Markings can incorporate dotted line extensions, shared lane markings, large stripe blocks, and/or colored pavement treatment.

Bicycle Facilities Tool Kit

BIKE/PED CROSSINGS



Davis, CA

Bicycle/Pedestrian crossings direct movements for bicyclists to ride and pedestrians to walk across a street. Crossings are identified with signs and markings. Available options to increase safety include median refuge islands, curb extensions, warning signals and beacons. The use of colored pavement treatment can further highlight the presence of bicyclists.



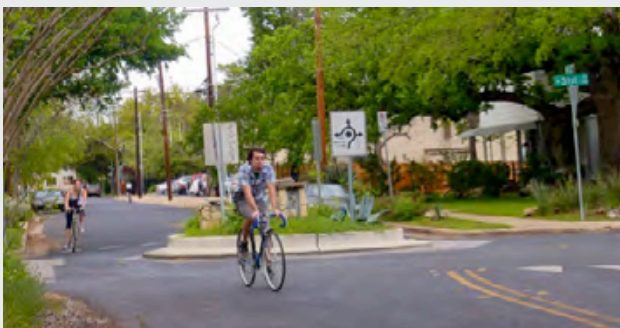
Top left: Berkeley, CA. Walk Eagle Rock; Flickr CCL. <http://www.flickr.com/photos/walkeaglerock/5480105323>
 Bottom right: Sevilla, Spain. Dylan Passmore; Flickr CCL. <http://www.flickr.com/photos/dylanpassmore/10577873266/sizes>

TRAFFIC CALMING



Davis, CA

Traffic calming is the use of various methods to reduce the speed and volume of motor vehicles. These procedures are needed to lower the speed differential between motor vehicles and bicycles, increase the awareness to motorists of the presence of bicyclists, and create a more comfortable bicycling environment. Methods for speed management include speed humps, speed cushions, speed tables, raised crosswalks, neighborhood traffic circles, curb extensions, center islands, vehicle pinch-points, narrow streets, and painted intersections/mandalas. Methods for volume management include forced vehicle turns, partial entrances, median diverters, diagonal diverters, and full diverters. These traffic calming measures reduce vehicle speeds and volume by slowing and redirecting motor vehicle traffic, while not inhibiting on bicycle traffic.



Flickr user eifelarr; Flickr CCL. <http://www.flickr.com/photos/8822495@N08/7065162227>



Davis, CA

Bicycle Facilities Tool Kit

GRADE SEPARATED CROSSINGS/BRIDGES AND TUNNELS



Davis, CA

Grade separated crossings, or bridges and tunnels, provide a safe link between two areas that are separated by a barrier, generally a major roadway. Grade separated crossings eliminate bicyclist interactions with motor vehicles that would occur at street crossings; thereby reducing safety risks and increasing the appeal to more bicycle users.

BICYCLE WAYFINDING



Bicycle wayfinding is a system of signs within a bicycle network that helps guide bicyclists to key destinations. Confirmation signs indicate a designated bikeway and provide distance and ride times to various locations. Turn signs indicate a change in direction on a bikeway with arrows pointing to destinations. Decision signs indicate an intersection of two or more bikeways with arrows, destinations, distances and/or ride times specified. Pavement markings, typically with directional shared lane markings, can also be used to supplement guidance of bicyclists along a bikeway. Bicycle wayfinding helps to provide useful information and identify the best routes for bicyclists, which may also encourage more people to bike.

BICYCLE BOULEVARDS/ENHANCED BIKEWAYS



Davis, CA

Enhanced bikeways, often described as bicycle boulevards in various cities, are streets specified for bicycle priority. They utilize low traffic streets and are designed to increase safety and comfort to bicyclists, while discouraging the high volume and speeds of motor vehicles. Enhanced bikeways provide connection to key locations along a direct and continuous route. Methods to reduce motor vehicle traffic incorporate speed and volume management, while methods to increase bicycle convenience incorporate minimizing stops for bicyclists and providing safe bicycle/pedestrian crossings across major streets. Enhanced bikeways should be clearly identified through signage and other bicycle wayfinding measures.

Bicycle Facilities Tool Kit

SIGNAL DETECTION AND ACTUATION



Signals that activate through detection need to be configured to change when a bicyclist approaches the intersection. Bicycle detection can be accomplished through a push-button mounted on a pole facing the street, or through automated methods including pavement embedded loop detection, video detection, microwave detection, or other new technologies. Accurate detection of bicyclists and clear guidance for bicyclists to activate an intersection is required for all methods. Bicycle signal detection pavement markings indicate the location of where bicyclists are to wait and in order to be detected. Upon detection of bicyclists, the signal phase should be long enough for bicyclists to clear the intersection before the other signals turn green.

BICYCLE SIGNALS



Davis, CA

Bicycle signals are traffic signals designated for only the movement of bicycles. These are established with a bicycle signal head which indicates a specific bicycle signal phase. The use of a bicycle signal phase may be appropriate for intersections where a separated bicycle facility or shared-use path meets with a signalized intersection.



4.2 Bicycle and Pedestrian Wayfinding

BACKGROUND

Wayfinding is a critical element of a complete bicycle network. The purpose of wayfinding is to guide bicyclists through specific corridors or to specific destinations, by means of signs and markings. Bicycle wayfinding provides clear and direct information to all bicyclists, and is particularly helpful at clarifying the complexities of the bike network to new riders. Currently, directional signs to key destinations are minimal and geared toward motor vehicles. There is a conspicuous lack of wayfinding signs on the bicycle network. Wayfinding is particularly necessary in Davis, where the ongoing influx of students means that there is always a large portion of new riders in the biking population.

ACTION STRATEGY

Improving directional guidance to key destinations will make it easier to understand the available biking options in Davis and therefore encourage more trips to schools, parks, shopping centers, and transit connections. Wayfinding can also be used to mark neighborhood corridors along shared use paths and streets with low volumes of motor vehicle traffic.

Davis has 54 miles of on-street bike lanes and 55 miles of separated shared use paths. However, it has no bicycle-specific wayfinding signage to assist users in finding safe, low-stress, efficient bicycle routes. The City seeks to remedy this situation and attain a more robust, complete bicycle network by providing designated wayfinding signs that help direct cyclists to these cycling amenities. In particular, the Davis Bike Loop will be updated with state-of-the-art pre-formed thermoplastic markings to replace the

existing painted stencils. The new markings will last more than 10 years, saving the City thousands of dollars in annual maintenance costs of re-stenciling.

In order to provide a comprehensive and useful wayfinding system, the City will first identify key destinations for residents and visitors alike. These destinations will include places such as schools, shopping centers, campus buildings, historical sites, and special event locations. City staff will work with the school district, UC Davis officials, and the Yolo County Visitor’s Bureau to ensure that the most important destinations are included in the wayfinding effort. A preliminary list of destinations is included in Appendix L.

The wayfinding program will benefit both bicyclists and pedestrians interested in using the city’s sustainable transportation network to the fullest. Key groups that



Wayfinding examples from several cities

will benefit include: schoolchildren and families seeking a safe route to school, UC Davis students, residents, and visitors.

Bicycle wayfinding also provides an element of branding for the city's bikeways, which is an important component in creating a sense of place. The wayfinding project's conceptual design depicts bicyclists of all ages riding on the Davis bikeways. By bringing a human element to the city's bicycling infrastructure, residents will feel a sense of normalcy, inclusion, and belonging when choosing cycling for transportation purposes.

OBJECTIVES:

- Increase ease, efficiency, and navigability of citywide bike network
- Expand Davis Bike Loop and improve visibility and longevity of markings
- Increase residents' sense of place and community through cycling

DELIVERABLES (SEE APPENDICES L AND M FOR DETAILS):

- Wayfinding signage along primary bikeways
- Wayfinding pavement markings along secondary, neighborhood bikeways
- Thermoplastic markings to replace current pavement markings for Davis Bike Loop

EVALUATION METHOD:

- Public satisfaction survey of whether wayfinding signing and marking is beneficial for cyclists in terms of ease of use and as an encouragement tool

FUNDING:

- SACOG Grant Funding
- Ride Walk Davis Program Implementation Funding

4.3 Shared Use Path Safety: Signing, Markings, and Maintenance



BACKGROUND

Davis' shared-use path network is one of the most valued and heavily used community assets. People of all ages and abilities use shared-use paths for both recreational and transportation purposes. The Davis Greenways Plan in Appendix K illustrates the completed and missing links of the entire planned shared use path network.

Walking and bicycling are the two primary activities and, occasionally, negative interactions between the two types of users can leave residents frightened, frustrated, or weary. Some pedestrians and cyclists are afraid of being hit by other cyclists, or are frightened when bicyclists pass at high speeds without any warning. In conjunction with wayfinding, there are additional measures that can be taken to improve communication and overall safety of all users of the shared use path system.

The transitions between shared use paths and streets are mostly substandard and should be made safer. The conditions along some sections of paths are poor and deteriorating. Tree roots are forcing undulations in the paths and can pose safety problems. Proper path maintenance will help reduce these additional safety concerns. Other sections of the path are too narrow to accommodate all types of bicycles and tricycles. These sections should be identified and expanded as necessary to allow for uninterrupted connectivity across the city for people using all types of bikes.

ACTION STRATEGY

Many users are not educated in the proper way to share limited path space, such as using an audible warning before passing on the left, keeping right except to pass, and slowing down in high traffic areas. Signage and markings that clearly explain proper etiquette on the shared-use paths will provide clear direction to all users and mitigate conflicts. Shared-use path maintenance is critical and staff should prioritize maintenance efforts along sections of bike paths that are most heavily used for both transportation and recreation purposes.

OBJECTIVE:

- Decrease shared use path conflicts between bicyclists and pedestrians
- Improve overall safety on shared use paths

DELIVERABLES:

- Completion of missing links in the shared use path network as outlined in the Davis Greenways Plan
- 15mph speed limit along the shared use path network
- Installation of etiquette and cautionary signs along the paths that communicate the following safety messages:
 - Keep right except to pass
 - Shared use path reminders (bicyclists, walkers, joggers)
 - Use an audible signal when passing
 - Bicycle Slow Zones – High Traffic Areas
- Striping and marking including:
 - Reflective centerlines on specific sections of shared use paths
 - Markings at conflict points to increase bicycle/pedestrian safety (e.g. pedestrian crossings, bicycle crossings over streets)
- Shared Use Path Maintenance (See Appendix H)
 - Priority list of shared use path sections for necessary maintenance/repair
 - Identification of shared use path sections with unsafe lateral conditions
 - Identification of shared use path sections that experience frequent overgrowth from adjacent vegetation
 - Increased frequency of routine maintenance



EVALUATION METHODS:

- Shared use path public satisfaction survey
- Annual bicycle crash analysis

FUNDING:

- SACOG Grant Funding
- Ride Walk Davis Program Implementation Funding

4.4 Bicycle Parking



BACKGROUND

Bike parking installation and policy is one of Davis' major strengths. In 2009, the City received a grant to update bicycle parking in the downtown core area. As a result, new bike racks were installed that accommodate bicycles in an orderly, efficient, and secure manner. Bike parking specifications were also updated in the building code to include the same design. Davis currently installs two models of bike racks: Creative Pipe, Inc.'s Lightning Bolt, LR series and ParkABike's Varsity Bike Rack.

In October 2013, the City of Davis adopted a Bicycle Parking Ordinance. The purpose of this Zoning Ordinance Amendment is to create clear and consistent standards for the required number of bicycle parking spaces based on land use type. The amendment decouples bicycle parking requirements from auto parking requirements while addressing the unique demands of the downtown area and providing flexibility for special situations. Refer to Appendix N for the entire Bicycle Parking Ordinance.

Table 2. City of Davis Bicycle Parking Standards

Land Uses	Examples	Standard (sf = gross square ft.)	Short Term Parking	Long Term Parking
Residential–group living	Fraternity, sorority, co-op housing	1 per bed	25%	75%
Residential–multi family	Apartments, condominiums	1 per bedroom	25%	75%
Lodging	Hotel, motel	1 per 10 guest rooms	50%	50%
Restaurant – quick serve	Deli, coffee shop, bar	1 per 150 sf	75%	25%
Restaurant – sit down	Restaurant	1 per 500 sf	75%	25%
Retail, general commercial	Grocery store, hardware, furniture	1 per 1000 sf	75%	25%
Commercial Services	Garden supply, appliance stores, auto repair, auto dealership (office/showroom)	1 per 1000 sf	75%	25%
Office	Professional, medical, dental, government, clinic, bank	1 per 1,500 sf	75%	25%
Shopping Center	Mix of personal services, retail, restaurants, offices	1 per 1,750 sf	75%	25%
Institutional	Schools, day care	1 per 2,500 sf	75%	25%
Light Industrial	R&D, business park	1 per 2,000 sf	25%	75%
Industrial	Warehouse, manufacturing, hospital	1 per 7,500 sf	25%	75%
Civic, cultural, religious centers	Library or museum (occupancy), places of worship (seats)	10% of maximum occupancy or seats	75%	25%
Commercial Recreation	Theater (seats), health club (occupancy)	10% of maximum occupancy or seats	75%	25%
Open space, parks, recreational uses	Ball field, driving range, playground, parks	As determined by the Community Development and Sustainability Director		
*Downtown (Core Area)	Includes all non-residential land use types in downtown	Apply same standards for land use above when feasible. City provides an on-going bicycle rack program for the Downtown Core Area.		

ACTION STRATEGY

Davis should continue to improve bicycle parking throughout the city. City staff should regularly examine bike parking demands at activity centers, such as neighborhood shopping centers, civic attractions, downtown, and at special events. Staff should continue to respond to requests from local businesses regarding the need for additional bike parking and provide consultation regarding bicycle rack types and installation locations for business owners.

Shopping centers must also be encouraged to update bicycle parking for patrons. The Bicycle Friendly Business and Bicycle Friendly Business District programs will help shopping centers provide secure and orderly bike parking. The Bicycle Parking Ordinance will review businesses that change use or make major modifications to their site plans in order to update their bike parking requirements accordingly.



One of Davis' several on-street bike parking installations

Downtown Core Area

The City employs an on-going bicycle parking program within the public right-of-way for the downtown core area that includes the installation, reconfiguration, and maintenance of both on and off street bicycle parking racks and stalls.

Vehicle parking stalls have been reutilized as bicycle parking corrals at eight locations in downtown Davis. Additional locations for on-street bicycle parking stalls have been identified and as bicycle parking demands change, future locations will be determined. On street bicycle parking stalls, however, must be balanced with vehicle parking demands. Keeping this balance in mind, a policy should be set to limit on-street bike parking to one stall/corral per block face, while allowing special consideration for additional on-street bike parking stalls should any unforeseen circumstances associated with the dynamics of bicycle parking demand arise.

Currently, businesses and developments within the downtown core area are not required to provide bicycle parking if adequate on-site space is not available. It is therefore imperative that a sustainable funding source be identified to pay for bike parking improvements and maintenance in the downtown core area. The Beyond Platinum plan recommends an integrated approach of utilizing up to five percent of annual paid parking revenue.

Special Event Bike Parking

Event bike racks should be available for local special event organizers to control overflow bicycle parking demands, particularly at the Farmer's Market and other Central Park events.

The City currently owns seven temporary event bike racks; however, these racks are very heavy and take up a lot of space. The City should consider purchasing additional temporary event bike parking racks that are lightweight, mobile, and easy to store.

OBJECTIVES:

- Provide efficient, secure, and ample bike parking throughout Davis
- Ensure a comfortable balance of on-street bike parking stalls and vehicle parking stalls
- Locate sustainable funding source to improve and maintain bicycle parking in the downtown core (if feasible, through the use of paid parking revenue)
- Improve collaboration with stakeholders in the downtown core area to establish best practices in addressing bike parking demands and expenses

DELIVERABLES:

- Additional bike parking in downtown core area and throughout Davis (where applicable)
- New efficient and mobile bike racks for special events

EVALUATION METHOD:

- Ongoing evaluation of citywide bike parking demands

FUNDING:

- Downtown core area paid parking revenue
- Ride Walk Davis Program Implementation Funding

4.5 Davis Bike Park



BACKGROUND

Davis is well known for its recreational cycling amenities. An extensive network of shared use paths meanders through the city connecting neighborhoods with pocket parks, playfields, and agricultural buffers. Davis is also a hub for road cycling, offering routes that connect to surrounding towns, Lake Berryessa and beyond, and hosting numerous nationally recognized road cycling events. However, the one recreational cycling opportunity missing in Davis is “dirt” riding: BMX, jumping, cyclocross and mountain biking. These disciplines represent a huge part of the excitement generated and dollars spent in the sport of cycling nationwide³² – yet Davis, with its flat terrain surrounded by farms and its lack of trails and facilities, is missing out on these benefits. But wait, with creative thinking and careful planning, these “missing” segments of bicycling can be a part of our allure as the “Bike Capital of America.” Within a fairly short timeframe and at a low cost, we can bring recreational benefits to local residents and stimulate economic development through increased events and tourism.

Multi-use bike parks have been springing up throughout the U.S. and Canada over the last 2-3 years at a rapid rate. Bike parks are equipped with an assortment of off-road amenities including single-track trails, jumps, technical rock gardens, log rides, trials sections, pump tracks, and more – attracting riders of all ages and abilities on many types of bicycles. Mountain biking, in particular, can be technically challenging – it’s tough to make the jump from riding the streets of Davis to a steep and rocky mountain trail – but bike parks provide a venue for children and adults to develop necessary skills in a relatively safe and progressive environment. Furthermore, the skills developed at a bike park translate into improved bike handling in any type of cycling – kids who learn at the park, for instance, will be safer riders on the streets of Davis. The experiences of numerous other communities show that bike parks are a wise investment: the facilities are often used to capacity as riders return frequently, local “bike culture” develops, rider skills increase, and cycling tourism revenue grows.



Off-road bike parks provide an excellent recreational opportunity for people of all ages

³² Grabow et al., 2010

ACTION STRATEGY

The construction of a bike park in Davis is a relatively simple and low-cost endeavor when compared to the construction of other sporting facilities. Once appropriate land is identified and plans are carefully laid, a couple of bulldozers can push the dirt into the designed formations in a matter of weeks. The formation of a citizen-led non-profit corporation will be crucial to the development of this project. Board members of the bike-park organization should be selected from a wide range of backgrounds including: ecology, engineering, landscape architecture, fundraising, public relations, tourism, and marketing.

Building and fostering local, regional, and national partnerships will be imperative to the success of the project. Potential partners like the International Mountain Bike Association (IMBA) offer years of experience and numerous resources for building bike parks, and are willing to be fully involved during the project planning and construction phases. Furthermore, following the example of cities like Truckee and Elk Grove, a strong local volunteer group will be formed to help with maintenance and development under the direction of the board. This group might include riders, bike shop owners, bike club members and others.

The vision of the Bike Park should be included into the community's economic development strategy while actively working with elected officials and city staff to identify parcels of City-owned land of approximately 30-40 acres. A Davis Bike Park would serve as a valuable tourism attraction and venue for a variety of bicycle events including mountain bike and cyclocross events.

OBJECTIVES:

- Provide safe environment for cyclists of all ages to develop key skills for off-road biking
- Spur local economic development and increase tourism revenue from off-road cycling recreational facility

DELIVERABLES:

- Recruitment of diverse volunteer board members to oversee project plans
- Bike park location selection
- Biannual progress reports to the Bicycle Advisory Commission and City Council highlighting progress on the construction of the Davis Bike Park
- Phased installation of Davis Bike Park

EVALUATION METHODS:

- Revenue and jobs generated from Bike Park construction and maintenance
- Bike park usage rates

FUNDING:

- Grants, corporate gifts, fundraising, and in-kind donation



Bridging the Gap: Integration of Cycling with Public Transit

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PART 5 Bridging the Gap: Integration of Cycling with Public Transit

Goal 3: Davis will integrate cycling with transit options both locally and regionally.

Introduction

The bicycle is an integral component of creating a balanced inter-modal transportation system because it is often used at the beginning and end of multi-modal trips. The bicycle is the link to increased transit use and provides convenient connectivity to activity centers, such as downtown, parks, schools, shopping centers, and the UC Davis campus. In order to build out an effective active transportation program that includes transit and walking, a high degree of emphasis should be placed on the integration of bicycles into public transit.

Work commute distances are too long for most riders. The average American commute is 15 miles each way, with less than a third of all commute trips being 5 miles or less.³³ While a daily 30 mile round trip isn't always practical for even a fit cyclist, mixing and matching transportation modes extends the feasible range of any trip. Although Davis is relatively compact and distances within the city are mostly feasible by bike, many residents work elsewhere and vice versa.

Planners are increasingly integrating the transport of bicycles into the mass transit equation; including more stowage space on trains and additional bike racks on urban buses. Nonetheless, transporting a bicycle on public transport isn't always as straightforward as we'd like it to be. Regulations and opinions vary as to how many bicycles should be accommodated on the bus or train, and whether they should be allowed onboard during rush hour.

Bicycle and transit planners discuss regional bike share at Capital Corridor offices



On-board space limitations will always present a problem, so improved parking at bus and railway stations, as seen in the Netherlands, is critical to an effective multi-modal transportation network. With 40% of train travelers arriving by bicycle, the Amsterdam Central Station boasts capacity to park over 100,000 bikes, including a four-story bicycle parking facility. Utrecht, with the largest train station in the Netherlands, will soon have a facility for 23,000 bicycle parking spots.

In an effort to accommodate long distance commuters, the City of Davis is coordinating with the following local and regional transit agencies to further advance and integrate cycling into transit.

³³ <http://www.bikesbelong.org/news/new-insight-on-multi-modal-bike-commuting-levels>

Unitrans

Unitrans was founded in 1968 as the University Transport System, when the Associated Students of UC Davis (ASUCD) purchased two vintage London double-decker buses to operate on two routes. In 1972, Unitrans opened to the general public, with partial funding from the City of Davis. Since then, the ASUCD/City of Davis partnership has continued, and Unitrans now provides public transportation service to the entire city with 49 buses on 15 routes, carrying over 3.5 million passengers/year (over 20,000 on a typical day).³⁴

Davis residents ride buses to get to destinations throughout the city. Many riders are students going to/from UC Davis, but the system is also heavily used for trips to downtown, junior and senior high schools, libraries, hospitals, neighborhood shopping centers, medical offices, the senior center, theaters, and the Farmers Market. Bicycles racks are deliberately absent from Unitrans buses, mainly because most trips within Davis are distances that can be covered by bicycle alone. However, Unitrans offers bicyclists the option of taking a bike on the last bus of the day on each route.

Yolo Bus

The Yolo County Transportation District administers Yolobus, which operates a local and intercity bus service 365 days per year in Yolo County and neighboring areas. Yolobus serves Davis, West Sacramento, Winters, Woodland, downtown Sacramento, Sacramento International Airport, Cache Creek Casino Resort, Esparto, Madison, Dunigan, and Knights Landing and makes connections with other local public transportation systems, including Unitrans and Fairfield-Suisun Transit in Davis, and Regional Transit and Light Rail in Sacramento. Yolobus provides an economical and environmentally friendly alternative to conventional transportation. Yolobus currently operates 48 compressed natural gas (CNG) buses. Yolobus offers both front-mounted bike racks and luggage bay bike racks.

Davis Community Transit

Davis Community Transit (DCT) is an advance reservation, origin-to-destination para-transit service provided to complement the fixed route services of Unitrans and Yolobus in Davis. Service is provided within .75 miles of fixed route bus lines in Davis. Para-transit service is reserved for residents that are unable to utilize fixed route services due to a disability or health condition. DCT is operated by the City of Davis and jointly funded by the City and the Transportation Development Act.

Capital Corridor

The Capitol Corridor is an intercity passenger train system that provides a convenient alternative to driving along the congested I-80, I-680 and I-880 freeways by operating fast, reliable, and affordable intercity rail service to 16 stations in eight Northern California counties: Placer, Sacramento, Yolo, Solano, Contra Costa, Alameda, San Francisco, and Santa Clara, a 170-mile rail corridor. An extensive network provides additional bus connections to serve the second-largest urban service area in the Western U.S.

The Capitol Corridor Joint Powers Authority (CCJPA) is a partnership among the six local transit agencies in the eight county service areas that shares the administration and management responsibilities of the Capitol Corridor. The San Francisco Bay Area Rapid Transit (BART) District provides day-to-day management support to the CCJPA. Capitol Corridor services are developed with input from riders, private and public sector stakeholders, and partners who help deliver the Capitol Corridor service: Amtrak, Union Pacific Railroad, Caltrans, and other agencies and communities along the Capitol Corridor.



Capital Corridor train at the Davis station

³⁴ <http://unitrans.ucdavis.edu/about/>

Demand for bicycle access to and from the trains has grown rapidly and has exceeded the designated bicycle capacity on the train. Supporting bicycle access to and from the Capitol Corridor service remains a core goal of the CCJPA. With the assistance and support of community experts, local and regional agencies, bicycle advocacy experts – including the train riders who regularly travel with bicycles – the CCJPA created the Bicycle Access Plan. This plan is a tool to ensure safety onboard the train while supporting the vital role that bicycles play in creating a sustainable transportation network. Implementing the CCJPS Bicycle Access Plan will help improve the environment, local economies, and the daily experiences of existing and future Capitol Corridor riders.

Operational changes have resulted in more efficient bicycle storage use on trains. Train equipment rotations have been modified to ensure a minimum bicycle storage capacity and to match larger capacity train sets with busier trains where possible. All existing cab cars are being retrofitted with a 13-bay bicycle storage facility, which will enable CCJPA to effectively implement a bicycle storage enforcement program. All trains are expected to have complete bicycle storage upgrades by Spring 2014.³⁵ For long-term solutions, Caltrans is in the process of ordering new railcars that will increase interior size and thus bicycle storage, and is exploring options for greater bicycle car storage.



Bicycle commuter riding the train—photo courtesy of the Davis Enterprise, from a story titled, “Davis Bicycles! Commute to Sacramento by bike, train.” Photo by John Hill

At-station bicycle storage solutions help resolve existing challenges and increase the bike mode share.³⁶ The Capitol Corridor should therefore address bicycle access and storage solutions at stations. The CCJPA has researched the industry, gathered feedback from other transit providers and identified three strategies that will reduce the demand for onboard bicycle storage: secure bicycle facilities, bike sharing, and folding bicycle rental. With the adoption of the Bicycle Access Plan in February 2013, the CCJPA created a budget for annual funding to help cities, including Davis, offset the costs of these station amenities.

³⁵ Capitolcorridor.org

³⁶ Dill and Carr, 2003

5.1 Enhanced Bicycle Parking Facilities at Davis Train Station



BACKGROUND

The Davis train station is the second most frequented train station along the Capitol Corridor, after Sacramento, and it has the highest bicycle usage and parking demands.³⁷ Visitors and residents can attest to the hundreds of bicycles consistently parked at the train station. The current bike rack configuration at the train station offers roughly 150 bicycle parking spaces and, of those spaces, approximately 85-100% are occupied a majority of the time.³⁸ The primary bike parking facilities at the train station are considered short-term and offer little security, although they are used for both short and long-term outdoor bicycle storage. Of all public bicycle parking in Davis, the train station has the highest frequency of abandoned bikes.



Abandoned and vandalized bikes are common at the Davis train station bicycle parking areas

Currently, the train station has 18 bicycle lockers for long-term storage. The bicycle locker program is designed for individual use. Lockers are reserved with a monthly fee. While the current bicycle locker program works well for a few individuals, numerous other train commuters do not have any secure bicycle storage options. The high commuter demand for secure bicycle storage outweighs the small number of individuals using limited, valuable space for personal storage. Furthermore, the existing bicycle lockers are in poor condition and present an eyesore for travelers to Davis.

ACTION STRATEGY

This project proposes four strategies to increase short and long-term, secure, covered bicycle parking at the Davis train station.

Short-Term Bicycle Parking

The City's standard bike racks accommodate bicycles in an orderly fashion while maximizing limited space and more of these racks should be installed at the train station. This plan recommends approximately 50 additional bike parking spaces at the train station. In conjunction with additional bike parking, abandoned bicycles must be removed to free up much needed bike parking spaces. Currently, the Davis Police Department employs its volunteer police unit to remove the abandoned bikes on a quarterly basis.

Key Issued Lockers vs. Shared Lockers (E-lockers)

There are currently eight key issued bicycle lockers in operation at the train station. These lockers are checked out to individuals on a monthly basis for \$20 per month. These lockers serve only a small number of transit users and are unable to accommodate the larger number of transit users seeking greater security for parked bicycles. Aesthetically, the existing bicycle lockers are unappealing as the exteriors have faded in color and show signs of deterioration, like rust and paint chipping, and they are often targets for graffiti. The existing bicycle lockers should be removed and replaced with electronic lockers (e-lockers).

Electronic lockers allow individuals to store a bicycle for a period of time as long as the user maintains sufficient funding in the account associated with their unique access code. With e-lockers, the transit user is able to use a bicycle locker for only the period of time for which they need to park their bicycle, rather than the 24 hours – seven days a week scenario with the single use locker.

The newer storage systems cost more to acquire and operate over time but when considering life-cycle cost and utility maximization, the benefits of these storage

³⁷ Capital Corridor Bicycle Access Plan 2013

³⁸ City of Davis Department of Public Works bike rack counts conducted in 2013



E-lockers increase the availability of secure bicycle parking options

systems are multiplicative because one locker space can support up to five to seven users.³⁹ This system offers a far greater rate of return on public investment than individual lockers. These e-lockers can accommodate bicycles of nearly any type or size with the exception of tandems and other lengthy wheelbase bicycles. The e-lockers are designed to keep debris out, can be moved easily, can be placed on a shallow incline if necessary, and have access modules (secure user interfaces) that run on both solar and battery power.

The e-lockers proposed for the train station are the same type of e-locker installed throughout the Bay Area, which will allow for interoperability across all train stations along the Capital Corridor. The e-lockers are run by modules that allow the rider to use an activation card and enter the amount of time the bike will be in the locker, which in turn starts the user's clock and then runs down the clock in decrements of hourly charges, currently between three and five cents. The bicycle lockers are paid for just like at a parking meter. The smart Bike Link card is both the cash and key for use of the system. There are no recurring membership fees and unused time can be refunded.

Members can reserve a space for their bicycle an hour ahead of time. The credit retained in the user's account provides sufficient funds to secure the use of the e-locker and if the user exceeds the pre-designated usage time, the charges per hour rise. Entering the time of anticipated usage provides the user a psychological cue to value the time of use and to be attentive to the charges. If a user does not return for the bicycle within the allotted time, remote monitoring will allow for following up with the user regarding their extended use and potentially for taking any defined follow-up actions such as retrieving the bicycle due to non-responsiveness.

³⁹bikelink.org

Twenty bicycle e-lockers (equivalent to 20 bicycle parking spaces) are proposed for the train station and will be funded and operated by the CCJPA. Additional bicycle e-lockers may be provided by the City of Davis following an initial monitoring and evaluation phase. It is possible for a portion of the e-lockers to be installed in an auxiliary location in downtown Davis for bicyclists who desire secure bicycle parking in the downtown core.

E-lockers may also be installed at select, regional bus stops to provide additional security and bicycle storage options.

Secure Bicycle Parking Areas

Secure bicycle parking areas (SPAS) operate on the same electronic activation principles as shared bicycle lockers. A significant advantage is that they can store many more bicycles than lockers. There are many varieties of SPAS used at transit facilities around the world. Bicyclists use an electronic access method to enter the SPA, and then bring their bicycle in and load it onto a metal docking unit with an option to secure the bicycle to the docking unit. The cost of a secure bicycle parking area is more cost effective per bicycle parking space than a shared bicycle e-locker, but there are several concerns regarding secure bicycle parking areas.

Safety is a concern since people can follow others into the SPA and then steal the bicycle of the person opening the secure door. Many SPA policies suggest that only one person access the secure parking area at a time, i.e. each bike owner should lock the door after entry to prevent theft. This anti-theft policy leads to queuing issues, which is not good when several bicyclists are trying park while time ticks down to the train departure. To deter theft, there have to be elaborate access protocols. Cameras are usually recommended to record entry and exit activity. The use of the electronic access card is a means to check up on any incidents that may arise.

The capital cost of a secure bicycle parking area is, by its nature, more cost effective on a per bicycle parking space basis than that of a shared bicycle e-locker. However, the operating costs of SPAS can be quite high due to the maintenance and diligence required for such a system. Because there is only a single access point, even a minor malfunction in the electronic activation system would cause significant inconvenience for users, increased possibility of vandalism or theft, and additional costs burdens to call in service agents to resolve the issue.

This action item will need to be further vetted to weigh the pros and cons of a secure parking area at the train station. The City of Davis is recommended to evaluate the effectiveness of the e-locker system to determine if, in fact, additional long-term bicycle parking is required after the e-locker system has been put in place.

Video Surveillance at the Train Station

The train station is not currently equipped with video surveillance. The City plans to install video cameras throughout the train station, which will greatly increase user safety and bicycle security. The train station has the highest rate of bicycle theft of all public facilities in Davis. Video surveillance, along with the removal of abandoned bikes, the installation of e-lockers, and increased short-term bicycle parking will greatly improve the current conditions of limited parking availability and minimal security.

OBJECTIVES:

- Provide additional short and long-term bicycle parking at train station
- Reduce bicycle theft and vandalism at the train station
- Increase intermodal, regional trips to and from Davis

DELIVERABLES:

- Removal of existing key-issued individual bike lockers
- Installation of 50 additional short-term bicycle racks at the train station
- Installation of 20 e-lockers at the train station
- Installation of 10-20 additional e-lockers at downtown and transit locations
- Possible installation of secure bicycle parking area (SPA)) in conjunction with a bicycle service provider
- Installation of video surveillance

EVALUATION METHODS:

- Monitor occupation rates of short and long-term bike parking at the train station
- Analyze train station bicycle theft reports
- Coordinate with Capital Corridor on administering survey to train users

FUNDING:

- Federal Transit Administration Grant (current)
- Capital Corridor Bicycle Access Plan Funding
- SACOG Funding Cycle

5.2 Folding Bikes for Hire



BACKGROUND

Folding bicycle rental programs are a very new – but effective – development, and have had the most success when paired with passenger train service. Worldwide, folding bicycles and transit prove to be uniquely compatible travel modes. Transit and train operators worldwide permit folding bicycles on their vehicles as luggage nearly without exception. Thus, the folded bicycle is a guaranteed means of travel to and from the train and permits the customer to freely utilize both modes of travel. Short of owning a folding bicycle and using it in conjunction with train travel (which the Capital Corridor is trying to encourage), a folding bicycle rental program would permit existing and new riders to use the Capitol Corridor with greater frequency and convenience. Riders would be able to make use of the folding bicycle at one or both ends of their journey without impacting the limited bicycle storage space on the train.

A folding bicycle rental program associated with Capitol Corridor service would function as the Capitol Corridor's own bicycle-share program, albeit with important differences from that of a citywide bike share program.

High gasoline prices, congested urban centers, increasing environmental awareness, and the visible increase of people with folding bicycles on trains has led at least one company to develop an innovative rental or, as it is termed, a “cycle hire” system featuring a particular type of folding bicycles.

Brompton Dock folding bike system and storage units



ACTION STRATEGY

Davis has been selected as one of only a few cities to participate in the folding bicycles for hire program through the Capital Corridor Joint Powers Authority (CCJPA). This program will be predominantly funded and operated by the CCJPA.

Introducing the Brompton Dock

Brompton Dock is a separate company from Brompton Bicycles, but they sell docks equipped with Brompton M3-L bicycles in options of 40, 20, or 10 bay configurations. Each Dock is a stainless steel, secure bicycle rental facility developed specifically for the Brompton folding bicycle. Brompton folding bicycles have a reputation for providing ride quality similar to that of a full-sized bicycle, but are best known for their quick and well-designed fold and their utility in conjunction with other modes of travel. The dock stores the Brompton bicycles until members check out a bike out through the use of text messages. Members return the Brompton bicycle via reverse texting to find a “locker” to replace the bicycle. There are charges for annual membership and charges for daily use.



The Brompton folding bike

Brompton Docks are, as of yet, only installed in the UK. The membership program administered by Brompton Dock has been established at train stations and universities, where the membership prices are attuned to the UK market. The dock unit itself is solar powered but can also be connected to a conventional power supply. Brompton Dock services the bicycles via annual charges to the sponsoring entity.

In the UK, Brompton Dock has two membership tiers: the frequent user and the occasional/trial user. Individuals interested in utilizing the Brompton Dock can sign up for membership on their website. Once they join, members use text messages to check out and return rental bicycles as well as to report any problems with particular bicycles. If there is a problem with a particular bicycle, such as a flat, the user texts in the problem, returns the bicycle, and has the option to get another bicycle. In concept, a member could check out a bicycle and retain it, turn it in for replacement immediately if it required service, then check out another bicycle for as long as they keep their membership active.

There are a variety of adjustable parameters involved in checking out a bicycle, such as how soon a bicycle can be reserved or when an unfulfilled service reservation expires, that would need to be researched and established before launching the program. The parameters can be set for adoption and use by working with Brompton Dock but they would largely be based on the utilization experience of UK members.

Bicycle for hire schemes serve a different function than the traditional automated bike share systems in that they provide bicycles on a long-term basis rather than a short-term basis. This plan recommends a 10 or 20 unit dock for the Davis train station.

OBJECTIVE:

- Provide regional commuters with a long-term bicycle transportation option
- Increase intermodal regional transportation trips

DELIVERABLES:

- Installation and operation of a 10 unit, folding bike rental dock

EVALUATION METHODS:

- Brompton Dock bicycle usage data
- Coordination with Capital Corridor to administer surveys to train riders

FUNDING:

- Capital Corridor Bicycle Access Plan Funding
- Federal Transit Administration Grant



Mayor Joe Krovoza and Christal Waters with a folding bike

5.3 Regional Bike Share System



BACKGROUND

Bike share is a bicycle rental system with a number of unattended stations. A bike share system encourages short bicycle trips for transportation purposes within a small geographic area. The planned bike share system is designed to allow users, including subscription-based members and day-use patrons, to easily check out and return bicycles from any designated bike share station in Davis, including the UC Davis campus.

Subscriptions will include annual, monthly, weekly, single and multi-day options. A web portal will also be accessible at every kiosk station, allowing non-members to register on-site and join as a member on a subscription basis or select the single-day use option. A designated webpage will be created where prospective users can register, select a subscription option, submit payment information, and sign a user agreement. After registering, members will be able to immediately access a bike from any station.

Bike share bicycles are virtually tamper and vandalism proof and will utilize radio-frequency identification smartcards and wireless technology to coordinate bicycle reservations

and keep track of subscriber information. The system will be designed to track user demand in order to maintain a balanced distribution of bikes by determining the optimal number of bikes and spare parking spaces at each station.



Bike Share program in Washington DC

ACTION STRATEGY

The City of Davis and UC Davis have collaborated with the Sacramento Metropolitan Air Quality Management District to develop a regional bike share system business plan. The implementation of a bike share system in Davis will likely coincide with regional implementation in various communities in the Sacramento region. The business plan identifies the necessary components of a bike share system, including: technology and infrastructure, demand potential, a prioritized list of prospective locations that would be suitable for bike share facilities, funding strategies, and governance structures for implementation and operations. The business plan also includes a density analysis, funding options, cost projections, and a professional analysis of the viability of operating a multi-jurisdiction program. The primary goals of a bike share system in Davis are: to foster bicycle transportation between the UC Davis campus and the Davis train station, to connect transit stops with shopping centers and downtown, and to offer greater, regional, multimodal transportation options.

OBJECTIVES:

- Provide regional commuters a short-term bicycle transportation option
- Increase intermodal regional transportation trips
- Increase number of bicycle trips between UC Davis and the Davis train station

DELIVERABLES:

- Regional bike share business plan (see Appendix Q)
- Installation and operation of a bike share system in Davis (City and UC Davis)

EVALUATION METHODS:

- Automated bike share usage data
- Coordination with Capital Corridor to administer surveys to train riders

FUNDING:

- SACOG 2013-14 Funding Cycle

Diamond: A Cyclist's Best Friend

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City Council taking part in Earth Day Festivities

PART 6 Diamond: A Cyclist's Best Friend

Goal 4: Davis will achieve the Diamond Level Bicycle Friendly Community designation from the League of American Bicyclists.

Introduction

Over the last decade, the League of American Bicyclists' (LAB) Bicycle Friendly America programs, specifically the Bicycle Friendly Community program, have encouraged cities across the country to create better conditions for cycling. The LAB has provided these communities with valuable feedback to continue advancing cycling as a safe, efficient, affordable, and healthy mode of transportation. There is a direct correlation between cities that are recognized as a bicycle friendly community and cities that exhibit high bicycle mode shares.⁴⁰



Davis is nationally renowned as the “Bicycle Capital of America” and has been since the 1980s, primarily due to the high number of everyday cyclists and expansive network of grade separated bike paths. In 2005, just as the LAB's Bicycle Friendly Community program began to gain traction, the City of Davis applied and received the platinum level bicycle friendly community designation, the highest award possible. The full text of this application is in Appendices T and U.

In 2012, bicycle advocates and city officials recognized the need for a new challenge for Davis, and the LAB's modification to the existing Bicycle Friendly Community program to include a higher designation of Diamond level provides just such a challenge. As Davis strives for diamond level bicycle friendly designation, the City will improve bike infrastructure, instigate effective enforcement campaigns, increase education and encouragement programs, and improve integration of bikes with transit.

The main difference between the diamond level bicycle friendly community designation and the lower designations is that the structure of diamond level designation provides objectives for cities to work toward, objectives that we have built into the framework of this Beyond Platinum plan. The City will make these improvements primarily to benefit the residents of Davis. Achieving the Diamond-level designation is recognition of this fulfillment.



Cyclists strike a pose in front of the State Capitol in Sacramento — a mere seventeen miles from Davis

Former Mayor Maynard Skinner (*left*) and former City of Davis' Public Works Director discuss the early days of bicycling in Davis

⁴⁰ Alliance for Biking and Walking, 2012

6.1 Tracking Progress Toward Diamond



BACKGROUND

Estimating Davis’ bicycle mode share is critical to assessing progress toward mode share goals but to do it in the most precise manner requires methodologies that may be cost prohibitive. Ideally, bicycle mode share assessment would be done as part of a larger transportation mode-share study using state of the art methods. City Council has, to date, not allocated resources to conduct such studies.

Despite these challenges, Davis has access to routinely generated data from a number of sources that could be combined using appropriate weights to provide a rough – but defined – estimate of bicycle mode share. These data sources include: the Census Bureau’s annual American Community Survey (ACS) that provides an estimate of proportion of workers commuting by bicycle, the annual UC Davis Campus Travel Survey that provides estimates of proportion of commute trips to campus by bicycle (and can be disaggregated to provide an estimate for students alone), and routine bicycle rack counts at Davis schools that provide an estimate of the proportion of students arriving by bicycle.

The ACS collects data on commute trips to work by mode. Table 3 is a summary of the bike commute mode share estimates for Davis. These estimates do not include individuals under 16 nor do they include bike trips made for any purpose other than work.

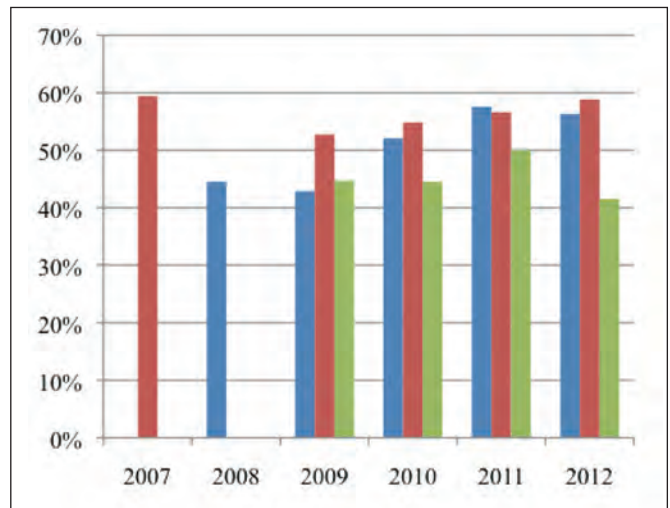
Table 3. ACS Bike Commute Mode Share Estimates Over Time

Year	Mode Share
2007	14.3%
2008	15.7%
2009	16.8%
2010	22.1%
2011	16.6%
2012	19.1%

Volunteers through the Davis Bicycles! Schools Committee conducted bike rack counts throughout the year at all of the public schools in Davis. The average bike mode share, including elementary, middle, and high schools is 25%.

Data collected from the past seven UC Davis Campus Travel Surveys show relatively consistent bike mode shares that hover around 50% for the entire campus. Figure 4 shows the bike commute mode share on an average weekday for students, faculty, and staff that live in Davis over the past six years. The bike mode share is somewhat lower when including employees and students that commute from outside of Davis. Each year data were collected mid-October, when enrollment is the highest.

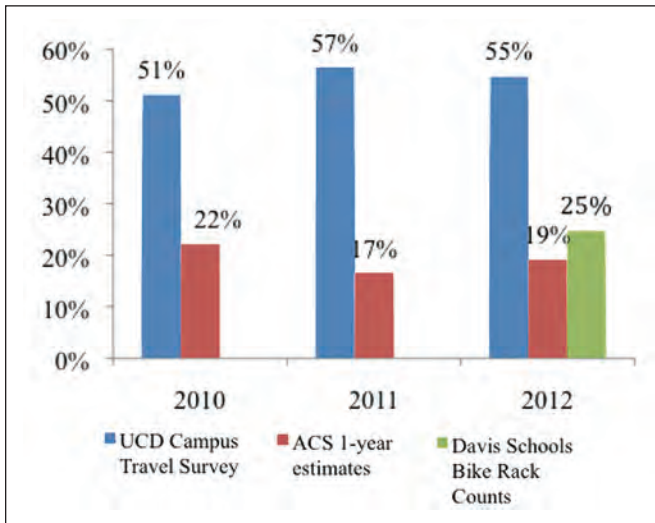
Figure 4. UC Davis Bike Commute Mode Share by Role



■ Students
 ■ Faculty
 ■ Staff

Utilizing these three bike mode share estimates, we can get a rough idea of the number of people in Davis that bike on a daily basis. Figure 5 summarizes the estimates from these three sources.

Figure 5. Davis Bike Mode Share Estimates by Source



There are, at this time, no routine data collection efforts for mode share for activities such as shopping, entertainment, after school programs, religious services, regular community events, sporting events, or any other non-commute trips. In conjunction with two major sources of travel generation — commuting to work and school — we can develop a means to estimate overall bike mode share through intercept surveys at key destinations: downtown, neighborhood shopping centers, libraries, athletic fields, and other locations. Capturing trips between homes would be extremely difficult, but we expect that those trips make up only a nominal share of total trips.

ACTION STRATEGY

By utilizing available data and collecting additional data on travel mode for shopping, dining and errands, we could calculate a weighted average of overall bike mode share using the point estimates generated by each routine data collection method. Refer to Appendix D for the Bicycle and Pedestrian Counting Plan. This approach to estimating bike mode share dovetails with the League of American Bicyclists (LAB) Diamond level metrics.

The LAB has set minimum requirements in the following categories:

- Percentage of bicycle trips to work and school
- Bicyclist safety
- Percentage of bicyclists that feel safe riding in the community
- Quantity and quality of the bicycling facility network, such as protected bike lanes, grade separated bike paths, buffered bike lanes, and bike parking

Obtaining Diamond Level Bicycle Friendly Community designation is based on a 100-point scale with the following performance metrics:

Key outcomes (65 points available)

- Percentage of trips to work and school by bike (1pt. per % pt., 35pts. possible, 15% minimum for any Diamond city, 25% Diamond 2, 35% Diamond 3)
- Safety — Fatality and crash rates (20pts available for safest rates = 15 pts. for fatality rate and 5 pts. for crash rate per 10k daily commuters — set minimum rate for Diamond 1, 2, 3)
- Percentage of people who feel safe riding their bikes on city streets (10 pts. available, 40% min satisfaction for Diamond 1, 2, 3)

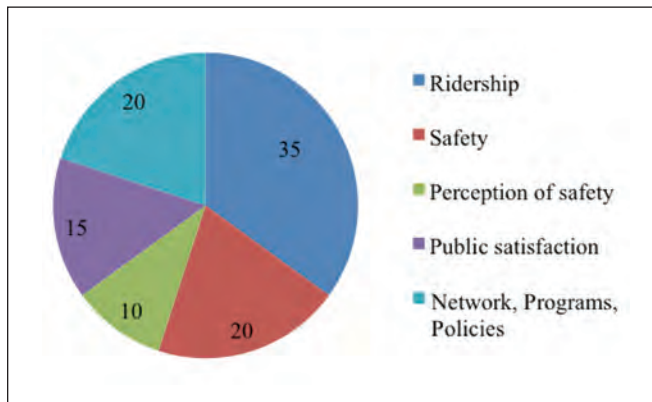
Public satisfaction survey (15 pts. available, 40% satisfaction is minimum for Diamond)

- Percentage of people who generally think the city is a good bicycling city (bicycling is part of the local culture and people feel that they can get to most destinations comfortably by bike)
- Percentage of people satisfied with the availability, convenience and quality of on-street bicycle facilities like bike lanes, buffered bike lanes and cycle tracks
- Percentage of people satisfied with the availability, convenience and quality of off-street bicycle facilities like shared-use paths
- Percentage of people satisfied with the maintenance of on and off-street bicycle facility network
- Percentage of people satisfied with the maintenance of street network without dedicated bicycle facilities
- Percentage of people satisfied with feasibility of combining bicycling and transit trips
- Percentage of people satisfied with bicycle parking availability, convenience and quality
- Percentage of people satisfied with the community leadership dedication and responsiveness to bicycling community

Network, programs and policies (20 pts. available, 70% for Diamond 1, 80% for Diamond 2, 90% for Diamond 3)

- Percentage of arterial streets with dedicated bicycle facilities (bike lanes, buffered bike lanes, cycle tracks)
- Mileage of bike lanes (min. riding space of 4ft)
- Mileage of buffered bike lanes
- Mileage of cycle tracks
- Mileage of shared-use paths
- Mileage of shared-use paths to total road network mileage
- Mileage of dedicated bike facilities to total road network
- Bicycle parking spaces available per person
- Percentage of elementary, middle and high schools offering bicycling education
- Minimum of quarterly bicycling education classes offered for adults
- Mileage of mountain biking trails (singletrack)
- Recreational bicycle facilities like velodrome, BMX track, bike park

Figure 6. Diamond Bicycle Friendly Community Points per Category



Scoring/Recognition (100pts. available)

- Diamond 1 (National cycling city) – 60pts.
- Diamond 2 (International cycling city) – 75pts. (comparable to Munich)
- Diamond 3 (World-class) – 95pts. (comparable to Amsterdam, Copenhagen, Freiburg)

Methodology

Davis will conduct a random public phone survey or mailing of 1000+ cyclist and non-cyclist citizens. Community bike networks will be judged based on responses to the four key components of the public survey: comfort (feeling safe), convenience, connectivity and quality of network. Not all questions will be scored. Some questions will be asked to help create additional benchmarks and targets for leaders. Examples of these questions include: whether a person would like to ride more, what it would take for them to feel comfortable while riding, what bicyclists should do to be safer, household levels of bike access, and reasons they bike or don't bike.

Scoring Footnotes

Ridership: Currently the BFC program uses the ACS 1-year data for cities with 65,000 or more residents and the most recent 3 or 5 year ACS data for communities beneath this threshold.

Safety Data: Currently the BFC program analyzes crash and fatality data for the previous five years. Using police reports and the ACS commuter data, the BFC program determines the number of crashes. See Appendix E for an analysis of Davis bicycle crashes from 2009 through 2012. Scoring is dependent upon a demonstrated decrease of annual reported bicycle crashes.

Yearly Crashes—Diamond minimum

- 10% decrease = 1pt.
- 20% decrease = 2pts.
- 30% decrease = 3pts.
- 40% decrease = 4pts.
- 50% decrease = 5pts.

Public Satisfaction Survey: 40% aggregate satisfaction required for this section.

- 40% = 5pts.
- 50% = 10pts.
- 60% = 10pts.
- 70% or more = 15pts.

Network, Programs and Policies Section: 20 points are available for this section. 70% of total pt. minimum for Diamond 1, 80% for Diamond 2 and 90% for Diamond 3

The effectiveness of the current bicycle network and any improvements through infrastructure or education will need to be evaluated through accurate data collection. Previous bike counting methods did not provide suffi-

Table 4. Diamond Report Card for Davis, California

Performance Metric	Diamond Minimum	Davis 2013	2017 Goal	2020 Goal
Percentage that bike to work	25%	20%	25%	30+%
Percentage that bike to school	30%	27%	40%	50+%
Percentage that bike to shop and dine	15%	TBD	25%	30+%
Annual bicyclist reported crashes	Decrease in annual reported crashed	65 crashes	45 crashes or 30% decrease	32 crashes or 50% decrease
Percentage of bicyclists that feel safe	40%	TBD	50%	80%
Public satisfaction with bicycling in city	40%	TBD	50%	80%
Quality of bicycling network, programs and policies	70% of total pts. available (14 pts.)	TBD	70% of total pts. available (14 pts.)	90% of total pts. available (14 pts.)

Table 5. Quality of Current Bike Network, Programs and Policies in Davis

Percentage of arterial streets with dedicated bicycle facilities (bike lanes, buffered bike lanes, cycle tracks)	98%
Mileage of bike lanes (min. riding space of 4ft)	54 mi
Mileage of buffered bike lanes	1
Mileage of cycle tracks	.25
Mileage of bike boulevards/neighborhood greenways	2 mi
Mileage of shared-use paths	65 mi
Mileage of shared-use paths to total road network mileage	37 %
Mileage of dedicated bike facilities to total road network of collectors and arterials	71%
Mileage of mountain biking trails (singletrack)	0
Bicycle parking spaces available per person	.05
Percentage of elementary, middle and high schools offering bicycling education	53%
Quarterly bicycle education classes available for adults	No
Public bike sharing system	No
Recreational bicycle facilities like velodrome, BMX track, bike park, or similar	Yes

cient information to extract accurate trends for planning. Utilizing a combination of automated counting technology, surveys, analyses of bicycle crash records, and bike rack counts will provide a more effective data collection process.

DELIVERABLES:

- Permanent automated bicycle counters at key locations to collect on-going data on bicycling and to determine trends
- Temporary automated bicycle counters at various locations to determine impact of new bicycle facilities
- Development and administration of statistically valid public satisfaction survey
- Development and administration of statistically valid shopping, dining, and errands travel survey

OBJECTIVES:

- Understand trends bicycle use citywide
- Identify safety concerns and other barriers to cycling
- Gauge effectiveness of new bicycle facilities in increas-

ing cycling along specified corridors

- Understand public perception and increase public satisfaction of bicycle safety and facilities
- Understand overall bicycle mode share by collecting data on bicycling to work, to school, and for shopping, dining, and other errands

EVALUATION METHODS:

- Bicycle crash data
- Annual ACS data
- UC Davis Campus Travel Survey
- School bike rack counts
- Permanent and temporary automated counters
- Public satisfaction survey data
- Biannual progress reports to the Bicycle Advisory Commission and City Council highlighting trends

FUNDING:

- SACOG Grant Cycle Funding
- Ride Walk Davis Program Implementation Funding

6.2 2017 Bicycle World's Fair



BACKGROUND

“The Bicycle Capital of America” was officially declared by the Davis Chamber of Commerce in the late 1970s when they printed the city’s first bike maps. This early declaration and branding of Davis helped drive the community’s commitment to bicycling over the last several decades. The year 2017 will mark three very important anniversaries for Davis and bicycling in general:

- 1) The golden (50th) anniversary of the nation’s first bike lane, which was developed in Davis
- 2) The centennial anniversary of the incorporation of the City of Davis
- 3) The bicentennial anniversary of the world’s first bicycle⁴¹

The Davis community has a long history of encouraging bicycle use. The early bicycle friendly vision of leaders from UC Davis and the City catalyzed a chain reaction that has resonated through several annual special events and many incredible cycling infrastructure projects. These efforts have ultimately fostered a bicycle way of life unmatched by any other American city.

Today, the Davis logo is none other than a Penny Farthing Highwheeler, one of the first bicycle designs. The city’s history and accomplishments have demonstrated that Davis truly is the “Bicycle Capital of America” and worthy of hearty celebration.

⁴¹ The first means of transport making use of two wheels arranged consecutively, and thus the archetype of the bicycle, was the German draisine dating back to 1817) http://en.wikipedia.org/wiki/History_of_the_bicycle

ACTION STRATEGY

“Make no small plans; they have no magic to stir men’s blood.”

— Daniel Burnham (1846-1912, American architect, urban designer, and Director of Works for the World’s Columbian Exposition in Chicago)

A Bicycle World’s Fair in Davis will be the perfect opportunity for the city and the international community to celebrate the bicycle. Planning for the year long celebration of activities will be conducted by a special skunk works planning committee that will be formed in 2014. Potential attractions and activities to be conducted in 2017 include:

- Install an interactive, interpretive, self-guided bicycle tour showcasing Davis’ cycling history and existing and future innovative cycling infrastructure
- Conduct a weeklong educational seminar with UC Davis specializing in bicycle and pedestrian planning and design
- Coordinate with the Association of Pedestrian and Bicycle Professionals (APBP) to host a Professional Development Seminar in Davis
- Plan a stage start or finish of AMGEN’s Tour of California in Davis



- Include Davis as a special stop for New Belgium’s Tour de Fat event
- Conduct one or more special events in conjunction with the League of American Bicyclists
- Construct additional bicycle art in downtown and throughout the community
- Explore possibility of hosting the global Velo-City conference in Davis
- Conduct special event recognizing local residents’ contribution to cycling

The Bicycle World’s Fair will be an incredible opportunity to showcase Davis to the international community. The planning, marketing, and anticipation of this event is intended to influence and persuade more residents to bicycle more frequently in order to achieve the Beyond Platinum plan’s overall objective of a 30% bicycle mode share.

This event is also intended to serve as an economic generator through increased tourism spending. The most important reason for organizing and hosting a Bicycle World’s Fair is to work toward creating better bicycling conditions through programmatic and infrastructure improvements. Working toward these goals, this event is designed to inspire more residents to adopt the Davis bicycle way of life and to create a heightened sense of place and better quality of life.

OBJECTIVES:

- Showcase Davis to the international community
- Attract bike tourism and economic development
- Celebrate milestones in bike history
- Host International Cycling Safety Conference

DELIVERABLES:

- Formation of a skunk works special committee to plan the components of the Bicycle World’s Fair
- Execution of a successful Bicycle World’s Fair in 2017

EVALUATION METHODS:

- Revenue generated by event at local hotels, restaurants, retailers
- Attendance rates
- Extent of media coverage

FUNDING:

- Ride Walk Davis Program Implementation Funding
- Sponsorships



Above: Davis resident, Peter Wagner, and his family ride their creative “frankenbikes” throughout the city, photo by Emily XU

T-shirt showcasing the Davis Bicycle Club’s Annual 4th of July Criterium Bike Race held in downtown Davis



PART 7 Funding Summary

Adequate funding is critical to the successful implementation of the Beyond Platinum plan. An initial projection of \$140,000 per year was identified to fully fund its implementation, which is divided into two main divisions: infrastructure and programs. Of the total sum, \$100,000 would be allocated to infrastructure projects – primarily signing, striping, and marking projects – while the remaining \$40,000 would fund the program division.

Throughout the development of the Beyond Platinum plan, external funding sources have been secured through transportation grants, stakeholder funding opportunities, and the possibility for upfront investment from the City’s pavement maintenance program. It is anticipated that additional external opportunities will continue to provide much of the necessary funding, thereby lessening the dependence on local resources for the plan’s implementation.

Staff will determine on an annual basis the local funds needed in order to accomplish the programs and projects outlined in the Beyond Platinum plan. When needed, local funds will be requested to leverage larger grant opportunities by providing a local match and to backfill programs and projects that are not eligible for external grant resources.

Current Funding Sources:

- Ride Walk Davis Program Implementation Funding
- SACOG Tier II Transportation Demand Management Funding
- Caltrans Active Transportation Program Safe Routes to School Funding
- City of Davis Roadway Rehabilitation/Pavement Maintenance Funding
- UC Davis Transportation and Parking Services
- Capitol Corridor Bicycle Access Plan Funding
- SACOG Funding Cycle
- Federal Transit Administration Grant
- Downtown core paid parking revenue
- Supplemental grants, corporate gifts, fundraising, and other donations
- Sponsorships

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